

November 30, 2011

Mr. William P. Meyer  
State of North Carolina  
Department of Environment and Natural Resources  
Division of Waste Management, Superfund Section  
401 Oberlin Road, Suite 150  
Raleigh, North Carolina 27605



**RE: Risk Management Plan**  
Campbell's Cleaners  
171 Wagner Street  
Troutman, Iredell County, NC 28166-9627  
W&R Project No. 02060496.40  
DSCA Site Identification No. 49-0004

Dear Mr. Meyer:

Withers & Ravenel is pleased to submit the enclosed Risk Management Plan (RMP) for the above referenced site. The results of a previous Tier 1 Risk Assessment indicated 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 during the risk assessment remain valid in the future. Based on the documentation contained and referenced in this plan, Withers & Ravenel recommends issuance of a No Further Action letter for the site.

If you have questions or require additional information, please do not hesitate to contact me at (910) 256-9277.

Sincerely,  
**Withers & Ravenel, Inc.**

Brian J. Bellis, P.G.  
Project Manager

**RISK MANAGEMENT PLAN  
CAMPBELL'S CLEANERS  
171 WAGNER STREET  
TROUTMAN, IREDELL COUNTY, NORTH CAROLINA  
W&R PROJECT NO. 02060496.40  
DSCA SITE IDENTIFICATION NO. 49-0004  
NOVEMBER 30, 2011**

**Risk Management Plan**

**Campbell's Cleaners**

171 Wagner Street

Troutman, Iredell County, North Carolina

W&R Project No. 02060496.40

DSCA Site Identification No. 49-0004

**Submitted To:**

**North Carolina Department of Environment  
and Natural Resources**

**Division of Waste Management**

**Superfund Section – DSCA Program**

401 Oberlin Road, Suite 150

Raleigh, North Carolina 27605

**Prepared By:**



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Brian J. Bellis, P.G.

Project Manager

N.C. Professional Geologist License #0980

November 30, 2011

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## **1.0 INTRODUCTION**

Withers & Ravenel, Inc. (W&R) has prepared this Risk Management Plan (RMP) for the Campbell's Cleaners site on behalf of the North Carolina Department of Environment and Natural Resources (NCDENR) Dry-cleaning Solvent Cleanup Act (DSCA) Program. The site is located at 171 Wagner Street in Troutman, Iredell County, North Carolina. Site assessment activities have confirmed that soil contamination associated with the former dry cleaning operation is confined to the site property and that associated groundwater contamination is confined to the site property and to the adjacent properties north and south of the site. 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 RMP**

Withers & Ravenel reviewed the results of previous investigations and conducted assessment activities which indicated that tetrachloroethene (PCE) is present in site soil but at concentrations below Risk Based Screening Levels, and that PCE is present in groundwater at concentrations above its Title 15A NCAC 2L .0202 Groundwater Standard (2L Standard) beneath the site property and the adjacent properties north and south of the site. The site and adjacent parcels north and south of the site are commercially zoned properties. The property to the north located at 144 S Main Street is owned by Southeastern Consortium Properties Troutman, LLC, and the property to the south located at 183 Wagner Street is owned by United Carolina Bank. W&R completed a Tier I Risk Assessment for the former Campbell's Cleaners site in June 2011. The results of the Tier I Risk Assessment indicated that there are on and off-site risks that exceed target risk levels. However, the risks will be managed through implementation of Land Use Restrictions (LURs) that have been selected as part of the Risk Assessment as detailed in this RMP. Thus, the objective of the RMP is to ensure that those site-specific LURs remain valid in the future.

### **3.0 SUMMARY OF APPROVED RISK ASSESSMENT REPORT**

Due to the presence of PCE in groundwater at concentrations above unrestricted use standards, W&R completed a Tier 1 Risk Assessment report for the site and adjacent commercial properties on June 16, 2011. This section describes the main components of the risk assessment, and summarizes the Tier I Risk Assessment results.

The Tier I Risk Assessment included development of an exposure model, calculation of site-specific representative concentrations (RCs) for each exposure domain, and comparison of Risk-Based Screening Levels (RBSLs) with the RCs. The exposure model evaluation indicated the following complete exposure pathways for the site:

#### On-Site Exposure Unit

- On-Site Current and Future Non-Residential Worker – combined pathway of outdoor inhalation of vapor emissions and particulates, accidental ingestion, and dermal contact from surficial soil, indoor and outdoor inhalation of vapor emissions from subsurface soil, indoor inhalation of vapor emissions from groundwater, and outdoor inhalation of vapors from groundwater.
- On-Site Construction Worker - combined pathways for soil up to depth of construction and outdoor inhalation of vapor emissions from groundwater

#### Off-Site Exposure Unit A

- Off-Site Unit A Current and Future Non-Residential Worker – indoor inhalation of vapor emissions from groundwater and outdoor inhalation of vapor emissions from groundwater.
- Off-Site Unit A Construction Worker – outdoor inhalation of vapor emissions from groundwater

### Off-Site Exposure Unit B

- Off-Site Unit B Current and Future Non-Residential Worker – indoor inhalation of vapor emissions from groundwater and outdoor inhalation of vapor emissions from groundwater.
- Off-Site Unit B Construction Worker – outdoor inhalation of vapor emissions from groundwater

In addition to the above referenced pathways, W&R also evaluated the Protection of Groundwater Use pathway. The Protection of Surface Water pathway was not evaluated because there are no surface waters within 500 feet of the site.

Representative concentrations calculated for detected dry cleaning solvent compounds in soil and groundwater were compared to Tier I RBSLs for those compounds. None of the RCs calculated for on-site soils exceeded Tier I RBSLs. Comparison of RCs to Tier I RBSLs for the Protection of Groundwater Use pathway identified two instances in which an RC exceeded Tier I RBSLs. The PCE RC for source groundwater of 0.0164 mg/L exceeded the Tier I RBSL of 0.0058 mg/L, and the PCE RC for demonstration well MW-8 of 0.0029 mg/L exceeded the RBSL of 0.0018 mg/L. Comparison of RCs calculated for a hypothetical point of exposure located 170 feet from the source area to Tier I RBSLs did not identify RCs that exceeded RBSLs. Because PCE concentrations within groundwater were found to be stable over time, the aforementioned exceedances will be managed through implementation of LURs and/or equivalent land use controls for all impacted properties documented in the RMP.

Based upon the results of the Tier I evaluation and the risk evaluation of air sampling results, W&R has concluded that the release at the site does not pose an unacceptable risk and has recommended site closure in accordance with the DSCA program's risk based rules.

## **4.0 RAP COMPONENTS**

### **4.1 Summary of Prior Assessment and Interim Actions**

The building which was used by Campbell's Cleaners at 171 Wagner Street, Troutman, NC currently serves as an office for an insurance business and dry cleaning operations involving the use of PCE are no longer performed within the building. Active dry cleaning operations took place from 1948 to 2004 under a different business name, and Campbell's Cleaners operated as a drop off and pick up station for dry cleaning services between 2004 and 2009. Campbell's Cleaners was accepted into the DSCA Program in April 2005.

A Phase I Environmental Site Assessment (ESA) was conducted by Engineering Consulting Services, Ltd. (ECS) for the site owner in April 2004. The Phase I ESA reported the existence of two aboveground storage tanks (AST) that were located adjacent to eastern and northern sides of the building. An underground storage tank (UST) was also reported to be present in the grassed area to the southeast of the building. One of the ASTs reportedly contained virgin varsol and the other reportedly contained heating oil. The UST was formerly used to store heating oil and had been abandoned in place. Due to the handling of dry cleaning solvents and the storage of fuel at the site, ECS recommended conducting a Phase II ESA which would involve collection of soil and groundwater samples for laboratory analysis.

The Phase II ESA was conducted by ECS in May 2004 and included collection of three soil samples (HAB-6, B-2, B-3) and one groundwater sample (TW-1). Soil samples HAB-6 and B-2 were analyzed for diesel range organics (DRO) and gasoline range organics (GRO) by EPA Method 8015B. Detectable concentrations of both DRO and GRO were identified in both samples. Soil sample B-3 was collected from a depth of zero to four feet and was analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, semi-VOCs by EPA Method 8270C, and glycols by EPA Method 8015B. PCE was the only compound identified in soil sample B-3 and the reported concentration of 0.0095 mg/kg does not exceed the surficial soil RBSL of 3.19 mg/kg for on-site non-residential workers or the surficial soil RBSL of 30.3 mg/kg



for on-site construction workers. The groundwater sample was obtained from a temporary well and was analyzed for VOCs by EPA Method 8260B, semi-VOCs by EPA Method 8270C, and glycols by EPA Method 8015B. PCE was the only compound detected in groundwater sample TW-1 and the reported concentration of 0.017 mg/L exceeds the 2L Standard of 0.0007 mg/L for PCE.

ENSR Consulting and Engineering, Inc. (ENSR) prepared a Prioritization Assessment Report for the DSCA Program in October 2006. To further evaluate the extent of soil and groundwater contamination, ENSR collected soil samples from two borings drilled inside the building (B-5 and B-6), and from a boring drilled outside the building (B-7). ENSR also collected soil samples from the borings used to install monitoring wells MW-1, MW-2 and MW-3, and collected groundwater samples from those wells. The soil and groundwater samples were analyzed for VOCs by EPA Method 8260B and semi-VOCs by EPA Method 8270C. Ethylbenzene, and xylenes were detected in the 8-10 foot depth soil sample from the boring for monitoring well MW-1 at concentrations of 0.019 mg/kg and 0.103 mg/kg respectively. However these concentrations do not exceed the respective subsurface soil RBSLs of 345 mg/kg and 44.5 mg/kg for on-site residential workers, or the respective subsurface soil RBSLs of 3,540 mg/kg and 1,210 mg/kg for on-site construction workers.

PCE was the only compound detected in the three groundwater samples and the reported concentrations were as follows: MW-1 (0.019 mg/L), MW-2 (0.0043 mg/L), and MW-3 (0.019 mg/L). Each of these concentrations exceed the 2L Standard of 0.0007 mg/L for PCE.

ENSR installed and sampled seven additional monitoring wells (MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10) in October 2007 in an attempt to determine the horizontal and vertical extent of groundwater contamination. The groundwater samples were analyzed for VOCs by EPA Method 8260B. PCE was the only VOC detected in five of the groundwater samples and the reported concentrations were as follows: MW-4 (0.016 mg/L), MW-7 (0.0033 mg/L), MW-8 (0.0027 mg/L), MW-9 (0.0048 mg/L), and MW-10 (0.0046 mg/L). All of the

detected PCE concentrations exceeded the 2L Standard of 0.0007 mg/L for PCE. No VOCs were identified in the groundwater samples from wells MW-5 or MW-6.

An additional assessment was conducted by ENSR in April 2008 during which three additional groundwater monitoring wells (MW-11, MW-12 and MW-13) were installed and sampled. As part of this work, groundwater samples were collected from the ten existing and three new monitoring wells. The presence of PCE was identified in the samples from wells MW-1 (0.014 mg/L), MW-2 (0.0043 mg/L), MW-3 (0.017 mg/L), MW-4 (0.019 mg/L), MW-7 (0.0023 mg/L), MW-8 (0.0013 mg/L), MW-9 (0.0042 mg/L), and MW-10 (0.0054 mg/L). These concentrations exceed the 0.0007 mg/L 2L Standard for PCE. Methyl tert-butyl ether was also detected in the sample from well MW-2 at a concentration of 0.0025 mg/L, however this concentration is below the 2L Standard of 0.020 mg/L for MTBE. No VOCs were detected in the samples from existing wells MW-5 and MW-6, or from the three additional wells MW-11, MW-12 and MW-13. Therefore, the extent of PCE within groundwater in the vicinity of the site was considered to be defined.

Between the years 2008 and 2011, W&R conducted eight quarterly groundwater monitoring events. PCE was consistently detected in the samples from wells MW-3, MW-4, MW-9, and MW-10 at concentrations similar to those identified by ENSR previously. Low concentrations of the VOCs acetone, chloromethane, chloroform, cis-1,2-dichloroethylene, trichloroethylene, and 1,2,4-trimethylbenzene were detected sporadically over the course of the monitoring period, however the detected concentrations were below the respective 2L Standards for these VOCs.

W&R conducted an additional soil assessment in December 2010. Four additional soil borings (WR-1, WR-2, WR-3, and WR-4) were advanced to obtain both surficial and subsurface soil samples from within the source area. The samples were analyzed for VOCs by EPA Method 8260, semi-VOCs by EPA Method 8270, and extractable and volatile petroleum hydrocarbons (EPH and VPH) by the appropriate MADEP methods. PCE was detected in the surficial soil sample from WR-4 at a concentration of 0.0051 mg/kg. However, this concentration is below the surficial soil RBSL of 3.19mg/kg for on-site non-residential workers or the RBSL of 30.3

mg/kg for on-site construction workers. Low concentrations of EPH, VPH, acetone, naphthalene, 2-butanone (MEK), sec-butylbenzene, p-isopropyltoluene, methylene chloride, and 1,3,5-trimethylbenzene were identified in some of the soil samples, however the individual concentrations and RCs for these compounds were found to be well below their respective Tier I RBSLs for on-site non-residential workers where applicable.

W&R collected sub-slab vapor and indoor air samples from inside the building in January 2011 at locations near to where dry cleaning was previously performed, in accordance with DSCA contractor bulletin 30. PCE was detected in sub slab vapor samples SSV-1 (0.579 mg/m<sup>3</sup>) and SSV-2 (1.9 mg/m<sup>3</sup>). Low concentrations of other VOCs were detected in the sub-slab vapor sample SSV-2 including acetone, carbon disulfide, ethylbenzene, methylene chloride, toluene, m&p xylene, o-xylene, and 1,2,4-trimethylbenzene.

PCE and its degradation products were not detected in indoor air sample IA-1 however, other volatile organic compounds were detected. These values and a value equal to one-half of the detection limit for PCE and its daughter products were entered into the DSCA Indoor Air Risk Calculator for commercial sites, which estimated or predicted an Individual Excess Lifetime Cancer Risk (IELCR) of  $5.58 \times 10^{-6}$  and a Hazard Index of 0.04.

Given the high detection limits for several compounds in the January indoor air sampling event, DSCA determined that it was impractical to accurately predict risk associated with the indoor air pathway. Therefore W&R returned to the site in June of 2011 to collect another sample of indoor air that would be representative of indoor air exposure to chemicals associated with a release of dry cleaning solvent to the environment. Analytical results indicated the presence of PCE (0.41 µg/m<sup>3</sup>) and cis 1,2 dichloroethene (2.9 µg/m<sup>3</sup>) in the indoor air sample. Low concentrations of several other VOCs were also identified including; 2-propanol (61 µg/m<sup>3</sup>), acetone (26 µg/m<sup>3</sup>), chloromethane (1.2 µg/m<sup>3</sup>), dichlorofluoromethane (1.9 µg/m<sup>3</sup>), ethanol (410 µg/m<sup>3</sup>), methylene chloride (1.8 µg/m<sup>3</sup>), n-heptane (1.4 µg/m<sup>3</sup>) and toluene (2.2 µg/m<sup>3</sup>). No other compounds were detected at concentrations above their respective laboratory detection limits. Among the compounds detected in the air sample, PCE and toluene were the only compounds that are

included in the DSCA cumulative risk calculator. The PCE and toluene concentrations were entered into the risk calculator and a cumulative IELCR of  $1.95 \times 10^{-7}$  and a Hazard Index of zero were determined. This risk level does not exceed the Tier 1 risk level used to evaluate specific exposure pathways, which is  $1.0 \times 10^{-6}$  IELCR. Given these generally low concentrations, and the minimal amount of soil contamination detected at this site, W&R does not expect that this condition will change in the future.

## 4.2 Remedial Action

According to the DSCA Program's RBCA guidance, no remedial action is necessary if four site conditions are met. Each of these conditions and their applicability to the subject site are addressed below.

*Condition 1: The dissolved plume is stable or decreasing.*

As discussed in **Section 4.1**, quarterly groundwater monitoring was conducted between July 2008 and April 2011, during which groundwater samples were collected from selected on-site and off-site monitoring wells. **Table 1** in **Appendix A** summarizes the analytical results for the eight quarterly monitoring events, and the map in **Appendix A** shows the locations of the monitoring wells and their approximate distances from the location of the former dry cleaning machine, which is considered to be the source area. Out of all the volatile organic compounds included in an EPA Method 8260 analysis, only PCE has been detected at concentrations that exceed its 2L Standard. More specifically, PCE has only been detected in samples W&R collected from monitoring wells MW-3, MW-4, MW-9 and MW-10, which are located relatively close to the source area. PCE concentration versus time charts for each of these wells are included in **Appendix A**. Review of the charts indicates that concentrations of PCE in groundwater are generally very low, even at locations close to the source area, and that the concentrations are relatively stable or are decreasing with respect to time.

**Table 2** in **Appendix A** shows the detected PCE concentrations for each quarterly monitoring event and the approximate distances between the monitoring wells and the source area. The PCE concentrations detected during each sampling event are plotted against distance from the source area on the chart entitled "PCE Concentration vs Distance" in **Appendix A**. Inspection of this chart reveals the range of PCE concentrations detected at each monitoring well over the course of the quarterly monitoring periods, and a consistent decrease in PCE concentration with increasing distance from the source area. This relationship is one line of evidence that implies that PCE concentrations in groundwater are stable, because if they were not, we would expect to see steadily increasing concentrations with increasing distance from the source area over time. Because there is no evidence of increasing PCE concentrations with increasing distance from the source area over time, the PCE plume appears to be in a condition of steady state.

Another line of evidence which suggest stability of PCE concentrations in groundwater over time are the maps showing the distribution of PCE in groundwater for each of the quarterly monitoring events (see **Appendix A**). Review of these maps reveals that the lateral extent of PCE concentrations in groundwater has remained relatively consistent over the monitoring period.

**Table 3** of **Appendix A** shows descriptive statistics of PCE concentration data for each of the four monitoring wells where PCE has been detected. **Table 4** of **Appendix A** shows the PCE concentrations by well location as well as the mean PCE concentrations and standard deviations of the means. Below the table are histograms that show the distribution of detected PCE concentrations with respect to the mean concentration. In all four cases, the histograms depict a normal distributions 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. It is the opinion of W&R that the normal distributions shown by the histograms are further evidence of the stability of PCE concentrations in groundwater near DSCA Site #49-0004. Based on these evaluations of the groundwater monitoring data, W&R concludes that Condition 1 is met.

*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.*

W&R evaluated the RCs calculated during the Tier 1 risk assessment and found that this condition has been met for all COCs and exposure pathways.

*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 Tier 1 evaluation for the site was based on the reasonable assumption that land-use conditions of the property where dry cleaning took place will remain commercial/industrial and that groundwater will not be utilized on the property. As discussed in **Section 6.0**, land-use restrictions (LUR) will be implemented for the property to ensure that future property owners are aware of groundwater contamination that exists beneath the former dry cleaning facility as well as the surrounding area and therefore the groundwater should not be utilized. Owners of the adjacent properties directly north and south of the site will also be notified that according to 15A NCAC 2C, the use or installation of water-supply wells is not allowed due to the presence of groundwater contamination on those properties.

*Condition 4: There are no ecological concerns at the site.*

W&R completed a Level 1 Ecological Risk Assessment for the site in accordance with the DSCA Program's RBCA guidance. The results of the evaluation indicate that the release does not pose an unacceptable ecological risk. The completed Level 1 Ecological Risk Assessment Checklists A and B and associated attachments are included in **Appendix B**.

Compliance of site conditions with the four conditions above referenced confirms that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future. Existing groundwater contamination is at low concentrations and is expected to naturally attenuate over time. The appropriate remedial action is therefore to implement land-use

restrictions on the site property and notify the adjacent property owners to the north and south that use or installation of water-supply wells is not allowed by North Carolina rules that govern well construction.

## **5.0 DATA COLLECTED DURING RMP IMPLEMENTATION**

Further sampling or other data collection activities are not proposed for the site, assuming the assumptions detailed in the LURs remain valid. As such, this section is not applicable.

## **6.0 LAND-USE RESTRICTIONS (LURs)**

The Tier 1 evaluation for the site was based on assumptions that usage of the site property will remain commercial/industrial and that groundwater will not be utilized on the property. LURs are implemented for the site property to ensure that land-use conditions are maintained and monitored until the LUR is no longer required for the site. A Notice of Dry-Cleaning Solvent Remediation (NDCSR) was prepared for the site to comply with the LUR requirement. The NDCSR is included in **Appendix C**. A plat showing the locations and types of dry-cleaning solvent contamination on the property is included as an exhibit to the NDCSR. The locations of dry-cleaning solvent contamination are where contaminants have been detected above unrestrictive use standards. **Appendix D** contains the NDCSRs for the non-source properties that are affected by groundwater contamination from the source property.

## **7.0 LONG-TERM STEWARDSHIP PLAN**

The NDCSR contains a clause which requires the owner of the site to submit a notarized "Annual DSCA Land Use Restrictions Certification" to NCDENR on an annual basis certifying that the NDCSR remains recorded with the Register of Deeds and that land-use conditions have

not changed. An example of such a notice is included in **Appendix E**. Documents relating to this site will be maintained by NCDENR and available for public access.

## **8.0 RMP IMPLEMENTATION SCHEDULE**

Since the contamination is stable and will naturally attenuate with time, and possible exposure to the contamination is managed through the NDCSR and LURs, 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 the proposed strategy. **Appendix F** includes example documents that will be used to announce the public comment period in the local newspaper, and to inform local officials, nearby property owners, and interested parties. Upon completion of the public comment period and final approval of the RMP, the NDCSR will be filed with the Iredell 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 LURs have been executed and recorded with the Iredell County Register of Deeds. The NDCSR may, at the request of the owner of the property, be canceled by NCDENR 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 remediation of the property. If NCDENR 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 LUR and if changes are required. Enforcement of the RMP will be maintained through receipt of the "Annual DSCA Land-Use Restrictions Certification" from the property owner as part of the NDCSR and LUR 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 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 NDCSR are violated, the owner of the site property 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**

W&R has prepared this RMP for the subject site on behalf of the NCDENR DSCA Program. The results of a previous Tier1 risk assessment indicated that contaminant concentrations at the site do not pose an unacceptable risk, and the groundwater contamination in the vicinity of the former dry cleaning operation appears to be stable or decreasing. This RMP specifies that the NDCSR and LUR 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, W&R recommends issuance of a "No Further Action" letter.

## **APPENDIX A**

### **DOCUMENTATION OF PLUME STABILITY EVALUATION**

May 6, 2011

William P. Meyer, Hydrogeologist  
DSCA Project Manager

North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Dry Cleaning Solvent Cleanup Act Program  
401 Oberlin Road, Suite 150  
Raleigh, North Carolina 27605

Subject: Plume Stability Evaluation  
DSCA #49-0004  
Campbell's Cleaners  
171 Wagner Street, Troutman, Iredell County

Dear Mr. Meyer,

Per your recent request, Withers & Ravenel is pleased to provide our evaluation of the stability of perchloroethene concentrations in groundwater in the vicinity of the subject site. Our involvement with this DSCA site began in 2008, after site characterization and plume delineation work had been completed by another DSCA contractor. Our work included collection and analysis of quarterly groundwater samples from seven of the thirteen monitoring wells installed on the subject site and surrounding properties (wells MW-3, MW-4, MW-5, MW-6, MW-9, MW-11 and MW-13). Following completion of a Tier 1 Risk Assessment, the decision was made to continue quarterly monitoring of five wells (MW-3, MW-5, MW-6, MW-9 and MW-10) to further document the apparent stability of perchloroethene (PCE) concentrations in groundwater. This evaluation provides a summary of the analytical results obtained over the course of two years of quarterly monitoring, and graphical and statistical analyses of the monitoring data.

The attached Table 1 summarizes the analytical results for the eight quarterly monitoring events, and the attached map shows the locations of the monitoring wells and their approximate distances from the location of the former dry cleaning machine, which is considered to be the source area. Out of all the volatile organic compounds included in an EPA Method 8260 analysis, only PCE has been detected at concentrations that exceed its North Carolina Groundwater Standard. More specifically, PCE has only been detected in samples we collected from monitoring wells MW-3, MW-4, MW-9 and MW-10, which are located relatively close to the DSCA Site #49-0004 source area. PCE concentration versus time charts for each of these wells are attached. Review of the charts indicates that concentrations of PCE in groundwater are generally very low, even at locations close to the source area, and that the concentrations are relatively stable or are decreasing with respect to time.

Table 2 shows the detected PCE concentrations for each quarterly monitoring event and the approximate distances between the monitoring wells and the source area. The PCE concentrations detected during each sampling event are plotted against distance from the source area on the

attached chart entitled "PCE Concentration vs Distance". Inspection of this chart reveals the range of PCE concentrations detected at each monitoring well over the course of the quarterly monitoring periods, and a consistent decrease in PCE concentration with increasing distance from the source area. This relationship is one line of evidence that implies that PCE concentrations in groundwater are stable, because if they were not, we would expect to see steadily increasing concentrations with increasing distance from the source area over time. Because there is no evidence of increasing PCE concentrations with increasing distance from the source area over time, the PCE plume appears to be in a condition of steady state.

Another line of evidence which suggest stability of PCE concentrations in groundwater over time are the maps showing the distribution of PCE in groundwater for each of the quarterly monitoring events (attached). Review of these maps reveals that the lateral extent of PCE concentrations in groundwater has remained relatively consistent over the monitoring period.

Table 3 shows descriptive statistics of PCE concentration data for each of the four monitoring wells where PCE has been detected. Table 4 shows the PCE concentrations by well location as well as the mean PCE concentrations and standard deviations of the means. Below the table are histograms that show the distribution of detected PCE concentrations with respect to the mean concentration. In all four cases, the histograms depict a normal distributions 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 distributions shown by the histograms are further evidence of the stability of PCE concentrations in groundwater near DSCA Site #49-0004.

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**

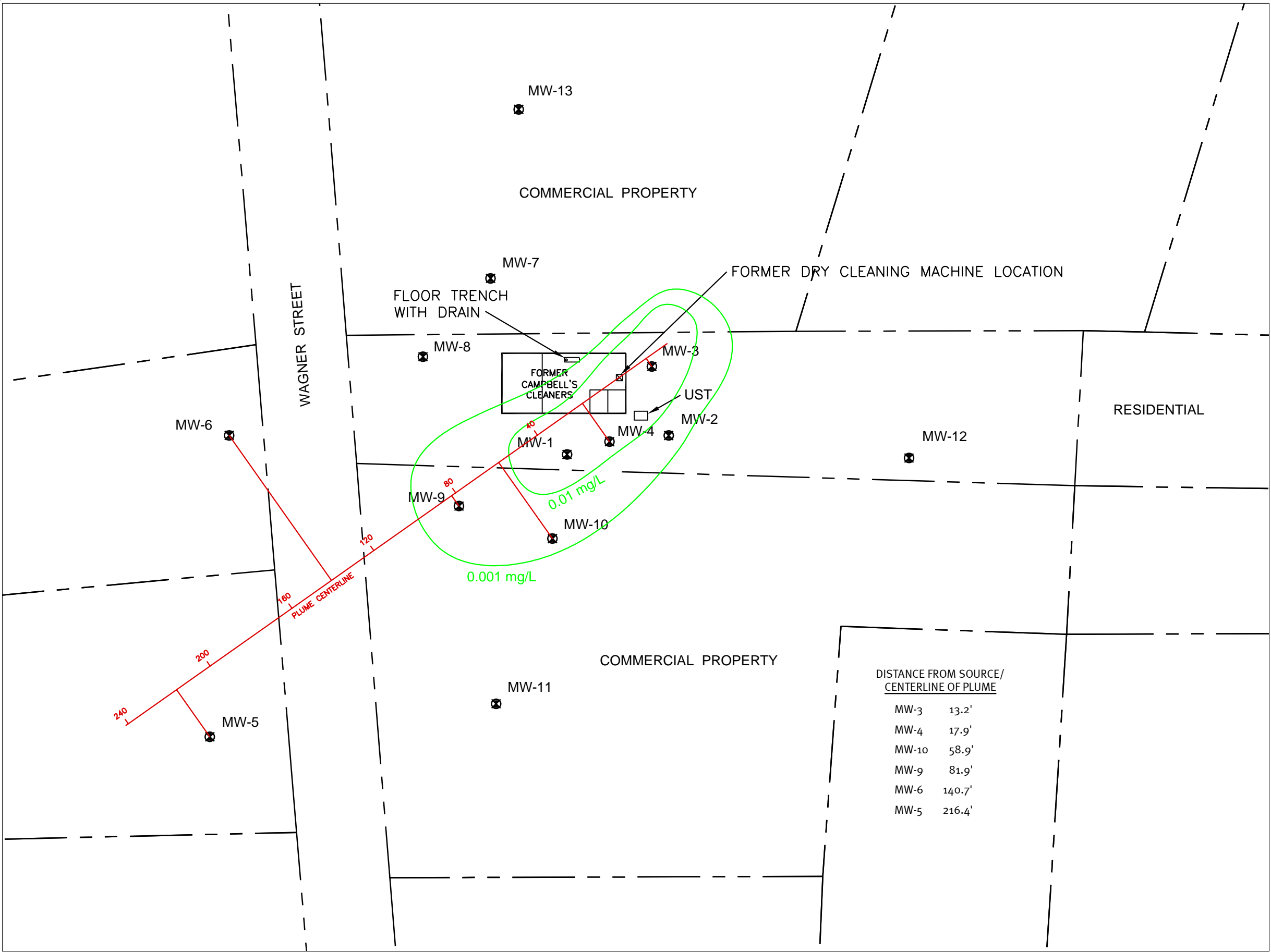
  
Brian J. Bellis, P.G.  
Project Manager



Attachments: Referenced Tables, Maps and Charts

**Table 1: Historical Analytical Table for Groundwater  
Campbells Cleaners: 171 Wagner Road, Troutman, Iredell County  
DSCA ID No.: 49-0004**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	I,1,1-Trichloroethane	I,1,2,2-Tetrachloroethane	I,1,2-Trichloroethane	I,1-Dichloroethane	I,1-Dichloroethylene	I,2-Dichloroethane (EDC)	Benzene	Benzo(a)pyrene	Carbon tetrachloride	Chloroform	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)
		[mg/L]																			
MW-3	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0217	<0.001	<0.001	<0.001	<0.001	<0.002
MW-3	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	<0.001	<0.002
MW-3	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.02	<0.005	<0.001	<0.001	<0.001	<0.003
MW-3	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0234	<0.005	<0.001	<0.001	<0.001	<0.003
MW-3	7/29/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0127	<0.005	<0.001	<0.001	<0.001	<0.003
MW-3	10/6/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	0.00026J	<0.001	<0.001	<0.005	0.0151	<0.005	<0.001	<0.001	<0.001	<0.003
MW-3	1/4/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0155	<0.005	<0.001	<0.001	<0.001	<0.003
MW-3	4/18/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0142	<0.005	<0.001	<0.001	<0.001	<0.003
MW-4	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0195	<0.001	<0.001	<0.001	<0.001	<0.002
MW-4	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0067	<0.001	<0.001	<0.001	<0.001	<0.002
MW-4	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.019	<0.005	<0.001	<0.001	<0.001	<0.003
MW-4	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0202	<0.005	<0.001	<0.001	<0.001	<0.003
MW-5	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-5	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-5	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-5	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-5	7/29/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-5	10/6/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	0.00031J	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	0.0013	<0.001	<0.003
MW-5	1/4/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-5	4/18/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-6	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-6	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-6	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-6	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-6	7/29/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	0.00025J	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-6	10/6/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	0.00062J	<0.001	<0.003
MW-6	1/4/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	0.00023J	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-6	4/18/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	0.0003J	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-9	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-9	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.005	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.00491	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	7/29/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0016	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	10/6/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0036	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	1/4/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0037	<0.005	<0.001	<0.001	<0.001	<0.003
MW-9	4/18/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0033	<0.005	<0.001	<0.001	<0.001	<0.003
MW-10	7/29/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0024	<0.005	<0.001	<0.001	<0.001	<0.003
MW-10	10/6/2010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0047	<0.005	<0.001	<0.001	<0.001	<0.003
MW-10	1/4/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0051	<0.005	<0.001	<0.001	<0.001	<0.003
MW-10	4/18/2011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	0.0048	<0.005	<0.001	<0.001	<0.001	<0.003
MW-11	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-11	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-11	3/31/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-11	6/23/2009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.003
MW-13	7/17/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-13	10/28/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MW-13	3/31/2009	<0.001	<0.001	<0.001	<0.00																



LEGEND

 **MW-1**  
0.0234  
MONITORING WELL LOCATION  
(PCE CONCENTRATION IN MG/L)

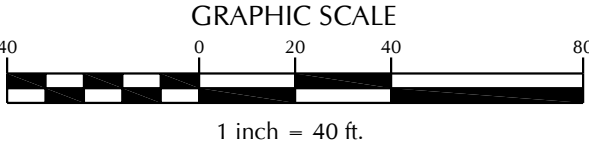
0.001  
PCE ISOPLETH (MG/L)

 PARCEL BOUNDARY

NS  
NOT SAMPLED AS PART OF QUARTERLY  
MONITORING PROGRAM

BDL  
BELOW DETECTION LIMIT

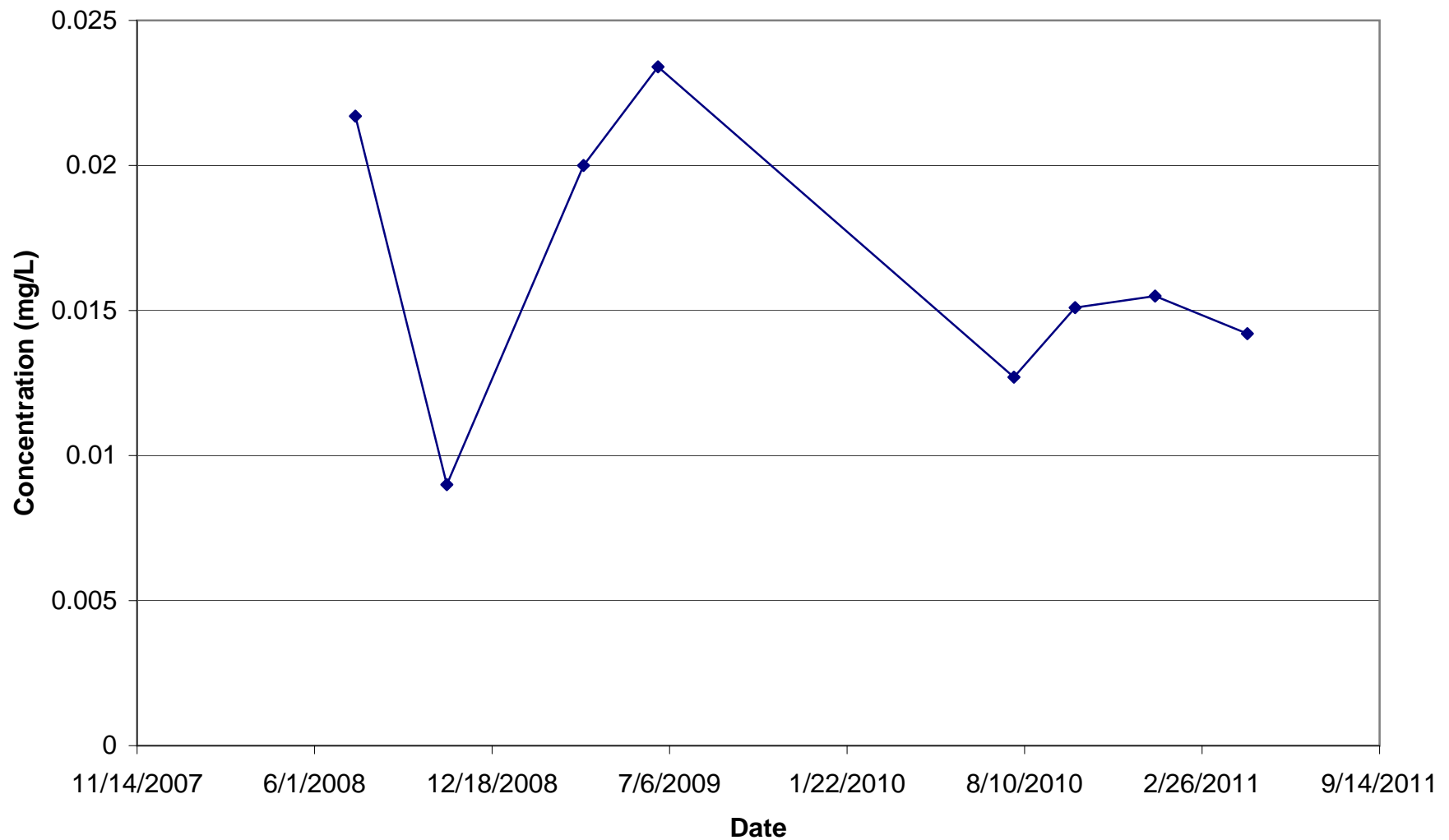
NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS. LOCATIONS  
OF EXISTING INTERNAL BUILDING WALLS ARE  
APPROXIMATE.



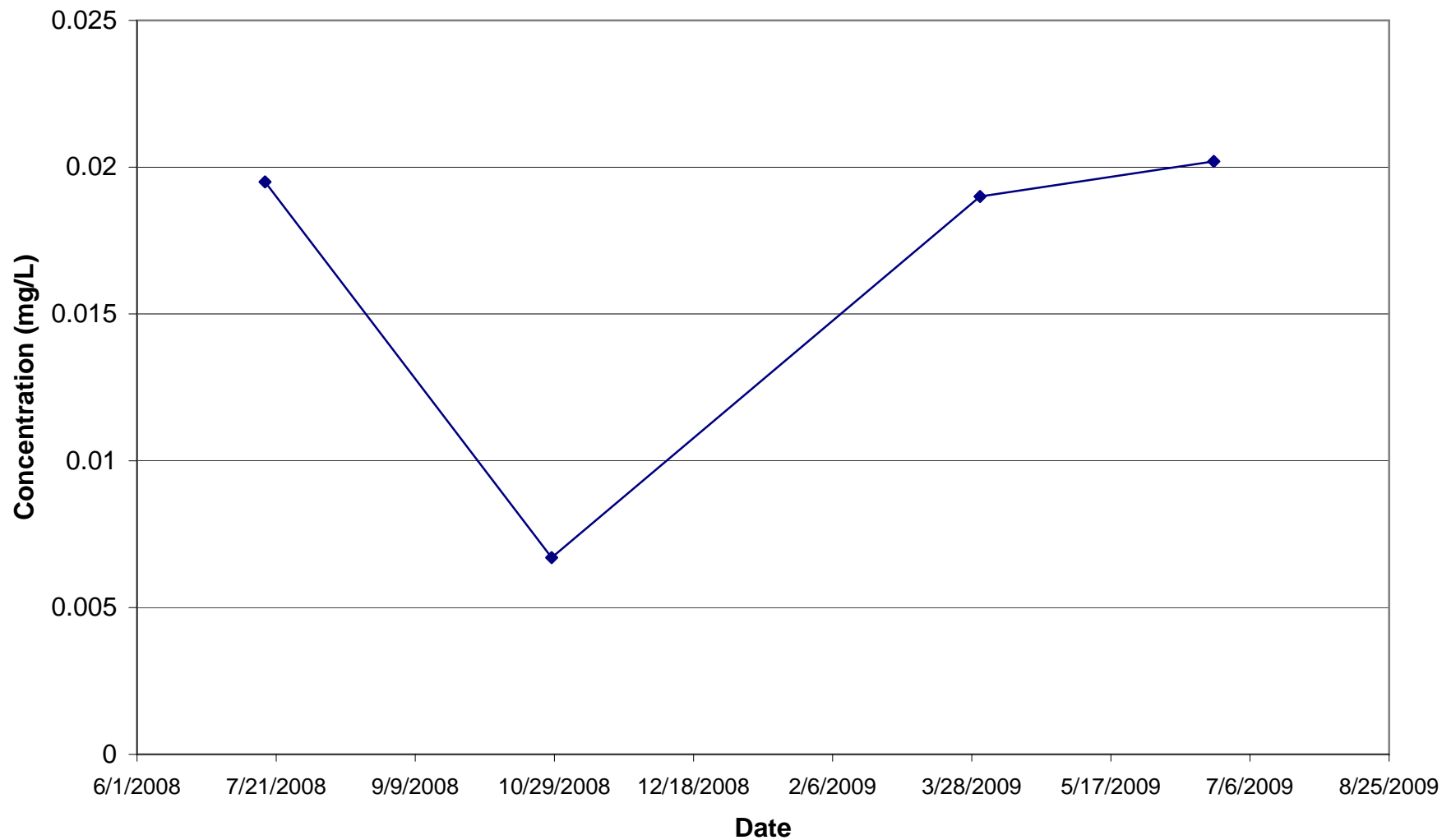
DISTANCE FROM SOURCE/  
CENTERLINE OF PLUME

MW-3	13.2'
MW-4	17.9'
MW-10	58.9'
MW-9	81.9'
MW-6	140.7'
MW-5	216.4'

## DSCA #49-0004 PCE vs Time: MW-3

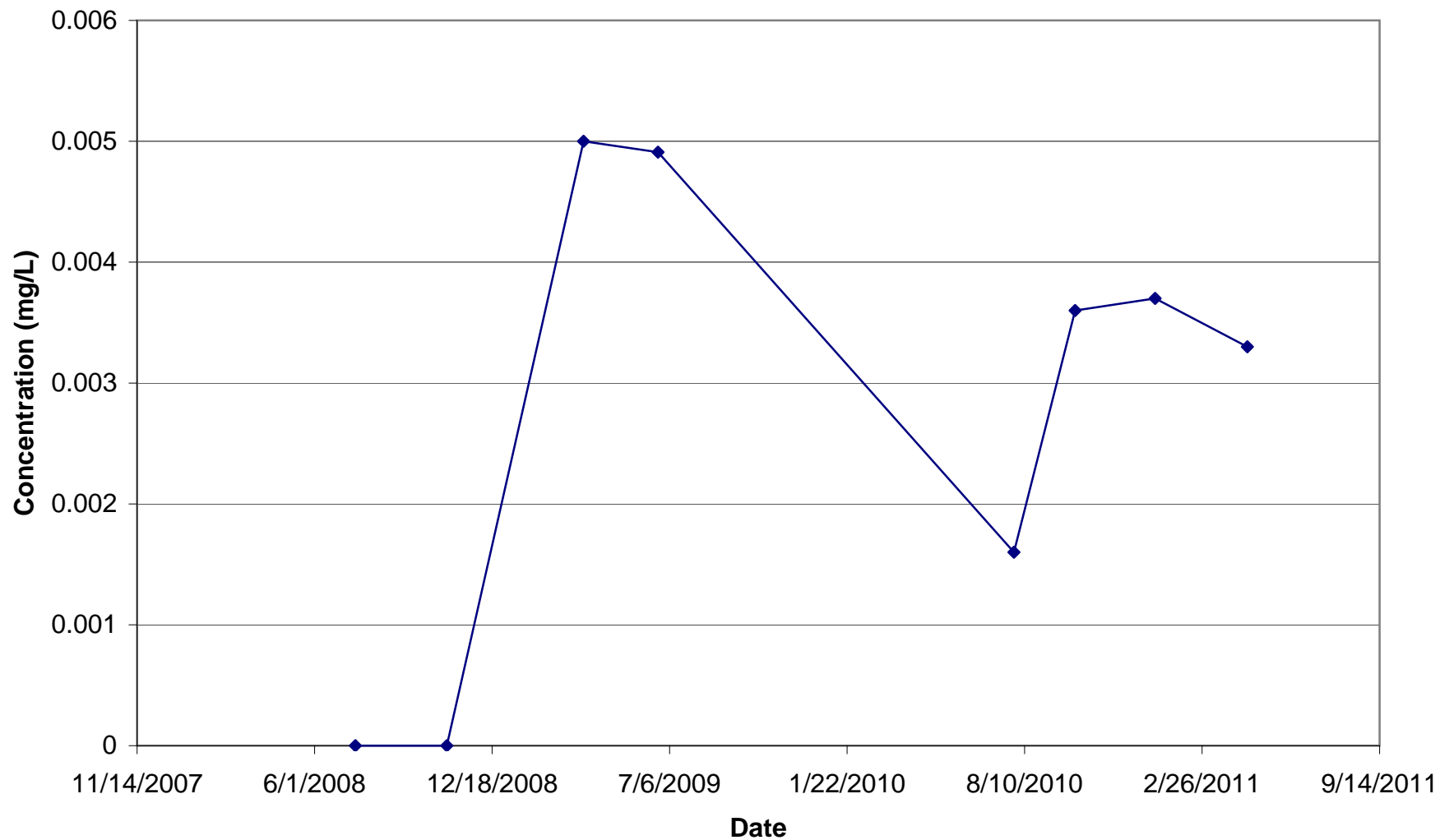


## DSCA #49-0004 PCE vs Time: MW-4

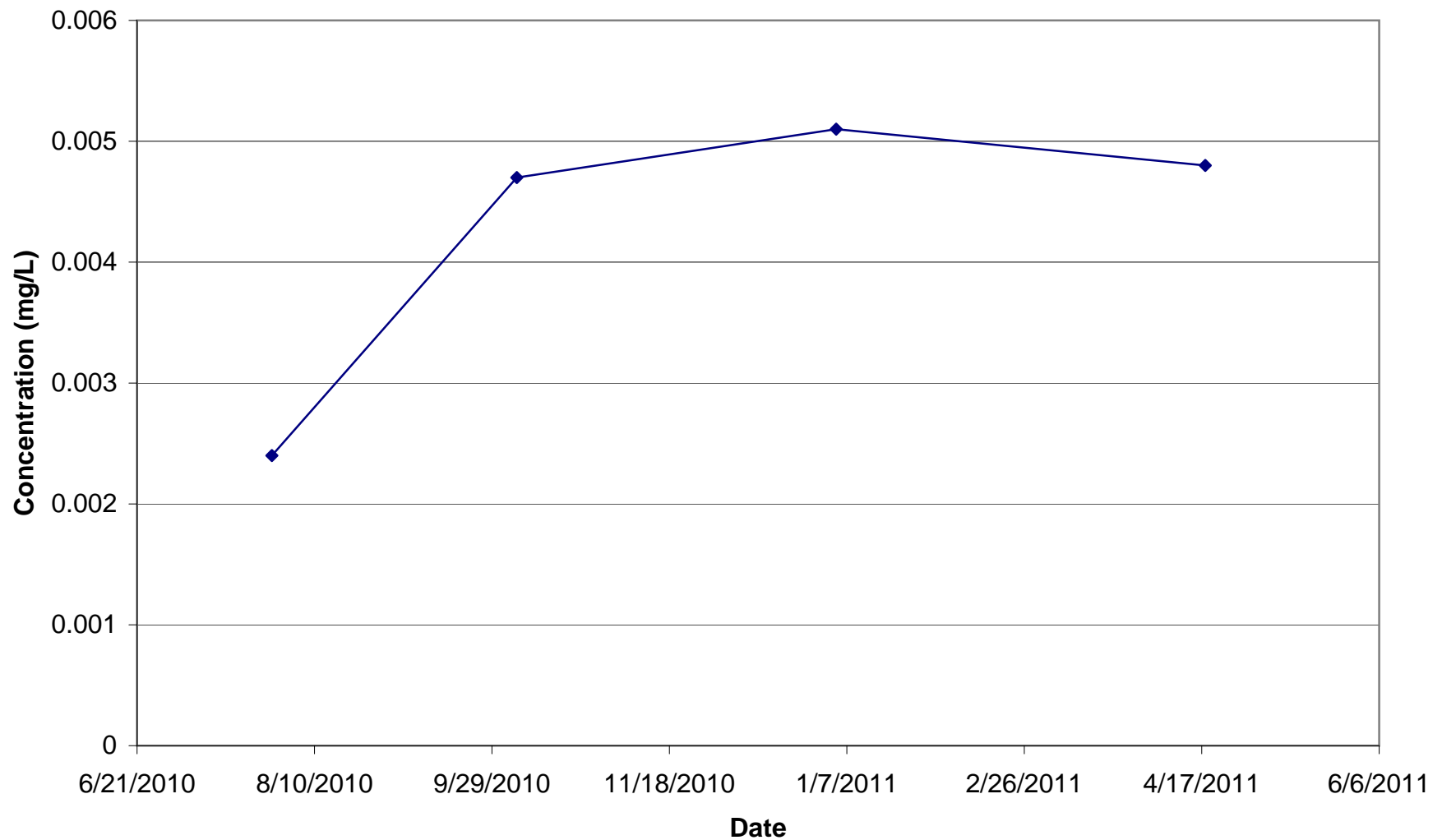




## DSCA #49-0004 PCE vs Time: MW-9



## DSCA #49-0004 PCE vs Time: MW-10



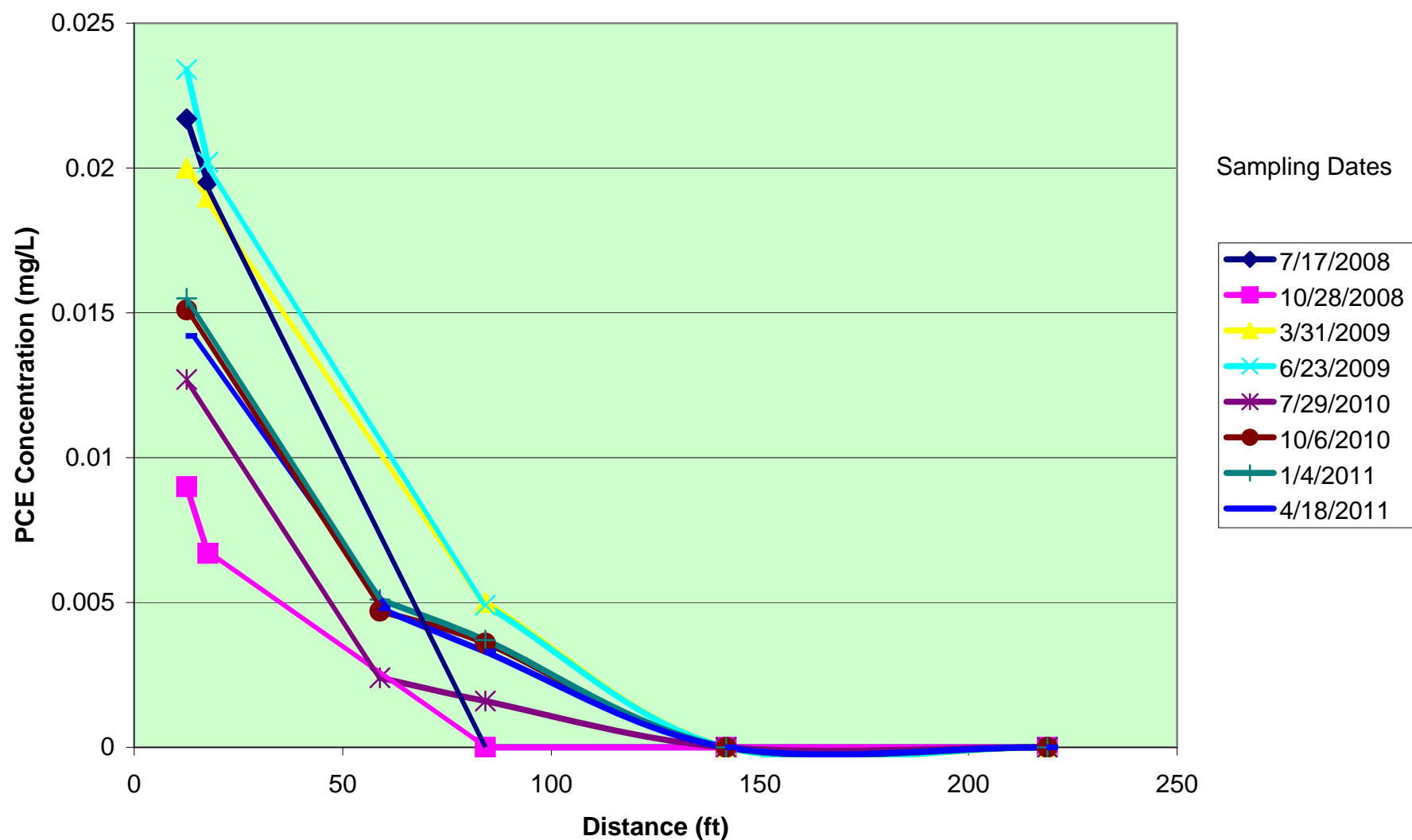
**Table 2: Summary of Quarterly Monitoring Results for PCE and Distance to Source Area  
DSCA #49-0004: Campbells Cleaners, Troutman, Iredell County**

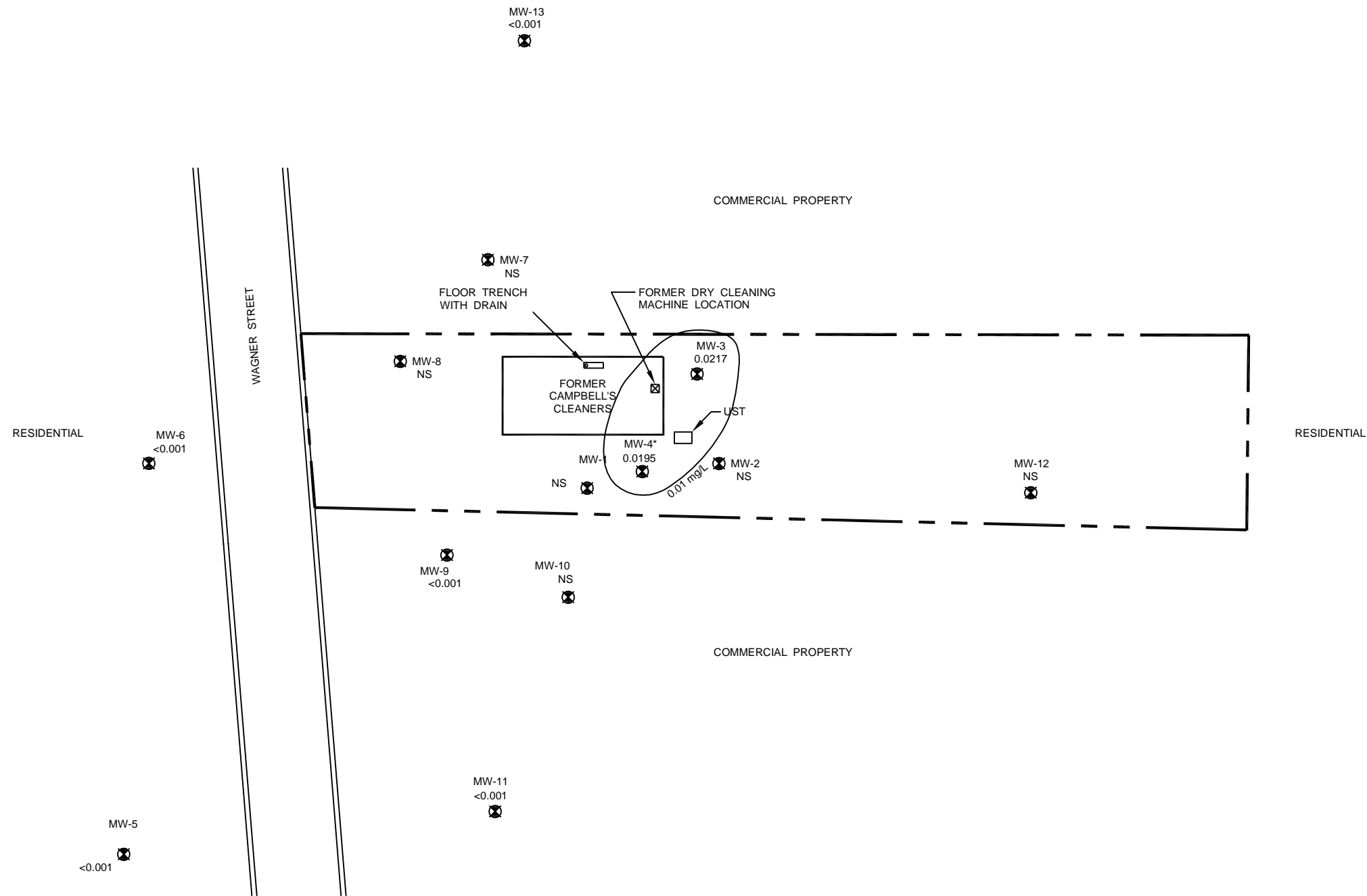
<i>Sampling Date</i>		7/17/2008	10/28/2008	3/31/2009	6/23/2009	7/29/2010	10/6/2010	1/4/2011	4/18/2011
<i>Well ID</i>	<i>Distance*</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>	<i>PCE mg/L</i>
MW-3	13	<b>0.0217</b>	<b>0.009</b>	<b>0.02</b>	<b>0.0234</b>	<b>0.0127</b>	<b>0.0151</b>	<b>0.0155</b>	<b>0.0142</b>
MW-4	18	<b>0.0195</b>	<b>0.0067</b>	<b>0.019</b>	<b>0.0202</b>	NS	NS	NS	NS
MW-10	59	NS	NS	NS	NS	<b>0.0024</b>	<b>0.0047</b>	<b>0.0051</b>	<b>0.0048</b>
MW-9	84	<0.001	<0.001	<b>0.005</b>	<b>0.00491</b>	<b>0.0016</b>	<b>0.0036</b>	<b>0.0037</b>	<b>0.0033</b>
MW-6	142	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-5	219	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

\* Approximate distance in feet from source area


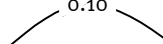

NS = Not sampled on this date

# DSCA #49-0004: PCE Concentration vs Distance



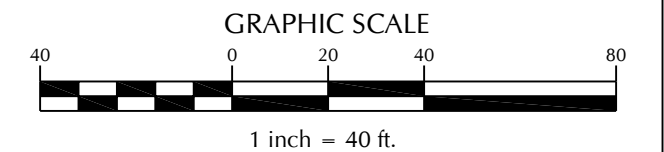


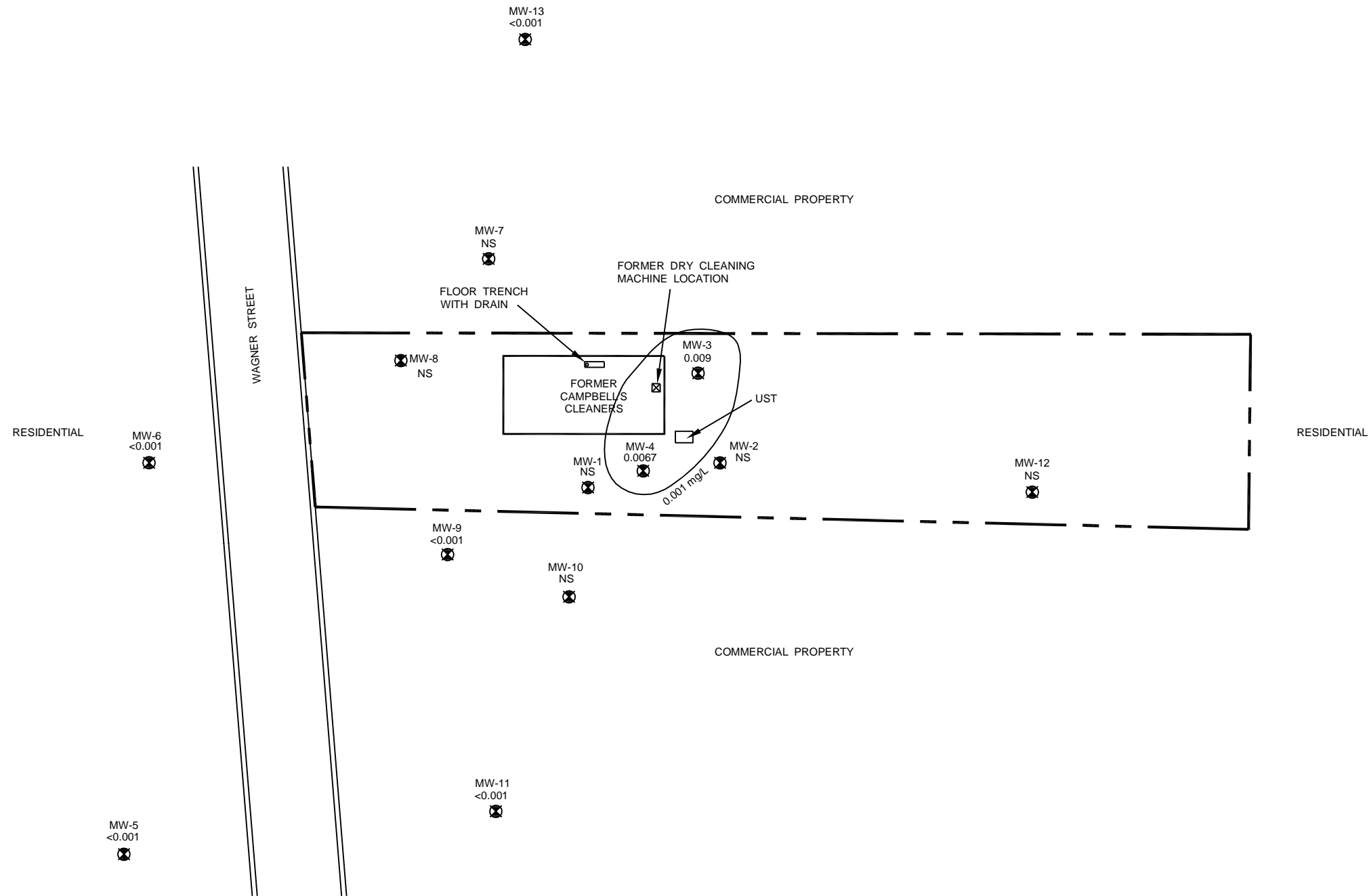
LEGEND

-  **WRMW-1**  
0.10  
Monitoring Well Location  
(PCE Concentration In mg/L)
-  0.10  
PCE Isopleth (ug/L)
-  Parcel Boundary
- NS  
Not Sampled as part of quarterly  
monitoring program


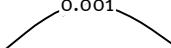

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.



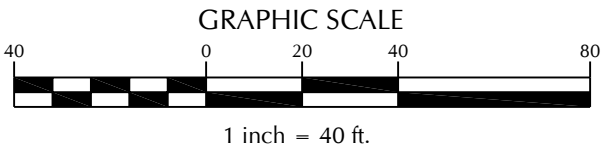


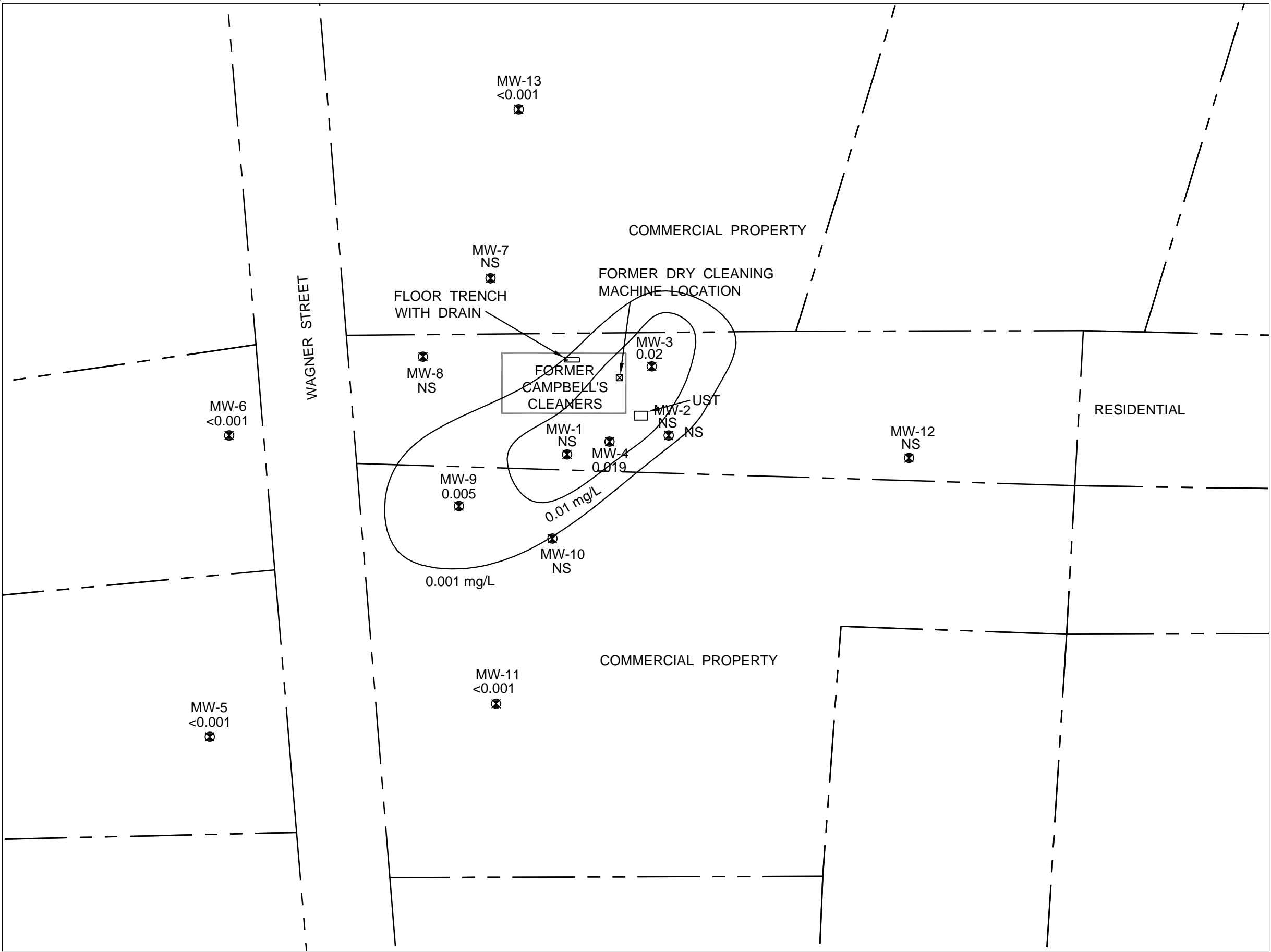
# LEGEND

-  **Monitoring Well Location**  
(PCE Concentration In mg/L)
-  **PCE Isopleth (mg/L)**
-  **Parcel Boundary**
- NS** **Not Sampled as part of quarterly monitoring program**

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.





LEGEND

WRMW-1  
0.10

Monitoring Well Location  
(PCE Concentration In mg/L)

0.001

PCE Isopleth (mg/L)

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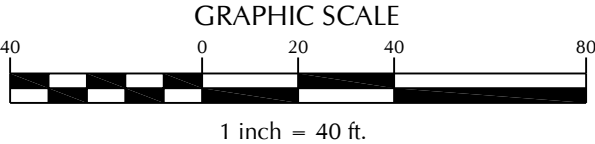
Parcel Boundary

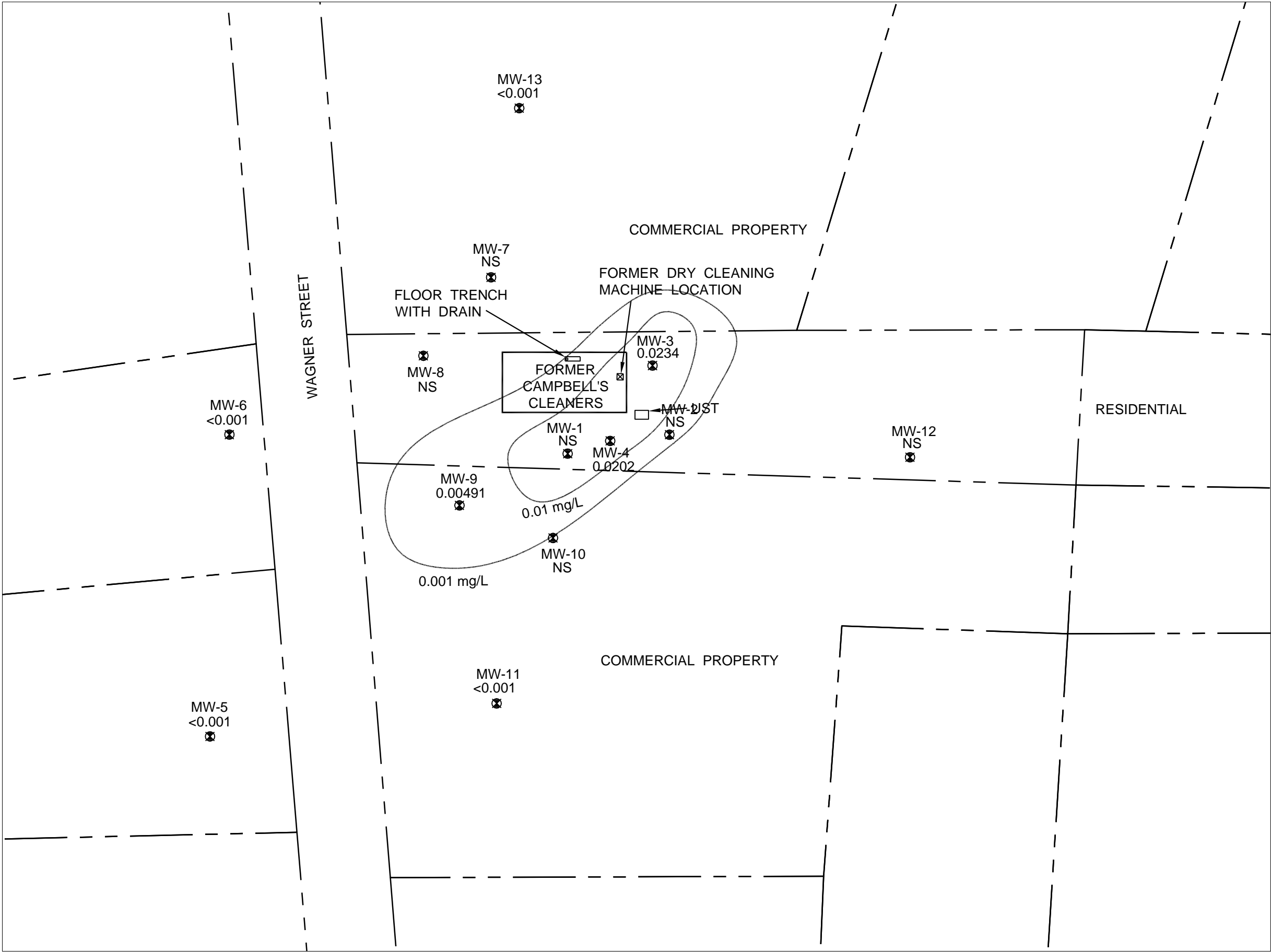
NS


Not Sampled as part of quarterly  
monitoring program

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.


LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.



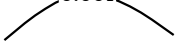





LEGEND

 **MW-1**  
0.0234

Monitoring Well Location  
(PCE Concentration In mg/L)

 0.001

PCE Isopleth (mg/L)



Parcel Boundary

NS


Not Sampled as part of quarterly monitoring program

NOTES:

ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

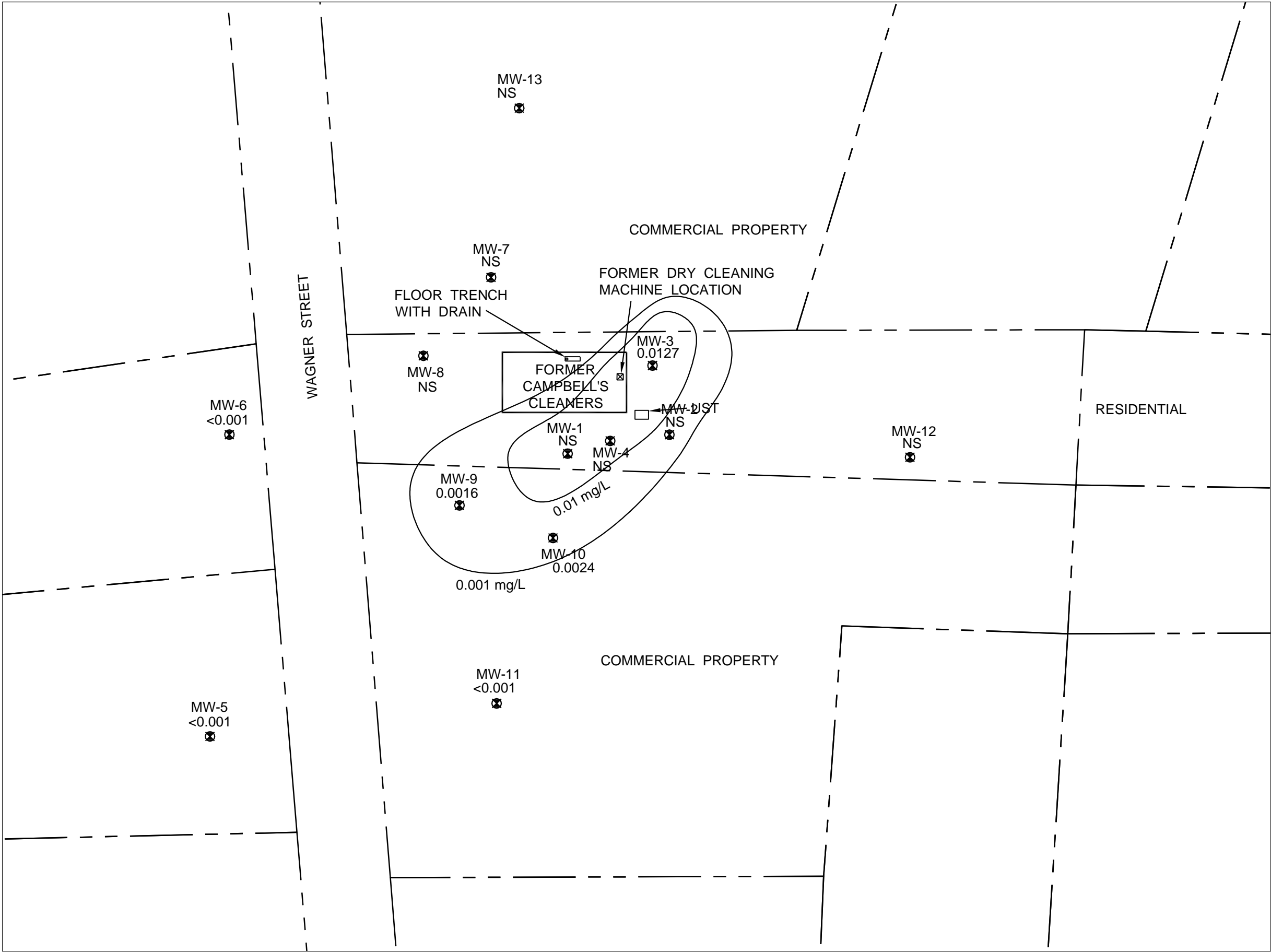
LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.

GRAPHIC SCALE



1 inch = 40 ft.





LEGEND

MW-1  
0.0234  
Monitoring Well Location  
(PCE Concentration In mg/L)

0.001  
PCE Isopleth (mg/L)

Parcel Boundary

NS  
Not Sampled as part of quarterly  
monitoring program

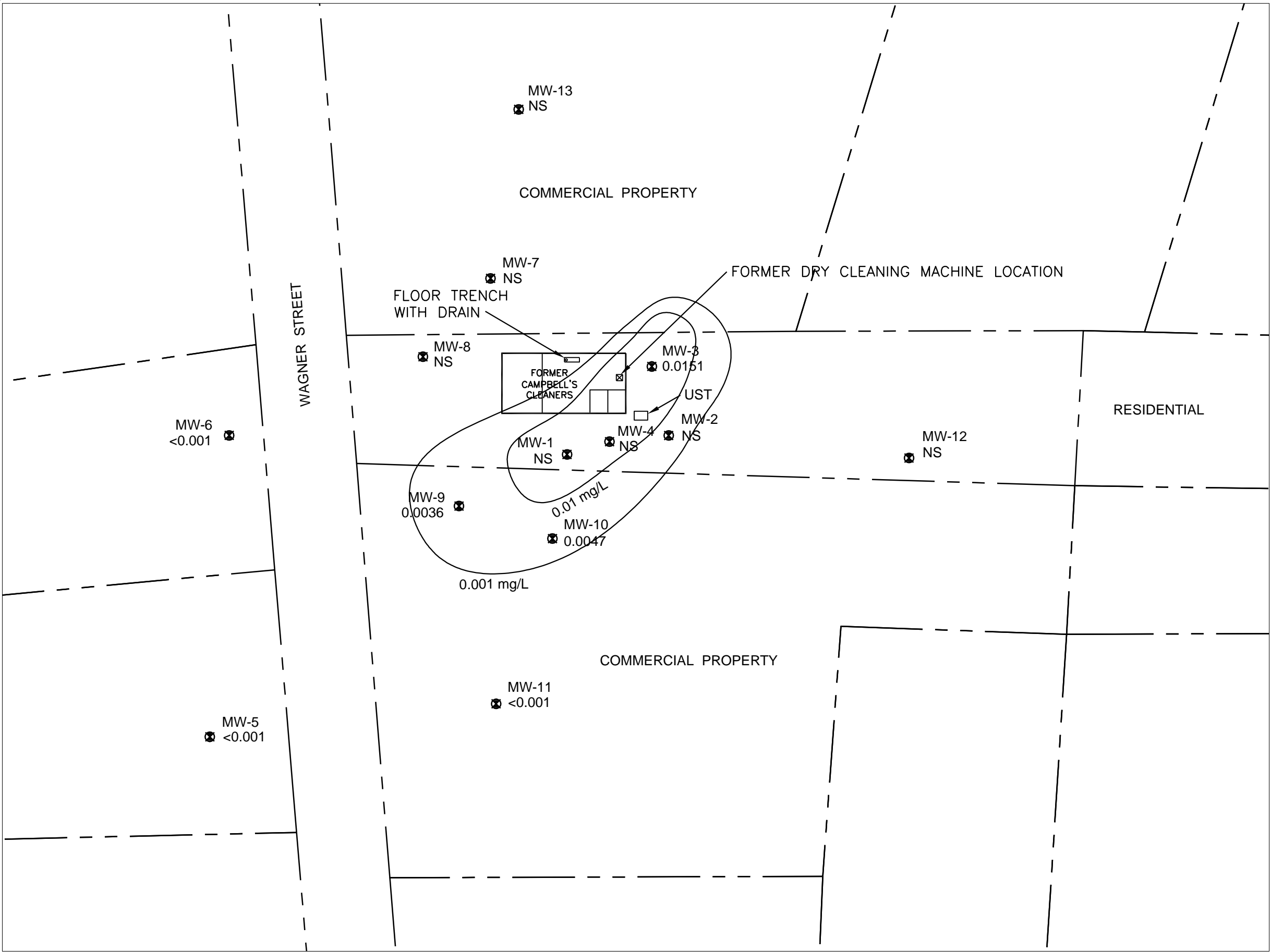
NOTES:

ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.

GRAPHIC SCALE

1 inch = 40 ft.



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0.001  
PCE Isopleth (mg/L)

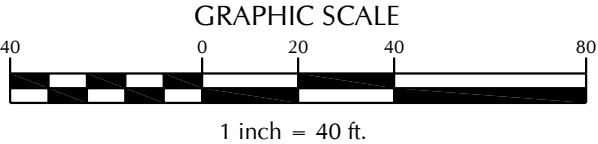
Parcel Boundary

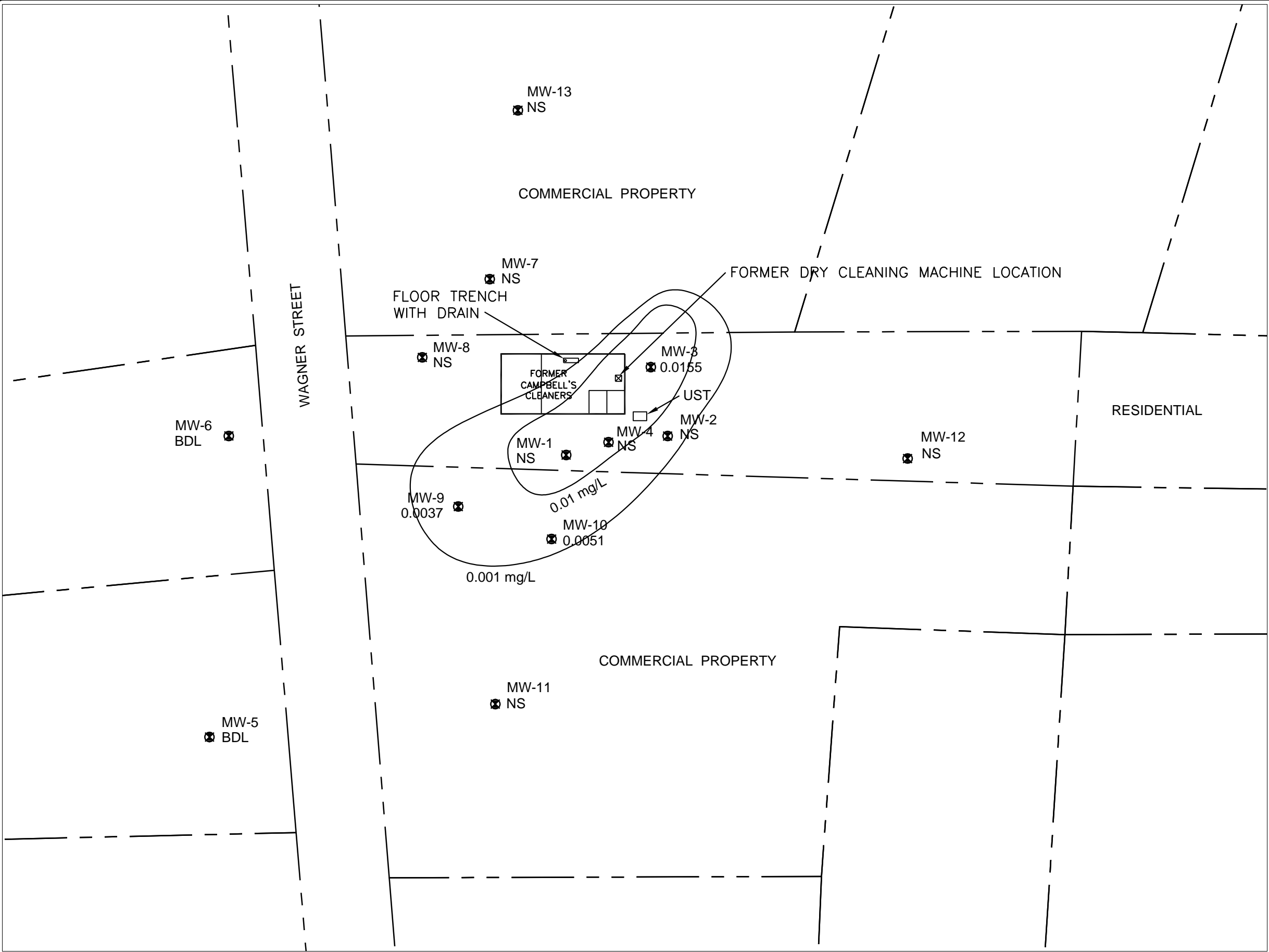
NS  
Not Sampled as part of quarterly  
monitoring program

BDL  
Below Detection Limit

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.





**LEGEND**

MW-1  
0.0234  
Monitoring Well Location  
(PCE Concentration In mg/L)

0.001  
PCE Isopleth (mg/L)

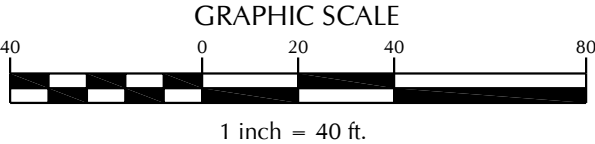
Parcel Boundary

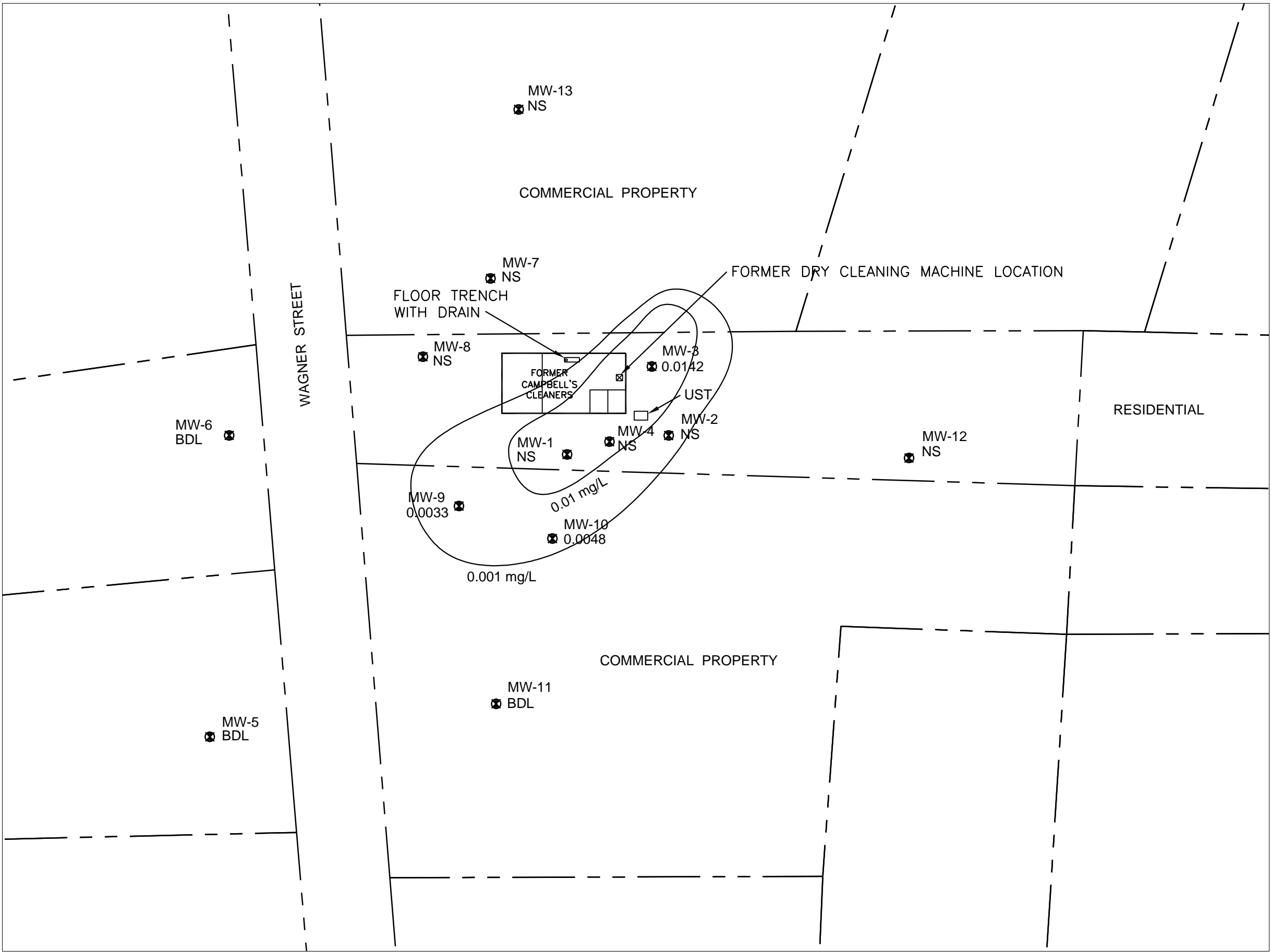
NS Not Sampled as part of quarterly  
monitoring program

BDL Below Detection Limit

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.





LEGEND

MW-1  
0.0234  
Monitoring Well Location  
(PCE Concentration In mg/L)

0.001  
PCE Isopleth (mg/L)

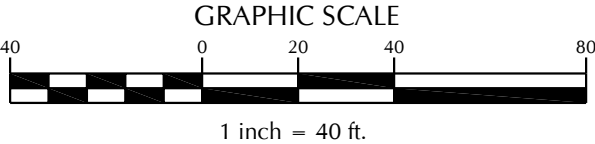
Parcel Boundary

NS Not Sampled as part of quarterly  
monitoring program

BDL Below Detection Limit

NOTES: ALL ANALYTICAL RESULTS IN mg/L.  
ONLY CHLORINATED COMPOUNDS (PCE) DETECTED  
IN INDIVIDUAL SAMPLES ARE SHOWN; SEE REPORT  
FOR COMPLETE ANALYTICAL RESULTS.

LOCATIONS OF EXISTING INTERNAL BUILDING  
WALLS ARE APPROXIMATE.



**Table 3: Descriptive Statistics for PCE Analysis Results**  
**DSCA #49-0004: Campbells Cleaners, Troutman, Iredell County**

<i>MW-3 PCE</i>		<i>MW-4 PCE</i>		<i>MW-9 PCE</i>		<i>MW-10 PCE</i>	
Mean	0.01645	Mean	0.01635	Mean	0.003014	Mean	0.00425
Standard Error	0.001721	Standard Error	0.003226	Standard Error	0.000575	Standard Error	0.000622
Median	0.0153	Median	0.01925	Median	0.00345	Median	0.00475
Mode	#N/A	Mode	#N/A	Mode	0.001	Mode	#N/A
Standard Deviation	0.004867	Standard Deviation	0.006452	Standard Deviation	0.001628	Standard Deviation	0.001245
Sample Variance	2.37E-05	Sample Variance	4.16E-05	Sample Variance	2.65E-06	Sample Variance	1.55E-06
Kurtosis	-0.892081	Kurtosis	3.886	Kurtosis	-1.689973	Kurtosis	3.659938
Skewness	0.073035	Skewness	-1.964987	Skewness	-0.174687	Skewness	-1.88627
Range	0.0144	Range	0.0135	Range	0.004	Range	0.0027
Minimum	0.009	Minimum	0.0067	Minimum	0.001	Minimum	0.0024
Maximum	0.0234	Maximum	0.0202	Maximum	0.005	Maximum	0.0051
Sum	0.1316	Sum	0.0654	Sum	0.02411	Sum	0.017
Count	8	Count	4	Count	8	Count	4
+1 STD D	0.021317	+1 STD D	0.022802	+1 STD D	0.004641	+1 STD D	0.005495
-1 STD D	0.011583	-1 STD D	0.009898	-1 STD D	0.001386	-1 STD D	0.003005

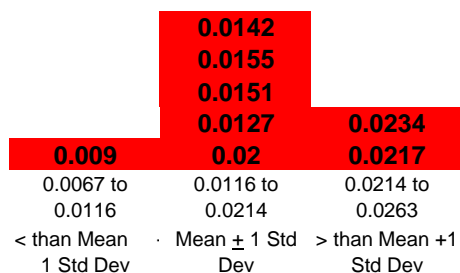
**Table 4: Summary of Quarterly Monitoring Results and Basic Statistics for PCE  
DSCA #49-0004: Campbells Cleaners, Troutman, Iredell County**

	Sampling Date	7/17/2008	10/28/2008	3/31/2009	6/23/2009	7/29/2010	10/6/2010	1/4/2011	4/18/2011	Statistics	
Well ID	Distance*	PCE mg/L	PCE mg/L	PCE mg/L	PCE mg/L	PCE mg/L	PCE mg/L	PCE mg/L	PCE mg/L	Mean	Std Dev
MW-3	13	<b>0.0217</b>	<b>0.009</b>	<b>0.02</b>	<b>0.0234</b>	<b>0.0127</b>	<b>0.0151</b>	<b>0.0155</b>	<b>0.0142</b>	0.0165	0.0049
MW-4	18	<b>0.0195</b>	<b>0.0067</b>	<b>0.019</b>	<b>0.0202</b>	NS	NS	NS	NS	0.0164	0.0065
MW-10	59	NS	NS	NS	NS	<b>0.0024</b>	<b>0.0047</b>	<b>0.0051</b>	<b>0.0048</b>	0.0043	0.0012
MW-9	84	<0.001	<0.001	<b>0.005</b>	<b>0.00491</b>	<b>0.0016</b>	<b>0.0036</b>	<b>0.0037</b>	<b>0.0033</b>	0.0030	0.0016
MW-6	142	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	NA
MW-5	219	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	NA

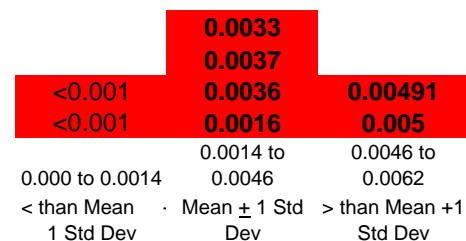
\* Approximate distance in feet from source area

NS = Not sampled on this date

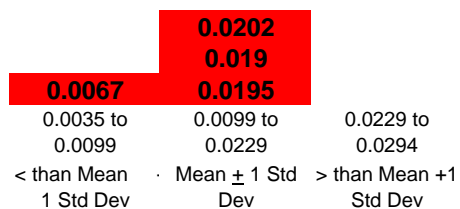
**MW-3 PCE mg/L**



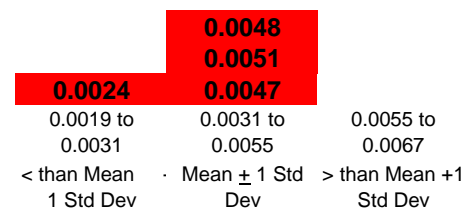
**MW-9 PCE mg/L**



**MW-4 PCE mg/L**



**MW-10 PCE mg/L**



## **APPENDIX B**

### **LEVEL 1 ECOLOGICAL RISK ASSESSMENT CHECKLISTS**

**Level 1 Ecological Risk Assessment**  
**Checklist A for Potential Receptors and Habitat**  
**DSCA # 49-0004**

1. Are there any navigable water bodies or tributaries to a navigable water body on or within one-half mile of the site? *Yes, unnamed tributaries to Hicks Creek, Rocky Creek, and I-L Creek are located within one-half mile of the site.*
- 2.
3. Are there any water bodies anywhere on or within one-half mile of the site? *Yes, unnamed tributaries to Hicks Creek, Rocky Creek, and I-L Creek are located within one-half mile of the site.*
4. Are there any wetland<sup>1</sup> areas such as marshes or swamps on or within one-half mile of the site? *No, there are no wetland areas within one-half mile of the site (Source: National Wetlands Inventory).*
5. Are there any sensitive environmental areas<sup>2</sup> on or within one-half mile of the site? *No, there are no sensitive environmental areas on or within one-half mile of the site (Source: NC One Map).*
6. Are there any areas on or within one-half mile of the site owned or used by local tribes? *No.*
7. 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. The list of endangered or threatened animal species for Iredell county include the Allegheny woodrat and the bog turtle. The list of endangered or threatened plant species for Iredell county include the dwarf-flowered heartleaf and the prairie birdsfoot-trefoil. This property would not be considered typically habitat for any of these species. (Source: U.S. Fish & Wildlife Service)*
8. Are there any breeding, roosting or feeding areas by migratory bird species on or within one-half mile of the site? *Not likely. Only possible habitat on site is a tree in the back of the property. No evidence of migratory bird habitat is known.*
9. Are there any ecologically<sup>3</sup>, recreationally or commercially important species on or within one-half mile of the site? *Not likely. See #7*
10. Are there any threatened and/or endangered species (plant or animal) on or within one-half mile of the site? *No. See #7*

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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<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.fw.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.

<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.



**Level 1 Ecological Risk Assessment**  
**Checklist B for Potential Exposure Pathways**  
**DSCA # 49-0004**

- 1A. Can chemicals associated with the site leach, dissolve, or otherwise migrate to groundwater? *Yes*  
1B. Are chemicals associated with the site mobile in groundwater? *Yes, but the plume is stable.*  
1C. Does groundwater from the site discharge to ecological receptor habitat? *Yes, where has been determined*

**Question 1. Could chemicals associated with the site reach ecological receptors through groundwater?** *Not likely. PCE concentrations have been very stable over time, and do not appear to be migrating further downgradient.*

- 2A. Are chemicals present in surface soils on the site? *Yes, low levels of PCE and naphthalene are present.*  
2B. Can chemicals be leached from or be transported by erosion of surface soils on the site? *Yes, chemicals within surface soils could be transported by erosion but this would be limited by the grass cover on site.*

**Question 2. Could chemicals associated with the site reach ecological receptors through runoff or erosion?** *Yes, the grassed areas could potentially produce runoff or erosion.*

- 3A. Are chemicals present in surface soil or on the surface of the ground? *Yes, PCE and naphthalene have been found in surficial soils.*  
3B. Are potential ecological receptors on the site? *Yes, some animals could live on-site in the tree/grassed areas.*

**Question 3. Could chemicals associated with the site reach ecological receptors through direct contact?** *Yes, chemicals in the surficial soils within the grassed areas could directly contact ecological receptors, however inspection of the site does not indicate an established habitat for wildlife.*

- 4A. Are chemicals on the site volatile? *Yes*  
4B. Could chemicals on the site be transported in air as dust or particulate matter? *Yes, within the grassed areas.*

**Question 4. Could chemicals associated with the site reach ecological receptors through inhalation of volatilized chemicals or adhered chemicals to dust in ambient air in subsurface burrows?** *Yes, there is the possibility of animals inhaling volatile chemicals or dust on-site.*

- 5A. Is Non-Aqueous Phase Liquid (NAPL) present at the site? *No*  
5B. Is NAPL migrating? *No*  
5C. Could NAPL discharge occur where ecological receptors are found? *No*

**Question 5. Could chemicals associated with the site reach ecological receptors through migration of NAPL?** *No, NAPL has not been identified at the site, and the low concentrations of COCs detected do not suggest that NAPL is present.*

- 6A. Are chemicals present in surface and shallow subsurface soils or on the surface of the ground? *Yes. See 3A.*  
6B. Are chemicals found in soil on the site taken up by plants growing on the site. *Yes, by grass growing over area where COCs were found in surficial soils (conservative assumption)*  
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 (conservative assumption)*  
6D. Do chemicals found on the site bioaccumulate. *No*

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

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

**Attachment 1****Examples of Sensitive Environments  
DSCA #49-0004**

Examples of environmentally sensitive areas include, but are not limited to, the following:

- National parks and national monuments, *None near site*
- Designated or administratively proposed federal wilderness areas, *None near site*
- National preserved, *None near site*
- National or state wildlife refuges, *None near site*
- National lakeshore recreational areas, *None near site*
- Federal land designated for protection of natural ecosystems, *None near site*
- State land designated for wildlife or game management, *None near site*
- State designated natural areas, *None near site*
- Federal or state designated scenic or wild river, *None near site*
- All areas that provide or could potentially provide critical habitat for state and federally listed threatened or endangered species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern, *None near site*
- Marine sanctuary, *None near site*
- Areas identified under the coastal zone management act, *None near site*
- Sensitive areas identified under the national estuary program or near coastal waters program, *None near site*
- Critical areas identified under the clean lakes program,
- National seashore recreational area, *None near site*
- Habitat known to be used by federal designated or proposed endangered or threatened species, *None near site*
- Unit of coastal barrier resources system, *None near site*
- Coastal barrier (undeveloped), *None near site*
- Spawning areas critical for the maintenance of fish/shellfish species within river, lake, or coastal tidal waters, *None near site*
- Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time, *None near site*
- Terrestrial areas utilized for breeding by large or dense aggregations of animals, *None near site*
- National river reach designated as recreational, *None near site*
- Habitat known to be used by state designated endangered or threatened species, *None near site*
- Habitat known to be used by species under review as to its federal endangered or threatened state, *None near site*
- Coastal barrier (partially developed), *None near site*
- Particular areas, relatively small in size, important to maintenance of unique biotic communities, *None near site*
- State designated areas for protection or maintenance of aquatic life, and *None near site*
- Wetlands. *None near site*

## **APPENDIX C**

### **ON-SITE NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

### **NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

Property Owner: Michael E. Cline and Linda R. Cline

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 Michael E. Cline and Linda R. Cline (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 171 Wagner Street, Troutman, Iredell County, North Carolina, Parcel Identification Number (PIN) 4731954174.**

**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 and is one of 3 parcels that makes up the contaminated site (hereinafter "Contaminated Site"). This Notice has been approved by the North Carolina Department of Environment and Natural Resources, or its successor in function (hereinafter "DENR") 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 Campbell's Cleaners (DSCA Site 49-0004) located at 171 Wagner Street, Troutman, Iredell County, North Carolina. Dry-cleaning operations were conducted on the Property from approximately 1948 to 2004.

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 DENR'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 DENR 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 DENR, 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 retail, commercial or industrial purposes and related amenities (parking, landscape areas and walkways), and all other uses of the Property are prohibited except as approved in writing by DENR.
2. Without prior written approval from DENR, 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 DENR.
4. No activities that cause or create a vapor intrusion risk (for example, construction of sub-grade structures that encounter contaminated soil or construction that places building users in close proximity to contaminated groundwater) may occur on the Property without prior approval of DENR.
5. 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 DSCA Land-Use Restrictions

**Certification to DENR certifying that this Notice remains recorded at the Register of Deeds' office, and that the Land-Use Restrictions are being complied with.**

- 6. 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 DENR may be denied access to the Property for the purpose of conducting such activities.**
- 7. 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 DENR, its agents, contractors, and employees, and any person performing pollution remediation activities under the direction of DENR, 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 DENR 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 DENR 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 DENR 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 DENR (or its successor in function), or his/her delegate, shall be subject to enforcement by DENR 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.

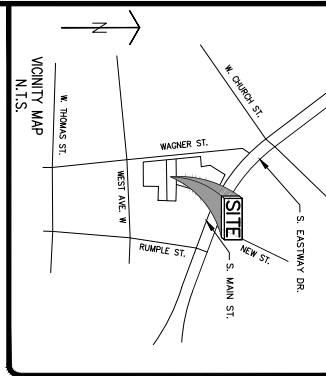
## **FUTURE SALES, LEASES, CONVEYANCES AND TRANSFERS**

When any portion of the Property is sold, leased, conveyed or transferred, pursuant to NCGS § 143-215.104M 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, a statement that the Property has been contaminated with dry-cleaning solvent and, if appropriate, cleaned up under the DSCA.

The Property Owner shall notify DENR at least fourteen (14) calendar days before the effective date of any conveyance, grant, gift, or other transfer, whole or in part, of the Owner's interest in the property, but such notification requirement does not apply with regard to the Property Owner's execution of a lease of any portion of the Property. This Notice shall include the name, business address and phone number of the transferee and the expected date of transfer.

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

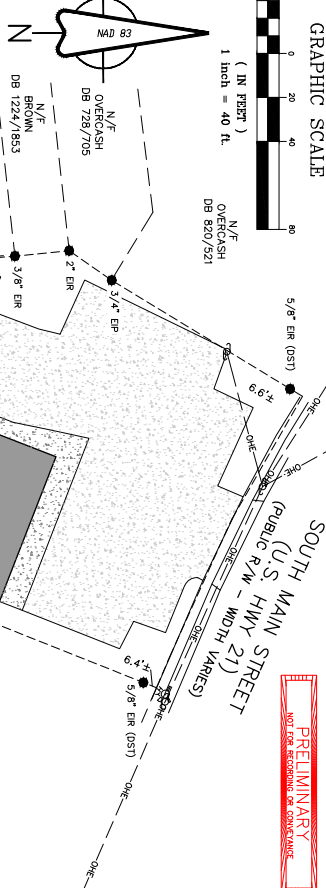




N.C.G.S. 143-215.10(a)(4) requires that when property for which a notice of dry-cleaning solvent remediation has been filed is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section, in no smaller type than the text of the deed or other instrument, the following language: "THIS PROPERTY HAS BEEN CONTAMINATED WITH DRY-CLEANING SOLVENT. A NOTICE OF DRY-CLEANING SOLVENT REMEDIATION IS RECORDED IN REDELL COUNTY REGISTER OF DEEDS OFFICE IN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_, DATED \_\_\_\_\_, 20\_\_\_\_. QUESTIONS CONCERNING THIS MATTER MAY BE REFERRED TO THE REDELL COUNTY PLANNING COMMISSION. HOWEVER, ANY FURTHER SUBMISSION OF THIS PROPERTY MAY BE SUBJECT TO THESE PROVISIONS."

THIS PROPERTY HAS BEEN CONTAMINATED WITH DRY-CLEANING SOLVENT. A NOTICE OF DRY-CLEANING SOLVENT REMEDIATION IS RECORDED IN REDELL COUNTY REGISTER OF DEEDS OFFICE IN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_, DATED \_\_\_\_\_, 20\_\_\_\_. QUESTIONS CONCERNING THIS MATTER MAY BE REFERRED TO THE REDELL COUNTY PLANNING COMMISSION. HOWEVER, ANY FURTHER SUBMISSION OF THIS PROPERTY MAY BE SUBJECT TO THESE PROVISIONS."

MAIL SERVICE CENTER, RALEIGH, NC 27699-1646



**PRELIMINARY**  
NOT FOR RECORDING OR CONVEYANCE

**Atlantic Coast Survey, PLLC**  
LICENSE P-0822  
PO Box 12588, Wilmington, NC 28405  
(910) 443-0080 www.atlanticcoastsurvey.com

**OWNERS CERTIFICATE:**  
I, Michael E. Cline, hereby certify that I have full authority to legally execute a deed for this property.  
**OWNER SIGNATURE:** Michael E. Cline (DATE) 11/11/2011  
**WITNESSES:** Linda R. Cline (DATE) 11/11/2011  
**NOTARY PUBLIC:** [Signature] (DATE) 11/11/2011  
**NOTARY PUBLIC (SIGNATURE):** [Signature] (DATE) 11/11/2011  
**NOTARY PUBLIC (COUNTY):** REDELL  
I, Michael E. Cline, hereby certify that I am a Notary Public of said County of REDELL, North Carolina, and that I am duly qualified to perform the duties of a Notary Public in and for said County.  
I, Linda R. Cline, hereby certify that I am a Notary Public of said County of REDELL, North Carolina, and that I am duly qualified to perform the duties of a Notary Public in and for said County.  
My Commission Expires: 11/11/2011

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I, Michael E. Cline, hereby certify that I have full authority to legally execute a deed for this property.  
**OWNER SIGNATURE:** Michael E. Cline (DATE) 11/11/2011  
**WITNESSES:** Linda R. Cline (DATE) 11/11/2011  
**NOTARY PUBLIC:** [Signature] (DATE) 11/11/2011  
**NOTARY PUBLIC (SIGNATURE):** [Signature] (DATE) 11/11/2011  
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**WITNESSES:** Linda R. Cline (DATE) 11/11/2011  
**NOTARY PUBLIC:** [Signature] (DATE) 11/11/2011  
**NOTARY PUBLIC (SIGNATURE):** [Signature] (DATE) 11/11/2011  
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**WITNESSES:** Linda R. Cline (DATE) 11/11/2011  
**NOTARY PUBLIC:** [Signature] (DATE) 11/11/2011  
**NOTARY PUBLIC (SIGNATURE):** [Signature] (DATE) 11/11/2011  
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My Commission Expires: 11/11/2011

**SUPERSEDED SECTION CERT APPROVAL:**  
APPROVED FOR THE PURPOSES OF NCOS 143-215.10(a)  
**DATE:** 11/11/2011  
**BY:** [Signature]  
**NOTARY PUBLIC (COUNTY):** REDELL  
I, Michael E. Cline, hereby certify that I am a Notary Public of said County of REDELL, North Carolina, and that I am duly qualified to perform the duties of a Notary Public in and for said County.  
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My Commission Expires: 11/11/2011

**SUPERSEDED SECTION CERT APPROVAL:**  
APPROVED FOR THE PURPOSES OF NCOS 143-215.10(a)  
**DATE:** 11/11/2011  
**BY:** [Signature]  
**NOTARY PUBLIC (COUNTY):** REDELL  
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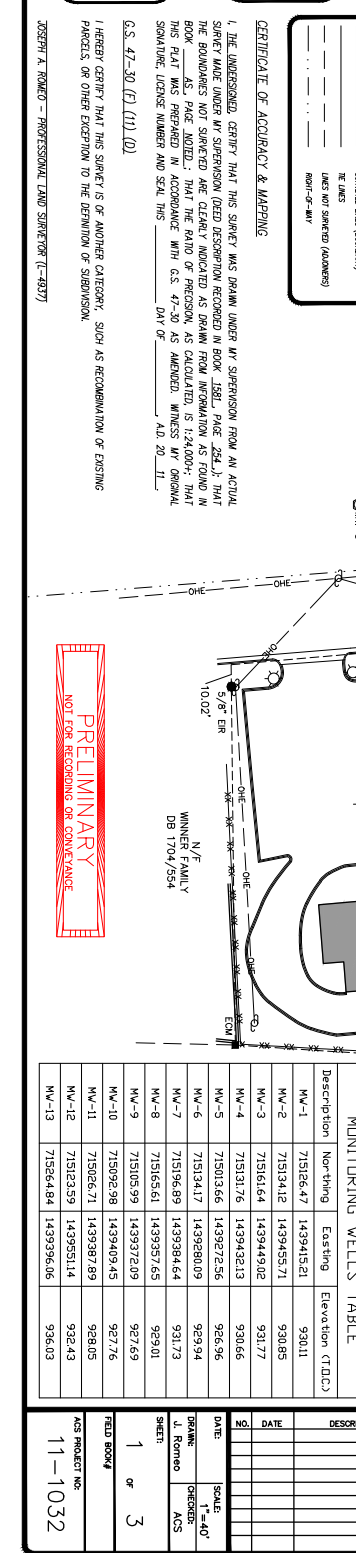
**SUPERSEDED SECTION CERT APPROVAL:**  
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**DATE:** 11/11/2011  
**BY:** [Signature]  
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My Commission Expires: 11/11/2011

**NOT SUBJECT TO:**  
THIS DEED IS NOT SUBJECT TO THE PROVISIONS OF THE REDELL COUNTY SUPERVISION COMMISSIONS AND DOES NOT REQUIRE THE APPROVAL OF THE REDELL COUNTY PLANNING COMMISSION. HOWEVER, ANY FURTHER SUBMISSION OF THIS PROPERTY MAY BE SUBJECT TO THESE PROVISIONS.  
**REDELL COUNTY PLANNING COMMISSION:** DATE 11/11/2011  
**NOTARY PUBLIC (COUNTY):** REDELL  
I, Michael E. Cline, hereby certify that I am a Notary Public of said County of REDELL, North Carolina, and that I am duly qualified to perform the duties of a Notary Public in and for said County.  
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My Commission Expires: 11/11/2011



MONITORING WELLS TABLE			
Description	North	East	Elevation (TIDC)
MW-1	715126.47	1439415.21	930.11
MW-2	715134.12	1439455.71	930.85
MW-3	715161.64	1439449.02	931.77
MW-4	715131.76	1439432.13	930.66
MW-5	715013.66	1439272.56	926.96
MW-6	715134.17	1439380.03	929.94
MW-7	715195.89	1439384.64	931.73
MW-8	715165.61	1439357.65	929.01
MW-9	715105.59	1439372.09	927.69
MW-10	715092.98	1439409.45	927.76
MW-11	715026.71	1439387.89	928.05
MW-12	715123.59	1439351.14	928.43
MW-13	715264.84	1439396.06	936.03

**NOT SUBJECT TO:**  
THIS DEED IS NOT SUBJECT TO THE PROVISIONS OF THE REDELL COUNTY SUPERVISION COMMISSIONS AND DOES NOT REQUIRE THE APPROVAL OF THE REDELL COUNTY PLANNING COMMISSION. HOWEVER, ANY FURTHER SUBMISSION OF THIS PROPERTY MAY BE SUBJECT TO THESE PROVISIONS.  
**REDELL COUNTY PLANNING COMMISSION:** DATE 11/11/2011  
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I, Linda R. Cline, hereby certify that I am a Notary Public of said County of REDELL, North Carolina, and that I am duly qualified to perform the duties of a Notary Public in and for said County.  
My Commission Expires: 11/11/2011

## CERTIFICATION OF REGISTER OF DEEDS

The foregoing documentary component of the Notice of Dry-Cleaning Solvent Remediation, and the associated plat, are certified to be duly recorded at the date and time, and in the Book and on the Page(s), shown on the first page hereof.

# Register of Deeds for Iredell County

By: \_\_\_\_\_  
(signature)

---

Date

Name typed or printed: \_\_\_\_\_

Deputy/Assistant Register of Deeds

**LIMITED POWER OF ATTORNEY**

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

**DENR and DENR’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 NORTH CAROLINA  
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]

**PROPERTY OWNER SIGNATURE**

IN WITNESS WHEREOF, Property Owner has caused this instrument to be duly executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Michael E. Cline and Linda R. Cline

By:

\_\_\_\_\_  
Name of contact

NORTH CAROLINA  
\_\_\_\_\_ COUNTY

I, \_\_\_\_\_, a Notary Public of the county and state aforesaid, certify that \_\_\_\_\_ personally came before me this day and acknowledged that he/she is Michael E. Cline and Linda R. Cline, 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 Environment and Natural Resources

By:

\_\_\_\_\_  
Jack Butler, Chief  
Superfund Section  
Division of Waste Management

\_\_\_\_\_  
Date

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

SOURCE SITE (FORMER CAMPBELL'S CLEANERS)

BEGINNING AT AN EXISTING IRON ROD (EIR) (REBAR) AT THE SOUTHWEST CORNER OF THE 1.387 ACRE PARCEL AS SHOWN ON MAP BOOK 44, PAGE 97 (RECORDS OF IREDELL COUNTY); THENCE WITH THE NORTHERLY LINE OF THAT CERTAIN PARCEL DESCRIBED IN DEED BOOK 1581, PAGE 254 S 89°24'34" E; 171.27 FEET TO AN EXISTING IRON ROD (EIR);

THENCE S 89°26'52" E, 118.66 FEET TO AN EXISTING IRON PIPE (EIP);

THENCE S 02°51'16" W, 61.13 FEET TO AN EIR;

THENCE ALONG THE NORTHERLY LINE OF THAT CERTAIN PARCEL DESCRIBED IN DEED BOOK 949, PAGE 630 N 88°40'45" W, 287.00 FEET TO A POINT ON OR NEAR THE RIGHT-OF-WAY OF WAGNER STREET;

THENCE N 00°03'40" E, 57.34 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 0.39 ACRES, MORE OR LESS (AS SURVEYED).

THE DESCRIBED PARCEL MAY ALSO BE SUBJECT TO ADDITIONAL RIGHT-OF-WAY WIDENING AND OTHER EASEMENTS AND ENCUMBRANCES OF RECORD.

**APPENDIX D**  
**NOTICES OF DRY-CLEANING SOLVENT REMEDIATION**  
**FOR NON-SOURCE PROPERTIES**

### **NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

Property Owner: Southeastern Consortium Properties Troutman, 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\_\_\_\_. 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 144 S Main Street, Iredell County, North Carolina, Parcel Identification Number (PIN) 4731954340.

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 and is one of three (3) parcels that make up the dry-cleaning solvent contamination site (hereinafter "Contamination Site"). This Notice has been approved by the North Carolina Department of Environment and Natural Resources, or its successor in function (hereinafter "DENR") 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 § 143-215.104I. A Notice will be recorded separately in each chain of title of the Contamination Site.

Groundwater under the Property is contaminated with dry-cleaning solvents associated with dry-cleaning operations at the former Campbell's Cleaners (DSCA Site 49-0004) located at 171 Wagner Street, Troutman, Iredell County, North Carolina.

Pursuant to N.C.G.S. § 143-215.104I, 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.

### **USE OF GROUNDWATER PROHIBITED BY STATE AND LOCAL REGULATIONS**

**Groundwater on this property contains contaminants that exceed unrestricted use standards. Pursuant to 15A North Carolina Administrative Code 02C .0107(b)(1), “(t)he source of water for any water supply well shall not be from a water bearing zone or aquifer that is contaminated.” Therefore, state law prohibits construction of a water supply well on this property unless it can be demonstrated that the water pumped from the well is not contaminated. Further, pursuant to North Carolina General Statute 87-88(c) and 15A North Carolina Administrative Code 02C .0112(a), no well may be constructed or maintained in a manner whereby it could be a source or channel of contamination of the groundwater supply or any aquifer.**

### **FUTURE SALES, LEASES, CONVEYANCES AND TRANSFERS**

When any portion of the Property is sold, leased, conveyed or transferred, pursuant to NCGS § 143-215.104M 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, a statement that the Property has been contaminated with dry-cleaning solvent and, if appropriate, cleaned up under the DSCA.

### **CANCELLATION OF THE NOTICE**

The Notice may, at the request of the Property Owner, be canceled by DENR after the risk to public health and the environment associated with the dry-cleaning solvent contamination and any other contaminants included in the DSCA Remediation Agreement have been eliminated as a result of remediation of the Property to unrestricted use standards.

**APPROVAL AND CERTIFICATION OF NORTH CAROLINA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES**

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

North Carolina Department of Environment and Natural Resources

By: \_\_\_\_\_  
Jack Butler, Chief  
Superfund Section  
Division of Waste Management

\_\_\_\_\_  
Date

STATE OF NORTH CAROLINA  
COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public, do hereby certify that  
\_\_\_\_\_ personally appeared before me this day and  
signed this Certification.

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

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

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

**CERTIFICATION OF REGISTER OF DEEDS**

The foregoing documentary component of the Notice of Dry-Cleaning Solvent Remediation, and the associated plat, are certified to be duly recorded at the date and time, and in the Books and Pages, shown on the first page hereof.

Register of Deeds for Iredell County

By: \_\_\_\_\_

Name typed or printed: \_\_\_\_\_

Deputy/Assistant Register of Deeds

\_\_\_\_\_ Date

**EXHIBIT A**

**SURVEY PLAT REDUCTION**



**EXHIBIT B**

**LEGAL DESCRIPTION FOR PROPERTY**

AFFECTED PARCEL (DOLLAR GENERAL STORE)

BEGINNING AT AN EXISTING IRON ROD (EIR) (REBAR) AT THE SOUTHWEST CORNER OF THE 1.387 ACRE PARCEL AS SHOWN ON MAP BOOK 44, PAGE 97 (RECORDS OF IREDELL COUNTY); THENCE N 04°39'24" W, 182.80 FEET TO AN EIR (FOUND DISTURBED AT THE TIME OF SURVEY); THENCE N 83°43'45" E, 76.68 FEET TO AN EIR;

THENCE N 04°44'09" W, 25.30 FEET TO AN EIR;

THENCE N 05°41'59" W, 24.83 FEET;

THENCE N 34°51'26" E, 23.53 FEET TO AN EXISTING IRON PIPE (EIP);

THENCE N 31°17'28" E, 101.54 FEET TO A POINT ON OR NEAR THE RIGHT-OF-WAY OF SOUTH MAIN STREET (US HWY 21);

THENCE S 60°01'40" E, 64.31 FEET TO A POINT;

THENCE S 65°41'26" E, 66.88 FEET TO A POINT;

THENCE S 66°46'08" E, 17.13 FEET TO A POINT;

THENCE S 21°40'15" W, 134.68 FEET TO A REBAR SET (RBS);

THENCE S 68°40'45" E, 16.50 FEET TO AN EIR;

THENCE S 18°16'31" W, 158.77 FEET TO AN EIR IN THE NORTHERLY LINE OF THAT CERTAIN PARCEL DESCRIBED IN DEED BOOK 1581, PAGE 254;

THENCE WITH SAID NORTHERLY LINE N 89°24'34" W; 171.27 FEET TO AN EIR AND THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 1.39 ACRES, MORE OR LESS (AS SURVEYED).

THE DESCRIBED PARCEL MAY ALSO BE SUBJECT TO ADDITIONAL RIGHT-OF-WAY WIDENING AND OTHER EASEMENTS AND ENCUMBRANCES OF RECORD.

### **NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

Property Owner: Branch Banking and Trust Company

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\_\_\_\_. 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 183 Wagner Street, Iredell County, North Carolina, Parcel Identification Number (PIN) 4731954074.

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 and is one of three (3) parcels that make up the dry-cleaning solvent contamination site (hereinafter "Contamination Site"). This Notice has been approved by the North Carolina Department of Environment and Natural Resources, or its successor in function (hereinafter "DENR") 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 § 143-215.104I. A Notice will be recorded separately in each chain of title of the Contamination Site.

Groundwater under the Property is contaminated with dry-cleaning solvents associated with dry-cleaning operations at the former Campbell's Cleaners (DSCA Site 49-0004) located at 171 Wagner Street, Troutman, Iredell County, North Carolina.

Pursuant to N.C.G.S. § 143-215.104I, 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.

### **USE OF GROUNDWATER PROHIBITED BY STATE AND LOCAL REGULATIONS**

**Groundwater on this property contains contaminants that exceed unrestricted use standards. Pursuant to 15A North Carolina Administrative Code 02C .0107(b)(1), “(t)he source of water for any water supply well shall not be from a water bearing zone or aquifer that is contaminated.” Therefore, state law prohibits construction of a water supply well on this property unless it can be demonstrated that the water pumped from the well is not contaminated. Further, pursuant to North Carolina General Statute 87-88(c) and 15A North Carolina Administrative Code 02C .0112(a), no well may be constructed or maintained in a manner whereby it could be a source or channel of contamination of the groundwater supply or any aquifer.**

### **FUTURE SALES, LEASES, CONVEYANCES AND TRANSFERS**

When any portion of the Property is sold, leased, conveyed or transferred, pursuant to NCGS § 143-215.104M 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, a statement that the Property has been contaminated with dry-cleaning solvent and, if appropriate, cleaned up under the DSCA.

### **CANCELLATION OF THE NOTICE**

The Notice may, at the request of the Property Owner, be canceled by DENR after the risk to public health and the environment associated with the dry-cleaning solvent contamination and any other contaminants included in the DSCA Remediation Agreement have been eliminated as a result of remediation of the Property to unrestricted use standards.

**APPROVAL AND CERTIFICATION OF NORTH CAROLINA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES**

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

North Carolina Department of Environment and Natural Resources

By: \_\_\_\_\_  
Jack Butler, Chief  
Superfund Section  
Division of Waste Management  
Date \_\_\_\_\_

STATE OF NORTH CAROLINA  
COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public, do hereby certify that  
\_\_\_\_\_ personally appeared before me this day and  
signed this Certification.

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

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

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

**CERTIFICATION OF REGISTER OF DEEDS**

The foregoing documentary component of the Notice of Dry-Cleaning Solvent Remediation, and the associated plat, are certified to be duly recorded at the date and time, and in the Books and Pages, shown on the first page hereof.

Register of Deeds for Iredell County

By: \_\_\_\_\_

Name typed or printed: \_\_\_\_\_

Deputy/Assistant Register of Deeds

\_\_\_\_\_  
Date

**EXHIBIT A**

**SURVEY PLAT REDUCTION**



**EXHIBIT B**

**LEGAL DESCRIPTION FOR PROPERTY**

AFFECTED PARCEL (BB&T BANK SITE)

COMMENCING AT AN EXISTING IRON ROD (EIR) (REBAR) AT THE SOUTHWEST CORNER OF THE 1.387 ACRE PARCEL AS SHOWN ON MAP BOOK 44, PAGE 97 (RECORDS OF IREDELL COUNTY); THENCE S 00°03'40" W, 57.34 FEET TO A POINT ON OR NEAR THE RIGHT-OF-WAY OF WAGNER STREET AN THE POINT OF BEGINNING FOR THIS DESCRIPTION.

THENCE FROM SAID POINT OF BEGINNING S 88°40'45" E, 287.00 FEET ALONG THE SOUTHERLY LINE OF THE PARCEL DESCRIBED IN DEED BOOK 1581, PAGE 254 TO AN EXISTING IRON ROD (EIR);

THENCE S 02°41'08" W; 59.48 FEET TO AN EXISTING IRON PIPE (EIP);

THENCE N 88°27'45" W, 90.14 FEET TO AN EIR;

THENCE S 03°46'17" W, 100.08 FEET TO AN EXISTING CONCRETE MONUMENT (ECM);

THENCE S 89°22'30" W, 172.89 FEET TO A POINT ON OR NEAR THE RIGHT-OF WAY OF SAID WAGNER STREET;

THENCE N 05°02'24" W, 166.00 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 0.81 ACRES, MORE OR LESS (AS SURVEYED).

THE DESCRIBED PARCEL MAY ALSO BE SUBJECT TO ADDITIONAL RIGHT-OF-WAY WIDENING AND OTHER EASEMENTS AND ENCUMBRANCES OF RECORD.

## **APPENDIX E**

### **EXAMPLE OF ANNUAL CERTIFICATION OF LAND-USE RESTRICTIONS**



**Site Name:** Former Campbell's Cleaners  
**Site Address:** 171 Wagner Street, Troutman, Iredell County, NC  
**DSCA ID No:** 49-0004

**ANNUAL CERTIFICIATION of LAND-USE RESTRICTIONS**

Pursuant to Condition #5 in a Notice of Dry-Cleaning Solvent Remediation (NDCSR) signed by Michael E. Cline and Linda R. Cline and recorded on \_\_\_\_\_, 20\_\_ at the Iredell County Register of Deeds Office, Michael E. Cline and Linda R. Cline hereby certifies, as an owner of at least part of the property that is the subject of the NDCSR, that the NDCSR remains recorded at the Iredell County Register of Deeds office and the land-use restrictions therein are being complied with.

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

Michael E. Cline and Linda R. Cline

By: \_\_\_\_\_  
Name typed or printed:

NORTH CAROLINA  
\_\_\_\_\_ COUNTY

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 Michael E. Cline and Linda R. Cline, and the foregoing certification was signed in its name 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 F**

### **EXAMPLE DOCUMENTS ANNOUNCING THE PUBLIC COMMENT PERIOD**



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

November 30, 2011

Iredell County Health Department  
Attn: Donna Campbell, Health Director  
318 Turnersburg Highway  
Statesville, NC, 28625

Subject: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 49-0004  
Former Campbell's Cleaners  
171 Wagner Street  
Troutman, Iredell County, North Carolina

Dear Ms. Campbell:

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. 143-215.104P, 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 Environment and Natural Resources (DENR).

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 on our website at [www.ncdsca.org](http://www.ncdsca.org), under "Public Notices".

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 \_\_\_\_\_, 20\_\_, until \_\_\_\_\_, 20\_\_. Written comments may be submitted to DENR no later than \_\_\_\_\_, 20\_\_. Written requests for a public meeting may be submitted to DENR no later than \_\_\_\_\_, 20\_\_. All such comments and requests should be sent to:

November 30, 2011

William P. Meyer, DSCA Remediation Unit  
Division of Waste Management, NC DENR  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646

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

If you have any questions, please feel free to contact me at (919) 707-8366.

Sincerely,

William P. Meyer, Project Manager  
DSCA Remediation Unit  
[billy.meyer@ncdenr.gov](mailto:billy.meyer@ncdenr.gov)

Attachments: Risk Management Plan

Cc: DSCA Site # 49-0004 File



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

November 30, 2011

Town of Troutman  
Attn: David Saleeby, Town Manager  
P.O. Box 26  
Troutman, NC 28166

Subject: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 49-0004  
Former Campbell's Cleaners  
171 Wagner Street  
Troutman, Iredell County, North Carolina

Dear Mr. Saleeby:

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. 143-215.104P, 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 Environment and Natural Resources (DENR).

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 on our website at [www.ncdsca.org](http://www.ncdsca.org), under "Public Notices".

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 \_\_\_\_\_, 20\_\_\_\_, until \_\_\_\_\_, 20\_\_\_\_. Written comments may be submitted to DENR no later than \_\_\_\_\_, 20\_\_\_\_. Written requests for a public meeting may be submitted to DENR no later than \_\_\_\_\_, 20\_\_\_\_. All such comments and requests should be sent to:

November 30, 2011

William P. Meyer, DSCA Remediation Unit  
Division of Waste Management, NC DENR  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646

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

If you have any questions, please feel free to contact me at (919)707-8366.

Sincerely,

William P. Meyer, Project Manager  
DSCA Remediation Unit  
[billy.meyer@ncdenr.gov](mailto:billy.meyer@ncdenr.gov)

Attachments: Risk Management Plan

Cc: DSCA Site # 49-0004 File

**Public Notice**

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

Former Campbell's Cleaners  
DSCA Site # 49-0004

Pursuant to N.C.G.S. §143-215.104L, on behalf of Michael E. Cline and Linda R. Cline, the North Carolina Department of Environment and Natural Resources' (DENR'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.

Former Campbell's Cleaners conducted dry-cleaning operations at 171 Wagner Street, in Troutman, North Carolina. Dry-cleaning solvent contamination has been identified in soil and/or groundwater at the following parcel(s):

171 Wagner Street, in Troutman, Iredell County: Parcel No. 4731954174  
144 S Main Street, in Troutman, Iredell County: Parcel No. 4731954340  
183 Wagner Street, in Troutman, Iredell County: Parcel No. 4731954074

An investigation of the extent of contamination has been completed. Based on the risks posed by the contamination, the proposed remedy involves land-use restrictions that will be implemented for the property to ensure that future property owners are aware of soil contamination that exists beneath the dry cleaning facility, and that groundwater beneath the properties should not be utilized.

The elements of the complete NOI are included in the Risk Management Plan (RMP) which is available online at [www.ncdsca.org](http://www.ncdsca.org), under "Public Notices".

***The public comment period begins \_\_\_\_\_, 20\_\_, and ends \_\_\_\_\_, 20\_\_.***

Comments must be in writing and submitted to DENR no later than \_\_\_\_\_, 20\_\_. Written requests for a public meeting may be submitted to DENR no later than \_\_\_\_\_, 20\_\_. Requests for additional information should be directed to Billy Meyer at (919)508-8415. All comments and requests should be sent to:

Billy Meyer, DSCA Remediation Unit  
Division of Waste Management, NC DENR  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

November 30, 2011

Southeast Consortium Properties Troutman  
P.O. Box 12  
West End, NC 27376

Subject: Dry-Cleaning Solvent Contamination  
Former Campbell's Cleaners  
171 Wagner Street  
Troutman, North Carolina

To Whom it Concerns:

The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the Former Campbell's Cleaners at 171 Wagner Street in Troutman. (The former dry-cleaning tenant space has been converted to office space.) A remedial strategy to address the site contamination has been prepared, and in accordance with the DSCA Program's statutes, the community has an opportunity to review and comment on the proposed strategy.

You are receiving this letter because your property lies within the area where dry-cleaning solvents have been detected in groundwater. An evaluation of the risks concluded that the contamination poses no unacceptable risks for the current use of your property. However, because groundwater under your property is contaminated, state regulations and local regulations prohibit the installation of a water supply well on this property. If the proposed remedy is approved, a notice will be recorded on the property deed indicating that groundwater is contaminated with dry-cleaning solvents and that regulations prohibit installation of a water supply well on the property. ***Please review the attached form as it provides important information about recording a notice.***

In accordance with the DSCA Program's statutes, the community has an opportunity to review and comment on the proposed remedial 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. We ask that you review these documents. If you do not have access to the internet, we ask that you contact us to request a hard copy of the complete NOI.



Dry-Cleaning Solvent Contamination  
171 Wagner Street, Troutman, NC  
DSCA Site # 49-0004  
Page 2

November 30, 2011

If you have questions, please contact me at 919-707-8366, or Pete Doorn at 919-707-8369.

Sincerely,

William P. Meyer, Project Manager  
DSCA Remediation Unit  
[billy.meyer@ncdenr.gov](mailto:billy.meyer@ncdenr.gov)

Attachments: Summary of the NOI

Cc: DSCA Site # 49-0004 File



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

**DSCA Site ID No.**

**49-0004**

***Owner Recordation Form***

If the proposed remedial strategy for DSCA Site #49-0004 is approved, a notice will be recorded on the property deed indicating that groundwater is contaminated with dry-cleaning solvents and that regulations prohibit installation of a water supply well on the property. The property owner may elect to record the DENR-approved notice by signing this form and returning it to the address below by <date of the end of comment period>. If you choose to record the notice, the notice and recordation instructions will be sent to you after the public comment period.

*NOTE: If you choose not to record the notice, you do not need to sign or return the form. If the proposed remedial strategy is approved, DENR will perform the recordation at its own expense.*

***By signing this form I attest to the following:***

- I am electing to record the DENR-approved notice at the Mecklenburg Register of Deeds office;
- I have the authority to record a notice on the property deed;
- I will record the notice within 15 days of receiving of the approved notice from NC DENR; and
- I accept responsibility for all costs associated with recording the notice at the Mecklenburg Register of Deeds office.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Business Name (if applicable)

Return to: Division of Waste Management, DSCA Program  
Attn : Billy Meyer  
1646 Mail Service Center  
Raleigh, NC 27699-1646

1646 Mail Service Center, Raleigh, North Carolina 27699-1646  
Phone: 919-707-8200 \ Internet: <http://portal.ncdenr.org/web/wm>

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North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

November 30, 2011

Archie and Glenda Miller  
204 Kendall Road  
Troutman, NC 28166

Subject: Dry-Cleaning Solvent Contamination  
Former Campbell's Cleaners  
171 Wagner Street  
Troutman, NC

To Whom it Concerns:

The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the Former Campbell's Cleaners facility at 171 Wagner Street in Troutman. (The former dry-cleaning tenant space is currently occupied as office space). The DSCA Program has prepared a remedial strategy to address the site contamination, and in accordance with our program's statutes, the community has an opportunity to review and comment on the proposed strategy. You are receiving this letter because your property is adjacent to the area contaminated with dry-cleaning solvents.

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 919-707-8366, or Pete Doorn at 919-707-8369.

Sincerely,

William P. Meyer, Project Manager  
DSCA Remediation Unit  
[billy.meyer@ncdenr.gov](mailto:billy.meyer@ncdenr.gov)

Attachments: Summary of the NOI

Cc: DSCA Site # 49-0004 File