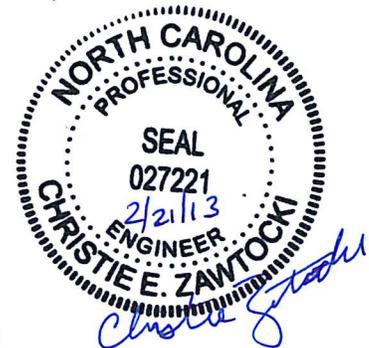


# Risk Management Plan Carolina Cleaners

DSCA ID No. 32-0016  
Chapel Hill, Durham County

North Carolina Dry-Cleaning  
Solvent Cleanup Act Program

H&H Job No. DS0-77A  
February 21, 2013



SMARTER ENVIRONMENTAL SOLUTIONS

**Risk Management Plan  
Carolina Cleaners  
DSCA ID No. 32-0016  
Chapel Hill, Durham County  
H&H Job No. DS0-77A**

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**Risk Management Plan  
Carolina Cleaners  
DSCA ID No. 32-0016  
Chapel Hill, Durham County  
H&H Job No. DS0-77A**

**1.0 Introduction**

Hart & Hickman, PC (H&H) has prepared this Risk Management Plan (RMP) to address dry-cleaning solvent contamination associated with the Carolina Cleaners site (DSCA Site #32-0016) on behalf of the North Carolina Department of Environment and Natural Resources (NCDENR) Dry-Cleaning Solvent Cleanup Act (DSCA) Program. The former drycleaner address was 2214 Nelson Highway (W. Highway 54) which is located on the parcel addressed as 2218 W. Highway 54 in Chapel Hill, Durham County, North Carolina. This RMP is intended to comply with the requirements of 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. A site location map is included as Figure 1, and a site map is included as Figure 2.

**2.0 RMP Objectives**

H&H performed a risk assessment to evaluate the cumulative site-wide risk under conservative residential land use scenarios. The results of the risk assessment indicate that site-wide risks do not exceed industrial target risk levels. However, the evaluation was based on site-specific land use conditions that require an RMP. As such, the objective of this RMP is to ensure that those site-specific land use conditions remain valid in the future.

**3.0 Summary of Approved Risk Assessment Report**

H&H submitted a Risk Assessment Report dated December 4, 2012 to the DSCA Program documenting a risk assessment evaluation of contamination associated with the site. The risk assessment evaluation included the development of an exposure model that consisted of an on-site exposure unit. The model accounted for potential exposure pathways within the on-site

exposure unit. Specifically, the exposure model consisted of the following complete exposure pathways:

On-Site Exposure Unit

- On-Site Resident – Current and Future Conditions – Surficial Soil – Outdoor Inhalation of Vapor Emissions and Particulates, Accidental Ingestion, and Dermal Contact
- On-Site Resident – Current and Future Conditions – Soil – Indoor Inhalation of Vapor Emissions
- On-Site Resident – Current and Future Conditions – Soil – Outdoor Inhalation of Vapor Emissions
- On-Site Resident – Current and Future Conditions - Groundwater (First Encountered Zone) - Indoor Inhalation of Vapor Emissions
- On-Site Non-Resident – Current and Future Conditions - Groundwater (First Encountered Zone) - Outdoor Inhalation of Vapor Emissions
- On-Site Construction Worker – Soil up to Depth of Construction - Combined Pathway: Outdoor Inhalation of Vapor Emissions and Particulates, Accidental Ingestion, and Dermal Contact

Note that the site property is zoned for commercial use and, therefore, residential land use is unlikely in the future. However, H&H evaluated residential land use in the exposure model to minimize future land use restrictions.

For each complete pathway, representative concentrations (RCs) were calculated for use in the risk assessment model. For soil and groundwater, the maximum concentrations from soil and groundwater samples in the area of maximum contaminant concentrations were used as the RCs. For the current indoor air pathway, RCs were calculated using the maximum concentrations from indoor air samples collected inside the current site building. For the future indoor air pathway, RCs were calculated using maximum concentration from sub-slab vapor samples collected at the site.

The current and future indoor air exposure pathways were modeled using the DSCA Program cumulative risk calculators for indoor air and soil gas, respectively. The other exposure pathways were modeled using GSI Environmental Inc.'s RBCA Tool Kit for Chemical Releases, Version 2.6 (GSI software). The results of the cumulative risk assessment indicate risks for the residential and construction worker receptors were below allowable risk levels for each respective pathway under both current and future conditions. Because the site passed the risk evaluation for residential pathways, the site property does not need to be restricted to non-residential land use. Because the hazard index for future conditions is 0.97 (just below the allowable level of 1), land use controls will be implemented to restrict activities that could cause or create a vapor intrusion risk.

In addition to the above-referenced pathways, H&H evaluated the protection of groundwater use pathway using the maximum concentrations detected in soil and groundwater as the RCs. A hypothetical point of exposure (POE) was placed at the nearest downgradient property boundary 182 feet from the groundwater source and 209 feet from the soil source. Site-specific and default fate and transport parameters were input into the GSI software to calculate Site-Specific Target Levels (SSTLs). Source area soil and groundwater concentrations do not exceed the SSTLs for the groundwater protection pathway. However, the protection of groundwater use model is based on the assumption that land use controls will be implemented at the site that restrict the installation of water supply wells.

The nearest surface water body is an unnamed tributary of Jordan Lake located greater than 600 feet west and downgradient of the site. Based on the distance to the nearest surface water body and the low site contaminant concentrations, the protection of surface water pathway was not considered complete and was not evaluated as part of the risk assessment.

Based on the results of the risk assessment, H&H concluded that risk associated with the contamination at the site could be managed through implementation of land use restrictions (LURs) for the source property, as detailed in this RMP. Therefore, the Risk Assessment Report recommended risk-based closure for the site.

## 4.0 RAP Components

### 4.1 Summary of Prior Assessment and Interim Action

The former Carolina Cleaners operated at 2214 Nelson Highway (W. Highway 54) in Chapel Hill, North Carolina. The site property consists of one parcel of land totaling 1.344 acres with the former dry-cleaning facility building and one other commercial building. Dry-cleaning operations were conducted at the Carolina Cleaners facility between 1998 and 2008. The former dry-cleaning facility building is currently occupied by medical offices.

A Limited Soil Assessment was conducted at the site in July 2008 by ATC and identified tetrachloroethene (PCE) in soil samples collected in the vicinity of the former dry-cleaning machines at concentrations ranging from 0.00096 mg/kg to 0.05 mg/kg. In addition, low concentrations of trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and/or ethylbenzene were detected in the soil samples.

On October 17, 2008, the site was certified into the DSCA Program. In December 2008, Withers & Ravenel (W&R) conducted assessment activities at the site including the advancement of twenty-four soil borings (WR-1 through WR-24) for soil sample collection, installation and sampling of four Type II monitoring wells (MW-1 through MW-4), and installation and sampling of four temporary wells (TW-5 through TW-8). PCE and TCE were detected in soil samples collected around a southern drainage trench at concentrations above DSCA Tier 1 RBSLs. Cis-1,2-DCE, trans-1,2-dichloroethene, toluene, ethylbenzene, and total xylenes were also detected in soil samples collected inside the building, but at concentrations below their respective Tier 1 RBSLs. Only one groundwater sample, collected from temporary well TW-5, contained detectable concentrations of dry-cleaning related constituents. PCE, TCE, and cis-1,2-DCE were detected in temporary well TW-5 at concentrations of 0.0023 mg/L, 0.0021 mg/L, and 0.002 mg/L, respectively. The detected PCE and TCE concentrations exceed their respective DSCA Tier 1 RBSLs of 0.0007 mg/L and 0.001 mg/L.

Based on the results of the December 2008 assessment activities, soil and groundwater impacts appeared to be limited to beneath the building slab in the vicinity of the drainage basin. In February 2009, an interim action was conducted to remove impacted soil in the vicinity of the southern drainage trench. A total of 154.17 tons of impacted soil was excavated from an area approximately 15 feet wide by 20 feet long and 10 feet deep and properly disposed off-site. Confirmation samples were collected from the sidewalls and base of the excavation, and no constituents were detected in the confirmation samples at concentrations above the Tier 1 RBSLs.

W&R conducted quarterly groundwater monitoring of the four permanent monitoring wells (MW-1 through MW-4) at the site in July 2009, October 2009, January 2010, and April 2010. No analyzed constituents were detected in any of the quarterly groundwater samples. Based on the quarterly sampling results, it appears the groundwater impacts are delineated, located under the footprint of the building, and stable.

To assess the potential for vapor intrusion at the site, W&R collected two sub-slab vapor samples (Slab-1 and Slab-2) in April 2010. PCE and TCE were detected in both sub-slab vapor samples. The highest concentrations were detected in Slab-2 with 113  $\mu\text{g}/\text{m}^3$  PCE and 14.6  $\mu\text{g}/\text{m}^3$  TCE. These concentrations are below the Division of Waste Management (DWM) Non-Residential Soil Gas Screening Levels (SGSLs) of 3,510  $\mu\text{g}/\text{m}^3$  and 176  $\mu\text{g}/\text{m}^3$ , respectively, but above the Residential SGSLs of 83.4  $\mu\text{g}/\text{m}^3$  and 4.2  $\mu\text{g}/\text{m}^3$ , respectively.

To further evaluate vapor intrusion potential, W&R collected two indoor air samples and one background, outdoor air sample in both December 2009 and April 2010. The highest indoor air concentrations (3.7  $\mu\text{g}/\text{m}^3$  PCE and 0.58  $\mu\text{g}/\text{m}^3$  TCE) were detected in sample IA-2 during the December 2009 sampling event. The highest detected PCE concentration is below the DWM Non-Residential Indoor Air Screening Levels (IASLs) of 35.1  $\mu\text{g}/\text{m}^3$  and the Residential IASL of 8.34  $\mu\text{g}/\text{m}^3$ . The highest detected TCE concentration is below the Non-Residential IASL of 1.76  $\mu\text{g}/\text{m}^3$ , but above the Residential IASL of 0.42  $\mu\text{g}/\text{m}^3$ . Low concentrations of cis-1,2-DCE (0.0556  $\mu\text{g}/\text{m}^3$  and 0.0579  $\mu\text{g}/\text{m}^3$ ) were detected in the April 2010 indoor air samples. There are

no established IASLs for cis-1,2-DCE. Based on the sub-slab vapor and indoor air sampling results, vapor intrusion does not appear to be a concern at the site.

## 4.2 Remedial Action

According to the DSCA Program's RBCA guidance, no remedial action is necessary if four site conditions are met: the dissolved plume is stable or decreasing; the maximum concentration within the exposure domain for every complete exposure pathway of any constituent of concern (COC) is less than ten times the RC of that COC; adequate assurance is provided that the land-use assumptions used in the DSCA Program's RBCA process are not violated for current or future conditions; and there are no ecological concerns at the site. The subject site's compliance with these four conditions confirms that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future. No remedial action is recommended for the site. Each of these conditions and their applicability to the subject site are summarized below.

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

Dry-cleaning related constituents were detected in one groundwater sample collected from a temporary monitoring well (TW-5) in December 2008. PCE (0.0023 mg/L) and TCE (0.0021 mg/L) were detected at concentrations slightly above their respective DSCA Tier 1 RBSLs of 0.0007 mg/L and 0.0001 mg/L. TW-5 was located within the footprint of the former dry-cleaning facility building, and the sample was collected prior to completion of the interim action.

W&R conducted quarterly groundwater monitoring of the four permanent monitoring wells (MW-1 through MW-4) at the site in July 2009, October 2009, January 2010, and April 2010. No analyzed constituents were detected in any of the quarterly groundwater samples. Based on the quarterly sampling results, it appears the groundwater impacts are delineated, located under the footprint of the building, and stable. A figure showing monitoring well locations and a table showing historical groundwater analytical data are included in Appendix A.

*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.*

The risk assessment was completed using the maximum detected concentrations as the RCs for each complete exposure pathway. Thus, this condition is met.

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

The risk assessment conducted by H&H for the site assumed that groundwater from the source property will not be utilized in the future. As discussed in Sections 6.0 and 7.0, LURs will be implemented for the source property to ensure that this assumption remains valid. Also, because the hazard index level associated with the future indoor inhalation pathway is 0.97 (just below the allowable level of 1), land use controls will be implemented to restrict activities that could cause or create a vapor intrusion risk.

*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 are included in Appendix B.

The site's compliance with the four above-referenced conditions indicates that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future. The plume is expected to naturally attenuate over time, and the appropriate remedial action is to implement LURs on the site property.

## **5.0 Data Collected During RMP Implementation**

No further sampling or other data collection activities are proposed for the site. As such, this section is not applicable.

## **6.0 Land-Use Controls**

The results of the cumulative risk assessment indicate risks for the residential and construction worker receptors were below allowable risk levels for each respective pathway under both current and future conditions. Because the site passed the risk evaluation for residential pathways, the site property does not need to be restricted to non-residential land use. Because the hazard index for future conditions is 0.97 (just below the allowable level of 1), land use controls will be implemented to restrict activities that could cause or create a vapor intrusion risk. In addition, source soil and groundwater concentrations do not exceed SSTLs for the groundwater protection pathway. However, the protection of groundwater use model provided in the risk assessment is based on the assumption that land use controls will be implemented at the site that restrict the installation of a water supply well on the site property.

The LURs are documented in a Notice of Dry-Cleaning Solvent Remediation (NDCSR) prepared for the source property. The NDCSR for the source property 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 unrestricted use standards.

## **7.0 Long-Term Stewardship Plan**

The NDCSR for the source property contains a clause requiring the owner of the property 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 they are complying with the land-use restrictions. An example of such a notice is included in

Appendix D. Documents relating to this site will be maintained by NCDENR and made available for public access.

## **8.0 RMP Implementation Schedule**

Since potential exposure to impacts at the site will be managed through the land-use controls, no additional site remedial 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 E includes example documents used to announce the public comment period in the local newspaper and to inform local officials, nearby property owners, and interested parties. Upon completion of the public comment period and final approval of the RMP, the NDCSR will be filed with the Durham County Register of Deeds and will complete the RMP schedule.

## **9.0 Criteria for Demonstration of RMP Success**

The RMP will be successfully implemented once the NDCSR has been executed and recorded with the Durham County Register of Deeds. The NDCSR may, at the request of the property owner, be canceled by NCDENR after 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 have been eliminated. 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 new site conditions have impacted the requirements set forth in the NDCSR and LURs, 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**

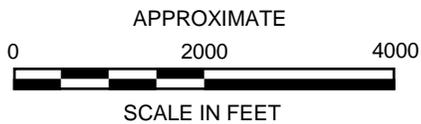
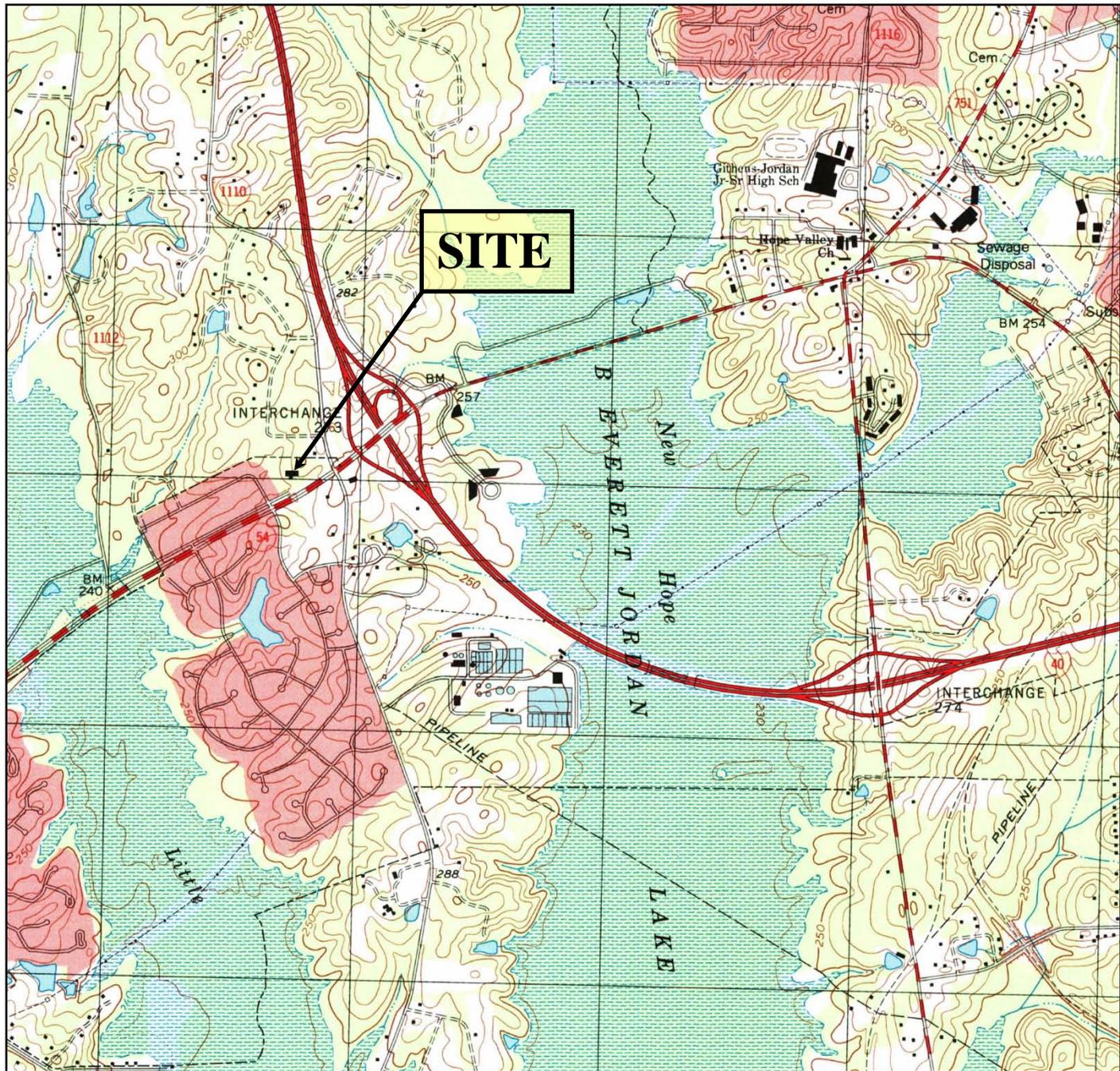
As discussed above, unless the DSCA Program is notified of a change in land use conditions at the site, per the notification requirements detailed in this plan, the LURs specified in the NDCSR will remain in effect. Pursuant to N.C.G.S. 143-215.104K, if any of the LURs set out in the

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**

H&H has prepared this RMP for the site on behalf of the DSCA Program. The risk assessment results indicate that contaminant concentrations at the site do not pose an unacceptable risk. Groundwater concentrations detected at the site appear to be stable. This RMP specifies that the NDCSR and LUR requirements provide notification that the land-use conditions observed during the risk assessment evaluation remain valid in the future. Based on the documentation contained in this report, H&H recommends issuance of a "No Further Action" letter.

## Figures



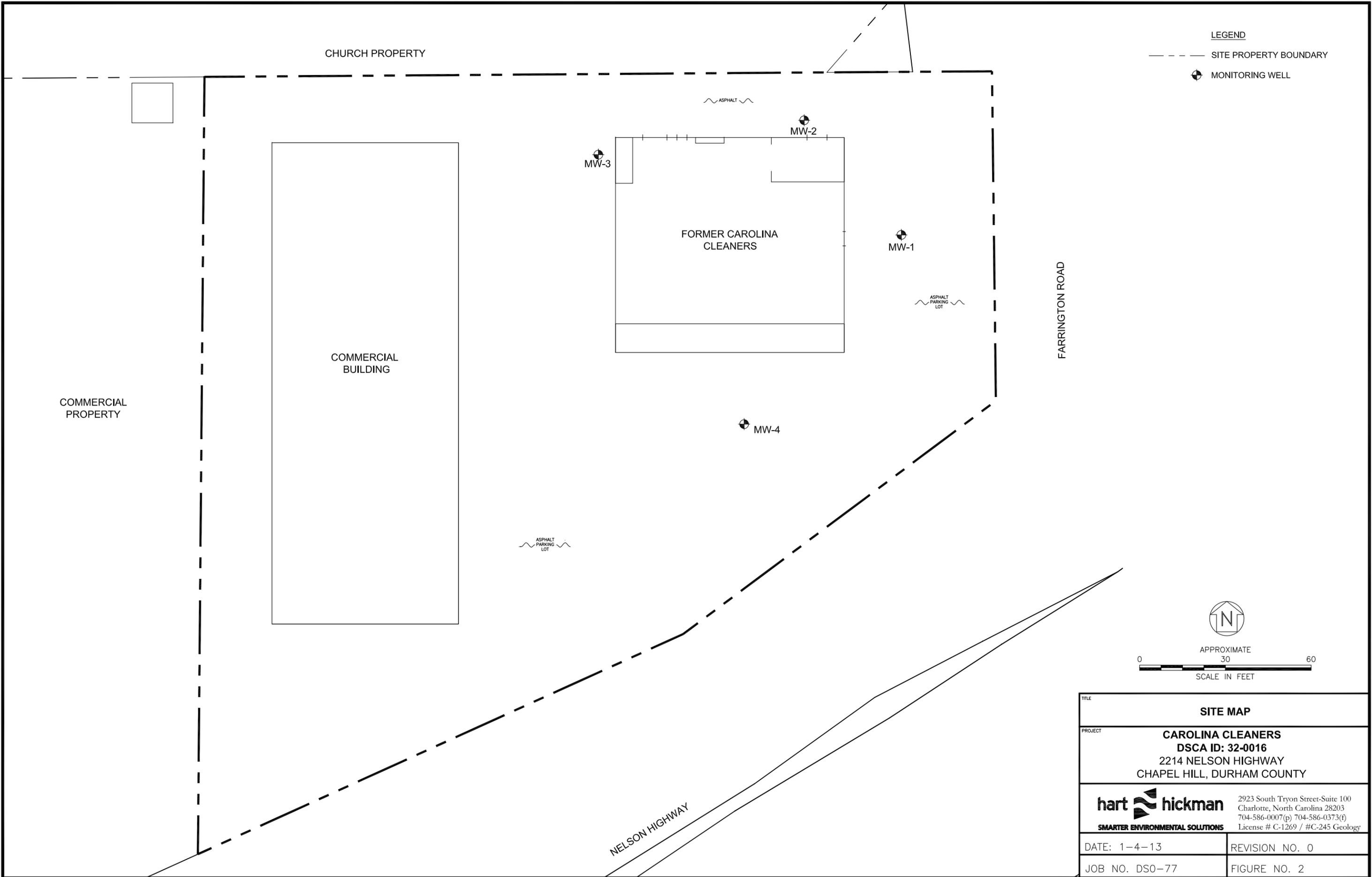
U.S.G.S. QUADRANGLE MAP

**SOUTHWEST DURHAM, N.C. 1993**

7.5 MINUTE SERIES (TOPOGRAPHIC)

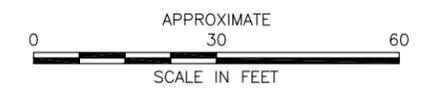
TITLE	<b>SITE LOCATION MAP</b>	
PROJECT	<b>CAROLINA CLEANERS</b> <b>DSCA ID# 32-0016</b> 2214 NELSON HIGHWAY CHAPEL HILL, DURHAM COUNTY	
	 SMARTER ENVIRONMENTAL SOLUTIONS	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f)
DATE:	1-4-13	REVISION NO: 0
JOB NO:	DS0-77	FIGURE: 1

\\hsvr\hart\hickman\local\masterfiles\AAA-Master Projects\DSCA - DSO\DS0-77 Carolina Cleaners\BMP\DC320016\_20121106\_Site map.dwg\_1/4/2013 2:14:58 PM, Adobe PDF



**LEGEND**

- SITE PROPERTY BOUNDARY
- ⊕ MONITORING WELL



TITLE		<b>SITE MAP</b>	
PROJECT		<b>CAROLINA CLEANERS</b> <b>DSCA ID: 32-0016</b> 2214 NELSON HIGHWAY CHAPEL HILL, DURHAM COUNTY	
		2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology	
DATE: 1-4-13	REVISION NO. 0		
JOB NO. DS0-77	FIGURE NO. 2		

## **Appendix A**

### **Documentation of Plume Stability Evaluation**

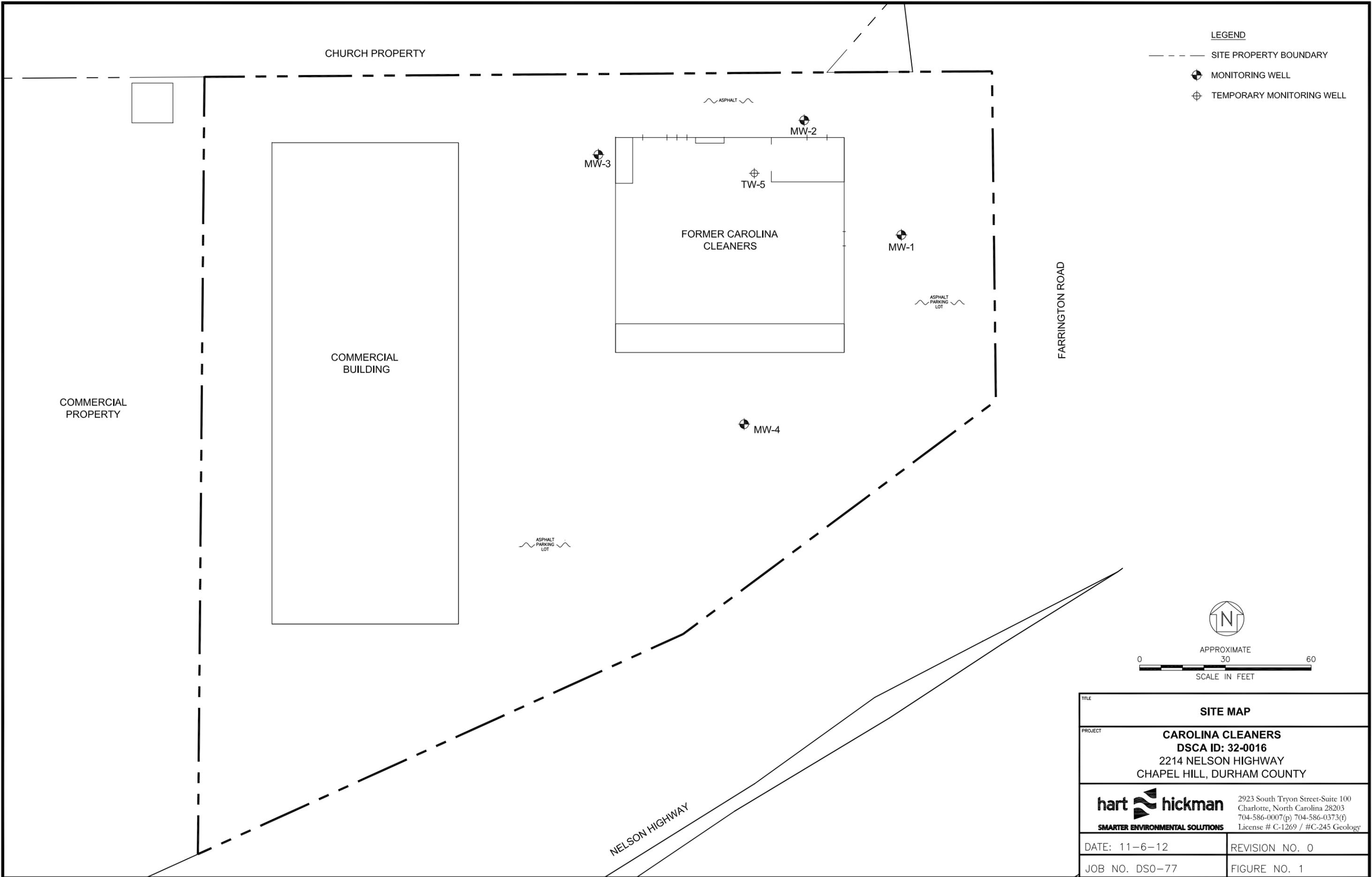
**Table 5: Analytical Data for Groundwater**

**DSCA ID No.: 32-0016**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2-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-1	12/2/08	NA	NA	NA	NA	<0.001	NA	<0.001	NA	NA	NA	<0.001	<0.001	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	7/22/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	0.0018	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/5/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	1/19/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/7/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
MW-2	12/2/08	NA	NA	NA	NA	<0.001	NA	<0.001	NA	NA	NA	<0.001	<0.001	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	7/22/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/5/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	1/19/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/7/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
MW-3	12/2/08	NA	NA	NA	NA	<0.001	NA	<0.001	NA	NA	NA	<0.001	<0.001	NA	NA	<0.001	<b>0.00021J</b>	<0.001	<0.001	<0.001	<0.001
	7/22/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/5/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	1/19/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/7/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
MW-4	12/2/08	NA	NA	NA	NA	<0.001	NA	<0.001	NA	NA	NA	<0.001	<0.001	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	7/22/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/5/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	1/19/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/7/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
TW-5	12/4/08	NA	NA	NA	NA	<0.001	NA	<0.001	NA	NA	NA	<b>0.002</b>	<0.001	NA	NA	<b>0.0023</b>	<0.001	<0.001	<b>0.0021</b>	<0.001	<b>0.00164</b>
TW-6	12/5/08	<0.001	<0.001	<0.005	<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
TW-7	12/12/08	<0.001	<0.001	<0.005	<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
TW-8	12/12/08	<0.001	<0.001	<0.005	<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

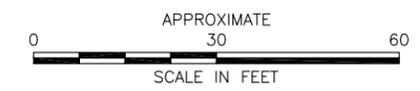
Note: J flag denotes estimated concentration between laboratory reporting limit and method detection limit.

\\hsvr\hart\hickman\local\masterfiles\AAA-Master Projects\DSCA - DSO\DS0-77 Carolina Cleaners\BMP\DC320016\_20121106\_gw\_figure.dwg, 1/4/2013 2:13:57 PM, Adobe PDF



**LEGEND**

- SITE PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- ⊕ TEMPORARY MONITORING WELL



TITLE		<b>SITE MAP</b>	
PROJECT		<b>CAROLINA CLEANERS</b> <b>DSCA ID: 32-0016</b> 2214 NELSON HIGHWAY CHAPEL HILL, DURHAM COUNTY	
		2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology	
DATE: 11-6-12	REVISION NO. 0		
JOB NO. DS0-77	FIGURE NO. 1		

## **Appendix B**

### **Level 1 Ecological Risk Assessment Checklists**

**Attachment 24.**  
**Level 1 Ecological Risk Assessment**  
**Checklist A for Potential Receptors and Habitat**

1. Are there any navigable water bodies or tributaries to a navigable water body on or within the one-half mile of the site?  
*Yes, according to the USGS Quad map for Southwest Durham, the Jordan Lake watershed, which is managed by the US Army Corp of Engineers, is located approximately 2500 feet west of the site and 2000 feet east of the site.*
  
2. Are there any water bodies anywhere on or within the one-half mile of the site?  
*Yes, according to the USGS Quad map for Southwest Durham, water bodies are located within a half mile of site. Three large ponds were identified at 1300 feet southeast, 1630 feet southwest, and 2200 feet northwest of the site. Unnamed intermittent tributaries to Jordan Lake are located approximately 620 feet west and 1540 feet southeast of the site. The Upper Little Creek, which is dammed to form Jordan Lake, is located approximately 1740 feet west of the site.*
  
3. Are there any wetland areas such as marshes or swamps on or within one-half mile of the site?  
*According to the Federal Wetland Inventory System, freshwater forested/shrub wetlands are located 2320 feet west of the site and 880 feet east of the site.*
  
4. Are there any sensitive environmental areas on or within one-half mile of the site?  
*Yes, according to the NC Natural Heritage Program Virtual Workroom, the following natural communities were identified within 2 miles of the site:*  
*Mesic mixed hardwood forest (piedmont subtype)*  
*Piedmont/mountain swamp forest*  
*Piedmont/mountain semipermanent impoundment*  
*Piedmont/mountain levee forest*  
*Piedmont/mountain bottomland forest*
  
5. Are there any areas on or within one-half mile of the site owned or used by local tribes?  
*No areas have been identified within a half mile of the site to be owned or used by local tribes.*
  
6. Are there any habitat, foraging area or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species on or within one-half mile of the site?  
*The Upper Little Creek Waterfowl Impoundment, which is identified as a NC Game Wildlife Land, is located approximately 1050 feet west of the site.*

7. Are there any breeding, roosting or feeding areas by migratory bird species on or within one-half mile of the site?

*The Migratory Bird Treat Act (MBTA) was developed to help reduce potential migratory bird strikes with aircraft, wind turbines, and towers. Many species of birds are protected that are common to the United States, Canada, and Mexico. Therefore, many species of birds in Cumberland County (e.g Bald Eagle, Canadian Goose, Mourning Dove) are likely to be within one-half mile of the site.*

8. Are there any ecologically, recreationally or commercially important species on or within one-half mile of the site?

*Based on site observations and desktop review, ecological and recreational species are likely to be present at natural communities identified within 2 miles of the sit, and at the Upper Little Creek Waterfowl Impoundment, which is identified as a NC Game Wildlife Land, located approximately 1050 feet west of the site. No commercially important species were observed within one-half mile of the site.*

9. Are there any threatened and/or endangered species (plant or animal) on or within one-half mile of the site?

*Yes, according to the NC Natural Heritage Program Virtual Workroom online species list, the following species were identified within 2 miles of the site:*

- *Echinacea laevigata* – Smooth Coneflower: NC Endangered “Species of Concern”, Federal Endangered Species
- *Monotropsis odorata* – Sweet Pinesap: NC Significantly rare threatened species, Federal “Species of Concern”

**Attachment 24.**  
**Level 1 Ecological Risk Assessment**  
**Checklist B for Potential Exposure Pathways**

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

*Yes. The primary constituent of concern for the site is tetrachloroethene (PCE). Based on published references [Environmental Protection Agency (EPA) and United States Agency for Toxic Substance and Disease Registry (ATSDR)], PCE is leachable to groundwater and soluble in groundwater. Analysis of groundwater samples collected at the site indicates groundwater has been impacted.*

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

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

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

*Potential ecological receptor habitats identified in the site vicinity include the Upper Little Creek Waterfowl Impoundment, which is identified as a NC Game Wildlife Land, located approximately 1050 feet west of the site and surface water features located between 620 and 2200 feet from the subject site. The path of groundwater flow has not been fully assessed between the subject site and these surface water features. However, the impacts to groundwater appear to be limited to beneath the building and do not appear to have migrated off site.*

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

***No. Impacted groundwater appears to be limited to beneath the building slab and does not appear to be migrating off site.***

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

*No. Impacted soils identified on the site were removed during excavation activities on the site.*

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

*No. Impacted soils identified on the site were removed during excavation activities on the site.*

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

***No. Impacted soils identified on the site were removed during excavation activities on the site.***

3A. Are chemicals present in surface soil or on the surface of the ground?  
*No. Impacted soils identified on the site were removed during excavation activities on the site. All impacted soils were previously located beneath the building slab and not exposed.*

3B. Are potential ecological receptors on the site?  
*No potential ecological receptors have been identified on the site.*

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

***No. Surficial soils do not appear to be impacted, and no ecological receptors are likely to be present in the area of the plume. All impacted soils were previously located beneath the building slab and not exposed.***

4A. Are chemicals on the site volatile?  
*Yes. Chlorinated solvents are considered volatile organic compounds.*

4B. Could chemicals on the site be transported in air as dust or particulate matter?  
*No. Impacted soils identified on the site were removed during excavation activities on the site. All impacted soils were previously located beneath the building slab and not exposed.*

**Question 4. Could chemicals associated with the site reach ecological receptors through inhalation of volatilized chemicals or adhered chemicals to dust in ambient air or in subsurface burrows?**

***No. Impacted soils identified on the site were removed during excavation activities on the site.***

5A. Is Non-Aqueous Phase Liquid (NAPL) present at the site?  
*No. NAPL has not been encountered at the site.*

5B. Is NAPL migrating?  
*No. NAPL has not been encountered at the site.*

5C. Could NAPL discharge occur where ecological receptors are found?  
*No. NAPL has not been encountered at the site.*

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

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

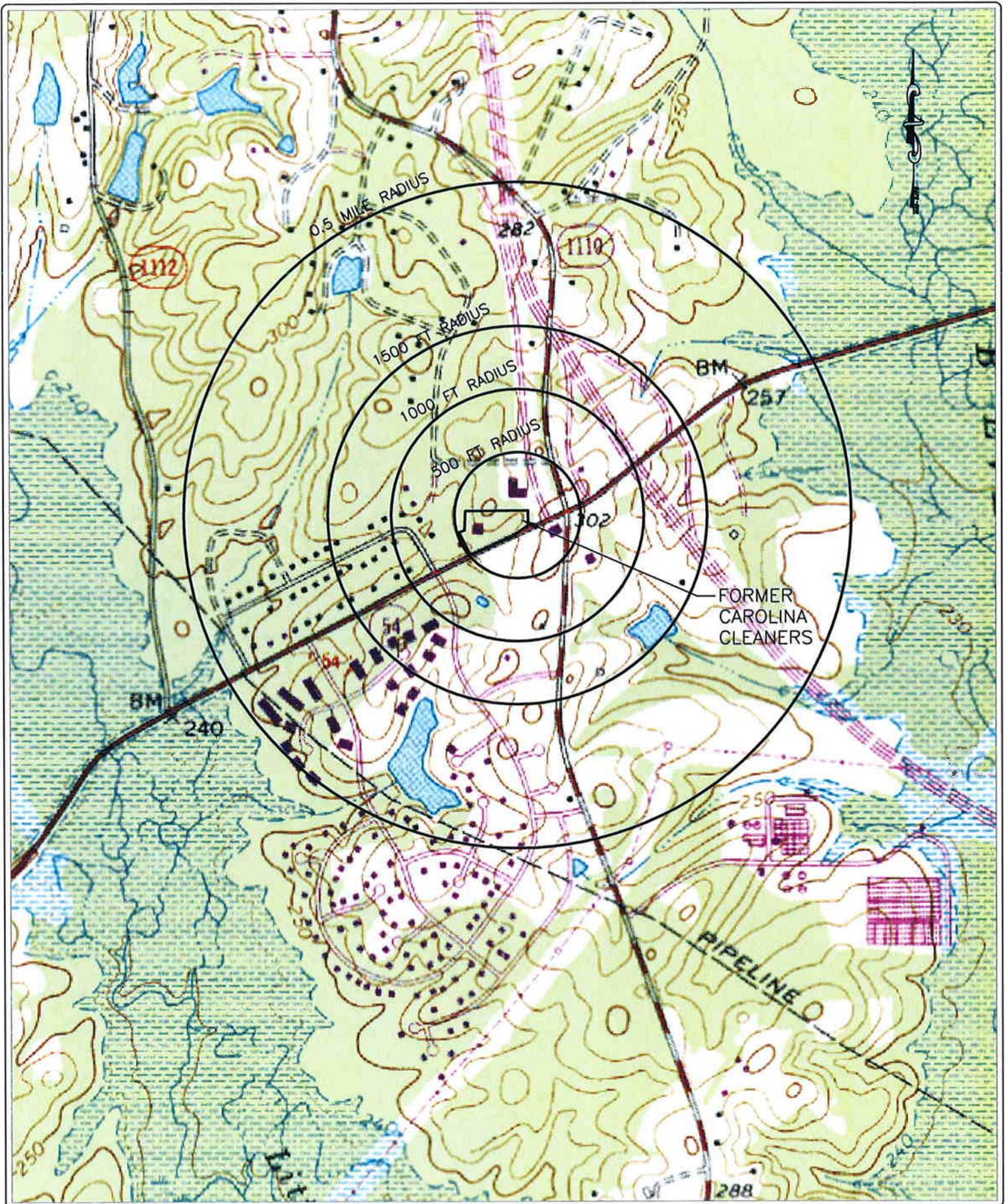
6A. Are chemicals present in surface and shallow subsurface soils or on the surface of the ground?  
*No. Impacted soils identified on the site were removed during excavation activities on the site.*

6B. Are chemicals found in soil on the site taken up by plants growing on the site?  
*No. Impacted soils identified on the site were removed during excavation activities on the site. All impacted soils were previously located beneath the building slab and not exposed.*

6C. Do potential ecological receptors on or near the site feed on plants (e.g., grasses, shrubs, forbs, trees, etc.) found on the site?  
*No. Impacted soils identified on the site were removed during excavation activities on the site. All impacted soils were previously located beneath the building slab and not exposed.*

6D. Do chemicals found on the site bioaccumulate?  
*No. Based on published references (ATSDR), PCE and its breakdown products do not significantly bioaccumulate.*

**Question 6. Could chemicals associated with the site reach ecological receptors through direct ingestion of soil, plants, animals or contaminants?**  
*No. Impacted soils identified on the site were removed during construction activities on the site. All impacted soils were previously located beneath the building slab and not exposed.*



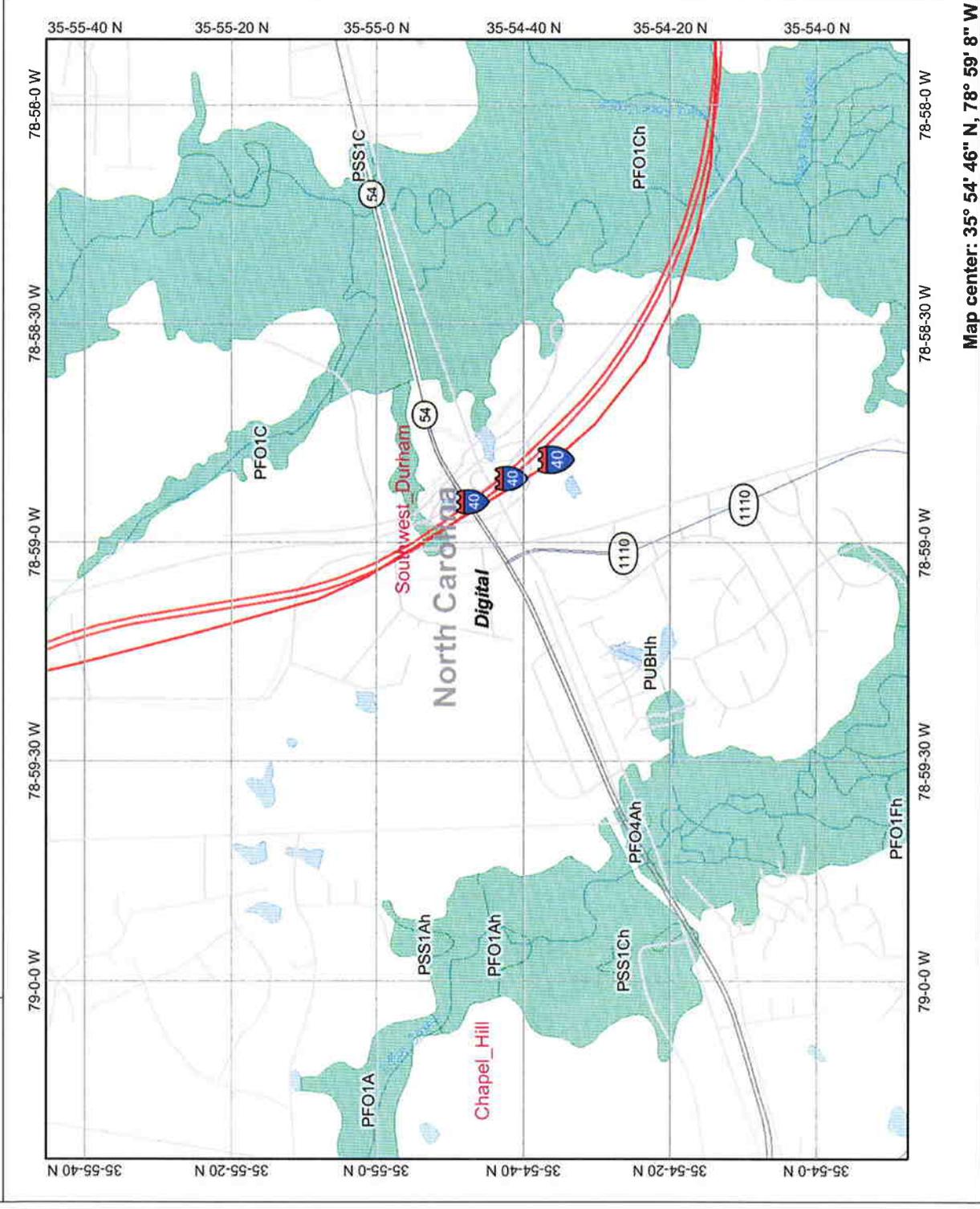
**WITHERS & RAVENEL**

ENGINEERS | PLANNERS | SURVEYORS  
 111 Mackenon Drive Cary, North Carolina 27511 www.wITHERSRAVENEL.com  
 tel: 919-460-6006 fax: 919-535-4545

GENERAL LOCATION MAP  
 CAROLINA CLEANERS, DSCA ID 32-0018  
 2214 NELSON HIGHWAY (HWY 54)  
 CHAPEL HILL, NORTH CAROLINA  
 USGS SOUTHWEST DURHAM, NC  
 7.5 min. Quadrangle

DRAWN BY:	SCALE:	ATTACHMENT
LP	1"=1000'	24
APPROVED BY:	DATE:	JOB NO:
DK	1/6/09	2060496.47

# Attachment 24 - USFWS Wetlands Map



Map center: 35° 54' 46" N, 78° 59' 8" W



### Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:25,479

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

**Appendix C**

**Notice of Dry-Cleaning Solvent Remediation for Source Property**

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

Property Owner: LRC, LLC

Recorded in Book \_\_\_\_\_, Page \_\_\_\_\_

Associated plat recorded in Plat Book \_\_\_\_\_, Page \_\_\_\_\_

**This documentary component of a Notice of Dry-Cleaning Solvent Remediation (hereinafter “Notice”) is hereby recorded on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by LRC, LLC (hereinafter “Property Owner”). The survey plat component of the Notice is being recorded concurrently with this documentary component. The real property (hereinafter “Property”) which is the subject of this Notice is located at 2218 W NC 54 Highway, Chapel Hill, Durham County, North Carolina, North Carolina, Parcel Identification Number (PIN) 0708-01-46-3797**

**The Property is contaminated with dry-cleaning solvent, as defined at North Carolina General Statutes (hereinafter “N.C.G.S.”), Section (hereinafter “§”) 143-215.104B(b)(9) and other contaminants. This Notice has been approved by the North Carolina Department of 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 Carolina Cleaners (DSCA Site 32-0016) located at 2214 Nelson Highway (W. Highway 54) on the property parcel addressed as 2218 W. NC 54 Highway. Dry-cleaning operations were conducted on the Property from approximately 1998 to 2008.

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

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

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

Pursuant to NCGS § 143-215.104M, a certified copy of this Notice must be filed within 15 days of receipt of 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. Without prior written approval from DENR, the Property shall not be used for mining or extraction of coal, oil, gas or any mineral or non-mineral substances.**
- 2. 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.**
- 3. 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.**
- 4. 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.**
- 5. No person conducting environmental assessment or remediation at the Property or involved in determining compliance with applicable land-use restrictions, at the direction of, or pursuant to a permit or order issued by DENR may be denied access to the Property for the purpose of conducting such activities.**

6. **The owner of any portion of the Property shall cause the instrument of any sale, lease, grant, or other transfer of any interest in the property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Notice. The failure to include such a provision shall not affect the validity or applicability of any land-use restriction in this Notice.**

### **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 within fourteen (14) calendar days of 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.

**PROPERTY OWNER SIGNATURE**

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

LRC, LLC

By:

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

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

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

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

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

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

**APPROVAL AND CERTIFICATION**

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

North Carolina Department of Environment and Natural Resources

By: \_\_\_\_\_ Date \_\_\_\_\_  
Jim Bateson, LG  
Chief, Superfund Section  
Division of Waste Management

**LIMITED POWER OF ATTORNEY**

I \_\_\_\_\_ “Property Owner”, do hereby grant a limited power of attorney to 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 \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

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

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

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

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



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



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

Being all of those tracts shown as Lots 1, 2, 3, 4, 5, 6, 7, 8, Eastwood Park, at Plat Book 47, Page 37, Durham County Registry; and

Being all of that tract described as BEGINNING at the point where the southwest right-of-way line of Farrington Road intersects with the northwest right-of-way line of North Carolina Highway #54 at an iron pipe set as appears on plat and survey hereinafter referred to, and running thence from said point and place of beginning along and with the northwestern right-of-way line of North Carolina Highway #54, South 69° 55' 09" West 800.73 feet to a point, an iron pipe set; running thence along and with the eastern boundary of Lot No. 1 of Eastwood Park as appears of record in Plat Book 47, at Page 37, Durham County Registry, North 22° 43' 34" West 199.03 feet to an iron pipe found; running thence along and with the northern boundary of the aforesaid Lot No. 1 South 69° 45' West 49.97 feet to an iron pipe found; running thence along and with the northern boundary of Lot No. 2 of said Eastwood Park South 69° 45' West 49.89 feet to an iron pipe found; running thence along and with the eastern boundary of Lot No. 110 and Lot No. 111 of said Eastwood Park North 22° 25' 42" West 100.09 feet to an iron pipe found; running thence along and with the eastern boundary of Lot No. 112 and Lot No. 113 of said Eastwood Park North 22° 25' 42" West 142.00 feet to an iron pipe set to a point in the right-of-way of Crescent Drive as appears on said survey of record in Plat Book 51, at Page 24, Durham County Registry; running thence South 85° 28' 24" East 516.15 feet to a point, an iron pipe found; continuing thence South 85° 28' 24" East 498.28 feet to a point in the southwestern right-of-way of Farrington Road an iron pipe set; running thence along and with the southwestern right-of-way line of Farrington Road South 11° 51' 27" East 18.24 feet to an iron pipe set, the point and place of BEGINNING and containing 3.800 acres more or less as portrayed on plat and survey entitled "Property of Brookgreen Investment Corporation", Triangle Township, Durham County, North Carolina, as surveyed and platted by Stephen E. Wilson, R.L.S., March 19, 1973, as appears of record in Plat Book 76, at Page 27, Durham County, Registry, LESS AND EXCEPT that certain property conveyed to the Department of Transportation in Book 1131, at Page 87, Durham County Registry, to which deed reference is hereby made for a more particular description of same.

Being the same property conveyed to NationsBank of North Carolina, N.A. from William D. Bernard by Substitute Trustee's Deed recorded on April 16, 1993 in Book 1836, Page 664 in the Office of the Register of Deeds for Durham County, North Carolina.

**Appendix D**

**Example Annual DSCA Land-Use Restrictions Certification**

**Annual Certification of Land-Use Restrictions**

**Site Name:** Carolina Cleaners

**Property Address:** 2218 W. Highway 54, Chapel Hill, Durham County

**DSCA ID No:** 32-0016

**ANNUAL CERTIFICIATION of LAND-USE RESTRICTIONS**

Pursuant to Condition 4 in the Notice of Dry-Cleaning Solvent Remediation (Notice) signed by <property owner or authorized designee> and recorded in Deed Book <blank>, Page <blank> on <date> at the <blank> County Register of Deeds Office, <property owner or authorized designee> hereby certifies, as an owner of at least part of the property that is the subject of the Notice, that the Notice remains recorded at the Durham County Register of Deeds office and the land-use restrictions therein are being complied with.

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

<property owner or authorized designee>

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

Name typed or printed:

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

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

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

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

Notary Public

My Commission expires: \_\_\_\_\_

[Stamp/Seal]

## **Appendix E**

### **Example Documents Announcing the Public Comment Period**

- **Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site**
  - **Summary of the Notice of Intent**
  - **Letters to Owners of Property Contiguous to the Contamination Site**

**Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site**



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

Patrick McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

<Date>

Mr. Roger L. Stancil, Town Manager  
Manager's Office, Town Hall, 2<sup>nd</sup> Floor  
405 Martin Luther King Jr. Blvd  
Chapel Hill, NC 27514

Subj: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 32-0016  
Carolina Cleaners, 2214 Nelson Hwy, Chapel Hill, Durham County

Dear Mr. Stancil

The Dry-Cleaning Solvent Cleanup Act of 1997 (DSCA), North Carolina General Statutes (N.C.G.S.) Sections 143-215.104A through 143-215.104U, provides for the assessment and remediation of properties that may have been or were contaminated by chlorinated solvents. To satisfy the requirements of N.C.G.S. 143-215.104L, this letter serves as the **Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site** (NOI) approved by the North Carolina Department of 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.ncdscs.org](http://www.ncdscs.org), under "Public Notices" during the public comment period.

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

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

Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 32-0016  
Carolina Cleaners, 2214 Nelson Hwy, Chapel Hill, Durham County  
Page 2

<date>

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

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

Sincerely,

Mike Cunningham, Project Manager  
DSCA Remediation Unit  
Mike.Cunningham@ncdenr.gov

Attachments: Risk Management Plan

Cc: DSCA Site # 32-0016 File



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

Patrick McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

<Date>

Gayle B. Harris, MPH, RN, Public Health Director  
Durham County Department of Public Health  
414 East Main Street  
Durham, NC 27701

Subj: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 32-0016  
Carolina Cleaners, 2214 Nelson Hwy, Chapel Hill, Durham County

Dear Ms. Harris

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

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

Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 32-0016  
Carolina Cleaners, 2214 Nelson Hwy, Chapel Hill, Durham County  
Page 2

<date>

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

Sincerely,

Mike Cunningham, Project Manager  
DSCA Remediation Unit  
Mike.Cunningham@ncdenr.gov

Attachments: Risk Management Plan

Cc: DSCA Site # 32-0016 File

## **Summary of Notice of Intent**

**Public Notice**

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

Carolina Cleaners  
DSCA Site # 32-0016

Pursuant to N.C.G.S. §143-215.104L, on behalf of LRC, LLC, 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.

Carolina Cleaners formerly conducted dry-cleaning operations at 2214 Nelson Highway (parcel addressed as 2218 W. Highway 54), in Chapel Hill, Durham County, North Carolina. The building that housed the dry-cleaner is currently occupied by medical offices. Dry-cleaning solvent contamination in soil and/or ground water has been identified at the following parcel(s):

2218 W NC 54 Highway in Chapel Hill, Durham County; Parcel No. 0708-01-46-3797

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

The elements of the complete NOI are included in the Risk Management Plan (RMP) which is available online at <http://portal.ncdenr.org/web/wm/DSCA/PublicNotices>.

***The public comment period begins [REDACTED], 20[REDACTED], and ends [REDACTED], 20[REDACTED].***

Comments must be in writing and submitted to DENR no later than [REDACTED], 20[REDACTED]. Written requests for a public meeting may be submitted to DENR no later than [REDACTED], 20[REDACTED]. Requests for additional information should be directed to Mike Cunningham at (919)707-8361.

All comments and requests should be sent to:

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

**Letters to Owners of Property Contiguous to the Contamination Site**



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

Patrick McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

<Date>

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

Subj: Dry-Cleaning Solvent Contamination at the former Carolina Cleaners  
Chapel Hill, Durham County, NC

Dear <property owner>:

You are receiving this letter because your property at <adjacent property address> is adjacent to an area contaminated with dry-cleaning solvents. The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the former Carolina Cleaners at 2214 Nelson Highway (parcel address of 2218 W. Highway 54) in Chapel Hill. The former dry-cleaning building is currently occupied by medical offices. A remedial strategy to address the site contamination has been prepared, and in accordance with our program's statutes, the community has an opportunity to review and comment on the proposed strategy.

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

If you have questions, please contact me at (919) 707-8361 or Delonda Alexander at (919) 707-8365.

Sincerely,

Mike Cunningham, Project Manager  
DSCA Remediation Unit  
Mike.Cunningham@ncdenr.gov

Attachments: Summary of the NOI

Cc: DSCA Site # 32-0016 File