



December 19, 2013

North Carolina Department of Environment  
and Natural Resources  
Division of Waste Management – DSCA Program  
1646 Mail Services Center  
Raleigh, NC 27699-1646

Att: Mr. Jay King  
DSCA Project Manager

Re: **Risk Management Plan**  
Former Coastal Cleaners - DSCA Site ID #67-0004  
1170 Henderson Drive  
Jacksonville, Onslow County, North Carolina

Dear Mr. King:

URS Corporation – North Carolina (URS) is pleased to provide the attached Draft Risk Management Plan (RMP) for the former Coastal Cleaners site located at 1170 Henderson Drive, Jacksonville, North Carolina. A risk assessment conducted for the site indicates that contaminant concentrations at the site do not pose an unacceptable risk. The primary purpose of this RMP is to ensure that the assumptions made in the risk assessment remain valid in the future. Based on the documentation outlined in this report, URS recommends issuance of a No Further Action letter for the site.

If you have any questions or require additional information, please do not hesitate to contact either Rob MacWilliams at 704.522.0330 or Carlin Slusher at 919.461.1341.

Sincerely,

**URS CORPORATION-NORTH CAROLINA**

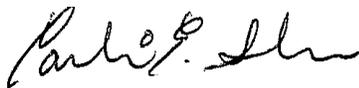
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**Risk Management Plan  
Former Coastal Cleaners - DSCA Site ID # 67-0004  
1170 Henderson Drive  
Onslow County  
Jacksonville, North Carolina 28540**

**Submitted To:**  
**NC Department of Environment and Natural Resources**  
Division of Waste Management – DSCA Program  
401 Oberlin Road, Suite 150  
Raleigh, NC 27605-1350



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Robert H. MacWilliams, PG  
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N.C. Professional Geologist #2110

**URS**

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**APPENDICES**

- Appendix A Documentation of Plume Stability Evaluation
- Appendix B Level 1 Ecological Risk Assessment Checklists
- Appendix C Notice of Dry-Cleaning Solvent Remediation
- Appendix D Example Annual DSCA Land-Use Restrictions Certifications
- Appendix E Notice of Intent

## 1.0 INTRODUCTION

URS Corporation – North Carolina (URS) has prepared this Risk Management Plan (RMP) to address dry-cleaning solvent contamination associated with the former Coastal Cleaners site (DSCA Site #67-0004) on behalf of the North Carolina Department of Environment and Natural Resources (NCDENR) Dry-Cleaning Solvent Cleanup Act (DSCA) Program. The former Coastal Cleaners site (herein after referred to as site or subject property) is located at 1170 Henderson Drive, Onslow County, Jacksonville, North Carolina. Site assessment activities have confirmed that contamination does not extend onto adjacent properties. The site location is shown on the attached **Figure 1**. This RMP is intended to comply with the requirements of the DSCA (N.C.G.S. 143-215.104A et seqs) and promulgated rules and follows the outline provided in the DSCA Program's risk-based corrective action (RBCA) guidance.

## 2.0 OBJECTIVES OF RISK MANAGEMENT PLAN

URS has completed soil assessment activities at the site which indicated tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and 2-butanone soil impacts exist above unrestricted land use standards. Additionally, groundwater assessment activities were completed at the site and indicated that PCE groundwater impacts existed on-site at levels exceeding the Title 15A NCAC 2L .0202 Groundwater Standards (2L Standards). Vapor intrusion assessment activities were completed at the site and indicated chlorinated solvent impacts in soil gas.

URS completed a Risk Assessment at the site and adjacent property in accordance with the DSCA Program's risk assessment procedures in April 2013. The results of the Risk Assessment indicated that there are on-site risks that do exceed target levels. However, these risks will be managed based on site-specific land-use conditions that have been selected as part of the evaluation and which require a RMP. Thus, the objective of the RMP is to ensure that those site-specific land-use conditions remain valid in the future.

## 3.0 SUMMARY OF RISK ASSESSMENT REPORT

As documented in the following reports (Prioritization Assessment Report, dated January 2011, Air Quality Evaluation Report, dated February 2011, and Groundwater Monitoring Report, dated February 2012) investigation activities completed to date have indicated the presence of soil contaminants, groundwater contaminants, and/or soil gas contaminants on the site property (on-

site exposure unit and off-site exposure unit #1) above unrestricted land-use standards. As such, URS performed a risk assessment to address the applicable exposure pathways based on the identified impacts. The results of the risk assessment are documented in the Risk Assessment Report for Former Coastal Cleaners, dated April 2013.

The site is currently zoned as commercial property. To be protective of unknown property zoning in the future, the risk assessment was completed to assume that the site could be rezoned in the future as residential property. Subsequently, both residential and commercial scenarios were considered as part of the risk assessment.

The first step in the risk assessment process consisted of evaluating exposure pathways for two separate exposure units: the On-Site Exposure Unit (site) and Off-Site Exposure Unit #1 (site). Exposure units are shown on **Figure 2**. The exposure model evaluation indicated the following complete exposure pathways for the On-Site Exposure Unit (site), and Off-Site Exposure Unit #1 (site):

### **On-Site Exposure Unit**

- **Surface Soil Exposure** – Impacted surface soil is present making a complete exposure pathway. Surface soil exposure was evaluated for current conditions (commercial property), future conditions (residential and commercial properties) and construction worker.
- **Indoor Inhalation of Vapor Emissions from Soil** – Impacted soil is present making a complete exposure pathway. Indoor inhalation of vapor emissions was evaluated for current conditions (commercial property) and future conditions (residential and commercial).
- **Indoor Inhalation of Vapor Emissions from Groundwater** – Impacted groundwater is present making a complete exposure pathway. Indoor inhalation of vapor emissions was evaluated for current conditions (commercial property) and future conditions (residential and commercial).
- **Outdoor Inhalation of Vapor Emissions from Soil** - Impacted soil is present making a complete exposure pathway. Outdoor inhalation of vapor emissions was evaluated for current conditions (commercial property), future conditions (residential and commercial properties), and construction worker.
- **Outdoor Inhalation of Vapor Emissions from Groundwater** - Impacted groundwater is present making a complete exposure pathway. Outdoor inhalation of vapor emissions

was evaluated for current conditions (commercial property), future conditions (residential and commercial properties), and construction worker.

In lieu of representative concentrations, the most elevated soil, groundwater, soil gas and/or indoor air concentrations observed at the site were used in the risk assessment for the On-Site Exposure Unit. Site-specific Domenico groundwater modeling results indicated exceedance of site-specific target levels (SSTLs) for source soil at a distance of 520 feet (distance to downgradient property boundary of the first property encountered where groundwater impacts have not been observed), as well as at a distance of 1600 feet (distance to nearest surface water body - Mill Creek). However, our evaluation of site groundwater conditions indicates that the plume has not migrated as far as the modeling projects. Some of the modeling inputs are conservative parameters, specifically the rate of infiltration which may not be representative of the current land cover (i.e., asphalt, concrete). Such land cover would reasonably minimize infiltration in the source area and likely affect the documented plume migration at the site. However, because the rate of infiltration is a significant variable in the leaching of contamination from soil and subsequent migration in groundwater, it is reasonable that plume expansion would occur as indicated by the model in the event that site conditions were altered such that infiltration rates increased in area of source contamination. Therefore, it is recommended that land-use controls be utilized to maintain current infiltration conditions in the areas of impacted soils exceeding the SSTL in the area depicted on **Figure 3**.

The On-Site Exposure Unit passed the risk evaluation for current complete exposure pathways. However, the evaluation failed for the indoor air exposure pathway for both residential and commercial exposure in the future and for the surficial soil exposure pathway for residential exposure in the future. The indoor air exposure pathway can be addressed through the imposition of land-use controls specific to the consideration of vapor mitigation measures in respect to future property development. To address the surficial soil exposure pathway, the imposition of land-use controls specific to residential/commercial development of the property may be warranted.

Finally, land-use controls should be implemented on the property to prevent future installation of water supply wells within the area of concern due to groundwater contaminant concentrations above the 2L Standards.

**Off-Site Exposure Unit #1**

- **Indoor Inhalation of Vapor Emissions from Groundwater** – Impacted groundwater is present making a complete exposure pathway. Indoor inhalation of vapor emissions was evaluated for current conditions (commercial property) and future conditions (residential and commercial).
- **Outdoor Inhalation of Vapor Emissions from Groundwater** - Impacted groundwater is present making a complete exposure pathway. Outdoor inhalation of vapor emissions was evaluated for current conditions (commercial property), future conditions (residential and commercial properties), and construction worker.

In lieu of representative concentrations, the most elevated groundwater concentrations observed at the site were used in the risk assessment for the Off-Site Exposure Unit #1. The Off-Site Exposure Unit #1 passed the risk evaluation for current and future complete exposure pathways. However, as groundwater contaminant concentrations are above the 2L Standards, land-use controls should be implemented on the property to prevent future installation of water supply wells within the area of concern.

## **4.0 REMEDIAL ACTION PLAN**

### **4.1 Assessment Activities and Interim Actions**

The site property is a 20.11-acre parcel at the corner of Henderson Drive and Gum Branch Road in the New Market Square shopping center. The shopping center consists of two buildings and is occupied by several tenants including a Piggly Wiggly grocery store, a Kmart department store, a Rent-A-Center, fitness center, laundromat, and smaller retail spaces. The dry-cleaning facility was reported in operation from the mid-1970s to the mid-2000s. The former location of the dry-cleaning facility is now the Jacksonville Coin Laundry, which is located on the northwest corner of the property in the smaller of the two on-site structures.

A Limited Phase II Sub-Surface Sample Screening Survey report, prepared by Comprehensive Safety & Environmental Services, Inc., and dated May 1999, documented the collection of three (3) soil borings and three (3) groundwater samples around the southeast corner of the dry-cleaning facility. Results indicated that a dry-cleaning solvent release may have occurred at the site.

A Comprehensive Site Assessment report, prepared by Engineering Consulting Services, Ltd. (ECS), and dated September 28, 1999, documented the site history, site geology, receptor survey information, installation of eight (8) permanent monitoring wells, and collection of eight (8) soil samples during well installation activities. Results further indicated that a dry-cleaning solvent release may have occurred at the site.

A Phase II Subsurface Investigation Report, dated May 26, 2010, was prepared by Partner Engineering and Science, Inc. to document groundwater sampling of the remaining five (5) groundwater monitoring wells installed by ECS in 1999. Groundwater sample results indicated elevated concentrations of chlorinated solvent constituents.

Upon confirmation of a release, the property owner, New Market Square, LLC, submitted a petition on June 17, 2010, to request admittance of the site into the DSCA Program. The site was certified into the program on June 21, 2010, and an Assessment and Remediation Agreement was executed.

Initial assessment activities executed by URS were conducted September 14-16, 2010, which included the advancement of seven (7) soil borings within the storage area of the former dry-cleaning facility to evaluate potential contaminant source areas. Soil samples were collected and then submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260. PCE was detected in surficial soil samples with concentrations ranging from 0.088 milligrams per kilogram (mg/kg) to 440 mg/kg and in subsurface samples with concentrations ranging from 0.097 mg/kg to 24 mg/kg. Based on a review of the soil data, the soil source impacts appear to be located in the current storage area of the Jacksonville Coin Laundry. The installation of one (1) Type III monitoring well and three (3) Type II monitoring wells was observed by URS personnel on September 14-15, 2010. The purpose of the monitoring wells was to evaluate the groundwater quality beneath the site. While on-site, URS personnel sampled five (5) existing monitoring wells. Following installation and development of newly installed wells and purging of existing wells, URS collected groundwater samples and submitted them for laboratory analysis of VOCs by EPA Method 8260. The maximum concentrations of PCE and TCE detected during initial site activities were 48 micrograms per liter (ug/L) and 19 ug/L, respectively. The groundwater impacts appeared to be centralized near MW-1 and MW-3, which is just east of the former dry-cleaner. Additionally, one indoor air sample and sub-slab vapor sample were collected beneath the floor slab of the former dry-cleaning facility in accordance with the air sampling requirements of DSCA Contractor's Bulletin #30, dated September 10, 2009. The analytical results of sub-slab vapor sample SSV-1 indicated elevated concentrations of

chlorinated solvents exceeding the applicable Tier I screening levels, warranting additional vapor/indoor air assessment.

Following the first round of assessment activities, laboratory data indicated that the horizontal extent of soil impacts had not been delineated for the site. Therefore, on January 12-13, 2011, URS personnel advanced five (5) additional soil borings at the former dry-cleaner and the adjacent tenant space, Rack'm Pub & Billiards. A confirmatory indoor air sample was also collected from the former dry-cleaner, as well as an indoor air and sub-slab vapor sample from the Rack'm Pub & Billiards.

On January 17, 2011, URS submitted a Prioritization Assessment Report (PAR) to the DSCA Program, outlining the details of the initial assessment activities, including specifics related to a site reconnaissance and receptor survey. As documented in the PAR, assessment activities indicated that the extent of impacted groundwater was adequately delineated in respect to applicable DSCA screening levels and the constituents of concern at the site were PCE, TCE, cis-1,2-DCE, and trans-1,2-DCE. An Air Quality Evaluation Results report, dated February 9, 2011, documented all vapor and indoor air assessment activities completed at the site. As documented in the February 9, 2011 report, vapor/indoor air results indicated no exceedances of indoor air risk screening levels during the two sampling events completed in September 2010 and January 2011.

As groundwater was adequately delineated at the site, URS began quarterly monitoring of the existing monitoring wells MW-1, MW-2R, MW-3 through MW-6, MW-8R, MW-9, and DMW-1 using passive diffusion bags (PDBs). After the initial sampling event in September 2010, three (3) additional sampling events were completed in April 2011, July 2011, and October 2011. The results of the sampling events are documented in the Groundwater Monitoring Report submitted to the DSCA Program on February 3, 2012, which concluded that contaminant plume stability was demonstrated. Two additional soil samples were taken in March 2011 and July 2011 to complete adequate soil delineation at the site.

When soil, groundwater, and vapor/indoor air assessment activities were completed at the site, URS completed a Risk Assessment Report in April 2013. As discussed in detail in Section 3.0, the risk assessment concluded that risks associated with the contamination could be managed through implementation of site-specific land-use controls as detailed in this RMP. Therefore, the risk assessment recommended risk-based closure for the site. The purpose of this RMP is to ensure that the assumptions made in the risk assessment remain valid in the future.

## 4.2 Remedial Action

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

### 4.2.1 Condition 1 – The Dissolved Plume is Stable or Decreasing

A total of four (4) groundwater monitoring events have been conducted for monitoring wells MW-1, MW-2R, MW-3 through MW-6, MW-8R, MW-9, and DMW-1 in September 2010, April 2011, July 2011, and October 2011. Constituents detected in groundwater samples from the site include: PCE, TCE, cis-1,2-DCE, trans-1,2-dichloroethene, toluene, ethylbenzene, methyl tert-butyl ether, and 4-methyl-2-pentanone. Of these, only PCE and TCE were detected at concentrations exceeding the 2L Standards. URS focused on PCE as a COC for evaluation of plume stability.

PCE has not been detected in groundwater samples collected from the source area monitoring well MW-1R since the April 2011 sampling event. URS prepared a concentration versus distance graph for sampling events conducted at the site, which is included in **Appendix A**. As indicated on the graph, PCE concentrations in the groundwater samples collected from monitoring well MW-1R appear to have decreased to below detection limit (BDL) over the four quarterly sampling events (September 2010 through October 2011) with PCE concentrations ranging from 1.4 ug/L to 48 ug/L. No COC was detected above 2L Standards in groundwater samples collected from downgradient monitoring well MW-9 or upgradient monitoring well MW-6 during any of the four sampling events. Based on this data, URS concludes that the size of the plume is stable and/or decreasing and concentrations in the source area are likely to remain generally stable.

Documentation of the plume stability evaluation, including a figure showing monitoring well locations, a table showing historical groundwater analytical data, and a concentration versus distance graph is included in **Appendix A**.

*4.2.2 Condition 2 –The Maximum Concentration within the Exposure Domain for Every Complete Exposure Pathway of any COC is Less Than Ten Times the RC of that COC*

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

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

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

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

URS 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**.

The site’s compliance with the four above referenced conditions confirms that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future. The plume is expected to naturally attenuate over time and the appropriate remedial action is to implement 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 or adjacent property, assuming the assumptions detailed in the Notice of Dry-Cleaning Solvent Remediation (NDCSR) remain valid. As such, this section is not applicable.

## 6.0 LAND-USE CONTROLS

The risk assessment conducted for the site was based on assumptions that usage of the property is currently commercial and future use could potentially be residential. Land-use controls will be implemented to ensure that land-use conditions are maintained and monitored until the land-use controls are no longer required for the site. A NDCSR was prepared for the site property to comply with the land-use control requirement. The NDCSR is included in **Appendix C**. Refer to the NDCSR for the specific language to be incorporated to address each of the risk assessment assumptions.

A plat showing the locations and types of dry-cleaning solvent impacts on the site are included as exhibits to the NDCSRs. The locations of dry-cleaning solvent impacts are where contaminants have been detected above unrestricted use standards. As discussed in Section 4.1, PCE is the primary COC for the site.

## 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 restrictions are being complied with. An example of such a certification is included in **Appendix D**.

## 8.0 RMP IMPLEMENTATION SCHEDULE

Since the groundwater plume is stable and confined to the site property and possible exposure to the contamination is managed through the NDCSR, no additional site remediation activities are required to implement the RMP. A 30-day public comment period will be held to allow the community an opportunity to comment on this proposed strategy. **Appendix E** includes example documents used to announce the public comment period in the local newspaper and to inform

local officials, nearby property owners, and interested parties. As such, upon completion of the public comment period and final approval of the RMP, the NDCSRs will be filed with the Onslow County Register of Deeds and will complete the RMP schedule.

## **9.0 CRITERIA FOR DEMONSTRATING RMP SUCCESS**

The RMP will be successfully implemented once the required NDCSRs have been executed and recorded with the Onslow County Register of Deeds. The NDCSR, for the site property, at the request of the property owner, may 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 the remediation of the property. If NCDENR is notified of a change in site conditions, per the notification requirements detailed in the NDCSRs, the RMP will be reviewed to determine if the site conditions have impacted the requirements set forth in the NDCSRs 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 owners as part of the NDCSR requirements.

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

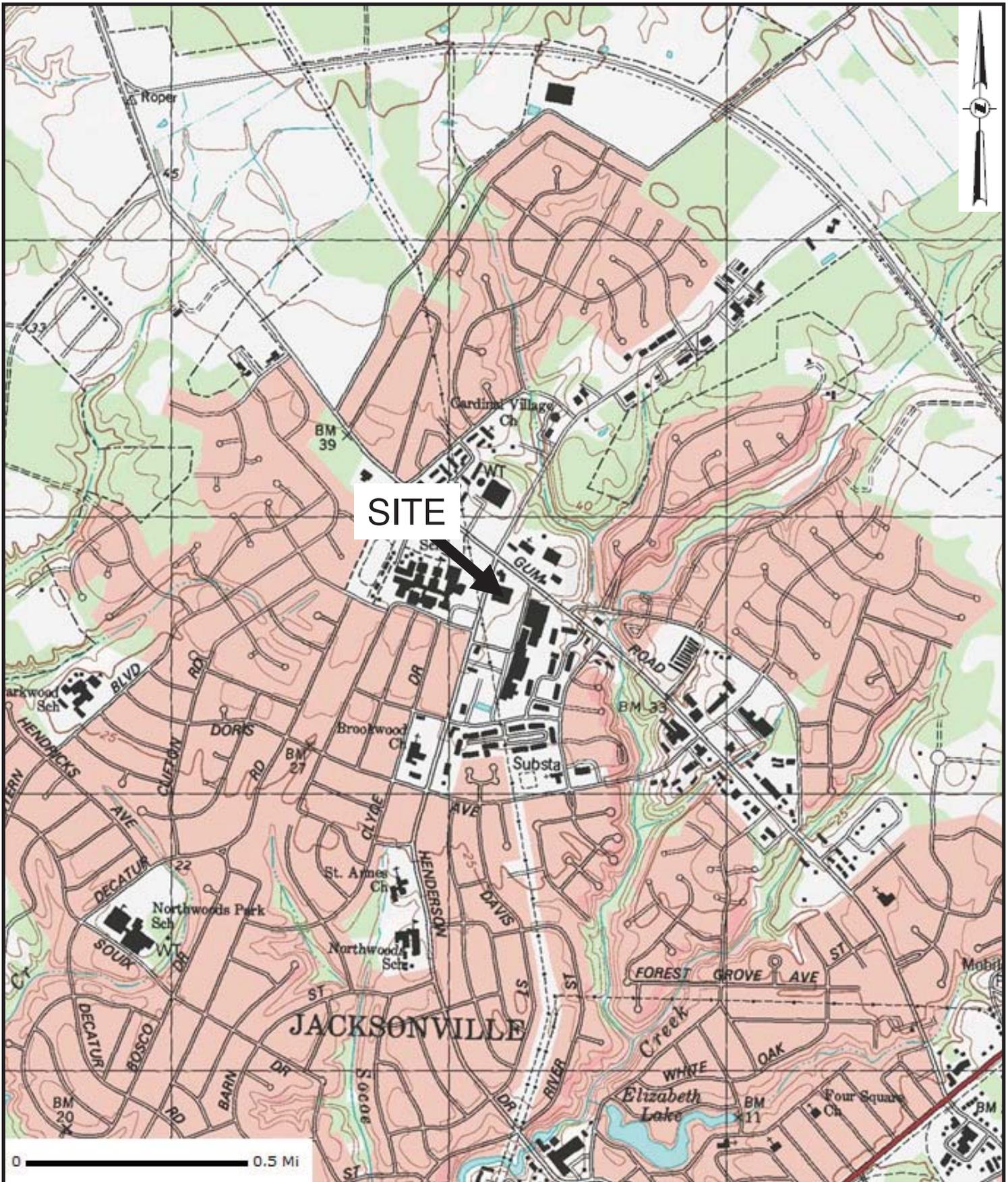
As discussed above, unless the DSCA Program is notified of a change in land-use conditions at the subject site, per the notification requirements detailed in this plan, the RMP will remain in effect until the RMP has met its objectives and is considered a success. Pursuant to N.C.G.S. 143-215.104K, if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

## **11.0 CONCLUSIONS AND RECOMMENDATIONS**

URS has prepared this RMP for the Coastal Dry Cleaners site on behalf of the DSCA Program. The results of the risk assessment completed for the site indicate that contaminant concentrations do not pose an unacceptable risk. The contaminant plume associated with the site appears stable and/or decreasing. This RMP specifies that the NDCSR requirements provide notification that land-use conditions observed during the risk assessment evaluation remain valid in the future.

Based on the documentation contained in this report, URS recommends issuance of a “No Further Action” letter.

## FIGURES



Reference: 7.5 Minute USGS Topographic Map: Jacksonville North, North Carolina (1997)



URS CORPORATION - NORTH CAROLINA  
 TWO SOUTH EXECUTIVE PARK  
 6155 PARK SOUTH DRIVE, SUITE 300  
 CHARLOTTE, NC 28210  
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Site Location Map  
 Former Coastal Dry Cleaners  
 1038 Henderson Drive  
 Jacksonville, NC  
 DSCA Site # 67-0004

DRAWN BY:  
 CLE - 7/6/10  
 CHECKED BY:  
 DT - 7/6/10  
 PROJECT NO:  
 38854487

SHEET  
 Att. 1



On-Site Unit

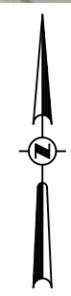
Former Coastal Dry Cleaners

Off-Site Unit

Distance from soil source to uncontrolled downgradient property boundary is approximately 520 feet

**LEGEND**

-  Property Line
-  Exposure Unit Boundary
-  Soil/Groundwater Source Area




APPROX. SCALE, ft.

SHEET:  
Att. 2

DRAWN BY:  
CES - 1/21/13

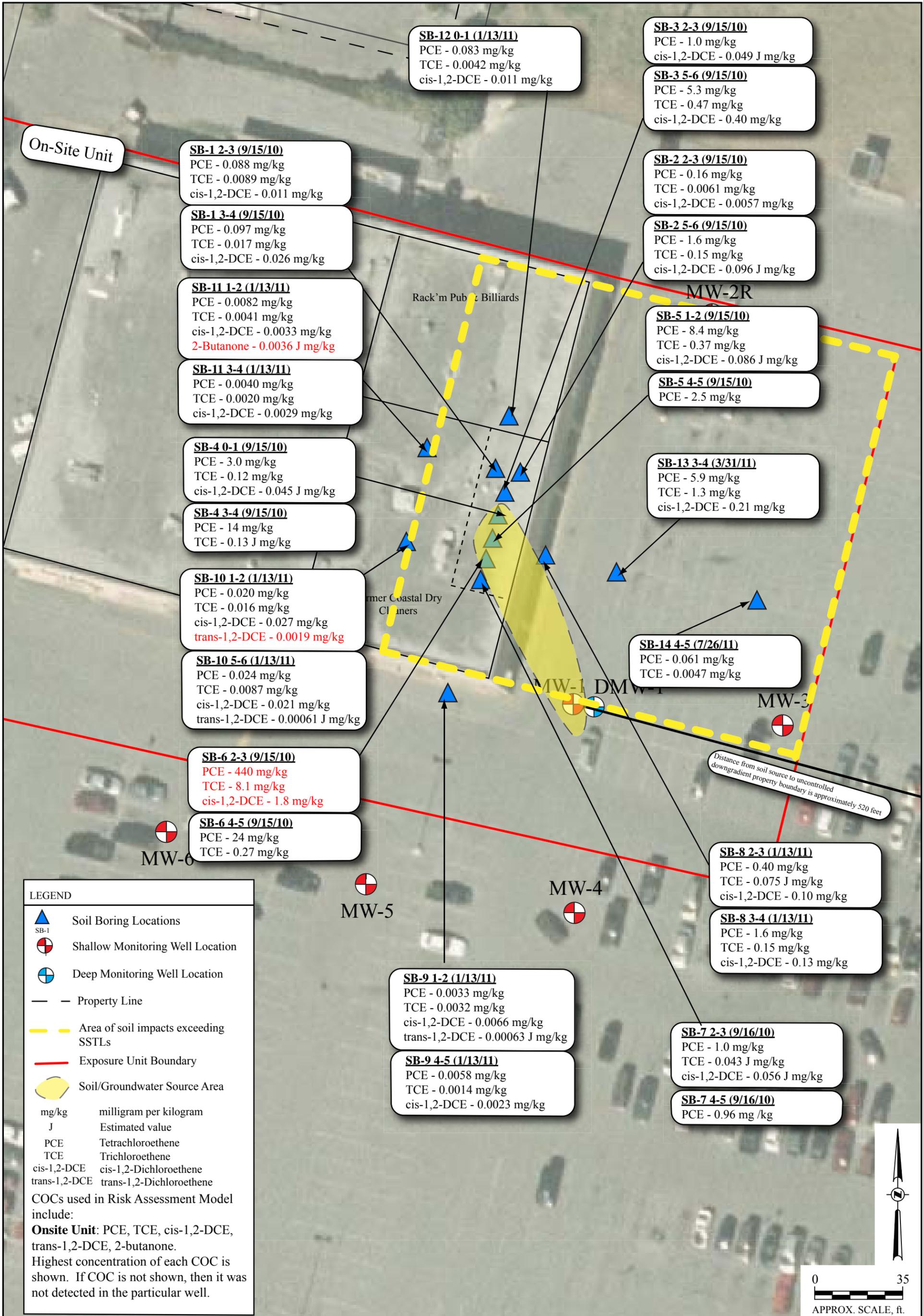
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RHM - 1/21/13

PROJECT NO.:  
31828837



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6000 FAIRVIEW DRIVE, SUITE 200  
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Exposure Unit Location Map  
Former Coastal Dry Cleaners  
1170 Henderson Drive  
Jacksonville, NC  
DSCA Site # 67-0004



**SB-12 0-1 (1/13/11)**  
PCE - 0.083 mg/kg  
TCE - 0.0042 mg/kg  
cis-1,2-DCE - 0.011 mg/kg

**SB-3 2-3 (9/15/10)**  
PCE - 1.0 mg/kg  
cis-1,2-DCE - 0.049 J mg/kg

**SB-3 5-6 (9/15/10)**  
PCE - 5.3 mg/kg  
TCE - 0.47 mg/kg  
cis-1,2-DCE - 0.40 mg/kg

**SB-2 2-3 (9/15/10)**  
PCE - 0.16 mg/kg  
TCE - 0.0061 mg/kg  
cis-1,2-DCE - 0.0057 mg/kg

**SB-2 5-6 (9/15/10)**  
PCE - 1.6 mg/kg  
TCE - 0.15 mg/kg  
cis-1,2-DCE - 0.096 J mg/kg

**SB-5 1-2 (9/15/10)**  
PCE - 8.4 mg/kg  
TCE - 0.37 mg/kg  
cis-1,2-DCE - 0.086 J mg/kg

**SB-5 4-5 (9/15/10)**  
PCE - 2.5 mg/kg

**SB-13 3-4 (3/31/11)**  
PCE - 5.9 mg/kg  
TCE - 1.3 mg/kg  
cis-1,2-DCE - 0.21 mg/kg

**SB-14 4-5 (7/26/11)**  
PCE - 0.061 mg/kg  
TCE - 0.0047 mg/kg

Distance from soil source to uncontrolled downgradient property boundary is approximately 520 feet

**SB-8 2-3 (1/13/11)**  
PCE - 0.40 mg/kg  
TCE - 0.075 J mg/kg  
cis-1,2-DCE - 0.10 mg/kg

**SB-8 3-4 (1/13/11)**  
PCE - 1.6 mg/kg  
TCE - 0.15 mg/kg  
cis-1,2-DCE - 0.13 mg/kg

**SB-7 2-3 (9/16/10)**  
PCE - 1.0 mg/kg  
TCE - 0.043 J mg/kg  
cis-1,2-DCE - 0.056 J mg/kg

**SB-7 4-5 (9/16/10)**  
PCE - 0.96 mg/kg

**SB-9 1-2 (1/13/11)**  
PCE - 0.0033 mg/kg  
TCE - 0.0032 mg/kg  
cis-1,2-DCE - 0.0066 mg/kg  
trans-1,2-DCE - 0.00063 J mg/kg

**SB-9 4-5 (1/13/11)**  
PCE - 0.0058 mg/kg  
TCE - 0.0014 mg/kg  
cis-1,2-DCE - 0.0023 mg/kg

**SB-1 2-3 (9/15/10)**  
PCE - 0.088 mg/kg  
TCE - 0.0089 mg/kg  
cis-1,2-DCE - 0.011 mg/kg

**SB-1 3-4 (9/15/10)**  
PCE - 0.097 mg/kg  
TCE - 0.017 mg/kg  
cis-1,2-DCE - 0.026 mg/kg

**SB-11 1-2 (1/13/11)**  
PCE - 0.0082 mg/kg  
TCE - 0.0041 mg/kg  
cis-1,2-DCE - 0.0033 mg/kg  
2-Butanone - 0.0036 J mg/kg

**SB-11 3-4 (1/13/11)**  
PCE - 0.0040 mg/kg  
TCE - 0.0020 mg/kg  
cis-1,2-DCE - 0.0029 mg/kg

**SB-4 0-1 (9/15/10)**  
PCE - 3.0 mg/kg  
TCE - 0.12 mg/kg  
cis-1,2-DCE - 0.045 J mg/kg

**SB-4 3-4 (9/15/10)**  
PCE - 14 mg/kg  
TCE - 0.13 J mg/kg

**SB-10 1-2 (1/13/11)**  
PCE - 0.020 mg/kg  
TCE - 0.016 mg/kg  
cis-1,2-DCE - 0.027 mg/kg  
trans-1,2-DCE - 0.0019 mg/kg

**SB-10 5-6 (1/13/11)**  
PCE - 0.024 mg/kg  
TCE - 0.0087 mg/kg  
cis-1,2-DCE - 0.021 mg/kg  
trans-1,2-DCE - 0.00061 J mg/kg

**SB-6 2-3 (9/15/10)**  
PCE - 440 mg/kg  
TCE - 8.1 mg/kg  
cis-1,2-DCE - 1.8 mg/kg

**SB-6 4-5 (9/15/10)**  
PCE - 24 mg/kg  
TCE - 0.27 mg/kg

**LEGEND**

- Soil Boring Locations
- Shallow Monitoring Well Location
- Deep Monitoring Well Location
- Property Line
- Area of soil impacts exceeding SSTLs
- Exposure Unit Boundary
- Soil/Groundwater Source Area

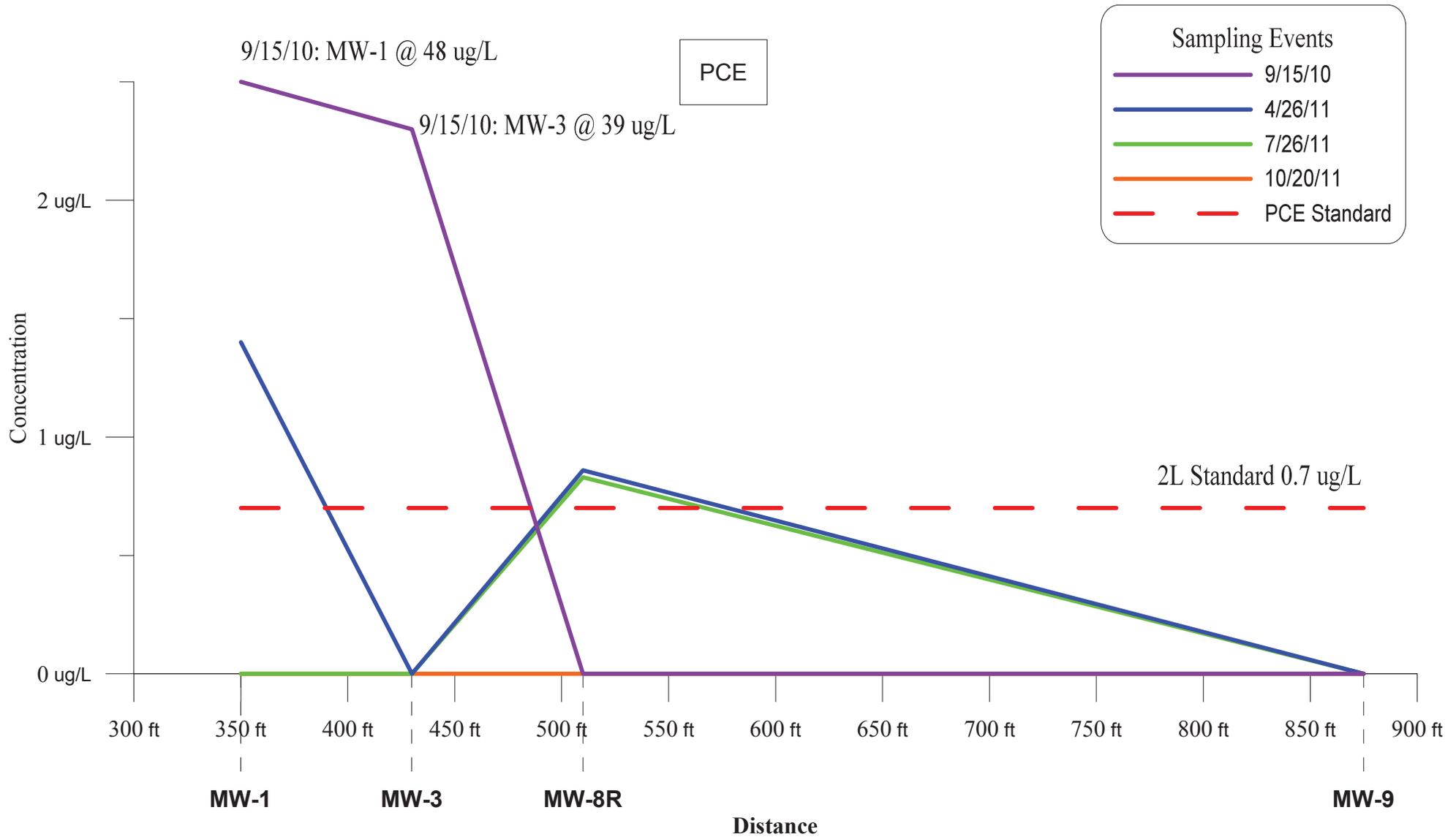
mg/kg milligram per kilogram  
J Estimated value  
PCE Tetrachloroethene  
TCE Trichloroethene  
cis-1,2-DCE cis-1,2-Dichloroethene  
trans-1,2-DCE trans-1,2-Dichloroethene

COCs used in Risk Assessment Model include:  
**Onsite Unit:** PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 2-butanone.  
Highest concentration of each COC is shown. If COC is not shown, then it was not detected in the particular well.



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

Appendix A  
Concentration vs. Distance  
Sampling Events September 2010 through October 2011  
Coastal Cleaners, Jacksonville, Onslow County, NC



**Table 8: Analytical Data for Groundwater**

**ADT 8**

**DSCA ID No.: 67-0004**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	Benzene	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)	4-Methyl-2-pentanone	Acetone	Isopropyl Ether	2-Butanone	Methylene chloride	Chloroform			
		[mg/L]																			
B1-W1	4/27/99	NA	2.706	NA	NA	NA	3.445	NA	0.03	1.241	NA	NA	NA	NA	NA	NA	0.031	NA			
B2-W1	4/27/99	NA	0.265	NA	NA	NA	0.263	NA	< 0.005	0.191	NA	NA	NA	NA	NA	NA	< 0.005	NA			
B3-W1	4/27/99	NA	< 0.005	NA	NA	NA	0.0023	NA	< 0.005	0.0006	NA	NA	NA	NA	NA	NA	< 0.005	NA			
MW-1	7/30/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.005	< 0.0005			
MW-2	7/30/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.005	< 0.0005			
MW-3	7/30/99	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	< 0.005	< 0.005	< 0.005	< 0.005	< 0.015	NA	NA	NA	NA	< 0.050	< 0.005			
MW-4	7/30/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.0050	< 0.0005			
MW-5	7/30/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.0050	< 0.0005			
MW-6	7/30/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.0050	< 0.0005			
MW-7	8/23/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.005	< 0.0005			
MW-8	8/23/99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	NA	NA	NA	NA	< 0.005	< 0.0005			
MW-1	5/10/10	< 0.001	0.0185	< 0.001	< 0.001	< 0.001	0.0786	< 0.001	0.0016	0.0344	0.0011	< 0.003	0.0231	< 0.025	< 0.0010	< 0.005	< 0.002	< 0.001			
MW-3	5/10/10	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.024	< 0.001	< 0.001	0.0036	< 0.001	< 0.003	< 0.005	0.028	< 0.0010	< 0.005	< 0.002	< 0.001			
MW-4	5/10/10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	< 0.005	0.0377	< 0.0010	< 0.005	< 0.002	< 0.001			
MW-5	5/10/10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	0.0058	0.187	< 0.0010	< 0.005	< 0.002	< 0.001			
MW-6	5/10/10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.003	0.0072	0.267	< 0.0010	< 0.005	< 0.002	< 0.001			
MW-1	9/15/10	< 0.0010	0.0062	0.0006 8 J	< 0.0010	< 0.0010	0.048	< 0.0010	0.0005 8 J	0.019	< 0.0010	< 0.0010	0.012	0.0077	< 0.0010	< 0.005	< 0.002	< 0.0010			

**Table 8: Analytical Data for Groundwater**

**ADT 8**

**DSCA ID No.: 67-0004**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	Benzene	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)	4-Methyl-2-pentanone	Acetone	Isopropyl Ether	2-Butanone	Methylene chloride	Chloroform			
		[mg/L]																			
MW-2R	9/14/10	< 0.0010	< 0.0010	< 0.0010	0.0022	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-3	9/16/10	< 0.0010	0.0014	0.0005 7 J	< 0.0010	< 0.0010	0.039	< 0.0010	< 0.0010	0.0034	< 0.0010	< 0.0010	0.0022 J	0.0065	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-4	9/16/10	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	0.0063	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-5	9/16/10	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-6	9/16/10	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-8R	9/14/10	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
DMW-1	9/15/10	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0007 6 J	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	0.0099	< 0.0010	< 0.005	< 0.002	0.0009 1 J			
MW-1	4/26/11	< 0.0010	0.046	< 0.0010	< 0.0010	< 0.0010	0.0014	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-2R	4/26/11	< 0.0010	< 0.0010	< 0.0010	0.0019	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	0.0007 5 J	< 0.005	< 0.002	< 0.0010			
MW-3	4/26/11	< 0.0010	0.013	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0019	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-4	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-5	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0008 5 J	< 0.0010	< 0.0010	< 0.0010	< 0.0030	0.0037 J	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-6	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0009 8 J	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-8R	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0008 6 J	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-9	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
DMW-1	4/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.005	< 0.002	< 0.0010			
MW-1	7/26/11	< 0.0010	0.046	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	0.0019 J	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			

**Table 8: Analytical Data for Groundwater**

**ADT 8**

**DSCA ID No.: 67-0004**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	Benzene	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)	4-Methyl-2-pentanone	Acetone	Isopropyl Ether	2-Butanone	Methylene chloride	Chloroform			
		[mg/L]																			
MW-2R	7/26/11	< 0.0010	< 0.0010	< 0.0010	0.007	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	0.0008 9 J	< 0.0050	< 0.002	< 0.0010			
MW-3	7/26/11	< 0.0010	0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0009 7 J	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-4	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-5	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	0.0037 J	0.0054	< 0.0010	0.0032 J	< 0.002	< 0.0010			
MW-6	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	0.0061	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-8R	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0008 3 J	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-9	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
DMW-1	7/26/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	0.009	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-1	10/20/11	< 0.0010	0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-2R	10/20/11	< 0.0010	< 0.0010	< 0.0010	0.0097	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	0.0006 0 J	< 0.0050	< 0.002	< 0.0010			
MW-3	10/20/11	< 0.0010	0.003	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-4	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-5	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	0.0035 J	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-6	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-8R	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	0.0040 J	< 0.0010	< 0.0050	< 0.002	< 0.0010			
MW-9	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	< 0.0050	< 0.0010	< 0.0050	< 0.002	< 0.0010			
DMW-1	10/20/11	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0050	0.0074	< 0.0010	< 0.0050	< 0.002	< 0.0010			



**LEGEND**

-  Shallow Monitoring Well
-  Deep Monitoring Well



SHEET:  
Att. 14

DRAWN BY:  
CES - 12/29/10  
CHECKED BY:  
JMR - 12/29/10  
PROJECT NO.:  
38854487



URS CORPORATION - NORTH CAROLINA  
TWO SOUTH EXECUTIVE PARK  
6135 PARK SOUTH DRIVE, SUITE 300  
CHARLOTTE, NC 28210  
TEL: (704) 522-0330  
FAX: (704) 522-0063

Monitoring Well Locations  
Former Coastal Dry Cleaners  
1038 Henderson Drive  
Jacksonville, NC  
DSCA Site # 67-0004

## APPENDIX B

### LEVEL I ECOLOGICAL RISK ASSESSMENT CHECKLISTS



July 30, 2013

North Carolina Department of Environment  
and Natural Resources  
Division of Waste Management – DSCA Program  
1646 Mail Services Center  
Raleigh, NC 27699-1646

Att: Mr. Jay King  
DSCA Project Manager

Re: Level 1 Ecological Risk Assessment  
Former Coastal Cleaners DSCA Site ID #67-0004  
1170 Henderson Drive  
Jacksonville, Onslow County, North Carolina  
URS-NC Project Number 31828795

Dear Mr. King:

URS Corporation – North Carolina (URS) is pleased to present the findings of the Level 1 Ecological Risk Assessment (Eco Risk Assessment) for the former Coastal Cleaners facility (site) located in Jacksonville, Onslow County, North Carolina to North Carolina Department of Environment and Natural Resources (NCDENR). The Eco Risk Assessment was completed in accordance with the DSCA program's Risk Based Corrective Action (RBCA) guidance document to assess the potential for ecological receptors. If you have any questions or require additional information, please do not hesitate to contact this office.

Sincerely,

**URS CORPORATION – NORTH CAROLINA**

Carlin Slusher  
Project Manager

Robert H. MacWilliams, PG  
Program Manager

Attachment

URS Corporation – North Carolina  
6000 Fairview Drive, Suite 200  
Charlotte, North Carolina 28210  
(704) 522-0330 Phone  
(704) 522-0063 Fax

**Level 1 Ecological Risk Assessment  
Checklist A for Potential Receptors and Habitat  
DSCA # 67-0004**

- 1. Are there any navigable water bodies or tributaries to a navigable water body on or within the one-half mile of this site?**  
Yes, according to the USGS topographic map, Jacksonville North, North Carolina, there is an unnamed tributary that flows into Mill Creek and then the New River that is located within the ½ mile radius to the southeast. According to the EDR, this tributary is just outside the ½ mile radius.
- 2. Are there any water bodies anywhere on or within the one-half mile of the site?**  
Yes, there are is an unnamed water body that drains into the Mill Creek/New River depicted on the topographic map within the ½ mile radius and the map supplied by EDR just outside the ½ mile radius.
- 3. Are there any wetland area such as marshes or swamps on or within one-half mile of the site?**  
Yes, there is one area to the east that has been identified by the National Wetland Inventory (NWI) within ½ mile of the site. The 100-year flood plan is located just within ¼ mile to the east of the site.
- 4. Are there any sensitive environmental areas on or within one-half mile of the site?**  
Yes, a wetland was identified within ½ mile of the site by the NWI.
- 5. Are there any areas on or within one-half mile of the site owned or used by local tribes?**  
No, none were identified by the Indian Reservation Database as reported by EDR.
- 6. Are there any habitat, foraging area or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species on or within one-half mile of the site?**  
Not likely. No endangered species were identified on the North Carolina Natural Heritage Sites database or the North Carolina Natural Areas database. However, there were several species reported for the County of Onslow. Given the developed nature of the site it is unlikely the site is used as habitat for the endangered species listed.
- 7. Are there any breeding, roosting or feeding areas by migratory bird species on or within one-half of the site?** None were located or have been specifically identified within ½ mile of the site or reported but potentially, as migratory birds are present in Onslow County according to the North Carolina Audubon website.
- 8. Are there any ecologically, recreationally or commercially important species on or within one-half mile of the site?** None have been identified.

**Are there any threatened and/or endangered species (plant or animal) on or within one-half mile of the site?** Not likely. No endangered species were identified on the North Carolina Natural Heritage Sites database or the North Carolina Natural Areas database. However, there were several species reported for the County of Onslow. Given the developed nature of the site it is unlikely the site is used as habitat for the endangered species listed.

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

---

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

March 2007

DSCA Program

**Level 1 Ecological Risk Assessment  
Checklist B for Potential Receptors and Habitat  
DSCA # 67-0004**

- 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
- 1C. Does groundwater from the site discharge to ecological receptor habitat? Yes, eventually, groundwater likely discharges to a creek located approximately ¼ mile east of the site.

**Question 1. Could chemicals associated with the site reach ecological receptors through groundwater?** Potentially, but not likely.

- 2A. Are chemicals present in surface soils on the site? Yes
- 2B. Can chemicals be leached from or be transported by erosion of surface soils on the site? No, surface soil impacts were only identified under impervious surfaces at the site.

**Question 2. Could chemicals associated with the site reach ecological receptors through runoff or erosion?** Not likely, the surface soil impacts were only identified under asphalt paved areas; therefore, erosion and runoff are not likely concerns.

- 3A. Are chemicals present in surface soil or on the surface of the ground? Yes
- 3B. Are potential ecological receptors on the site? No

**Question 3. Could chemicals associated with the site reach ecological receptors through direct contact?** No, surface soil impacts are located beneath impervious surfaces at the site.

- 4A. Are chemicals on the site volatile? Yes
- 4B. Could chemicals on the site be transported in air as dust or particulate matter? No, surficial soil impacts are located beneath impervious surfaces at the site. Unless soil and sediment is disturbed, chemicals transported by dust is not a concern.

**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?** Not likely, surficial soil impacts are located beneath impervious surfaces. The area is highly developed with commercial properties and roadways immediately adjacent to the site. No burrowing animals have been observed or would be expected beneath the paved asphalt at the 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 site reach ecological receptors through migration of NAPL?** No

- 6A. Are chemicals present in surface and shallow subsurface soils or on the surface of the ground? Yes, chemicals have been identified below ground surface (bgs) beneath paved asphalt.

- 6B. Are chemicals found in soil on the site taken up by plants growing on the site? No, the area is highly developed with commercial properties and parking lots.
- 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.
- 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?** Potentially, but not likely.

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.

March 2007

DSCA Program

**APPENDIX C**

**NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

## NOTICE OF DRY-CLEANING SOLVENT REMEDIATION

Property Owner: New Market Square, 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 New Mark Square, 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 1170 Henderson Drive, Jacksonville, Onslow, North Carolina, Parcel Identification Number (PIN) 437706393775.**

**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 Coastal Cleaners (DSCA Site 67-0004) located at 1170 Henderson Drive in the New Market Square. Dry-cleaning operations were conducted on the Property from approximately mid-1970s to mid-2000s.

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 On-site Exposure Unit of the Property (“Exposure Unit Boundary”) 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 on the On-site Exposure Unit (“Exposure Unit Boundary”) 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. No activities that cause or create an increase in infiltration (for example, removal or demolition of materials such as asphalt, concrete, buildings, or other structures that by their use and nature minimize infiltration of rain or water runoff into potentially contaminated soil) may occur in “Area of Soil Impact” of the Property, as shown on Exhibit A, without prior approval of DENR.**

6. **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.**
7. **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.**
8. **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 subject to this Notice is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section, in no smaller type than that used in the body of the deed or instrument, (1) a statement that the property has been contaminated with dry-cleaning solvent and, if appropriate, cleaned up under the Act and (2) a reference by book and page to the recordation of this Notice.

The Property Owner shall notify DENR within fourteen (14) calendar days of the effective date of any conveyance, grant, gift, or other transfer, whole or in part, of the Property Owner's interest in the Property. This notification shall include the name, business address and phone number of the transferee and the expected date of transfer.

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

**PROPERTY OWNER SIGNATURE**

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

New Market Square, 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 New Market Square, 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”.

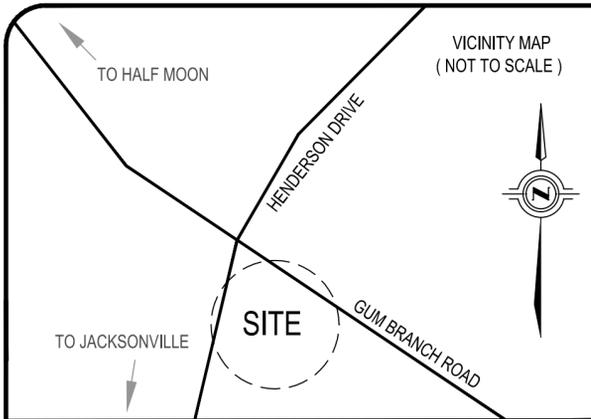
WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

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

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



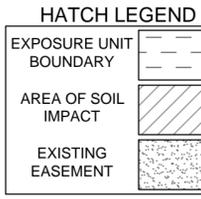
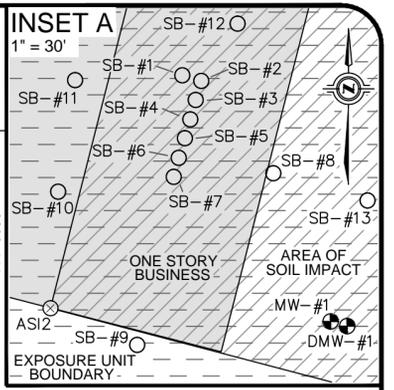
**EXHIBIT A**  
**REDUCTION OF SURVEY PLAT**



NCGS MON "DON 2 1973"  
 NAD 83 (NSRS 2011)  
 NORTHING = 381,784.9801  
 EASTING = 2,471,252.5331  
 ELEV. = 38.07

I, Augustin D. Keane, certify that this map was drawn under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

1. Class of Survey: Class A
2. Positional Accuracy: 0.10'
3. Type of GPS Field Procedure: NCGS VRS Network
4. Dates of Survey: 1-8-13 - 1-10-13
5. Datum/Epoch: NAD 83 (NSRS 2011)
6. Published/Fixed-control use: See Plat
7. Geoid Model: Geoid 2012
8. Combined Grid Factor: See Plat
9. Units: US Survey Feet



**REVIEW OFFICER CERTIFICATE**  
 I, \_\_\_\_\_, Review Officer of Onslow County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

Review Officer \_\_\_\_\_ Date \_\_\_\_\_

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

I, \_\_\_\_\_, A NOTARY PUBLIC OF SAID COUNTY AND STATE, DO HEREBY CERTIFY THAT

DID PERSONALLY APPEAR AND SIGN BEFORE ME THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

NOTARY PUBLIC (SIGNATURE) \_\_\_\_\_

MY COMMISSION EXPIRES \_\_\_\_\_

N.C.G.S. 143-215.104M(D) REQUIRES THAT WHEN PROPERTY FOR WHICH A NOTICE OF DRY-CLEANING SOLVENT REMEDIATION HAS BEEN FILED OR SOLD, LEASED, CONVEYED OR TRANSFERRED, THE DEED OR OTHER INSTRUMENT OF TRANSFER SHALL CONTAIN IN THE DESCRIPTION SECTION, IN NO SMALLER TYPE THAN THAT USED IN THE BODY OF THE DEED OR INSTRUMENT, A STATEMENT THAT THE PROPERTY HAS BEEN CONTAMINATED WITH DRY-CLEANING SOLVENT AND, IF APPROPRIATE, CLEANED UP UNDER THIS PART. USE THE FOLLOWING STATEMENT TO SATISFY N.C.G.S. 143-215.104M(D).

THIS PROPERTY HAS BEEN CONTAMINATED WITH DRY-CLEANING SOLVENT. A NOTICE OF DRY-CLEANING SOLVENT REMEDIATION IS RECORDED IN THE (FILL IN) COUNTY REGISTER OF DEEDS OFFICE AT BOOK (FILL IN), PAGE (FILL IN). QUESTIONS CONCERNING THIS MATTER MAY BE DIRECTED TO THE NORTH CAROLINA DIVISION OF WASTE MANAGEMENT, SUPERFUND SECTION, DRYCLEANING SOLVENT CLEANUP ACT (DSCA) PROGRAM, OR ITS SUCCESSOR IN FUNCTION.

1646 MAIL SERVICE CENTER  
 RALEIGH, NC 27699-1646

LEGEND

- ▲ ... PROJECT CONTROL
- ... PERMANENT MONITORING WELL
- ... SOIL BORE HOLE
- ... EXISTING PROPERTY CORNER
- ⊗ ... CHISELED X
- ⊗ ... MAG NAIL SET
- ASI ... AREA OF SOIL IMPACT
- EUB ... EXPOSURE UNIT BOUNDARY
- EIR ... EXISTING IRON ROD
- NMF ... NO MONUMENTATION FOUND
- MW ... MONITORING WELL
- SB ... SOIL BORE
- PP ... POWER POLE
- FH ... FIRE HYDRANT
- E ... EAST
- C&G ... CURB AND GUTTER
- TMH ... TELEPHONE MANHOLE
- S ... SIGN
- PK ... PARKER KALON NAIL
- TR ... TREE
- TRANSMISSION LINE
- LINE NOT SURVEYED
- SURVEYED

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

I, \_\_\_\_\_, A NOTARY PUBLIC OF SAID COUNTY AND STATE, DO HEREBY CERTIFY THAT

DID PERSONALLY APPEAR & SIGN BEFORE ME THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

NOTARY PUBLIC (SIGNATURE) \_\_\_\_\_

MY COMMISSION EXPIRES \_\_\_\_\_

The documentary component of this Notice of Dry Cleaning Solvent Remediation, limiting the uses of this property is recorded at: Deed Book \_\_\_\_\_, Page \_\_\_\_\_.

Monitoring Well Coordinate Data - Top of PVC Casing

Descriptor	Northing	Easting	Elevation
DMW-#1	379829.4868	2473263.3778	33.04
MW-#1	379830.6257	2473259.2527	33.14
MW-#2R	379977.4120	2473310.1037	33.22
MW-#3	379815.3418	2473324.3299	31.49
MW-#4	379763.1821	2473268.1111	32.07
MW-#5	379739.1320	2473174.4455	31.63
MW-#6	379758.9810	2473096.9044	32.44
MW-#8R	379781.3795	2473412.2766	31.10
MW-#9	379671.4981	2473739.2168	30.84
SB-#1	379892.0231	2473222.1024	34.32
SB-#2	379890.6540	2473226.8752	34.30
SB-#3	379885.8962	2473225.4627	34.32
SB-#4	379881.0485	2473224.0842	34.31
SB-#5	379876.3357	2473222.7368	34.31
SB-#6	379871.4573	2473221.2059	34.33
SB-#7	379866.6887	2473219.9569	34.32
SB-#8	379867.6240	2473244.9242	33.76
SB-#9	379824.7916	2473210.8035	33.66
SB-#10	379890.8528	2473195.2331	34.32
SB-#11	379890.8528	2473195.2331	34.32
SB-#12	379904.9434	2473235.9736	34.25
SB-#13	379860.8365	2473268.4937	33.39
SB-#14	379846.2383	2473323.4816	31.61

**NORTH CAROLINA**  
**ONSLOW COUNTY**

I, AUGUSTIN D. KEANE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DESCRIPTION RECORDED IN DEED BOOK 1631 PAGE 130 ONSLOW COUNTY REGISTRY) THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS BROKEN LINES, THAT THE RATIO OF PRECISION AS CALCULATED EXCEEDS 1:10,000, THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH GENERAL STATUTE 47-30 AS AMENDED, WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 2013.

THIS SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

AUGUSTIN D. KEANE, NC PLS L-4474

**PRELIMINARY**

**SURVEYED BY:**  
 ESP Associates, P.A.  
 5121 Kingdom Way  
 Suite 208  
 Raleigh, NC 27607  
 phone 919.678.1070  
 fax 919.677.1252  
 www.espassociates.com

**DRY CLEANING SOLVENT REMEDIATION PLAT PREPARED FOR:**  
**URS CORPORATION - NC**  
 1600 Perimeter Park Drive, Suite 400  
 Morrisville, NC 27560

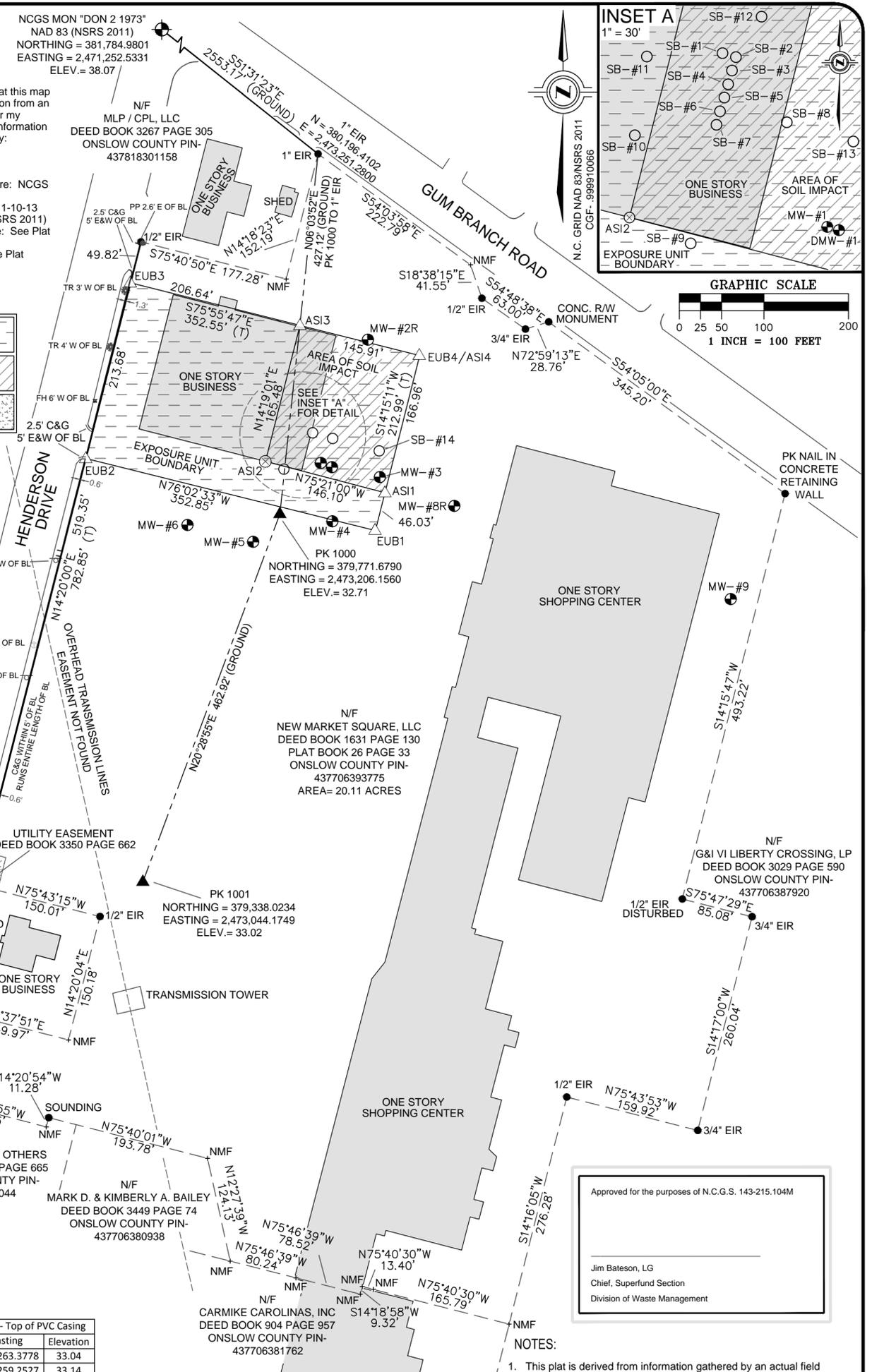
Approved for the purposes of N.C.G.S. 143-215.104M

Jim Bateson, LG  
 Chief, Superfund Section  
 Division of Waste Management

**NOTES:**

1. This plat is derived from information gathered by an actual field survey made by this office completed and plated January, 2013.
2. Horizontal datum used for this project is NAD 83(NSRS 2011).
3. Vertical datum used for this project is NAVD 88.
4. Horizontal and Vertical control were established by ESP using the NCGS VRS RTK network.
5. All distances are horizontal ground measurements unless otherwise noted.
6. All coordinate values are localized ground coordinates.
7. The project was localized around ESP Control Point "1000". The CGF is 0.999910066 (Ground to Grid).
8. It was not within the scope of this project to determine flood plain locations on site.
9. The purpose of this survey plat is to serve as a Site Survey Plat for a State-certified Dry-Cleaning Solvent Remediation project.
10. Boundary lines shown are per recovered field evidence. A complete title search was not performed as a part of this survey.
11. The areas and types of contamination depicted hereon are approximations derived from the best available information at the time of filing. This information was supplied to ESP by URS Corporation.
12. Building outlines were derived from GIS basemaps. Road outlines not within 5' of a surveyed boundary line were derived from aerial data.
13. The purpose of this plat is to locate permanent monitoring well and soil bore hole locations within the site and show their relations to the site boundary.

**SURVEY PLAT:**  
 Exhibit A to the Notice of Dry-Cleaning Solvent Remediation  
 Property Owned By:  
 New Market Square, LLC  
 Former Coastal Dry Cleaners  
 DSCA Site ID #67-004  
 1150 Henderson Drive  
 City of Jacksonville, Jacksonville Township  
 Onslow County, North Carolina



Approved for the purposes of N.C.G.S. 143-215.104M

Jim Bateson, LG  
 Chief, Superfund Section  
 Division of Waste Management

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**SURVEY PLAT:**  
 Exhibit A to the Notice of Dry-Cleaning Solvent Remediation  
 Property Owned By:  
 New Market Square, LLC  
 Former Coastal Dry Cleaners  
 DSCA Site ID #67-004  
 1150 Henderson Drive  
 City of Jacksonville, Jacksonville Township  
 Onslow County, North Carolina

**SURVEYED BY:**  
**ESP**  
 ESP Associates, P.A.  
 5121 Kingdom Way  
 Suite 208  
 Raleigh, NC 27607  
 phone 919.678.1070  
 fax 919.677.1252  
 www.espassociates.com  
 LICENSE NO. C-0587

**DRY CLEANING SOLVENT REMEDIATION PLAT PREPARED FOR:**  
**URS CORPORATION - NC**  
 1600 Perimeter Park Drive, Suite 400  
 Morrisville, NC 27560

DATE: 1/10/13  
 SCALE: 1" = 100'  
 DRAWN BY: A.M.W.  
 CHECKED BY: K.D.M.  
 REVISIONS:  
 ESP Associates Project #BM202800  
 -DESCRIPTION-  
 DSCA SURVEY  
 SHEET  
 1 OF 1

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

## BOOK 1631 PAGE 131

NEW MARKET SQUARE  
LAND DESCRIPTION

Commencing at NCGS Monument "Don - 2" having NCGS coordinates of N=116,368.536 meters, E=753,239.041 meters, thence South 46 degrees 11 minutes 48 seconds East 2552.74 feet to an existing iron rod on the southwestern right of way line of Gum Branch Road (NCSR 1308 - 85 foot right of way), said iron rod being the TRUE POINT OF BEGINNING and having NC Grid coordinates of N=115,884.4741 meters, E=753,848.2093 meters; thence from the above described point of beginning and with the southeastern right of way line of Gum Branch Road, South 48 degrees 43 minutes 02 seconds East 222.79 feet to an existing iron rod; thence continuing with said right of way line, South 13 degrees 20 minutes 59 seconds East 41.57 feet to an existing iron rod; thence continuing with said right of way line, South 49 degrees 27 minutes 45 seconds East 63.00 feet to a new iron rod; thence continuing with said right of way line, North 77 degrees 35 minutes 53 seconds East 28.74 feet to an existing concrete monument; thence continuing with said right of way line, South 48 degrees 43 minutes 50 seconds East 345.5 feet to an existing P.K. nail in a concrete block wall; thence leaving the right of way line of Gum Branch Road and with the western line of the UDRT of North Carolina property recorded in Deed Book 1220, Page 648 of the Onslow County Registry, South 19 degrees 37 minutes 43 seconds West 493.28 feet to an existing iron rod; thence South 70 degrees 26 minutes 26 seconds East 85.14 feet to an existing iron rod; thence South 19 degrees 38 minutes 37 seconds West 260.03 feet to an existing iron rod; thence North 70 degrees 22 minutes 57 seconds West 159.92 feet to an existing concrete monument; thence South 19 degrees 37 minutes 01 seconds West 276.28 feet to an existing iron rod; thence leaving the UDRT line and with the northern line of the Carmike Carolina, Inc. property recorded in Deed Book 904, Page 957, North 70 degrees 19 minutes 34 seconds West 165.79 feet to a new P.K. nail; thence continuing along the same line North 70 degrees 19 minutes 34 seconds West 13.40 feet to a computed point inside of the building; thence South 19 degrees 39 minutes 54 seconds West 9.32 feet to a computed point inside a building; thence North 70 degrees 25 minutes 43 seconds West 78.52 feet to a new P.K. nail; thence continuing along the same line, North 70 degrees 25 minutes 43 seconds West 80.24 feet to an existing P.K. nail at the southeasternmost corner of the Danny Eugene Bailey property recorded in Deed Book 1523, Page 611; thence with the eastern line of the Bailey property, North 07 degrees 06 minutes 43 seconds West 124.13 feet to an existing P.K. nail at the northeasternmost corner of the Bailey property; thence with the northern line of the Bailey property and with the northern line of the Miller, Thomas, Bryant, and Batchelor property recorded in Deed Book 798, Page 665, North 70 degrees 20 minutes 20 seconds West 193.78 feet to an existing iron rod; thence South 19 degrees 41 minutes 50 seconds West 11.28 feet to an existing iron rod; thence continuing with the Miller and others property, North 70 degrees 10 minutes 06 seconds West 149.99 feet to an existing iron rod on the eastern right of way line of Henderson Drive (NCSR 1336 - 82 foot right of way); thence with said right of way line, North 19 degrees 41 minutes 56 seconds East 105.51 feet to an existing iron rod; thence leaving said right of way line and with the southern line of Tract 2 of the Neuse, Inc. property recorded in Deed Book 434, Page 407, South 70 degrees 16 minutes 55 seconds East 149.97 feet to an existing iron rod; thence with the eastern line of the Neuse, Inc. property, North 19 degrees 41 minutes 15 seconds East 150.18 feet to an existing iron rod; thence North 70 degrees 22 minutes 19 seconds West 150.01 feet to an existing iron pipe on the eastern right of way line of Henderson Drive; thence with the said right of way line, North 19 degrees 41 minutes 28 seconds East 782.85 feet to an existing iron rod; thence leaving said right of way line and with the southern line of the E. J. Pope and Son, Inc. property recorded in Deed Book 1005, Page 387, South 70 degrees 19 minutes 54 seconds East 177.28 feet to an existing iron rod; thence with the eastern line of the Pope and Son, Inc. property, North 19 degrees 36 minutes 28 seconds East 152.20 feet to the point and place of beginning.

Containing 20.11 acres. All courses are correct in their angular relationship to North per Map Book 26, Page 33 of the Onslow County Registry.

Together with all easements and rights granted to or reserved by Samuel M. Longiotti in that certain deed to Carmike Carolinas, Inc. recorded in Book 904, Page 957, as amended by deed recorded in Book 1311, Page 245, Onslow County Registry and all easements appurtenant to and in favor of the above described property contained in Deed of Easements recorded in Book 983, Page 885, Onslow County Registry.

F:\apps\WP51\DOCS\CLIENTS\Longiotti\00PL0205\new market square description.wpd

**APPENDIX D**

**EXAMPLE ANNUAL DSCA LAND-USE RESTRICTIONS CERTIFICATIONS**

**Annual Certification of Land-Use Restrictions**

**Site Name:** Former Coastal Cleaners  
**Site Address:** 1170 Henderson Drive, Jacksonville, Onslow County  
**DSCA ID No:** #67-0004

**ANNUAL CERTIFICATION of LAND-USE RESTRICTIONS**

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

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

New Market Square, LLC

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

Name typed or printed:

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

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

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

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

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

APPENDIX E  
NOTICE OF INTENT



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

Pat McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

<Date>

<name>, <City Manager>  
<address>  
<city>, NC <zip>

<name>, <County Health Director>  
<address>  
<city>, NC <zip>

Subj: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # 67-0004  
Former Coastal Cleaners, 1136 Henderson Drive, Jacksonville

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.ncdsca.org](http://www.ncdsca.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:

Jay King, 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 # 67-0004  
Former Coastal Cleaners, 1136 Henderson Drive, Jacksonville  
Page 2

June 5, 2013

A Summary of the NOI is being published in the <newspaper of general circulation>, 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)707-8367.

Sincerely,

Jay King, Project Manager  
DSCA Remediation Unit  
Jay.King@ncdenr.gov

Attachments: Risk Management Plan

Cc: DSCA Site # 67-0004 File

**Public Notice**

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

Former Coastal Cleaners  
DSCA Site # 67-0004

Pursuant to N.C.G.S. §143-215.104L, on behalf of New Market Square, 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.

Former Coastal Cleaners formerly conducted or conducts dry-cleaning operations at the New Market Square at 1170 Henderson Drive in Jacksonville, North Carolina. The property is currently occupied by the Jacksonville Coin Laundry. Dry-cleaning solvent contamination in soil and/or ground water has been identified at the following parcel(s):

1170 Henderson Drive in Jacksonville; Parcel No. 437706393775

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

The elements of the complete NOI are included in the 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 Jay King at (919)707-8367. All comments and requests should be sent to:

Jay King, 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

Pat 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 1170 Henderson Drive  
Jacksonville, 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 Coastal Cleaners at 1170 Henderson Drive in Jacksonville. The property is currently occupied by a laundromat. 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) 707-8367, or Delonda Alexander at (919) 707-8365.

Sincerely,

Jay King, Project Manager  
DSCA Remediation Unit  
Jay.King@ncdenr.gov

Attachments: Summary of the NOI

Cc: DSCA Site # 67-0004 File