April 21, 2021

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

Att: Mr. Al Chapman
DSCA Project Manager

Re: Risk Management Plan
Three Dollar Crystal Cleaners, DSCA Site ID DC650012
7336 Market Street, Wilmington, New Hanover County, North Carolina

Dear Mr. Chapman:

AECOM Technical Services of North Carolina, Inc. (includes legacy URS and herein referred to as AECOM) is pleased to provide the attached Risk Management Plan (RMP) for the Three Dollar Crystal Cleaners site located at 7336 Market Street in Wilmington, North Carolina. A risk assessment conducted for the site indicates that contaminant concentrations at the site do not pose an unacceptable risk. The primary purpose of this RMP is to ensure that the assumptions made in the risk assessment remain valid in the future. Based on the documentation outlined in this report, AECOM recommends issuance of a No Further Action letter for the site.

If you have any questions or require additional information, please do not hesitate to contact either Rob MacWilliams or Mike Ranck at 919.461.1258.

Sincerely,

AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC.

J. Michael Ranck, PG
Project Manager

Robert H. MacWilliams, PG
Program Manager
Risk Management Plan
Three Dollar Crystal Cleaners
DSCA Site ID DC650012
7336 Market Street, Wilmington, New Hanover County, North Carolina 28411

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

J. Michael Ranck, PG
Project Manager

Robert H. MacWilliams, PG
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1.0 INTRODUCTION

AECOM Technical Services of North Carolina, Inc. (includes legacy URS and herein referred to as AECOM) has prepared this draft Risk Management Plan (RMP) to address dry-cleaning solvent contamination associated with the Three Dollar Crystal Cleaners (DSCA Site ID DC650012) on behalf of the North Carolina Department of Environmental Quality (NCDEQ) Dry-Cleaning Solvent Cleanup Act (DSCA) Program. The Three Dollar Crystal Cleaners facility was in operation from 1998 until 2020 at 7336 Market Street, Wilmington, New Hanover County, North Carolina. The site location is shown on the attached Figure 1.

The Three Dollar Crystal Cleaners site (herein referred to as the “site”) includes the source property (where the dry-cleaning facility source was located), owned by Stalvey Property LLC, 7336 Market Street, PID RO4400-003-001-000. The property is currently developed with a two-unit commercial building which encompasses the Point Your Toes Dance Studio, Sherwin-Williams paint store, and paved surface level drive aisle, storage yard, and parking areas.

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

2.0 OBJECTIVES OF RISK MANAGEMENT PLAN

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

- The presence of tetrachloroethylene (PCE) in groundwater beneath the source property at concentrations exceeding the Title 15A NCAC 2L.0202 Groundwater Standards (2L Standards);
- The presence of PCE in soil beneath the source property at concentrations above the Division of Waste Management (DWM) health based and/or protection of groundwater Preliminary Soil Remediation Goals (PSRGs); and,
- The presence of site contaminants in soil-gas beneath the source property as identified in the Risk Assessment Report, dated November 1, 2017, that exceed calculated residential and non-residential risk for future use conditions.

AECOM completed a risk assessment for the site in accordance with the DSCA Program’s risk assessment procedures in November 2017. A risk assessment addendum was submitted in
February 2021 to include the results of indoor air sampling data collected subsequent to the completion of the November 2017 risk assessment. The results of the risk assessment indicated that there are risks that exceed applicable target levels on the source property. These risks will be managed using site-specific land-use conditions that have been selected as part of the risk assessment evaluation and which require 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

AECOM performed a risk assessment to address the applicable exposure pathways based on the identified impacts summarized in Section 2.0. Comprehensive results of the risk assessment, which are summarized herein, are documented in the Risk Assessment Report, dated November 1, 2017 and Risk Assessment Addendum, dated February 24, 2021.

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

The risk assessment process consisted of evaluating exposure pathways for the exposure unit shown on Figure 2. A summary of the groundwater quality data used in the risk assessment is included on Figure 3. A summary of the soil quality data used in the risk assessment is included on Figure 4. A summary of the vapor quality data used in the risk assessment is included on Figure 6. The exposure model evaluation indicated the following exposure pathways for Exposure Unit #1 (EU#1):

**Exposure Unit #1**

EU#1 includes the source property where the Three Dollar Crystal Cleaners dry-cleaning facility formerly operated and where soil, groundwater, and sub-slab soil-gas impacts are present.

- **Vapor Intrusion Pathway** – For the vapor intrusion exposure pathway, the maximum contaminant concentrations observed in indoor air data within EU#1 were conservatively used as exposure point concentrations (EPC’s) to evaluate current risk, and the maximum contaminant concentrations observed in sub-slab vapor data within EU#1 were
conservatively used as EPCs to evaluate future risk. Indoor inhalation risk was evaluated using the DSCA risk assessment toolkit using the EPC from indoor air and sub-slab vapor data and applicable calculators for current conditions and future conditions. The results of the risk assessment were within acceptable risk levels for current non-residential use conditions but exceeded acceptable levels of risk for the indoor air exposure pathway for residential use or non-residential use under future conditions.

- **Soil Combined Pathways** – For the soil combined pathways evaluation, maximum soil contaminant concentrations observed within EU#1 were conservatively used as EPC’s to evaluate current and future risk. Soil combined risk was evaluated using the DSCA risk assessment toolkit and applicable calculators for current conditions, future conditions, and construction worker. Soil combined pathways risk levels did not exceed calculated allowable risk for current land-use conditions or for future residential, non-residential or construction user land-use conditions.

**Point of Exposure Modeling**

Site-specific Domenico groundwater modeling results indicate an exceedance of the site-specific target level (SSTL) for PCE in source soil to be protective of the closest uncontrolled point of exposure (POE) which is the first property located directly downgradient from the groundwater plume on which impacts have not been observed, located approximately 110 feet downgradient from the soil source area. As shown on **Figure 3**, a water supply well (WSW-2) is located on the source property and a water supply well (WSW-1) is located on the adjacent, downgradient property. As documented in a **Water Supply Well Sampling Report**, dated June 23, 2017, these water supply wells have been sampled and results were below laboratory detection limits. The water supply well WSW-2 is inactive and will be abandoned as part of the site closure process.

An evaluation of site groundwater conditions indicates that plume has not migrated as far as the site-specific Domenico groundwater modeling predicts. This is evident in groundwater quality data generated from downgradient monitoring wells MW-2 and MW-3 based on the non-detection of contaminant and/or concentrations below applicable 2L Groundwater Quality Standards. Some of the modeling inputs are conservative parameters, specifically the rate of infiltration which may not be representative of the current land cover. Such land cover would reasonably minimize infiltration in the source area and likely affect the documented plume migration at the site. However, because rate of infiltration is a significant variable in the leaching of contamination from soil and subsequent migrating 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 implemented to minimize soil disturbance and infiltration.

Furthermore, the Domenico groundwater model utilized as part of this evaluation does not account for physical and/or biological contaminant degradation that may be occurring naturally in the subsurface as the contaminant(s) migrate between the source area and the point of exposure. As documented in the DSCA Groundwater Monitoring Report Forms, submitted on July 14, 2014, groundwater quality stability at the site has been empirically demonstrated (based on a review of the groundwater quality data generated to date), and groundwater contamination above the 2L Standards is not expected to create an exceedance of 2L Standards at the point(s) of exposure referenced above.

Site-specific Domenico groundwater modeling results do not indicate any exceedances of the SSTLs in the area of maximum groundwater contaminant concentrations with respect to the following points of exposure: the first property located directly downgradient from the groundwater plume on which impacts have not been observed located approximately 110 feet downgradient from the groundwater source area, and the closest surface water body in the downgradient direction (Pages Creek) located approximately 3,600 feet downgradient from the groundwater source area. Note that the modeling does not account for potential pumping influences of the water supply well WSW-1 but these influences are likely to be variable due to seasonal demand from the commercial sod facility operating on the property. Groundwater and water supply well quality data generated to date empirically demonstrates that pumping conditions have not resulted in further plume migration and future risk associated with operation of the supply well WSW-1 has been determined to be acceptable.

4.0 REMEDIAL ACTION PLAN

4.1 Assessment Activities and Interim Actions

The Three Dollar Crystal Cleaners was in operation at the site from 1998 until 2020. In October 2010, PM Environmental completed a Phase II Environmental Site Assessment (ESA) at the site. The Phase II ESA included the collection of groundwater samples from four temporary Type II
monitoring wells (SB/TMW-1 through 4) and the collection of a soil sample from one boring installed in the vicinity of the active dry-cleaning machine (SB-5). An additional Limited Phase II Environmental Site Assessment Report was prepared by Applied Resource Management in November 2010, which documents the installation of monitoring well MW-1 and collection of a confirmatory soil sample in the vicinity of the dry-cleaning machine (S-1). Both ESAs identified PCE impacts to soil and groundwater at the site, and the site was certified into the DSCA Program on February 22, 2012.

In July and August 2012, legacy URS performed a receptor and water supply well (WSW) survey and initiated prioritization assessment activities including the installation and sampling of five Type II monitoring wells (MW-2 through MW-6), nine soil borings (SB-6 through SB-14), one soil-gas sample (SG-2), and one sub-slab vapor sample (SSV-1). The results of the prioritization assessment activities are documented in a Prioritization Assessment Report, dated October 5, 2012. Pertinent groundwater, soil, and vapor analytical results are shown on Figures 3, 4, and 6, respectively. Soil and groundwater assessment activities adequately delineated the extent of soil and groundwater impacts with respect to SSTLs and 2L Standards. PCE in the sub-slab vapor sample at the dry-cleaner exceeded acceptable risk levels.

Subsequently, in September and October 2012, legacy URS collected an ambient air sample (Ambient-1) outside the building, indoor air samples at Point Your Toes (IA-1 PYT) and Sherwin-Williams (IA-2 SW) and sub-slab vapor samples at Point Your Toes (SSV-2 PYT) and Sherwin-Williams (SSV-3 SW). As documented in the Air Quality Evaluation Results Report, dated October 18, 2012, legacy URS collected the indoor air samples during non-operating conditions at the dry-cleaning facility to minimize the potential of fugitive emissions from the dry-cleaning operations to affect indoor air quality in the adjacent tenant spaces. Results indicated that the indoor air risk exceeded acceptable limits for non-residential use. However, indoor air concentrations of non-chlorinated volatile organic compounds exceeded sub-slab vapor concentrations, which indicated that fugitive emissions from sources inside the building (specifically, at Sherwin-Williams) may have been contributing a significant portion to the overall risk calculations.

To further evaluate the significance of the fugitive emissions from ongoing site operations at the Sherwin-Williams facility (and, to a lesser extent, the Three Dollar Crystal Cleaners dry-cleaning facility), to impact indoor air quality at the Sherwin-Williams and Point Your Toes Dance Studio tenant spaces, additional indoor air sampling and sub-slab vapor sampling was performed. In
April 2013, legacy URS completed a fugitive emissions study at Point Your Toes, Sherwin-Williams, and Three Dollar Crystal Cleaners, which included the collection of indoor air and sub-slab vapor samples for volatile organic compounds and radon during non-operational hours of the Three Dollar Crystal Cleaners. Results were documented in a Vapor Intrusion-Related/Fugitive Emissions Sampling Results report, dated July 8, 2013, and indicated that previously observed indoor air impacts exceeding acceptable risk levels at the Sherwin-Williams tenant space are not solely attributable to the intrusion of contaminant vapors from the subsurface. Off-gassing of non-chlorinated VOCs from products within the Sherwin-Williams facility appeared to be contributing to air quality degradation. Based on these results, additional vapor intrusion evaluation activities were not warranted at the time.

Legacy URS completed a groundwater sampling event in April 2013, with results documented in a Groundwater Monitoring Report, dated July 8, 2013. Groundwater quality data was considered to be generally consistent with previous site data. In November 2013, legacy URS oversaw the installation of a deep monitoring well (DMW-1) and performed a comprehensive sampling event of existing site monitoring wells. Legacy URS performed additional comprehensive groundwater sampling events on February 25, 2014 and May 23, 2014. Deep monitoring well installation and groundwater monitoring events were documented in Groundwater Monitoring Report submittals dated April 15, 2014, and July 14, 2014. Pertinent groundwater sample locations and analytical results are shown on Figure 3. Groundwater quality data was consistent with previous site data, the vertical extent of the plume was established, and completion of a risk assessment was recommended.

A draft risk assessment report was prepared by legacy URS in May 2015. After subsequent discussion between legacy URS and DSCA, it was decided that additional vapor assessment data was required prior to finalization of the risk assessment to further clarify future vapor intrusion risks due to elevated sub-slab vapor concentrations. As documented in a Vapor Quality Evaluation Report, submitted January 23, 2017, legacy URS installed permanent sub-slab vapor sampling pins (VP1, VP2, and VP3) in the Point Your Toes, Three Dollar Crystal Cleaners, and Sherwin-Williams tenant spaces, respectively, and completed an additional fugitive emissions study which included the collection of indoor air and sub-slab vapor samples for VOCs and radon. Indoor air samples were collected in each tenant space during both operational and non-operational hours of the Three Dollar Crystal Cleaners. Additionally, differential pressures across the building slab were measured for two days in each tenant space. The results indicated that observed indoor air concentrations were likely attributable to fugitive emissions emanating.
from the operation of the dry-cleaning equipment as well as the on-site storage of dry-cleaning compounds and dry-cleaned clothing/materials. Pertinent indoor air and sub-slab vapor sample locations and analytical results are shown on Figure 6.

AECOM re-submitted a revised draft Risk Assessment Report for the site on January 26, 2017. As part of the review of the risk assessment, it was determined that additional water supply well samples should be collected from the on-site water supply well (WSW-2) and the downgradient off-site water supply well (WSW-1) located at 7340 Market Street to confirm current groundwater quality at both water supply wells. Both WSW-1 and WSW-2 were previously sampled in August 2012. Therefore, on May 10, 2017, AECOM sampled the off-site water supply well (WSW-1) and attempted to sample the on-site water supply well WSW-2; however, the well was inactive and could not be sampled. As documented in a Water Supply Well Sampling Report, dated June 23, 2017, all results at WSW-1 were below the laboratory detection limit. Pertinent groundwater sample locations and analytical results are shown on Figure 3.

The risk assessment was further revised and re-submitted on November 1, 2017, and DSCA provided concurrence on November 1, 2017. The dry-cleaning operation was still operating onsite at the time of the completion of the risk assessment. On April 28, 2020, DSCA informed AECOM that the dry-cleaner had recently vacated the facility and that representative indoor air samples could be collected. During May-August 2020, AECOM completed an indoor air quality evaluation at the site of which the comprehensive findings are documented in an Indoor Air Quality Evaluation Results report, dated December 17, 2020. As such, a Risk Assessment Addendum, dated February 24, 2021 was prepared to reflect the use of actual, current indoor air quality data to establish indoor air exposure risk in lieu of estimating indoor air quality using soil-gas data and a DAF assumed for the building floor slab.

As discussed in detail in Section 3.0, the risk assessment and risk assessment addendum concluded that risks associated with chlorinated constituent 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 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 contaminant of concern (COC) is less than ten times the RC of that COC;

(iii) adequate assurance is provided that the land-use assumptions used in the DSCA Program’s RBCA process are not violated for current or future conditions; and,

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

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

4.2.1 Condition 1 – The dissolved plume is stable or decreasing

A total of five groundwater monitoring events (August 2012, April 2013, November 2013, February 2014, and May 2014) were conducted using existing site monitoring wells to document plume stability at the site. Constituents detected in groundwater samples from the site include: PCE, trichloroethylene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), toluene, ethylbenzene, xylenes, acetone, bromodichloromethane, chloroform, dibromochloromethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 2-butanone (MEK). Only PCE was detected at concentrations exceeding the 2L Standard and was the primary COC used for evaluation of plume stability.

AECOM prepared a GSI Environmental Inc. (GSI) Mann-Kendall Toolkit for Constituent Trend Analysis (Mann-Kendall Analysis) including current and historical data (dating back to November 2010), which is included in Appendix A, and indicates PCE concentrations at the site are stable. Based on this data, AECOM concluded that the size of the plume is stable and concentrations in the source area are likely to remain generally stable.

Documentation of the plume stability evaluation, including a table showing historical groundwater analytical data and the Mann-Kendall Trend Analysis, 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 representative concentration of that COC.

Representative concentrations were not calculated as part of the risk assessment for this site. Instead, a more conservative approach was utilized by using the maximum concentration for each COC within 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 source property was based on current land-use conditions being non-residential. However, using the most conservative approach, future conditions at the site were considered to be residential. As discussed in Section 6.0, land-use controls will be implemented for the site to ensure that these assumptions remain valid.

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

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

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

No further sampling or other data collection activities are proposed for the site or adjacent properties, 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

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

- Any activities that cause or create a vapor intrusion risk should not be completed without prior approval of NCDEQ, as detailed below:
  - Except for routine maintenance, no construction activities or change in property use that cause or create an unacceptable human health risk from vapor intrusion may occur on the Property without prior approval of the NCDEQ. These activities include but are not limited to: construction of new buildings, removal and construction of part of a building, construction of sub-grade structures that encounter contaminated soil or places building users in close proximity to contaminated groundwater, change from non-residential to residential property, change in tenant space usage, and addition of residential property use on higher floors.
  - Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of the NCDEQ that the indoor air in the structure does not pose an unacceptable risk to the occupants following modifications. These modifications include but are not limited to: modification or replacement of heating, ventilation or air conditioning (HVAC) systems, removal or replacement of the building slab, installation of multiple conduits or piping through the building slab, modifications to building walls or ceilings that may change air flow.

- The source property shall not be used for child care centers or schools, or for mining or extraction of coal, oil, gas or any mineral or non-mineral substances without prior written approval from NCDEQ;

- Soil in Area A on Figure 5 may not be removed or disturbed unless approved in writing in advance by NCDEQ or its successor in function, except for routine landscape
maintenance and emergency utility repair. In the event of emergency utility repair, DEQ shall be given written notice of any such emergency repair no later than the next business day, and further related assessment and remedial measures may be required;

- 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 B on Figure 5 that lies within Area A without prior approval of NCDEQ; and

- Groundwater will not be used on the source property without prior approval of NCDEQ.

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

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

### 7.0  LONG-TERM STEWARDSHIP PLAN

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

### 8.0  RMP IMPLEMENTATION SCHEDULE

Since the groundwater plume is stable and confined to the source property, and possible exposure to the contamination is managed through the 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 30-day public comment period and the final approval of the RMP, the NDCSR will be filed with the New Hanover County Register of Deeds and will complete the RMP schedule.

9.0 CRITERIA FOR DEMONSTRATING RMP SUCCESS

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

10.0 CONTINGENCY PLAN IF RMP FAILS

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

11.0 CONCLUSIONS AND RECOMMENDATIONS

AECOM has prepared this RMP for the Three Dollar Crystal 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 with appropriate land-use controls applied to the impacted property. The contaminant plume associated with the site appears generally stable. This RMP specifies that the NDCSR requirements provide notification that land-use conditions observed during the risk assessment evaluation remain valid in the future. Based on the documentation contained in this report, AECOM recommends issuance of a “No Further Action” letter.
FIGURES
LEGEND

- Monitoring Well Location and Identification
- Private Water Supply Well Location
- Potentiometric Surface Contour (ft)
- Inferred Groundwater Flow Direction
- Site Property Line
- Soil/Groundwater Source Area
- Location of $3.00 Cleaners facility (active dry-cleaning facility)
- Approximate Dry-Cleaning Machine Location

Potentiometric Surface Contour (ft)
Inferred Groundwater Flow Direction
Site Property Line
Soil/Groundwater Source Area
Location of $3.00 Cleaners facility (active dry-cleaning facility)
Approximate Dry-Cleaning Machine Location

Distance from source area to point of exposure (POE) for protection of groundwater is approximately 110 feet.

Distance from source area to point of exposure (POE) for protection of surface water is approximately 3,600 feet (not shown).

Figure 2
**Figure 3**

Groundwater Quality Map

**Legend**
- Monitoring Well Location and Identification
  - MW-1
- Private Water Supply Well Location
- Potentiometric Surface Contour (ft)
- Inferred Groundwater Flow Direction
- Site Property Line
- Parcel lines (per New Hanover County GIS)
- Exposure Unit Boundary
- Groundwater Source Area
- Area of Chlorinated Compounds 2L Standard Exceedances
- Location of $3.00 Cleaners facility (active dry-cleaning facility)
- Approximate Dry-Cleaning Machine Location

**BDL** Below Laboratory Detection Limits

<table>
<thead>
<tr>
<th>ug/l micrograms per liter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCE - Tetrachloroethene</td>
</tr>
</tbody>
</table>

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

Groundwater COCs used in Risk Assessment Model include: PCE, Chloroform, Acetone, and 2-Butanone.

Highest concentration of each COC observed in onsite wells during sampling events completed since 2013 is shown.

<table>
<thead>
<tr>
<th>Location</th>
<th>COC</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW-1</td>
<td>PCE</td>
<td>4.1 ug/l (11/13/13)</td>
</tr>
<tr>
<td>DMW-1</td>
<td>Acetone</td>
<td>140 ug/l (11/14/13)</td>
</tr>
<tr>
<td>MW-2</td>
<td>BDL</td>
<td></td>
</tr>
<tr>
<td>MW-3</td>
<td>BDL</td>
<td></td>
</tr>
<tr>
<td>MW-4</td>
<td>Acetone</td>
<td>2.7 J ug/l (5/23/14)</td>
</tr>
<tr>
<td>MW-5</td>
<td>BDL</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- The map shows the location of a $3.00 Cleaners facility, which is an active dry-cleaning facility.
- The map also shows the approximate location of dry-cleaning machines.
- The map includes groundwater quality data for various compounds, with highlight concentrations used in the DSCA Risk Assessment Model.
- The map is a composite of various geophysical and environmental data points, including potentiometric surfaces, inferred groundwater flow directions, and monitoring well locations.

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**Groundwater COCs (Observed Concentrations):**

- **PCE** - Tetrachloroethene
- **Chloroform**
- **Acetone**
- **2-Butanone**

**Data Sources:**
- MW-1: PCE - 4.1 ug/l (11/13/13)
- DMW-1: Acetone - 140 ug/l (11/14/13)
- MW-2: BDL
- MW-3: BDL
- MW-4: Acetone - 2.7 J ug/l (5/23/14)
- MW-5: BDL

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**Additional Information:**
- The map indicates the presence of Chlorinated Compounds exceedances.
- The DSCA Site ID 650012 is referenced, indicating the site's identification within the Delineation of Site Contamination Area program.
- The map is useful for environmental monitoring and regulatory compliance purposes.

---

**Notes to Reviewer:**
- Review the map for accuracy and completeness.
- Ensure all data is up-to-date and reflects the most recent sampling events.
- Confirm that all necessary environmental data is included in the report.

---

**Contact Information:**
- URS CORPORATION - NORTH CAROLINA
- SOUTHPARK TOWERS
- 6000 FAIRVIEW ROAD, SUITE 200
- TEL: (704) 522-0330
- FAX: (704) 522-0063
- CHARLOTTE, NC 28210

---

**Figure 3 Details:**
- This figure illustrates the groundwater quality map for a specific site, highlighting key environmental and geological features.
- The map is a critical tool for environmental management, regulatory compliance, and site remediation planning.

---

**References:**
- Delineation of Site Contamination Area (DSCA) Model.
- Environmental Compliance and Regulatory Standards.
- Site-specific sampling data and regulatory requirements.

---

**Authors:**
- JMR - 01/09/2017
- SDH - 01/09/2017
Point Your Toes

Soil Quality Summary Map
Three Dollar Crystal Cleaners
7336-2 Market Street
Wilmington, NC
DSCA Site ID 65-0012

*LEGEND*
- Soil Boring Location
- Soil Boring Location Installed by PM Environmental, Inc. (October 2010)
- Soil Boring Location Installed by ARM (November 2010)
- Site Property Line
- Parcel lines (per New Hanover County GIS)
- Exposure Unit Boundary
- Location of $3.00 Cleaners facility (active dry-cleaning facility)
- Approximate Dry-Cleaning Machine Location

**BDL**: Below Laboratory Detection Limits (mg/kg)

**PCE**: Tetrachloroethene

Red highlighted text indicates concentrations exceeding SSTL.

Soil COCs used in Risk Assessment Model include: PCE, Acetone, 2-Butanone, and 4-Methyl-2-pentanone.

Highest concentration of each COC observed in soil borings is shown.

Area of soil impacts exceeding Site Specific Target Levels (SSTLs)

Area of soil impacts exceeding unrestricted use (PSRGs)

Soil Boring Location
- SB-8 (4-5') 08/22/12
  - PCE: 0.10 mg/kg
  - Acetone: 0.018 mg/kg
- SB-6 (4-5') 08/22/12
  - PCE: 0.14 mg/kg
  - Acetone: 0.014 mg/kg
- SB-11 (0-1') 08/22/12
  - PCE: 0.0043 mg/kg
  - TCE: 0.00081 mg/kg
  - Acetone: 0.031 mg/kg
- SB-9 (2-3') 08/22/12
  - PCE: 0.0057 mg/kg
  - Acetone: 0.01 mg/kg
- SB-11 (5-6') 08/22/12
  - PCE: 0.015 mg/kg
- SB-10 (2-3') 08/22/12
  - PCE: 0.059 mg/kg
  - Acetone: 0.018 mg/kg
- SB-13 (0-1') 08/22/12
  - PCE: 0.023 mg/kg
  - Acetone: 0.066 mg/kg
- SB-11 (1.0-1.5')
  - PCE: 0.051 mg/kg
  - Acetone: 0.02 mg/kg
- SB-13 (4-5') 08/22/12
  - PCE: 0.049 mg/kg
  - 2-Butanone: 0.0061 mg/kg
  - Acetone: 0.13 mg/kg
- SB-10 (4-5') 08/22/12
  - PCE: 0.051 mg/kg
  - Acetone: 0.02 mg/kg
- SB-8 (4-5') 08/22/12
  - PCE: 0.10 mg/kg
  - Acetone: 0.072 mg/kg
- SB-12 (2-3') 08/22/12
  - PCE: 0.063 mg/kg
  - Acetone: 0.03 mg/kg
- SB-12 (4-5') 08/22/12
  - PCE: 0.11 mg/kg
  - Acetone: 0.004 mg/kg
- SB-9 (4-5') 08/22/12
  - PCE: 0.097 mg/kg
- SB-14 (2-3') 08/22/12
  - PCE: 0.081 mg/kg
  - Acetone: 0.077 mg/kg
- SB-7 (2-3') 08/22/12
  - PCE: 0.0057 mg/kg
  - Acetone: 0.01 mg/kg
- SB-14 (4-5') 08/22/12
  - PCE: 0.12 mg/kg
  - Acetone: 0.01 mg/kg
- SB-5 (1.0-1.5')
  - PCE: 0.040 mg/kg
- SB-7 (0-1') 08/22/12
  - PCE: 0.14 mg/kg
  - Acetone: 0.004 mg/kg
- SB-13 (1.0-1.5')
  - PCE: 0.19 mg/kg
  - 2-Butanone: 0.0064 mg/kg
  - 4-Methyl-2-pentanone: 0.00062 mg/kg
  - Acetone: 0.097 mg/kg
- SB-6 (0-1') 08/22/12
  - PCE: 0.11 mg/kg
  - TCE: 0.00081 mg/kg
  - Acetone: 0.031 mg/kg
- SB-8 (2-3') 08/22/12
  - PCE: 0.023 mg/kg
  - Acetone: 0.066 mg/kg
- SB-10 (4-5') 08/22/12
  - PCE: 0.051 mg/kg
  - Acetone: 0.02 mg/kg
- SB-12 (4-5') 08/22/12
  - PCE: 0.097 mg/kg
  - Acetone: 0.077 mg/kg
- SB-14 (4-5') 08/22/12
  - PCE: 0.079 mg/kg
- SB-9 (4-5') 08/22/12
  - PCE: 0.049 mg/kg
  - 2-Butanone: 0.0061 mg/kg
  - Acetone: 0.13 mg/kg
- SB-13 (0-1') 08/22/12
  - PCE: 0.028 mg/kg
  - Acetone: 0.03 mg/kg
  - 2-Butanone: 0.0061 mg/kg
  - Acetone: 0.13 mg/kg
- SB-5 (1.0-1.5')
  - PCE: 0.040 mg/kg
- SB-6 (0-1') 08/22/12
  - PCE: 0.11 mg/kg

**3.00 Cleaners**

**Sherwin Williams**
Exposure Unit #1:
The results of the risk assessment were within acceptable risk levels for current conditions. The results of the risk assessment were not within acceptable levels of risk for the indoor air exposure pathway for residential use or commercial use under future conditions. As such, it is recommended that the following land use controls be utilized:

- Except for routine maintenance, no construction activities or change in property use that cause or create an unacceptable human health risk from vapor intrusion may occur on the Site Property without prior approval of DEQ. These activities include but are not limited to: construction of new buildings, removal and construction of part of a building, construction of sub-grade structures that encounter contaminated soil or places building users in close proximity to contaminated groundwater, change from non-residential to residential property, change in tenant space usage, and addition of residential property use on higher floors;

- Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of DEQ that the indoor air in the structure does not pose an unacceptable risk to the occupants following modifications. These modifications include but are not limited to: modification or replacement of heating, ventilation or air conditioning (HVAC) systems, removal or replacement of the building slab, installation of multiple conduits or piping through the building slab, modifications to building walls or ceilings that may change air flow;

- 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 as “Area B”;

- Soil in “Area A” and “Area B” may not be removed or disturbed unless approved in writing in advance by DEQ or its successor in function, except for routine landscape maintenance and emergency utility repair. In the event of emergency utility repair, DEQ shall be given written notice of any such emergency repair no later than the next business day, and further related assessment and remedial measures may be required; and

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

- Site Property Line
- Parcel lines (per New Hanover County GIS)
- Exposure Unit Boundary
- Location of former S3.00 Cleaners facility
- Approximate Dry-Cleaning Machine Locations

**BDL**

- Indoor Air Sample
- Subslab Vapor Sample
- Soil Gas Sample

**J**

- Estimated Value

**μg/m**

- micrograms per cubic meter

**pCi/L**

- picocuries per liter

**PCE** - Tetrachloroethene

**TCE** - Trichloroethene

**cis-1,2-DCE** - cis-1,2-Dichloroethene

**1,2-DC** - 1,2-Dichloroethene

**MTBE** - Methyl tert-butyl ether

**Xylenes** - Total o-xylene-xylenes

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

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

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

PLUME STABILITY DEMONSTRATION
**GSI MANN-KENDALL TOOLKIT**

for Constituent Trend Analysis

**Evaluation Date:** 1-Jun-18  **Job ID:** DC650012

**Facility Name:** Three Dollar Crystal Cleaners  **Constituent:** PCE

**Conducted By:** Stephanie Hempel  **Concentration Units:** mg/L

**Sampling Point ID:** MW-1

<table>
<thead>
<tr>
<th>Sampling Event</th>
<th>Sampling Date</th>
<th>PCE Concentration (mg/L)</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>10-Nov-10</td>
<td>0.0037</td>
</tr>
<tr>
<td>2</td>
<td>23-Aug-12</td>
<td>0.0039</td>
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<tr>
<td>3</td>
<td>7-Apr-13</td>
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<tr>
<td>4</td>
<td>13-Nov-13</td>
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<tr>
<td>5</td>
<td>25-Feb-14</td>
<td>0.003</td>
</tr>
<tr>
<td>6</td>
<td>23-May-14</td>
<td>0.0024</td>
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</tr>
<tr>
<td>8</td>
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<tr>
<td>20</td>
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**Coefficient of Variation:** 0.19  **Mann-Kendall Statistic (S):** -7

**Confidence Factor:** 86.4%  **Concentration Trend:** Stable

**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S=0 = No Trend; < 90%, S<0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.

**DISCLAIMER:** The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.

GSI Environmental Inc., www.gsi-net.com
<table>
<thead>
<tr>
<th>Groundwater Sampling Point</th>
<th>Sampling Date (mm/dd/yy)</th>
<th>Benzene</th>
<th>cis-1,2-Dichloroethylene</th>
<th>Ethylbenzene</th>
<th>Methyl tert-butyl ether (MTBE)</th>
<th>Naphthalene</th>
<th>Toluene</th>
<th>trans-1,2-Dichloroethylene</th>
<th>Trichloroethylene</th>
<th>Vinyl chloride</th>
<th>Xylenes (total)</th>
<th>1,2,4-Trimethylbenzene</th>
<th>1,3,5-Trimethylbenzene</th>
<th>Acetone</th>
<th>Bromodichloromethane</th>
<th>chloroform</th>
<th>Dichloromethane</th>
<th>2-Bromone</th>
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<td>Ethylbenzene</td>
<td>Methyl tert-butyl ether (MTBE)</td>
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<td>Ethylbenzene</td>
<td>Methyl tert-butyl ether (MTBE)</td>
<td>Naphthalene</td>
<td>Toluene</td>
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APPENDIX B

LEVEL I ECOLOGICAL RISK ASSESSMENT CHECKLISTS
Level 1 Ecological Risk Assessment
Checklist A for Potential Receptors and Habitat
DSCA # DC650012

1. Are there any navigable water bodies or tributaries to a navigable water body on or within the one-half mile of this site? No, none have been identified within a one-half mile radius.

2. Are there any water bodies anywhere on or within the one-half mile of the site? No, none were identified.

3. Are there any wetland areas such as marshes or swamps on or within one-half mile of the site? Yes, according to the US Fish and Wildlife Services website, there are three small freshwater ponds within one-half mile of the site and five freshwater forested/shrub wetland areas located approximately one-half mile to the northeast and west of the site (http://www.fws.gov/wetlands/Data/Mapper.html). The EDR NEPACheck® report indicates sixteen National Wetland Inventory areas within one-half mile of the site.

4. Are there any sensitive environmental areas on or within one-half mile of the site? Yes, as stated above, three freshwater ponds and several freshwater forested/shrub wetland areas were identified within one-half 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.

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? Yes, the North Carolina Natural Heritage Sites database and/or the North Carolina Natural Areas database (http://www.ncnhp.org/web/nhp/nhp-map-viewer) list one significant natural heritage areas within one-half mile of the site. According to the U.S. Fish & Wildlife Service online database, extant threatened or endangered plants and animals are expected to have very low occurrences in this area.

7. Are there any breeding, roosting or feeding areas by migratory bird species on or within one-half of the site? Potentially, migratory birds are present in New Hanover County according to the Cape Fear Audubon Society website (http://capefearaudubon.org); however, none have been specifically identified within one-half mile of the site.

8. Are there any ecologically, recreationally or commercially important species on or within one-half mile of the site? No, none have been identified.

9. Are there any threatened and/or endangered species (plant or animal) on or within one-half mile of the site? Yes. Seven species of federally endangered and six
threatened plants and animal species were identified on the U.S. Fish & Wildlife Service database in New Hanover County. One species of vascular plant, the Seabeach Amaranth, and two species of birds, the red-cockaded woodpecker and the piping plover, are believed to occur within one-half mile of the site.

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

Wetlands are defined in 40 CFR §232.2 as “areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The sources to make the determination whether or not wetland areas are present may include, but not limited to, national wetland inventory available at http://nwi.fws.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 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 # DC650012

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 discharges to a small freshwater pond located approximately 0.8 mile southeast or to Topsail Sound located approximately 2.4 miles southeast of the site.

**Question 1. Could chemicals associated with the site reach ecological receptors through groundwater?** Not likely, impacted groundwater is contained to the site and is not expected to reach the pond located approximately 0.8 mile southeast of the site.

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, impacted soils are contained beneath a concrete slab and asphalt parking lot and are not likely to be affected by erosion.

**Question 2. Could chemicals associated with the site reach ecological receptors through runoff or erosion?** Not likely. As long as the building and associated concrete slab and asphalt parking lot remain in place, erosion and runoff are not reasonable concerns.

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

**Question 3. Could chemicals associated with the site reach ecological receptors through direct contact?** No, there are no ecological receptors 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? Not likely, impacted soils are contained beneath a concrete slab and asphalt parking lot and are not expected to be transported in air as dust or particulate matter.

**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, impacted surficial soils are contained beneath a building and associated concrete slab and parking lot. No burrowing animals have been observed or are expected to be present 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 – in the shallow subsurface soils, however the soils are covered by a concrete slab and asphalt parking lot.

6B. Are chemicals found in soil on the site taken up by plants growing on the site? No. The site is developed as a strip-mall and parking lot. Impacted soils are contained beneath the building and associated concrete slab and parking lot. There is no vegetation present in this area.

6C. Do potential ecological receptors on or near the site feed on plants (e.g., grasses, shrubs, forbs, trees, etc.) found on the site? Not likely. There is very little vegetation associated with the onsite landscaped areas.

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? Not likely, as impacted soil is contained beneath a building, concrete slab, and asphalt parking lot.

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.
APPENDIX C

NOTICE OF DRY-CLEANING SOLVENT REMEDIATION

FOR THE SOURCE PROPERTY
NOTICE OF DRY-CLEANING SOLVENT REMEDIATION

Property Owner: Stalvey Property 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 Stalvey Property 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 7336 Market Street, Wilmington, New Hanover County, North Carolina, Parcel Identification (PID) R04400-003-000-000.

The Property is contaminated with dry-cleaning solvent, as defined at North Carolina General Statutes (hereinafter “N.C.G.S.”), Section (hereinafter “§”) 143-215.104B(b)(9), and is the parcel that makes up the dry-cleaning solvent contamination site (hereinafter “Contamination Site”). This Notice has been approved by the North Carolina Department of Environmental Quality, or its successor in function (hereinafter “DEQ”) under the authority of the Dry-Cleaning Solvent Cleanup Act of 1997, as amended, N.C.G.S. § 143-215.104A et seq. (hereinafter “DSCA”), and is required to be filed in the Register of Deeds' Office in the county or counties in which the land is located, pursuant to NCGS § 143-215.104M. A Notice will be recorded separately in each chain of title of the Contamination Site.

Soil and groundwater at the Property are contaminated with dry-cleaning solvents associated with dry-cleaning operations at the Three Dollar Crystal Cleaners (DSCA Site DC650012) located at 7336 Market Street, Wilmington, North Carolina. Dry-cleaning operations were conducted on the Property from 1998 until 2020.

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 8.5" x 14", 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 (Area “A”) with respect to permanently surveyed benchmarks; and
(2) The type, location and quantity of regulated dry-cleaning solvent contamination and other contaminants known to exist on the Property.

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

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

LAND-USE RESTRICTIONS

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

1. Without prior written approval from DEQ, the Property shall not be used for:
   a. child care centers or schools; or
   b. mining or extraction of coal, oil, gas or any mineral or non-mineral substances.

2. Except for routine maintenance, no construction activities or change in property use that cause or create an unacceptable human health risk from vapor intrusion may occur on the Property without prior approval of the DEQ. These activities include but are not limited to: construction of new buildings, removal and construction of part of a building, construction of sub-grade structures that encounter contaminated soil or places building users in close proximity to contaminated groundwater, change from non-residential to residential property, change in tenant space usage, and addition of residential property use on higher floors.

3. Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of the DEQ that the indoor air in the structure does not pose an unacceptable risk to the occupants following modifications. These modifications include but are not limited to: modification or replacement of heating, ventilation or air conditioning (HVAC) systems, removal or replacement of the building slab, installation of multiple conduits or piping through the building slab, modifications to building walls or ceilings that may change air flow.

4. No activities that encounter, expose, remove or use groundwater (for example, installation of water supply wells, fountains, ponds, lakes or swimming pools that use groundwater, or construction or excavation activities that encounter or expose groundwater) may occur on the Property without prior approval of DEQ.
5. In January of each year, on or before January 31st, the owner of any portion of the Property shall submit a notarized Annual Certification of Land-Use Restrictions to DEQ certifying that this Notice remains recorded at the Register of Deeds’ office, and that the land-use restrictions are being complied with.

6. No person conducting environmental assessment or remediation at the Property or involved in determining compliance with applicable land-use restrictions, at the direction of, or pursuant to a permit or order issued by DEQ may be denied access to the Property for the purpose of conducting such activities.

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

In addition to restrictions 1-7 above, the following restrictions also apply to the portion of the Property identified as Area A as shown on the survey plat attached as Exhibit A:

8. No activities that remove or disturb the soil in Area A of the Property, as shown on Exhibit A, may occur without prior approval of DEQ, except for routine landscape maintenance and emergency utility repair. In the event of emergency utility repair, DEQ shall be given written notice of any such emergency repair no later than the next business day, and further related assessment and remedial measures may be required.

In addition to restrictions 1-8 above, the following restrictions also apply to the portion of the Property identified as Area B as shown on the survey plat attached as Exhibit A:

9. No activities that change infiltration to, disturb, or remove the soil located beneath the existing structures in Area B of the Property, as shown on Exhibit A, may occur without prior approval of DEQ.

RIGHT OF ENTRY

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

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

i) that the Property Owner is the sole owner of the Property; or that the Property Owner has provided to DEQ the names of all other persons that own an interest in or hold an encumbrance on the Property and have notified such persons of the Property Owner’s intention to enter into this Notice;

ii) that the Property Owner has the power and authority to enter into this Notice, to grant the rights and interests herein provided and to carry out all obligations hereunder; and

iii) that this Notice will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which the Property Owner is a party or by which the Property Owner may be bound or affected.

ENFORCEMENT

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

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

FUTURE SALES, LEASES, CONVEYANCES AND TRANSFERS

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

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

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

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

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

Stalvey Property 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 Stalvey Property LLC, and that by authority duly given and as the act of the company, the foregoing Notice of Dry-Cleaning Solvent Remediation was signed in its name by him.

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

________________________________________
Name typed or printed
Notary Public

My Commission expires: ___________________
[Stamp/Seal]

APPROVAL AND CERTIFICATION

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

North Carolina Department of Environmental Quality

By: ____________________________________ __________________

Jim Bateson, LG   Date
Chief, Superfund Section
Division of Waste Management
LIMITED POWER OF ATTORNEY

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

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

Signature of Property Owner ______________________________________________________

Dated this _____ day of __________________, 20___.

STATE OF _____________________
COUNTY OF ___________________

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

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

________________________________________
Name typed or printed
Notary Public

My Commission expires: _________________
[Stamp/Seal]
CERTIFICATION OF REGISTER OF DEEDS

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

Register of Deeds for New Hanover County

By: ___________________________ ___________________________
   (signature)        Date

Name typed or printed: ___________________________
Deputy/Assistant Register of Deeds
Being all of Lot 1AR, said lot is shown on that map entitled “Recombination Plat - Donald Curtis - Lot 1AR and 1BR” prepared by Hanover Designs Services, P A, dated July 27, 2010, and recorded on July 29, 2010, in Map Book 55 at Page 179 of the New Hanover County Registry.

Together with, and subject to, any and all rights and privileges related to the “40’ Access & Utility Easement” shown on said map adjacent to and along the southern boundary of said Lot 1AR.

(This property is originally described in the deeds of trust to Wachovia Bank referred to in the complaint in this action as

Being all of Lot 1A as shown on that map known as “Map of Division Lot 1 for Donald Curtis” prepared by Hanover Design Services and duly recorded November 18, 1997 in Map Book 37 at page 223 of the New Hanover County Registry. Being a portion of that property conveyed to Donald and Janice Curtis in Book 1947 page 284 of the New Hanover County Registry.)
APPENDIX D

EXAMPLE ANNUAL CERTIFICATION OF
LAND-USE RESTRICTIONS
Subj: Annual Certification of Land-Use Restrictions
Three Dollar Crystal Cleaners
7336 Market Street
Wilmington, New Hanover County, North Carolina
DSCA Site ID DC650012

Dear <property owner>:

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

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

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

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

If you have any questions concerning these documents or the site, please contact me at (919) 707-8368 or via email at al.chapman@ncdenr.gov.

Sincerely,

Al Chapman, Project Manager
DSCA Remediation Unit
Superfund Section
Division of Waste Management

Attachments: Annual Certification of Land-Use Restrictions form

Cc: DSCA Site ID DC650012 File
Annual Certification of Land-Use Restrictions

Site Name: Three Dollar Crystal Cleaners

Site Address: 7336 Market Street
Wilmington, New Hanover County, NC

DSCA Site ID: DC650012

ANNUAL CERTIFICATION of LAND-USE RESTRICTIONS

Pursuant to Condition ___ in the Notice of Dry-Cleaning Solvent Remediation (Notice) signed by Stalvey Property LLC and recorded in Deed Book <blank>, Page <blank> on <date> at the New Hanover County Register of Deeds Office, Stalvey Property 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 New Hanover County Register of Deeds office and the land-use restrictions therein are being complied with.

Duly executed this _____ day of _______________, 20__.  

Stalvey Property LLC
By: ________________________________

Name typed or printed: ______________________________

STATE OF _________________
COUNTY OF ________________

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

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

________________________________
Name typed or printed: 
Notary Public

My Commission expires: ___________________
[Stamp/Seal]
APPENDIX E

EXAMPLE DOCUMENTS ANNOUNCING PUBLIC COMMENT PERIOD
<Date>

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

Subj: Remediation of Dry-Cleaning Solvent Contamination
DSCA Site ID DC650012
Three Dollar Crystal Cleaners
7336 Market Street, Wilmington, New Hanover County, North Carolina

Dear <name>:

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

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

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

Al Chapman, DSCA Remediation Unit
Division of Waste Management, NCDEQ
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
A Summary of the NOI is being published in the Star-News, 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)707-8368.

Sincerely,

Al Chapman, DSCA Project Manager
Division of Waste Management, NCDEQ
Public Notice

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

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

Three Dollar Crystal Cleaners
DSCA Site ID DC650012

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

The Three Dollar Crystal Cleaners facility conducted dry-cleaning operations at 7336-2 Market Street, Wilmington, North Carolina from 1998 until 2020. Dry-cleaning solvent contamination in soil and groundwater has been identified at the following parcel(s):

7336 Market Street, in Wilmington; Parcel No. R04400-003-001-000

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 (RMP) has been prepared which proposes using land-use controls to prevent current and future risks at the affected properties.

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

The public comment period begins __________ 20__, and ends __________ 20__.

Comments must be in writing and submitted to NCDEQ no later than __________ 20__. Written requests for a public meeting may be submitted to NCDEQ no later than __________ 20__. Requests for additional information should be directed to Al Chapman at (919)707-8368. All comments and requests should be sent to:

Al Chapman, DSCA Remediation Unit
Division of Waste Management, NCDEQ
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
Subj: Dry-Cleaning Solvent Contamination at the Three Dollar Crystal Cleaners, 7336 Market Street, Wilmington, New Hanover County, North Carolina
DSCA Site ID DC650012

Dear <property owner>:

You are receiving this letter because your property at <adjacent property address> is adjacent to an area contaminated with dry-cleaning solvents. There are no actions required on your part and your property is not contaminated. This letter is only for notification purposes. The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the former Three Dollar Crystal Cleaners at 7336 Market Street in Wilmington, NC. 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 <DSCA PM email address> or (919) 707-8368.

Sincerely,

Al Chapman, DSCA Project Manager
Division of Waste Management, NCDEQ

Attachments: Summary of the NOI
Cc: DSCA Site ID DC650012 File