



**SITE ASSESSMENT REPORT  
CARTER COLOR COAT SITE  
DETROIT, WAYNE COUNTY, MICHIGAN**

Prepared for:

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
Emergency Response Branch Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604**

TDD No.:	S05-0709-001
Date Prepared:	January 23, 2008
Contract No.:	EP-S5-0603
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## 1.0 INTRODUCTION

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T N & Associates, Inc. (TN&A), a member of the STN Environmental Joint Venture with Sullivan International Group, Inc. (Sullivan), has prepared this site assessment report in accordance with the requirements of U.S. Environmental Protection Agency (U.S. EPA) Technical Direction Document (TDD) No. S05-0709-001 under the Superfund Technical Assessment and Response Team (START) contract No. EP-S5-06-03. The scope of this TDD was to conduct a site assessment at the Carter Color Coat (Carter Coat) site in Detroit, Wayne County, Michigan. START was tasked to prepare a site-specific Health and Safety Plan, field sampling and analysis plan, subcontract an analytical laboratory, collect samples, evaluate analytical data, document on-site conditions with written logbook notes and still photographs, and prepare this Site Assessment Report. Stephen Wolfe of TN&A was the START Project Manager.

This Site Assessment Report summarizes the site background; discusses the assessment activities; provides a summary of the analytical data; and discusses potential site-related threats. The photographic log of the site is included in Attachment A and the validated sample analytical results are included in Appendix A.

## 2.0 BACKGROUND

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This section provides site background information as well as the site history.

### 2.1 SITE DESCRIPTION

The Carter Color Coat site is located at 6051 Hastings Street in Detroit, Michigan at 42° 22.184' north latitude and 83° 03.598' west longitude (Figure 1). A large six-storey concrete and steel frame building covers approximately one-half of the property. The other half of the property was primarily used for parking. The property is fenced, but not secure. The site is located in a mixed residential and industrial neighborhood with residential properties located approximately one-half mile to the southwest of the site. The site is bordered by Hastings Street to the northeast, Harper Street to the southeast, St. Antoine Street to the southwest, and Piquette Street to the northwest. Other industrial properties surround the site on all 4 sides (Figure 2).

### 2.2 SITE HISTORY

The building was originally constructed and operated by General Motors Corporation (GMC), Fisher Body Division between 1919 and 1984. Facility operations involved automotive stamping of special discs and tools, dye sets, jigs and fixtures. GMC generated halogenated and non-halogenated spent solvents, spent plating wastes, ignitable and corrosive wastes from its operations at this location.

Between 1985 and 1990, the facility was owned and operated by Cameo Color Coat, Inc., after which time the property ownership was transferred to Carter Color Coat. Carter Color Coat operated as a conditionally exempt small quantity generator of hazardous wastes at this facility.

Carter Coat declared bankruptcy and abandoned the facility in 1993. GMC conducted a removal action at the property in the early 1990s, removing paints and other hazardous materials from the building.

83°04.000' W

WGS84 83°03.000' W

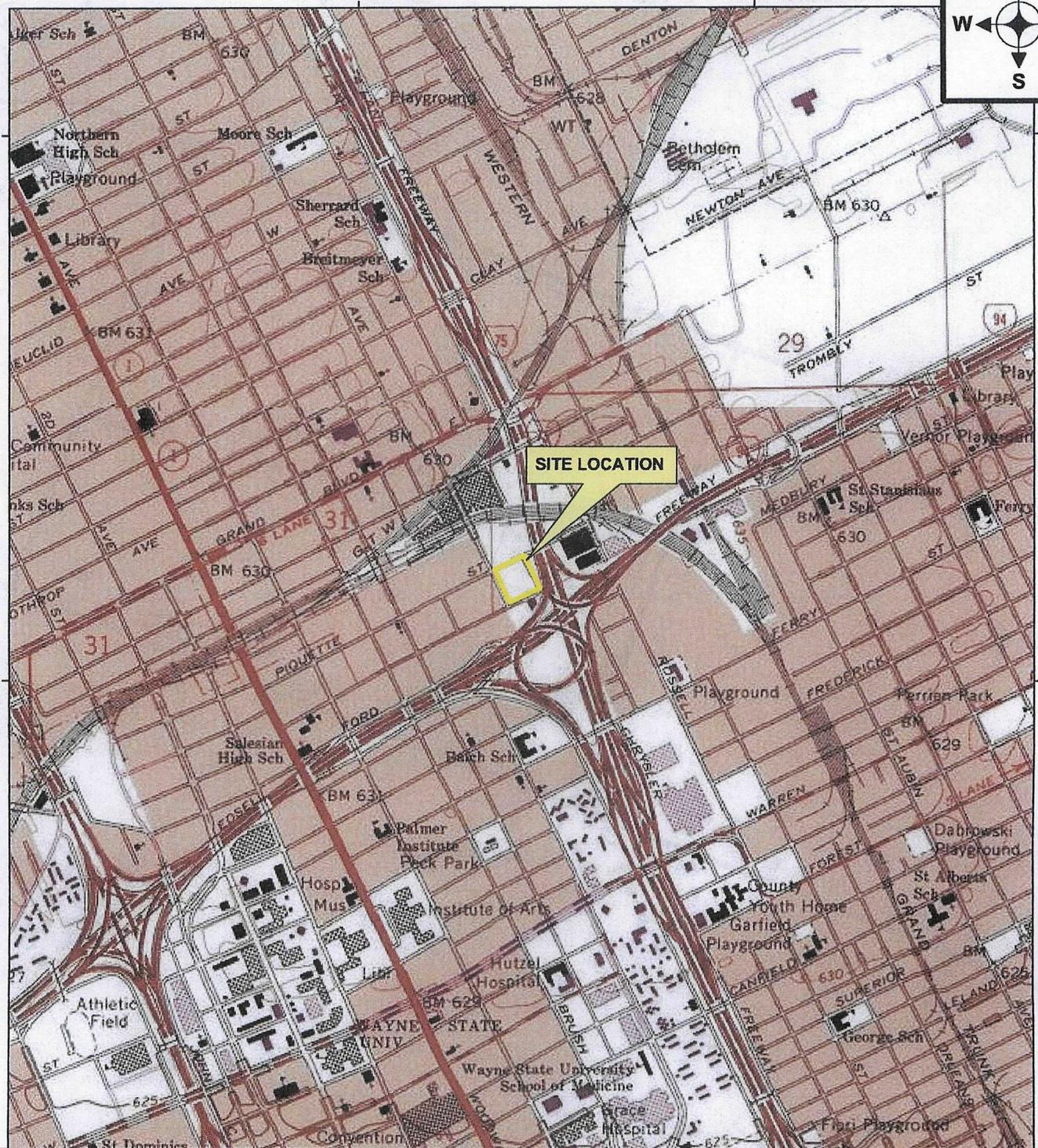


42°23.000' N

42°23.000' N

42°22.000' N

42°22.000' N



**SITE LOCATION**



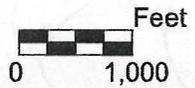
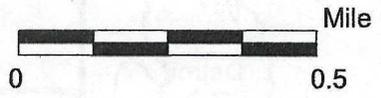
Carter Color Coat  
Site Assessment  
Detroit, Wayne County, Michigan  
TDD No.: S05-0709-001

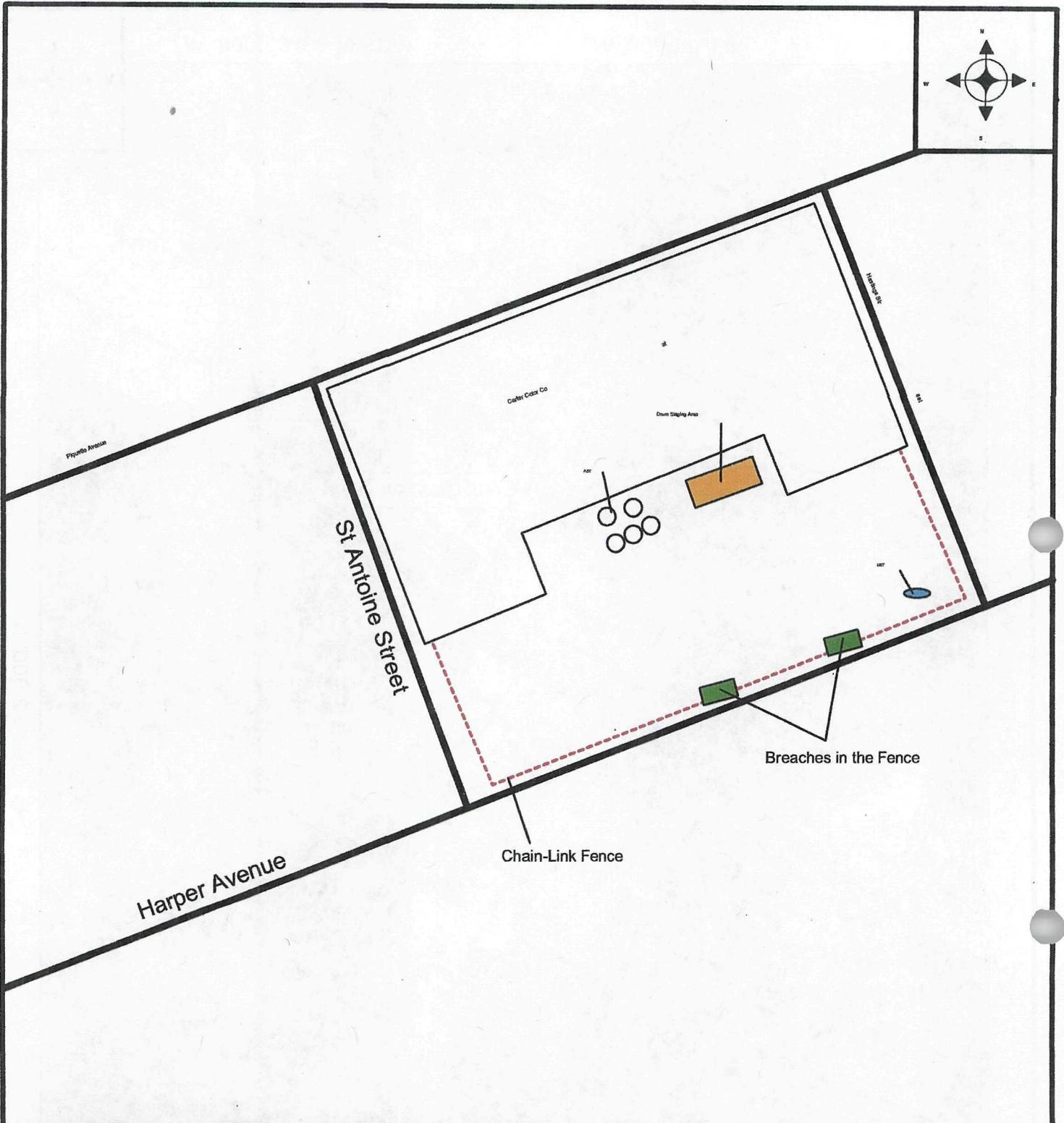
Figure 1  
Site Location



service disabled veteran owned small business

83°03.000' W





Carter Color Coat  
 Site Assessment  
 Detroit, Wayne County, Michigan  
 TDD No.: S05-0709-001

Figure 2  
 Site Features



**NOT TO SCALE**

The Michigan Department of Environmental Quality (MDEQ) and their contractor conducted a site assessment of the property in April and June of 2004, and proceeded to obtain bids for the clean-up. Due to funding issues, the State of Michigan is no longer able to fund the clean-up at the property and therefore requested assistance from the U.S. EPA in August of 2007.

### **2.3 MDEQ ASSESSMENT RESULTS**

During the MDEQ site assessment, approximately 30 drums of waste material was consolidated. Some of the waste exhibited the characteristics of corrosivity (pH less than 2 or greater than 12.5), and ignitability (flashpoint less than 60 degrees Celsius [140 degrees Fahrenheit]). In addition, leftover material in an aboveground storage tank and pits exhibited toxicity characteristics (failed Toxicity Characteristics Leachate Procedure (TCLP) parameters for lead and chromium). There was at least one underground storage tank (UST) that was not sampled but was assumed to contain old fuel, based on site records. Polychlorinated biphenyls (PCBs) were present in the concrete (as high as 11 milligrams per kilogram (mg/Kg) in a crushed sample) and there was some indication of soil contamination with metals and Semi Volatile Organic Compounds (SVOCs).

In addition to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) wastes described above, asbestos was found throughout the building in the form of tiles, boards, and pipe wrapping. A full asbestos survey performed by MDEQ contractors found that the asbestos material had deteriorated and is present in debris located on the floors of the building.

The City of Detroit had boarded up the first floor of the building and repaired a chain link fence enclosing the back of the property to deter trespassers. Since the time of the MDEQ site assessment, trespassers have been on site numerous times (as evidenced by graffiti and holes in the fencing) and are the cause of a fire in the building on at least one occasion (as reported by MDEQ).

### 3.0 SITE ASSESSMENT ACTIVITIES

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An U.S. EPA site assessment was scheduled for December 11, 2007, to include the following activities in order to verify the MDEQ findings: opening of drums and qualitative field testing the contents; collection of wipe samples from the concrete for PCB analysis; collection of material in the aboveground storage tank for TCLP metal analysis; and the collection of soil samples and UST sample(s) if easily accessible. In addition, samples of wood block flooring were to be collected to verify PCB contamination of the wood blocks. (MDEQ indicated that the wood blocks were PCB contaminated in their bid specifications; however no evidence supporting this was found in the file review).

Site assessment activities conducted at the Carter Color Coat site are discussed below.

#### 3.1 SITE ASSESSMENT

On December 11, 2007, U.S. EPA On-Scene Coordinator (OSC) Jeffrey Kimble and START member Stephen Wolfe of TN&A, mobilized to the site and met with the representatives from the Michigan Department of Environmental Quality (Patricia Thornton and Jeff Lippert). Representatives from the City of Detroit were on site and granted access to the site.

START performed a perimeter walk prior to all parties arriving on to the site and discovered several breaches in the chain link fence and that the board covering one of the entrances had been removed. Evidence of vagrants in the area was also documented by START.

The MDEQ personnel guided the OSC and START to the past sampling locations. All the drums that were staged on-site were now buried under debris (concrete, shingles, etc.). Samples from these drums could not be collected by START because they were buried under the debris.

MDEQ then identified the UST location for sampling. There were no access points in order to sample the UST contents; therefore, no sample was collected from the UST.

Contents in the above ground storage tank (AST) and the sumps, which failed TCLP parameters during the MDEQ assessment, were found frozen solid during this site assessment and no sample could be collected. Approximately 6 inches of material was present in the AST and an unknown volume of material was present in the sumps.

The PCB contamination was found in concrete samples located outside the buildings. The inclement weather (heavy rains) made it impossible to collect wipe samples from the concrete. In addition, the entire property is paved and there was no place to collect a soil sample.

After the site walk, the sample strategy was revised to include the sampling of material on the floor of the building for metals and PCB analysis and to collect wipe samples of the wood block flooring for PCB analysis.

Two samples of miscellaneous debris (one located outside the building and one located inside the building, ground floor) were sampled for total metals and PCB analysis. One wipe sample was collected from wood blocks on the ground floor, second floor, third floor, fourth floor, and fifth floor, for a total of five wipe samples for PCB analysis (areas of wood blocks that appeared to be stained were used for sample collection).

All samples were sent to Trace Analytical Laboratories, Inc., Muskegon, Michigan for analysis.

## 4.0 ANALYTICAL RESULTS

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Appendix A provides a hard copy of the validated analytical results.

The following paragraphs summarize the analytical data, which is presented in Tables 1, 2 and 3.

### 4.1 MISCELLANEOUS SOLID SAMPLES

Two debris samples were collected at the Carter Coat site (CCC-Material Outside and CCC-Material Inside). These samples were analyzed for PCBs and TCLP metals. PCBs were detected in CCC-Material Outside (Aroclor-1260) at a concentration of 13,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ). PCBs were not detected in the CCC-Material Inside sample collected from inside the building (Table 1).

Cadmium (0.22 milligrams per liter [ $\text{mg}/\text{L}$ ]) and lead (0.55  $\text{mg}/\text{L}$ ) were detected in the TCLP metals analyses of CCC-Material Inside. All other TCLP metals parameters were less than the laboratory's detection limit for this sample. Sample CCC-Material Outside did not have any results above the laboratory's detection limit for TCLP metals (Table 2).

### 4.2 WIPE SAMPLES

Five wipe samples were collected from random areas of the wood block flooring and analyzed for PCBs. Aroclor-1260 was detected in CCC-Wipe 4<sup>th</sup> Floor at 260 micrograms/wipe ( $\mu\text{g}/\text{wipe}$ ), Aroclor-1254 was detected in samples CCC-Wipe 3<sup>rd</sup> Floor (1.1  $\mu\text{g}/\text{wipe}$ ), CCC-Wipe 2<sup>nd</sup> Floor (1.7  $\mu\text{g}/\text{wipe}$ ), and CCC-Wipe Ground Floor (17  $\mu\text{g}/\text{wipe}$ ). All other Aroclors of PCBs were non-detect in the samples (Table 3).

**Table 1**  
**Polychlorinated Biphenyls Analytical Results**  
**Miscellaneous Solid Material**  
**Carter Color Coat Site Assessment**

Analyte	Units	CCC-Material Outside	CCC-Material Inside
Aroclor-1016	µg/kg	ND	ND
Aroclor-1221	µg/kg	ND	ND
Aroclor-1232	µg/kg	ND	ND
Aroclor-1242	µg/kg	ND	ND
Aroclor-1248	µg/kg	ND	ND
Aroclor-1254	µg/kg	ND	ND
Aroclor-1260	µg/kg	<b>13,000</b>	ND

Notes:

µg/kg micrograms per kilogram

**Bolded** results exceeded the laboratory's detection limit for that analyte.

ND Non-detect. Analyte was not detected above the laboratory's detection limit.

**Table 2**  
**TCLP Metals Analytical Results**  
**Miscellaneous Solid Material**  
**Carter Color Coat Site Assessment**

Analyte	Units	CCC-Material Outside	CCC-Material Inside
Arsenic	mg/L	ND	ND
Barium	mg/L	ND	ND
Cadmium	mg/L	ND	<b>0.22</b>
Chromium	mg/L	ND	ND
Lead	mg/L	ND	<b>0.55</b>
Selenium	mg/L	ND	ND
Silver	mg/L	ND	ND
Mercury	mg/L	ND	ND

Notes:

mg/L milligrams per Liter

**Bolded** results exceeded the laboratory's detection limit for that analyte.

ND Non-detect. Analyte was not detected above the laboratory's detection limit.



**Table 3**  
**Polychlorinated Biphenyls Analytical Results**  
**Wipe Samples**  
**Carter Color Coat Site Assessment**

Analyte	Units	CCC-Wipe Ground Floor	CCC-Wipe 2 <sup>nd</sup> Floor	CCC-Wipe 3 <sup>rd</sup> Floor	CCC-Wipe 4 <sup>th</sup> Floor	CCC-Wipe 5 <sup>th</sup> Floor
Aroclor-1016	µg/wipe	ND	ND	ND	ND	ND
Aroclor-1221	µg/wipe	ND	ND	ND	ND	ND
Aroclor-1232	µg/wipe	ND	ND	ND	ND	ND
Aroclor-1242	µg/wipe	ND	ND	ND	ND	ND
Aroclor-1248	µg/wipe	ND	ND	ND	ND	ND
Aroclor-1254	µg/wipe	<b>17</b>	<b>1.7</b>	<b>1.1</b>	ND	ND
Aroclor-1260	µg/wipe	ND	ND	ND	<b>260</b>	ND

Notes:

µg/wipe milligrams per wipe

**Bolded** results exceeded the laboratory's detection limit for that analyte.

ND Non-detect. Analyte was not detected above the laboratory's detection limit.

## 5.0 POTENTIAL SITE-RELATED THREATS

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Based on the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) in Title 40 of the *Code of Federal Regulations* (CFR), Section 300.415, U.S. EPA may take removal actions to abate, prevent, minimize, stabilize, mitigate, or eliminate a release or potential release that poses a threat to the public health or welfare of the United States or the environment. Paragraph (b)(2) of 40 CFR Section 300.415 lists factors to be considered when determining the appropriateness of a removal action. The following discussion summarizes factors applicable or relevant to the Carter Coat site.

**Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants.** Numerous drums were documented to be on site during an assessment conducted by MDEQ; however during the U.S. EPA site assessment the drums were discovered to be buried by debris. The physical state of the drums is unknown and it is possible the drums were punctured and the contents spilled to the environment. In addition, the pit material and an AST material, that exhibited the characteristics of toxicity, are open and exposed to the elements. During the site assessment the pits were found to be full of rain water, which having mixed with the hazardous contents, could spill over or potentially flow off site. Although the City of Detroit boarded up the building and repaired a chain link fence enclosing the back half of the property, a site walk found several openings in the chain link fence and a board pulled off an entrance to the building. Trespassing has occurred at the site, as evidenced by graffiti, presence of food-related material, clothing, and the fact that the drums were buried in debris. On at least one occasion, trespassers actions have resulted in a fire in the building. In addition, the U.S. EPA site assessment results found PCBs in an uncovered pile of material outside the building as well as in wipe samples of the wooden block flooring.

**Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that pose a threat of release.** Based on the analytical results obtained by MDEQ, hazardous substances are present on-site in 55-gallon drums, ASTs, sumps, and USTs. The drums have been buried and the conditions are unknown. The AST and sumps are open and exposed to the elements. The condition of the UST is unknown at this time. These vessels contain Resource Conservation and Recovery Act (RCRA) hazardous wastes as defined by the

following waste codes: D001 (characteristic of ignitibility); D002 (characteristic of corrosivity); and D007 and D008 (characteristic of toxicity).



## 6.0 SUMMARY

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Numerous hazardous materials were found to be on the site during the MDEQ site assessment conducted in April 2004. U.S. EPA and START attempted to verify these results; however site conditions did not allow for the full implementation of the sampling plan.

Currently, the drums that were staged by MDEQ are buried under general construction debris and are unable to be sampled until they are unburied. Some of the drums reportedly contain hazardous substance such as flammable liquids and solids or corrosive liquids. In addition, the material in an outside tank and outside pits were frozen solid and a sample was not able to be collected to verify the toxicity threat of the material. The sumps are open to the environment and the material inside the pits could be released to the environment during periods of heavy rains.

During the limited site assessment performed by the U.S. EPA, PCBs were found to be present in an uncovered pile of material located outside of the building as well as in samples collected from the wood block flooring. The State of Michigan's Administrative Rule, Part 201 criteria for PCBs is 4,000 ppb for residential and commercial and 16,000 ppb for industrial properties. Residential criteria will be used due to the evidence of vagrants in the building. The PCB concentration in the material collected outside was 13,000 ppb. U.S. EPA uses the Toxic Substances Control Act (TSCA) level of PCBs at 50 ppm as a cleanup criteria level.

Since PCBs were detected during the U.S. EPA site assessment, and other hazardous materials were reported to be present from a MDEQ site assessment, a removal action is warranted at this site.

**ATTACHEMNT A**  
**PHOTOGRAPHIC LOG**  
**(4 Pages)**



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	1	<b>Direction:</b>	Northwest
<b>Comment</b>	A view of a missing segment of the chainlink fence along Harper Avenue..		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	2	<b>Direction:</b>	Northwest
<b>Comment</b>	A view of a missing segment of the chainlink fence along Harper Avenue..		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	3	<b>Direction:</b>	Northwest
<b>Comment</b>	A view of graffiti and broken windows on the Carter Color Coat building.		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	4	<b>Direction:</b>	Southwest
<b>Comment</b>	A view of graffiti and a removed board on the Hastings Street side of the property.		



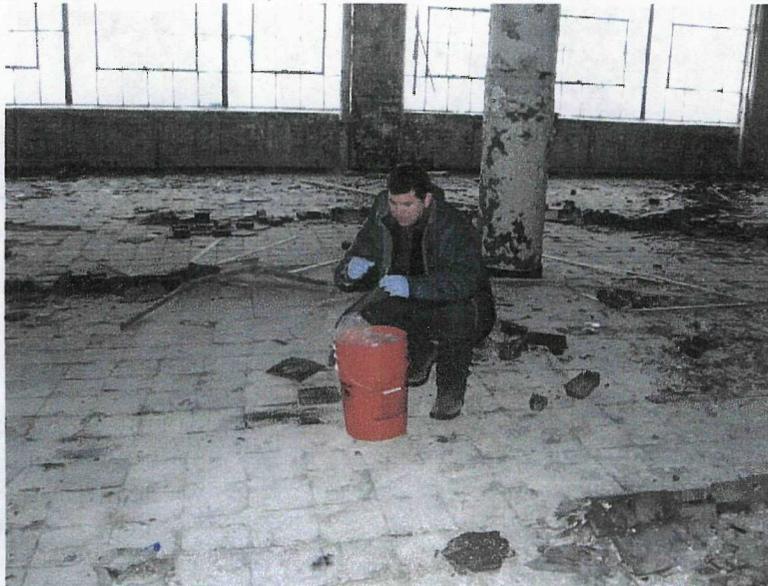
<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	5	<b>Direction:</b>	Southeast
<b>Comment</b>	A view of the area where drums were staged by MDEQ. Partially buried drums are visible.		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	6	<b>Direction:</b>	Down
<b>Comment</b>	A view of the area where drums were staged by MDEQ. Partially buried drums are visible.		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Stephen Wolfe		
<b>Photo Number:</b>	7	<b>Direction:</b>	Down
<b>Comment</b>	A view of a 5-gallon tote with a corrosive label that was found inside the building.		



<b>Site:</b>	Carter Color Coat		
<b>Date:</b>	December 11, 2007		
<b>Photographer:</b>	Jeffrey Kimble		
<b>Photo Number:</b>	8	<b>Direction:</b>	Southeast
<b>Comment</b>	START collecting a PCB wipe sample.		

**APPENDIX A**  
**VALIDATED LABORATORY ANALYTICAL RESULTS**  
**(16 Pages)**



**STN Environmental, JV**

125 South Wacker Drive, Suite 1180 • Chicago, IL 60606 • (312) 443-0550 • (312) 443-0557

**MEMORANDUM**

**Date:** March 25, 2008

**To:** Karen Campbell, Project Manager, STN Environmental JV (STN)  
Superfund Technical Assessment and Response Team (START) for region 5

**Prepared by:** Richard Baldino, Senior Chemist, STN START for Region 5

**Subject:** Data Validation for  
Carter Coat Site  
Detroit, Michigan  
Analytical Technical Direction Document (TDD) No. S05-0711-008  
Project TDD No. S05-0709-001

Laboratory: Trace Analytical

Work Order No. T07L102

Analyses of 2 Solid Samples for Polychlorinated Biphenyls (PCBs) and TCLP RCRA  
Metals; Analysis of 5 Wipe Samples for Polychlorinated Biphenyls

**1.0 INTRODUCTION**

The STN START for region 5 validated PCB and TCLP RCRA metals analytical data for 2 solid samples and PCB analytical data for 5 wipe samples. Samples were collected at the Carter Coat Site located in Detroit, Michigan on December 11<sup>th</sup>, 2007. The samples were analyzed under Work Order number T07L102 by Trace Analytical of Muskegon, MI using U.S. Environmental Protection Agency (U.S. EPA) SW-846 methods 1311, 8082, and 6010B/7471A (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846).

Laboratory data were validated using guidelines set forth in the U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA540/R-99/008, October 1999), U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (540/R-94/013, February 1994), and applicable methodologies. The purpose of the chemical data quality evaluation process is to assess the usability of data for the project decision-making process.



**STN Environmental, JV**

125 South Wacker Drive, Suite 1180 • Chicago, IL 60606 • (312) 443-0550 • (312) 443-0557

**MEMORANDUM**

**Date:** March 25, 2008

**To:** Karen Campbell, Project Manager, STN Environmental JV (STN)  
Superfund Technical Assessment and Response Team (START) for region 5

**Prepared by:** Richard Baldino, Senior Chemist, STN START for Region 5

**Subject:** Data Validation for  
Carter Coat Site  
Detroit, Michigan  
Analytical Technical Direction Document (TDD) No. S05-0711-008  
Project TDD No. S05-0709-001

Laboratory: Trace Analytical  
Work Order No. T07L102  
Analyses of 2 Solid Samples for Polychlorinated Biphenyls (PCBs) and TCLP RCRA  
Metals; Analysis of 5 Wipe Samples for Polychlorinated Biphenyls

**1.0 INTRODUCTION**

The STN START for region 5 validated PCB and TCLP RCRA metals analytical data for 2 solid samples and PCB analytical data for 5 wipe samples. Samples were collected at the Carter Coat Site located in Detroit, Michigan on December 11<sup>th</sup>, 2007. The samples were analyzed under Work Order number T07L102 by Trace Analytical of Muskegon, MI using U.S. Environmental Protection Agency (U.S. EPA) SW-846 methods 1311, 8082, and 6010B/7471A (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846).

Laboratory data were validated using guidelines set forth in the U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA540/R-99/008, October 1999), U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (540/R-94/013, February 1994), and applicable methodologies. The purpose of the chemical data quality evaluation process is to assess the usability of data for the project decision-making process.

Organic data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- GC/MS Instrument performance check, Initial Calibration, and Continuing Calibration
- Blank results
- Surrogate recoveries
- Matrix spike and Matrix Spike Duplicate (MS/MSD) recovery results
- Laboratory Control Sample (LCS) recovery results
- Internal Standard area counts and retention times
- Target compound identification and quantitation

Inorganic data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- Initial Calibration, and Continuing Calibration
- Blank results
- Laboratory Control Sample (LCS) recovery results
- Duplicate sample results
- Matrix spike and Matrix Spike Duplicate (MS/MSD) recovery results

Section 2.0 of this memorandum discusses the results of organic data validation. Section 3.0 of this memorandum discusses the results of inorganic data validation. Section 4.0 presents an overall assessment of the data. The attachment to this memorandum contains the laboratory reporting forms as well as START's handwritten data qualifications where warranted.

## **2.0 ORGANIC DATA VALIDATION RESULTS**

The Results of START's organic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted (see attachment):

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

### **2.1 SOLID AND WIPE SAMPLES BY METHOD 8082 FOR PCBs**

#### **2.1.1 SAMPLE HANDLING**

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Solid samples were collected on December

11<sup>th</sup>, 2007 and were received cool and intact by the laboratory on December 12<sup>th</sup>, 2007. No discrepancies were noted.

### ***2.1.2 SAMPLE PRESERVATION AND HOLDING TIME***

Solid samples and wipe samples were shipped on ice and properly preserved. PCB samples were extracted one day after collection and were analyzed up to fifteen days after collection. No discrepancies were noted.

### ***2.1.3 GC PERFORMANCE, INITIAL AND CONTINUING CALIBRATION***

Performance checks on the gas chromatograph with electron capture detector (GC/ECD) system are performed to ensure adequate resolution and instrument sensitivity. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear calibration curve. Calibration verification checks documents satisfactory performance of the instrument over specific time periods during sample analysis. No discrepancies were noted.

### ***2.1.4 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. Laboratory method blank sample T002763-BLK2 and T002764-BLK1 were run with this SDG. No method blank detects were noted.

### ***2.1.5 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. Surrogate spike compounds included tetrachloro-m-xylene and decachlorobiphenyl.

Surrogate recoveries in sample CCC-Material Outside were 0% due to dilutions. No action was taken to qualify analytical data.

The surrogate recovery of tetrachloro-m-xylene in sample CCC-Material Inside was high at 163%. The upper control limit was 113%. No detects were noted for sample CCC-Material Inside. No action was taken to qualify analytical data.

Surrogate recoveries in sample CCC-Wipe 4<sup>th</sup> Floor were 0% due to dilutions. No action was taken to qualify analytical data.

### ***2.1.6 MS/MSD RECOVERY RESULTS***

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries in sample CCC-Material Inside were low at 11% to 37%. PCB results in sample CCC-Material Inside are considered estimated and flagged "UJ" due to possible negative bias.

### ***2.1.7 LCS RECOVERY RESULTS***

Data for laboratory control samples (LCS) are generated to provide information on the accuracy of the analytical method and on the laboratory performance. Laboratory Control Samples (LCS) were fortified with the full list of VOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by Percent Recovery (%R). LCS recoveries ranged from 70% to 97%. No discrepancies were noted.

### ***2.1.8 TARGET COMPOUND IDENTIFICATION AND QUANTITATION***

Qualitative criteria for compound identification have been established to minimize the number of false positives (reporting a compound present when it is not) and false negatives (not reporting a compound that is present). No discrepancies were noted.

## **3.0 INORGANIC DATA VALIDATION RESULTS**

The Results of START's inorganic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted (see attachment):

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

## **3.1 SOLID SAMPLES BY METHOD 6010B/7000 FOR TCLP METALS**

### ***3.1.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Solid samples were collected on December 11<sup>th</sup>, 2007 and were received cool and intact by the laboratory on December 12<sup>th</sup>, 2007. No discrepancies were noted.

### ***3.1.2 SAMPLE PRESERVATION AND HOLDING TIME***

Solid samples were shipped on ice and properly preserved. TCLP Metals samples were extracted one day after collection and were analyzed up to two days after collection. No discrepancies were noted.

### ***3.1.3 INITIAL CALIBRATION, AND CONTINUING CALIBRATION***

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative results. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing calibration

verification establishes that the initial calibration is still valid by checking the performance of the instrument on a continual basis. No discrepancies were noted.

### ***3.1.4 BLANK RESULTS***

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. No method blank detects above the reporting limit were noted.

### ***3.1.5 LCS RECOVERY RESULTS***

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Laboratory Control Samples (LCS) were fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by Percent Recovery (%R). LCS recoveries ranged from 90% to 103%. No discrepancies were noted.

### ***3.1.6 MS/MSD RECOVERY RESULTS***

Data for matrix spike/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries ranged from 85% to 112%. No discrepancies were noted.

### ***3.1.7 LABORATORY DUPLICATES***

The objective of duplicate sample analysis is to demonstrate acceptable precision by the laboratory. Non-homogenous samples can impact the apparent analytical precision. Lab duplicate precision is measured by Relative Percent Difference (RPD). Lab duplicate samples were not run for TCLP samples. No discrepancies were noted.

## **4.0 OVERALL ASSESSMENT OF DATA**

The analytical performance of this data set is very strong. The analytical results meet the data quality objectives defined by the applicable method and validation guidance documentation. The analytical data is usable and acceptable with the qualifications noted above. Rejection of analytical data was not required.

**ATTACHMENT**  
**SUMMARY OF ANALYTICAL RESULTS**  
**AND**  
**CHAIN-OF-CUSTODY**  
(10 Sheets)

**ANALYTICAL RESULTS**

Trace Project ID: T07L102  
Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-01 Date Collected: 12/11/07 11:30 Matrix: Soil  
Sample ID: CCC-Material Outside Date Received: 12/12/07 09:48

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

**PESTICIDES/PCBS** 404

Analysis Method: EPA 8082

Batch: T002764

Aroclor-1016	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1221	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1232	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1242	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1248	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1254	<1200 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
Aroclor-1260	13000 ug/kg dry	1200	10	12/12/07	kb	12/21/07	tim	
<b>Surrogates:</b>								
Tetrachloro-m-xylene	* %	40-113	10	12/12/07	kb	12/21/07	tim	302, N
Decachlorobiphenyl	* %	32-111	10	12/12/07	kb	12/21/07	tim	302, N

**METALS, TCLP**

Analysis Method: EPA 6010B

Batch: T002782

Arsenic	<0.30 mg/L	0.30	1	12/13/07	da	12/14/07	pe	5.0
Barium	<1.0 mg/L	1.0	1	12/13/07	da	12/14/07	pe	100
Cadmium	<0.10 mg/L	0.10	1	12/13/07	da	12/14/07	pe	1.0
Chromium	<0.50 mg/L	0.50	1	12/13/07	da	12/14/07	pe	5.0
Lead	<0.50 mg/L	0.50	1	12/13/07	da	12/14/07	pe	5.0
Selenium	<0.60 mg/L	0.60	1	12/13/07	da	12/14/07	pe	1.0
Silver	<0.10 mg/L	0.10	1	12/13/07	da	12/14/07	ac	5.0

Analysis Method: EPA 7470A

Batch: T002781

Mercury	<0.010 mg/L	0.010	1	12/13/07	da	12/13/07	pe	0.20
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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-01	Date Collected: 12/11/07 11:30	Matrix: Soil
Sample ID: CCC-Material Outside	Date Received: 12/12/07 09:48	

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
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**WET CHEMISTRY**

Analysis Method: % Calculation

Batch: T002790

% Solids	55 % by Wt.	0.10	1	12/13/07	pf	12/14/07	jn	N
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3/25/08

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-02 Date Collected: 12/11/07 11:35 Matrix: Soil  
 Sample ID: CCC-Material Inside Date Received: 12/12/07 09:48

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
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**PESTICIDES/PCBS**

229

Analysis Method: EPA 8082

Batch: T002764

Aroclor-1016	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1221	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1232	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1242	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1248	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1254	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim
Aroclor-1260	<130 ug/kg dry	130	1	12/12/07	kb	12/21/07	tim

**Surrogates:**

Tetrachloro-m-xylene	* 163 %	40-113	1	12/12/07	kb	12/21/07	tim 311.5, N
Decachlorobiphenyl	52 %	32-111	1	12/12/07	kb	12/21/07	tim N

**METALS, TCLP**

Analysis Method: EPA 6010B

Batch: T002782

Arsenic	<0.30 mg/L	0.30	1	12/13/07	da	12/14/07	pe 5.0
Barium	<1.0 mg/L	1.0	1	12/13/07	da	12/14/07	pe 100
Cadmium	0.22 mg/L	0.10	1	12/13/07	da	12/14/07	pe 1.0
Chromium	<0.50 mg/L	0.50	1	12/13/07	da	12/14/07	pe 5.0
Lead	0.55 mg/L	0.50	1	12/13/07	da	12/14/07	pe 5.0
Selenium	<0.60 mg/L	0.60	1	12/13/07	da	12/14/07	pe 1.0
Silver	<0.10 mg/L	0.10	1	12/13/07	da	12/14/07	ac 5.0

Analysis Method: EPA 7470A

Batch: T002781

Mercury	<0.010 mg/L	0.010	1	12/13/07	da	12/13/07	pe 0.20
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**ANALYTICAL RESULTS**

Trace Project ID: T07L102  
 Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-02	Date Collected: 12/11/07 11:35	Matrix: Soil					
Sample ID: CCC-Material Inside	Date Received: 12/12/07 09:48						
PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL

**WET CHEMISTRY**

Analysis Method: % Calculation

Batch: T002790

% Solids	98 % by Wt.	0.10	1	12/13/07	pf	12/14/07	jn	N
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3/25/08*

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102  
 Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-03 Date Collected: 12/11/07 11:45 Matrix: Wipe  
 Sample ID: CCC-Wipe 5th Floor Date Received: 12/12/07 09:48

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
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**PESTICIDES/PCBS**

Analysis Method: EPA 8082

Batch: T002763

Aroclor-1016	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1221	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1232	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1242	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1248	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1254	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
Aroclor-1260	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/21/07	tim	N
<b>Surrogates:</b>								
Tetrachloro-m-xylene	84 %	50-131	1	12/12/07	kb	12/13/07	tim	N
Decachlorobiphenyl	83 %	50-115	1	12/12/07	kb	12/13/07	tim	N

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 3/15/08

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-04 Date Collected: 12/11/07 12:00 Matrix: Wipe  
 Sample ID: CCC-Wipe 4th Floor Date Received: 12/12/07 09:48

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
<b>PESTICIDES/PCBS</b>							413
<i>Analysis Method: EPA 8062</i>							
<i>Batch: T002763</i>							
Aroclor-1016	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1221	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1232	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1242	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1248	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1254	<20 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
Aroclor-1260	260 ug/Wipe	20	10	12/12/07 kb	12/13/07 tim	N	
<i>Surrogates:</i>							
Tetrachloro-m-xylene	* %	50-131	10	12/12/07 kb	12/13/07 tim	302, N	
Decachlorobiphenyl	* %	50-115	10	12/12/07 kb	12/13/07 tim	302, N	

*MAH  
3/25/08*

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-05  
Sample ID: CCC-Wipe 3rd Floor

Date Collected: 12/11/07 12:10 Matrix: Wipe  
Date Received: 12/12/07 09:48

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
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**PESTICIDES/PCBS**

Analysis Method: EPA 8082

*Batch: T002763*

Aroclor-1016	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1221	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1232	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1242	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1248	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1254	1.1 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
Aroclor-1260	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N
<b>Surrogates:</b>								
Tetrachloro-m-xylene	82 %	50-131	1	12/12/07	kb	12/13/07	tim	N
Decachlorobiphenyl	74 %	50-115	1	12/12/07	kb	12/13/07	tim	N

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-06 Date Collected: 12/11/07 12:20 Matrix: Wipe  
Sample ID: CCC-Wipe 2nd Floor Date Received: 12/12/07 09:48

PARAMETERS RESULTS UNITS RDL DILUTION PREPARED BY ANALYZED BY NOTES MCL

**PESTICIDES/PCBS**

Analysis Method: EPA 8082

Batch: T002763

Aroclor-1016	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1221	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1232	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1242	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1248	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1254	1.7 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
Aroclor-1260	<1.0 ug/Wipe	1.0	1	12/12/07	kb	12/26/07	tim	N	
<b>Surrogates:</b>									
Tetrachloro-m-xylene	83 %	50-131	1	12/12/07	kb	12/13/07	tim	N	
Decachlorobiphenyl	83 %	50-115	1	12/12/07	kb	12/13/07	tim	N	

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**ANALYTICAL RESULTS**

Trace Project ID: T07L102

Client Project ID: Carter Color Coat / TDD:505-0709-001

Trace ID: T07L102-07

Date Collected: 12/11/07 12:30

Matrix Wipe

Sample ID: CCC-Wipe Ground Floor

Date Received: 12/12/07 09:48

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED BY	ANALYZED BY	NOTES	MCL
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**PESTICIDES/PCBS**

413

Analysis Method: EPA 8082

Batch: T002763

Aroclor-1016	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1221	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1232	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1242	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1248	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1254	17 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
Aroclor-1260	<2.0 ug/Wipe	2.0	1	12/12/07	kb	12/13/07	tim	N
<b>Surrogates:</b>								
Tetrachloro-m-xylene	69 %	50-131	1	12/12/07	kb	12/13/07	tim	N
Decachlorobiphenyl	105 %	50-115	1	12/12/07	kb	12/13/07	tim	N

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