



## **Limited Lead Paint Survey**

**For**

**Industrial Arts Building  
1800 State Fair Park Drive  
Lincoln, Nebraska 68508**

**Prepared for  
Nebraska Nova LLC c/o  
Scott Woodbury Wiegert, LLC  
11422 Miracle Hills Drive, Suite 400  
Omaha, Nebraska 68154**

**Prepared by  
ATC ASSOCIATES INC.  
11117 MOCKINGBIRD DRIVE  
OMAHA, NEBRASKA 68137**

ATC Project No: 007.43508.0001

July 17, 2012

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**CERTIFICATION OF RESULTS**

This report has been prepared for the exclusive use of Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC. ATC Associates Inc. acknowledges that Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC may rely on this report in the management of the property. Photocopying of this document, in part or whole, by parties other than those designated by Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC or use of this document for purposes other than it is intended, is prohibited.

Respectfully submitted July 17, 2012.

**ATC Associates Inc.**



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Brock Flowers  
Project Hygienist  
Nebraska Lead Inspector



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Tim Jacobsen, MPH  
Project Manager

## **EXECUTIVE SUMMARY**

ATC Associates Inc. (ATC) was retained by Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC to perform a Limited Lead Paint survey of the Industrial Arts Building in preparation for renovation activities. The Industrial Arts Building is located at 1800 State Fair Park Drive in Lincoln, Nebraska (Site). The structure is two floors with a show floor and has a construction date of 1913. This report summarizes the findings of the Limited Lead Paint survey.

The scope of the survey included the performance of a Limited Lead Paint survey to identify components coated with lead utilizing an X-ray Fluorescence Analyzer (XRF) manufactured by Niton, Inc. (300 XL Series). The Site is not a child-occupied facility and is currently vacant. ATC followed general field protocols and methodologies established by the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* as published by HUD, June 1995, Rev. 1997 (also known as the HUD Guidelines) and EPA 40 CFR Part 745.227 "Work Practice Standards for Conducting Lead-Based Paint Activities in Target Housing and Child Occupied Facilities."

### ***Summary of Results***

XRF and paint chip analysis identified lead in concentrations at or above 1.0 mg/cm<sup>2</sup> and 0.5% by weight. These guidelines were established by HUD and EPA. A summary of all surfaces identified with LBP can be referenced in Section 3.01. XRF field survey reports and photographs of positive lead components can be found in Appendix A. It is our understanding that the information in this report will be provided to the contractors so that appropriate precautions can be made to minimize worker exposure to lead.

No asbestos containing materials were identified in the building at the time of the inspection.

## **1.0 INTRODUCTION**

ATC Associates Inc. (ATC) was retained by Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC to perform a Limited Lead Paint survey at the Industrial Arts Building located at 1800 State Fair Park Drive in Lincoln, Nebraska. These services were performed using general guidelines and practices based on the United States Department of Housing and Urban Development (HUD) regulations and the Environmental Protection Agency (EPA).

### **1.01 ATC INSPECTION PERSONNEL**

Mr. Brock Flowers of ATC's Omaha, Nebraska office performed the testing on July 02, 2012.

### **1.02 SITE DESCRIPTION AND PHYSICAL CHARACTERISTICS**

The Site is the old Industrial Arts building located at the former State Fair Grounds in Lincoln, Nebraska. The structure includes the original two-story building with a construction date of 1913. The building layout included a large show area and two floors for exhibits and storage.

Construction is of brick and concrete. The interior finish is primarily brick walls with metal roof deck and joist. The flooring is all comprised of concrete.

### **1.03 PURPOSE OF EVALUATION**

The purpose of this survey was to identify locations of lead-based paints and coatings within the specified areas or on the exterior of the structures as requested by Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC in preparation of renovation activities.

### **1.04 STANDARDS AND GUIDELINES**

The Lead Paint Survey was performed using general standards and guidelines, with modifications appropriate for a non-child occupied residential building, from the following sources:

- *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, as published by the U.S. Department of Housing and Urban Development (HUD), June 1995, Chapter 7 Inspection, Revised 1997.
- United States Environmental Protection Agency (USEPA) 40 CFR Part 745.227(b).
- XRF-specific Performance Characteristic Sheet methodology (included in Appendix C).

## **1.05 LEAD-BASED PAINT THRESHOLD LIMITS**

Both the EPA and HUD define “lead-based paint” as any paint, varnish, shellac, or other surface coating that contains lead equal to or in excess of 1.0 milligram of lead per square centimeter ( $\text{mg}/\text{cm}^2$ ) as measured by XRF (or laboratory analysis) or if the lead concentration is greater than 0.5% by weight. The results of testing in this survey report are units of  $\text{mg}/\text{cm}^2$  and % by weight. The threshold for the detection of lead-based paint by the XRF is  $1.0 \text{ mg}/\text{cm}^2$  and for paint chip analysis 0.5% by weight.

The objective of the Occupational Safety and Health Administration (OSHA) regarding lead in construction is to protect workers during construction activities that may generate elevated airborne lead concentrations. OSHA states that construction work (including renovation, maintenance, and demolition) conducted on structures coated with paint containing lead concentrations lower than the EPA or HUD definition have the potential to result in airborne lead concentrations in excess of regulatory limits. For this reason, OSHA identifies out that paint having any measurable level of lead may pose a substantial exposure hazard during construction work, depending upon the work performed.

## **2.0 XRF SAMPLING AND ANALYTICAL PROCEDURES**

### **2.01 TESTING PROCEDURES**

#### **2.01.1 Niton 300 XL XRF Analyzer**

Testing was performed using X-Ray Fluorescence *in situ* analysis (XRF) of painted construction materials. ATC utilized the Niton 300 XL Series manufactured by Niton Corporation Inc. for this inspection.

The Niton 300 XL Series Lead Paint Analyzer is a complete lead paint analysis system that quickly, accurately, and non-destructively measures the concentration of LBP on surfaces. The Niton relies on the measurement of the K-shell X-rays to determine the amount of lead present in the painted surface. K-shell X-rays can penetrate many layers of paint and allow a measurement of the lead content of paint to be made without being significantly affected by the thickness or number of layers of paint on the surface of the sample.

The Niton has the ability to analyze and compute corrections for the differences in the energy spectrums relating to different substrates. This analysis of the energy spectrum means that the lead paint reading displayed on the instrument already accounts for any substrate effects and correction is not required by the operator. The Niton's field of view is limited to a depth of 3/8", deep enough to handle virtually all painted surfaces, but not prone to detect lead objects located behind the surface.

Upon arrival at the job site and once every four hours or after the day's inspection work was completed, a "validation test" was performed to assure that the instrument was operating properly. A series of three test measurements using the nominal time that was used during the inspection were taken on the NIST Paint Film Standard (SRM No. 2579) as required by the instrument's PCS. The individual readings and an average of the three readings were recorded and compared to the standards. In all cases the instrument was functioning within the standard deviation as defined by the manufacturer and the PCS. All validation readings are recorded on the field sample collection logs in the order in which they were taken at the site. If for any reason the XRF does not pass the quality control procedures, it is ATC's policy to replace that instrument with an XRF that passes the above criteria for calibration. The Results of Calibration Checks are included in Appendix A of this report.

The parameters used to interpret XRF results are outlined in the HUD Guidelines and the Performance Characteristics Sheet (PCS) in Appendix C. According to the PCS, each XRF result is classified as positive for LBP if the result is greater than or equal to 1.0 mg/cm<sup>2</sup> or negative for LBP if the result is below 1.0 mg/cm<sup>2</sup>.

ATC also collected three paint chip samples of components that were initially positive through XRF analysis. The paint chip samples were collected to determine if the lead was in the actual paint and not the metal joist or columns. ATC had the paint chip samples analyzed by EMSL Analytical, Inc. of Westmont, New Jersey using the Flame Atomic Absorption Spectrophotometry (AAS) method.

Site Specific Testing Methods:

ATC entered accessible rooms within the building to perform the testing. For the purpose of this report Side A = North, Side B = East, Side C = South, and Side D = West. All components were tested at the judgment of the inspector. Not all surfaces were tested. Inaccessible areas were not tested.

### 3.0 SURVEY RESULTS

#### 3.01 LEAD-BASED PAINT

Inspection results from the building confirmed that lead-based paint was detected in the building components. ATC analyzed a total of 69 painted surfaces during the survey conducted on July 02, 2012. Twenty-four of the 69 shots were found to contain lead paint  $\geq 1.0 \text{ mg/cm}^2$  or 0.5% by weight not including the calibration shots.

The following is a complete listing of all components that were identified by XRF and Paint Chip analysis to contain lead in concentrations at or above the EPA and HUD Guidelines of  $1.0 \text{ mg/cm}^2$  and 0.5% by weight for lead-based paints. Photographs of lead-based paints have been provided in the attachments to aid in the identification of the components.

Please note that XRF Readings in a room equivalent are representative of their respective building component within the room equivalent. For example, the Brown Concrete Wall on side B of the Southwest Entry of the building is representative of **all** Brown Concrete Walls of the building.

**Table 3.1 –Summary of Lead-Based Painted Components**

| <b>Component &amp; Location</b>                             | <b>XRF results<br/>(<math>\text{mg/cm}^2</math>)</b> |
|-------------------------------------------------------------|------------------------------------------------------|
| Brown Concrete Wall, Side B, Southwest Entry                | $1.0 \pm 0.1$                                        |
| Brown Wood Window Casing, Side D, Southwest Entry           | $4.8 \pm 3.4$                                        |
| Brown Plaster Wall, Side C, Southwest Men's Restroom        | $1.3 \pm 0.3$                                        |
| Brown Wood Window Casing, Side D, Southwest Men's Restroom  | $3.8 \pm 2.7$                                        |
| Brown Wood Door, Side C, Southwest Men's Restroom           | $8.4 \pm 7.3$                                        |
| Brown Wood Window, Side B, Southwest Women's Restroom       | $6.5 \pm 4.9$                                        |
| White Metal Pipe, Side A, Southwest Women's Restroom        | $15.9 \pm 12.7$                                      |
| White Wood Door, Side B, Southwest Storage                  | $6.5 \pm 5.4$                                        |
| Green Wood Door, Side B, Southwest Storage                  | $4.4 \pm 2.7$                                        |
| White Wood Wall, Side A, East 1 <sup>st</sup> Garage Area   | $12.5 \pm 10.5$                                      |
| White Wood Wall, Side A, Middle East Storage                | $1.2 \pm 0.1$                                        |
| Yellow Plaster Wall, Side B, Northwest Office               | $1.1 \pm 0.1$                                        |
| Light Yellow Plaster Ceiling, Northwest Office              | $3.1 \pm 2.1$                                        |
| White Wood Door, Side B, Northwest Office                   | $21.3 \pm 18.6$                                      |
| Yellow Metal Support Beam, Upper, Main Area                 | $7.0 \pm 5.9$                                        |
| White Wood Window, Side A, Main Area                        | $6.2 \pm 4.3$                                        |
| Yellow Metal Beam, Side A, Main Area                        | $10.4 \pm 9.4$                                       |
| Silver Metal Beam, Side B, 2 <sup>nd</sup> Floor Main Area* | $9.5 \pm 7.9$                                        |

| <b>Component &amp; Location</b>          | <b>XRF results<br/>(mg/cm<sup>2</sup>)</b> |
|------------------------------------------|--------------------------------------------|
| Brown Metal Beam, Side C, Main Area      | 10.7 ± 8.8                                 |
| White Wood Window, Side D, Exterior      | 8.9 ± 7.9                                  |
| White Wood Door Casing, Side C, Exterior | 4.2 ± 2.7                                  |
| White Wood Window, Side C, Exterior      | 8.9 ± 6.8                                  |
| White Concrete Wall, Side A, Exterior    | 2.0 ± 1.0                                  |
| White Concrete Wall, Side A, Exterior    | 1.3 ± 0.2                                  |

Majority of the lead based paint was observed to be in poor condition with chipping or flaking noted.

\*Paint Chip Analysis confirms lead is present in the paint layer and not in the metal.

#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

ATC performed a Limited Lead Paint survey of the Industrial Arts Building located at 1800 State Fair Park Drive in Lincoln, Nebraska. Inspection results from the building confirmed that lead-based paint was detected in the building components. ATC presents the following conclusions and recommendations.

##### **4.01 LEAD-BASED PAINT**

LBP was found in concentrations  $\geq 1.0$  mg/cm<sup>2</sup> and  $>0.5$  % by weight on those surfaces identified above in "Table 3.1 - Summary of Lead-Based Paint Components". Table 3.1 includes surfaces that were identified to be lead-based paint based on the EPA and HUD definitions. Paint film containing any detectable concentration of lead must be viewed as a potential source of lead exposure and a health hazard. Since exposure to lead can be caused by demolition, alteration, friction, and deterioration of painted surfaces, lead-based paint hazards exist if proper work practices are not implemented. Please refer to test results for lead levels in painted surfaces.

Based upon the results of the testing, it is likely that lead-based paint will be impacted as part of any future renovation work. As such, the implementation of the following is recommended:

1. Avoid the use of cutting torches on materials covered with lead-based paint or lead-containing paint. If cutting torches must be used, proper personal protective measures should be taken and relevant OSHA regulations followed.
2. Prior to working on, removing, demolishing, or salvaging of any materials painted with lead-based paint, the contractor and contractor's employees should be notified that the materials might be covered with lead-based paint.
3. Prior to disposal of debris that contains materials that have been found to contain lead-based paint, conduct Toxicity Characteristic Leaching Procedures (TCLP) on representative solid wastes. This will determine if the debris requires a hazardous waste disposal site.
4. Establish communication with all contractors/sub-contractors regarding the locations of lead-based paint.
5. Any surfaces that were not tested should be tested prior to being impacted by renovation activities or assumed to be coated in lead-based paint and handled accordingly.
6. During renovation work, assure that workers are properly protected from potential lead exposures.
7. If targeted removal of lead-based paint is necessary, contract a licensed lead abatement contractor.

This evaluation report can help the Owner develop a plan for renovating the building by having the lead-based paint identified. It is our understanding that the information in this report will be provided to the contractors so that appropriate precautions can be made to minimize worker exposure to lead. If the lead-based paint components are treated improperly, exposure could occur to workers and future occupants of the facility.

**5.0 LEAD ASSESSMENT TEAM**

The representative for ATC Associates Inc. conducting the assessment was Mr. Brock Flowers. A copy of his training is included in Appendix B.

Assessed by:

Reviewed by:



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Brock Flowers  
Project Hygienist  
Nebraska Licensed Lead Inspector

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Tim Jacobsen, MPH  
Project Manager

## 6.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions, and recommendations expressed in the report are based only on the results noted during the limited lead paint survey conducted on July 2, 2012. The facility was unoccupied at the time of the inspection and is not a child-occupied facility.

This report is designed to aid Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC, the building owner, architect, construction manager, general contractor, and potential lead abatement contractors in preparing the design of the selective demolition within the facility. **Under no circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as an Abatement Work plan or OSHA Lead in Construction Work Plan.**

The results of this survey are applicable for the time that the Lead Paint Survey was performed. If questions arise regarding lead content in or on surfaces that were not tested by ATC, additional testing services should be procured to test those surfaces for lead. ATC makes no representation or warranty concerning the standards and specifications provided in the *HUD Guidelines* or by Niton, Inc.

**This report is intended for the sole use of Nebraska Nova LLC c/o Scott Woodbury Wiegert, LLC**  
The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations contained herein is at the risk of said user.

## **APPENDIX A**

# **XRF Field Survey Report, EMSL Analytical Results and Photographs**

Serial #XLp-6951  
 Header: State Fair Park (Industrial Arts Building)  
 Site: Lincoln, Nebraska  
 Date: 07/02/12  
 Ranges (NEG<INC<POS): Device PCS

ATC Associates  
 11117 Mockingbird Drive  
 Omaha, Nebraska

| Reading No | Time          | Type        | Units      | Component     | Substrate | Side | Condition | Color      | Site | Inspector | Floor | Room                 | Results  | PbC  | PbC Error |
|------------|---------------|-------------|------------|---------------|-----------|------|-----------|------------|------|-----------|-------|----------------------|----------|------|-----------|
| 133        | 7/2/2012 7:32 | SHUTTER_CAL | cps        |               |           |      |           |            |      |           |       |                      |          | 5.91 | 0         |
| 134        | 7/2/2012 7:33 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Negative | 0    | 0.03      |
| 135        | 7/2/2012 7:33 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Negative | 0    | 0.03      |
| 136        | 7/2/2012 7:33 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Negative | 0    | 0.02      |
| 137        | 7/2/2012 7:34 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Negative | 0.9  | 0.1       |
| 138        | 7/2/2012 7:35 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Positive | 1    | 0.1       |
| 139        | 7/2/2012 7:35 | CALIBRATE   | mg / cm ^2 |               |           |      |           |            |      |           |       |                      | Negative | 0.9  | 0.1       |
| 140        | 7/2/2012 7:38 | PAINT       | mg / cm ^2 | WALL          | CONCRETE  | A    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. ENTRY           | Negative | 0.02 | 0.05      |
| 141        | 7/2/2012 7:41 | PAINT       | mg / cm ^2 | WALL          | CONCRETE  | B    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. ENTRY           | Positive | 1    | 0.1       |
| 142        | 7/2/2012 7:41 | PAINT       | mg / cm ^2 | DOOR          | WOOD      | D    | INTACT    | WHITE      | IAB  | BF        | FIRST | S.W. ENTRY           | Negative | 0    | 0.02      |
| 143        | 7/2/2012 7:42 | PAINT       | mg / cm ^2 | WINDOW CASING | WOOD      | D    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. ENTRY           | Positive | 4.8  | 3.4       |
| 144        | 7/2/2012 7:45 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | C    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Positive | 1.3  | 0.3       |
| 145        | 7/2/2012 7:48 | PAINT       | mg / cm ^2 | CEILING       | PLASTER   |      | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.8  | 0.2       |
| 146        | 7/2/2012 7:49 | PAINT       | mg / cm ^2 | CEILING       | PLASTER   |      | PEELING   | GREEN      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.8  | 0.2       |
| 147        | 7/2/2012 7:50 | PAINT       | mg / cm ^2 | WALL          | BRICK     | C    | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.8  | 0.2       |
| 148        | 7/2/2012 7:50 | PAINT       | mg / cm ^2 | WALL          | BRICK     | B    | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.6  | 0.1       |
| 149        | 7/2/2012 7:51 | PAINT       | mg / cm ^2 | STALL DOOR    | WOOD      | D    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.01 | 0.07      |
| 150        | 7/2/2012 7:51 | PAINT       | mg / cm ^2 | STALL         | WOOD      | D    | PEELING   | RED        | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Negative | 0.02 | 0.09      |
| 151        | 7/2/2012 7:52 | PAINT       | mg / cm ^2 | WINDOW CASING | WOOD      | D    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Positive | 3.8  | 2.7       |
| 152        | 7/2/2012 7:52 | PAINT       | mg / cm ^2 | DOOR          | WOOD      | C    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. MENS RESTROOM   | Positive | 8.4  | 7.3       |
| 153        | 7/2/2012 7:54 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | D    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0.5  | 0.2       |
| 154        | 7/2/2012 7:56 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | A    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0.8  | 0.1       |
| 155        | 7/2/2012 7:56 | PAINT       | mg / cm ^2 | WINDOW        | WOOD      | B    | PEELING   | BROWN      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Positive | 6.5  | 4.9       |
| 156        | 7/2/2012 7:58 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | A    | PEELING   | DARK BROWN | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0.8  | 0.1       |
| 157        | 7/2/2012 8:00 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | A    | PEELING   | GREEN      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0.8  | 0.1       |
| 158        | 7/2/2012 8:01 | PAINT       | mg / cm ^2 | STALL         | METAL     | D    | PEELING   | ORANGE     | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0    | 0.02      |
| 159        | 7/2/2012 8:01 | PAINT       | mg / cm ^2 | CEILING       | PLASTER   |      | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Null     | 0    | 0.02      |
| 160        | 7/2/2012 8:02 | PAINT       | mg / cm ^2 | CEILING       | PLASTER   |      | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0    | 0.02      |
| 161        | 7/2/2012 8:02 | PAINT       | mg / cm ^2 | WALL          | BRICK     | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Negative | 0.4  | 0.3       |
| 162        | 7/2/2012 8:03 | PAINT       | mg / cm ^2 | PIPE          | METAL     | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | S.W. WOMENS RESTROOM | Positive | 15.9 | 12.7      |
| 163        | 7/2/2012 8:43 | PAINT       | mg / cm ^2 | DOOR          | WOOD      | B    | INTACT    | WHITE      | IAB  | BF        | FIRST | S.W. STORAGE         | Positive | 6.5  | 5.4       |
| 164        | 7/2/2012 8:44 | PAINT       | mg / cm ^2 | DOOR          | WOOD      | B    | INTACT    | GREEN      | IAB  | BF        | FIRST | S.W. STORAGE         | Positive | 4.4  | 2.7       |
| 165        | 7/2/2012 8:47 | PAINT       | mg / cm ^2 | WALL          | WOOD      | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | EAST 1ST GARAGE AREA | Positive | 12.5 | 10.5      |
| 166        | 7/2/2012 8:48 | PAINT       | mg / cm ^2 | WALL          | BRICK     | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | EAST 1ST GARAGE AREA | Negative | 0.01 | 0.04      |
| 167        | 7/2/2012 8:50 | PAINT       | mg / cm ^2 | WALL          | WOOD      | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | MIDDLE EAST STORAGE  | Positive | 1.2  | 0.1       |
| 168        | 7/2/2012 8:57 | PAINT       | mg / cm ^2 | WALL          | WOOD      | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | MIDDLE WEST STORAGE  | Negative | 0    | 0.02      |
| 169        | 7/2/2012 9:00 | PAINT       | mg / cm ^2 | WALL          | PLASTER   | B    | PEELING   | YELLOW     | IAB  | BF        | FIRST | N.W. OFFICE          | Positive | 1.1  | 0.1       |
| 170        | 7/2/2012 9:01 | PAINT       | mg / cm ^2 | CEILING       | PLASTER   |      | PEELING   | LT YELLOW  | IAB  | BF        | FIRST | N.W. OFFICE          | Positive | 3.1  | 2.1       |
| 171        | 7/2/2012 9:03 | PAINT       | mg / cm ^2 | DOOR          | WOOD      | B    | PEELING   | WHITE      | IAB  | BF        | FIRST | N.W. OFFICE          | Positive | 21.3 | 18.6      |
| 172        | 7/2/2012 9:04 | PAINT       | mg / cm ^2 | DOOR GARAGE   | WOOD      | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | NORTH MAIN AREA      | Negative | 0.6  | 0.3       |
| 173        | 7/2/2012 9:06 | PAINT       | mg / cm ^2 | WALL          | WOOD      | A    | PEELING   | WHITE      | IAB  | BF        | FIRST | NORTH MAIN AREA      | Negative | 0.01 | 0.05      |
| 174        | 7/2/2012 9:07 | PAINT       | mg / cm ^2 | WALL          | BRICK     | B    | PEELING   | WHITE      | IAB  | BF        | FIRST | NORTH MAIN AREA      | Negative | 0    | 0.02      |
| 175        | 7/2/2012 9:08 | PAINT       | mg / cm ^2 | WALL          | WOOD      | C    | PEELING   | WHITE      | IAB  | BF        | FIRST | NORTH MAIN AREA      | Negative | 0    | 0.02      |
| 176        | 7/2/2012 9:09 | PAINT       | mg / cm ^2 | WALL          | BRICK     | D    | PEELING   | WHITE      | IAB  | BF        | FIRST | MAIN AREA            | Negative | 0    | 0.02      |
| 177        | 7/2/2012 9:10 | PAINT       | mg / cm ^2 | SUPPORT BEAM  | METAL     |      | PEELING   | YELLOW     | IAB  | BF        | FIRST | MAIN AREA            | Positive | 7    | 5.9       |
| 178        | 7/2/2012 9:12 | PAINT       | mg / cm ^2 | STAIR RAIL    | METAL     | C    | PEELING   | GRAY       | IAB  | BF        | FIRST | MAIN AREA            | Negative | 0.08 | 0.13      |

| Reading No | Time          | Type      | Units      | Component     | Substrate | Side | Condition | Color  | Site | Inspector | Floor  | Room      | Results  | PbC  | PbC Error |
|------------|---------------|-----------|------------|---------------|-----------|------|-----------|--------|------|-----------|--------|-----------|----------|------|-----------|
| 179        | 7/2/2012 9:14 | PAINT     | mg / cm ^2 | STAIR WALL    | BRICK     | C    | PEELING   | WHITE  | IAB  | BF        | FIRST  | MAIN AREA | Null     | 1    | 0.1       |
| 180        | 7/2/2012 9:14 | PAINT     | mg / cm ^2 | STAIR WALL    | BRICK     | C    | PEELING   | WHITE  | IAB  | BF        | FIRST  | MAIN AREA | Negative | 0    | 0.02      |
| 181        | 7/2/2012 9:15 | PAINT     | mg / cm ^2 | STAIR WALKWAY | WOOD      | C    | PEELING   | BLUE   | IAB  | BF        | FIRST  | MAIN AREA | Negative | 0.01 | 0.04      |
| 182        | 7/2/2012 9:17 | PAINT     | mg / cm ^2 | WALL          | BRICK     | A    | PEELING   | YELLOW | IAB  | BF        | SECOND | MAIN AREA | Negative | 0.01 | 0.03      |
| 183        | 7/2/2012 9:18 | PAINT     | mg / cm ^2 | PIPE          | METAL     | A    | PEELING   | WHITE  | IAB  | BF        | SECOND | MAIN AREA | Negative | 0.01 | 0.03      |
| 184        | 7/2/2012 9:18 | PAINT     | mg / cm ^2 | WINDOW        | WOOD      | A    | PEELING   | WHITE  | IAB  | BF        | SECOND | MAIN AREA | Positive | 6.2  | 4.3       |
| 185        | 7/2/2012 9:19 | PAINT     | mg / cm ^2 | BEAM          | METAL     | A    | PEELING   | YELLOW | IAB  | BF        | SECOND | MAIN AREA | Positive | 10.4 | 9.4       |
| 186        | 7/2/2012 9:21 | PAINT     | mg / cm ^2 | RAIL          | METAL     | B    | PEELING   | BROWN  | IAB  | BF        | SECOND | MAIN AREA | Negative | 0.11 | 0.19      |
| 187        | 7/2/2012 9:22 | PAINT     | mg / cm ^2 | WALL          | BRICK     | B    | PEELING   | WHITE  | IAB  | BF        | SECOND | MAIN AREA | Negative | 0    | 0.02      |
| 188        | 7/2/2012 9:24 | PAINT     | mg / cm ^2 | BEAM          | METAL     | B    | PEELING   | SILVER | IAB  | BF        | SECOND | MAIN AREA | Positive | 9.5  | 7.9       |
| 189        | 7/2/2012 9:26 | PAINT     | mg / cm ^2 | WALL          | BRICK     | D    | PEELING   | WHITE  | IAB  | BF        | SECOND | MAIN AREA | Negative | 0    | 0.02      |
| 190        | 7/2/2012 9:31 | PAINT     | mg / cm ^2 | BEAM          | METAL     | C    | PEELING   | BROWN  | IAB  | BF        | FIRST  | MAIN AREA | Positive | 10.7 | 8.8       |
| 191        | 7/2/2012 9:32 | PAINT     | mg / cm ^2 | CEILING       | WOOD      | C    | PEELING   | WHITE  | IAB  | BF        | FIRST  | MAIN AREA | Negative | 0    | 0.02      |
| 192        | 7/2/2012 9:40 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | D    | PEELING   | BEIGE  | IAB  | BF        |        | OUTSIDE   | Negative | 0.21 | 0.08      |
| 193        | 7/2/2012 9:40 | PAINT     | mg / cm ^2 | WALL          | BRICK     | D    | INTACT    | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0.01 | 0.04      |
| 194        | 7/2/2012 9:41 | PAINT     | mg / cm ^2 | DOOR          | METAL     | D    | INTACT    | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0    | 0.03      |
| 195        | 7/2/2012 9:41 | PAINT     | mg / cm ^2 | WINDOW        | WOOD      | D    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Null     | 2.2  | 2.1       |
| 196        | 7/2/2012 9:41 | PAINT     | mg / cm ^2 | WINDOW        | WOOD      | D    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Positive | 8.9  | 7.9       |
| 197        | 7/2/2012 9:42 | PAINT     | mg / cm ^2 | WALL          | BRICK     | C    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Negative | 0.01 | 0.04      |
| 198        | 7/2/2012 9:43 | PAINT     | mg / cm ^2 | WALL          | BRICK     | C    | PEELING   | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0.01 | 0.02      |
| 199        | 7/2/2012 9:43 | PAINT     | mg / cm ^2 | DOOR CASING   | WOOD      | C    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Positive | 4.2  | 2.7       |
| 200        | 7/2/2012 9:43 | PAINT     | mg / cm ^2 | WINDOW        | WOOD      | C    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Positive | 8.9  | 6.8       |
| 201        | 7/2/2012 9:44 | PAINT     | mg / cm ^2 | DOOR          | METAL     | C    | INTACT    | BROWN  | IAB  | BF        |        | OUTSIDE   | Negative | 0.01 | 0.04      |
| 202        | 7/2/2012 9:44 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | C    | INTACT    | WHITE  | IAB  | BF        |        | OUTSIDE   | Negative | 0.08 | 0.08      |
| 203        | 7/2/2012 9:45 | PAINT     | mg / cm ^2 | DRAIN         | METAL     | C    | INTACT    | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0.03 | 0.12      |
| 204        | 7/2/2012 9:46 | PAINT     | mg / cm ^2 | GARAGE DOOR   | WOOD      | C    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Negative | 0    | 0.03      |
| 205        | 7/2/2012 9:47 | PAINT     | mg / cm ^2 | RAIL          | METAL     | B    | PEELING   | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0.01 | 0.03      |
| 206        | 7/2/2012 9:48 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | B    | PEELING   | WHITE  | IAB  | BF        |        | OUTSIDE   | Negative | 0.18 | 0.12      |
| 207        | 7/2/2012 9:48 | PAINT     | mg / cm ^2 | WALL          | BRICK     | B    | INTACT    | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0    | 0.02      |
| 208        | 7/2/2012 9:50 | PAINT     | mg / cm ^2 | WALL          | BRICK     | A    | INTACT    | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0    | 0.02      |
| 209        | 7/2/2012 9:51 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | A    | INTACT    | WHITE  | IAB  | BF        |        | OUTSIDE   | Null     | 0.6  | 0.1       |
| 210        | 7/2/2012 9:51 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | A    | INTACT    | WHITE  | IAB  | BF        |        | OUTSIDE   | Positive | 2    | 1         |
| 211        | 7/2/2012 9:52 | PAINT     | mg / cm ^2 | WALL          | CONCRETE  | A    | INTACT    | WHITE  | IAB  | BF        |        | OUTSIDE   | Positive | 1.3  | 0.2       |
| 212        | 7/2/2012 9:53 | PAINT     | mg / cm ^2 | DOOR          | WOOD      | D    | PEELING   | RED    | IAB  | BF        |        | OUTSIDE   | Negative | 0.02 | 0.07      |
| 213        | 7/2/2012 9:56 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Negative | 0    | 0.02      |
| 214        | 7/2/2012 9:56 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Negative | 0    | 0.02      |
| 215        | 7/2/2012 9:56 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Negative | 0    | 0.03      |
| 216        | 7/2/2012 9:58 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Positive | 1    | 0.1       |
| 217        | 7/2/2012 9:58 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Negative | 0.9  | 0.1       |
| 218        | 7/2/2012 9:59 | CALIBRATE | mg / cm ^2 |               |           |      |           |        |      |           |        |           | Negative | 0.9  | 0.1       |



# EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-9551

<http://www.emsl.com>

[cinnaminsonleadlab@emsl.com](mailto:cinnaminsonleadlab@emsl.com)

EMSL Order: 201206380

CustomerID: ATC55

CustomerPO:

ProjectID:

Attn: **Brock Flowers**  
**ATC Associates, Inc.**  
**11117 Mockingbird Drive**

**Omaha, NE 68137**

Project: **4-H & IAB**

Phone: (402) 697-9747  
Fax: (402) 597-8532  
Received: 07/03/12 9:52 AM  
Collected: 7/2/2012

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B\*/7000B)

| <i>Client Sample Description</i>                    | <i>Lab ID</i> | <i>Collected</i> | <i>Analyzed</i> | <i>Lead Concentration</i> |
|-----------------------------------------------------|---------------|------------------|-----------------|---------------------------|
| 5                                                   | 0001          | 6/29/2012        | 7/6/2012        | 0.031 % wt                |
| Site: Orange Column Paint- 4H                       |               |                  |                 |                           |
| 6                                                   | 0002          | 6/29/2012        | 7/6/2012        | <0.014 % wt               |
| Site: Yellow Column Paint- 4H                       |               |                  |                 |                           |
| 9                                                   | 0003          | 6/29/2012        | 7/6/2012        | 15 % wt                   |
| Site: Brown Column Paint- 4H Arena                  |               |                  |                 |                           |
| 10                                                  | 0004          | 6/29/2012        | 7/6/2012        | 36 % wt                   |
| Site: Green Column Paint- 4H Arena                  |               |                  |                 |                           |
| 11                                                  | 0005          | 6/29/2012        | 7/6/2012        | 13 % wt                   |
| Site: Brown Metal Support Beam 2nd Flr Warehouse-4H |               |                  |                 |                           |
| IAB-3                                               | 0006          | 7/2/2012         | 7/6/2012        | 0.016 % wt                |
| Site: Yellow Support Beam Paint                     |               |                  |                 |                           |
| IAB-4                                               | 0007          | 7/2/2012         | 7/6/2012        | 14 % wt                   |
| Site: Silver Support Beam Paint                     |               |                  |                 |                           |
| IAB-5                                               | 0008          | 7/2/2012         | 7/6/2012        | 0.47 % wt                 |
| Site: White Exterior Paint                          |               |                  |                 |                           |

Julie Smith - Laboratory Director  
NJ-NELAP Accredited:04653  
or other approved signatory

Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. The QC data associated with these results included in this report meet the method QC requirements, unless specifically indicated otherwise. Unless noted, results in this report are not blank corrected. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. \* slight modifications to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10896, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01



**Lead & Metals Chain of Custody**

EMSL Order Number (Lab Use Only):

201206380

Corporate - Cinnaminson, NJ  
 200 Route 130 North  
 Cinnaminson, NJ 08077  
 PHONE: 1-800-220-3675  
 FAX: (856) 786-5974

|                                 |                                                                                                                                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company: ATC Associates         | EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different<br>If Bill to is Different note instructions in Comments**<br>Third Party Billing requires written authorization from third party |
| Street: 11117 Mockingbird Drive |                                                                                                                                                                                                                             |
| City/State/Zip: Omaha, NE 68137 |                                                                                                                                                                                                                             |
| Report To (Name): Brock Flowers | Fax: 402-597-8532                                                                                                                                                                                                           |
| Telephone: 402-697-9747         | Email Address: brock.flowers@atcassociates.com                                                                                                                                                                              |
| Project Name/Number: 4-H & IAB  |                                                                                                                                                                                                                             |
| Please Provide Results: Email   | Purchase Order:                                                                                                                                                                                                             |
| State Samples Taken: NE         |                                                                                                                                                                                                                             |

**Turnaround Time (TAT) Options\* - Please Check**

3 Hour     6 Hour     24 Hour     48 Hour     72 Hour     96 Hour     1 Week     2 Week

\*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

| Matrix                                                                                                                      | Method                             | Instrument              | Reporting Limit  | Check                               |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------|------------------|-------------------------------------|
| Chips <input type="checkbox"/> mg/cm <sup>2</sup><br><input checked="" type="checkbox"/> % by wt.                           | SW846-7000B/7420<br>or AOAC 974.02 | Flame Atomic Absorption | 0.01%            | <input checked="" type="checkbox"/> |
| Air                                                                                                                         | NIOSH 7082                         | Flame Atomic Absorption | 4 µg/filter      | <input type="checkbox"/>            |
|                                                                                                                             | NIOSH 7105                         | Graphite Furnace AA     | 0.03 µg/filter   | <input type="checkbox"/>            |
|                                                                                                                             | NIOSH 7300 modified                | ICP-AES                 | 0.5 µg/filter    | <input type="checkbox"/>            |
| Wipe* <input type="checkbox"/> ASTM<br><input type="checkbox"/> non ASTM<br>*If no box is checked, non-ASTM Wipe is assumed | SW846-7000B/7420                   | Flame Atomic Absorption | 10 µg/wipe       | <input type="checkbox"/>            |
|                                                                                                                             | SW846-6010B or C                   | ICP-AES                 | 0.5 µg/wipe      | <input type="checkbox"/>            |
| TCLP                                                                                                                        | SW846-1311/7420/SM 3111B           | Flame Atomic Absorption | 0.4 mg/L (ppm)   | <input type="checkbox"/>            |
|                                                                                                                             | SW846-6010B or C                   | ICP-AES                 | 0.1 mg/L (ppm)   | <input type="checkbox"/>            |
| Soil                                                                                                                        | SW846-7000B/7420                   | Flame Atomic Absorption | 40 mg/kg (ppm)   | <input type="checkbox"/>            |
|                                                                                                                             | SW846-7421                         | Graphite Furnace AA     | 0.3 mg/kg (ppm)  | <input type="checkbox"/>            |
|                                                                                                                             | SW846-6010B or C                   | ICP-AES                 | 1 mg/kg (ppm)    | <input type="checkbox"/>            |
| Wastewater                                                                                                                  | SM3111B or<br>SW846-7000B/7420     | Flame Atomic Absorption | 0.4 mg/L (ppm)   | <input type="checkbox"/>            |
|                                                                                                                             | EPA 200.9                          | Graphite Furnace AA     | 0.003 mg/L (ppm) | <input type="checkbox"/>            |
|                                                                                                                             | SW846-6010B or C                   | ICP-AES                 | 1 mg/kg (ppm)    | <input type="checkbox"/>            |
| Drinking Water                                                                                                              | EPA 200.9                          | Graphite Furnace AA     | 0.003 mg/L (ppm) | <input type="checkbox"/>            |

Other: \_\_\_\_\_ Preservation Method (Water): \_\_\_\_\_

Name of Sampler: Brock Flowers Signature of Sampler: [Signature]

| Sample # | Location                                           | Volume/Area | Date/Time Sampled |
|----------|----------------------------------------------------|-------------|-------------------|
| 5        | ORANGE Column Paint - 4ft                          | -           | 6/29              |
| 6        | yellow Column Paint - 4ft                          | -           | ↑<br>7/2          |
| 9        | Brown Column Paint - 4ft Area                      | -           |                   |
| 10       | Green Column Paint - 4ft Area                      | -           |                   |
| 11       | Brown metal Support Beam 2nd floor warehouse - 4ft | -           |                   |
| IAB-3    | Yellow Support Beam paint                          | -           |                   |

Client Sample #'s: \_\_\_\_\_ Total # of Samples: 6

Relinquished (Client): [Signature] Date: 7/2 Time: 15:02

Received (Lab): [Signature] Date: 7/3/12 Time: 9:22 AM

Comments/Special Instructions: \_\_\_\_\_

JUL 2 2012  
 9:52 AM  
 CINNAMINSON, NJ  
 EMSL ANALYTICAL, INC.





XRF Shot #141, Brown Concrete Wall, Side B, Southwest Entry



XRF Shot #143, Brown Wood Window Casing, Side D, Southwest Entry



XRF Shot #144, Brown Plaster Wall, Side C, Southwest Men's Restroom



XRF Shot #151, Brown Wood Window Casing, Side D, Southwest Men's Restroom



XRF Shot #152, Brown Wood Door, Side C, Southwest Men's Restroom



XRF Shot #155, Brown Wood Window, Side B, Southwest Women's Restroom



XRF Shot #162, White Metal Pipe, Side A, Southwest Women's Restroom



XRF Shot #163, White Wood Door, Side B, Southwest Storage



XRF Shot #164, Green Wood Door, Side B, Southwest Storage



XRF Shot #165, White Wood Wall, Side A, East 1<sup>st</sup> Garage Area



XRF Shot #167, White Wood Wall, Side A, Middle East Storage



XRF Shot #169, Yellow Plaster Wall, Side B, Northwest Office

**Photographic Documentation**  
Industrial Arts Building  
State Fair Park  
Lincoln, Nebraska  
*Photographs Taken on June 29, 2012*

**ATC Associates Inc.**  
11117 Mockingbird Drive  
Omaha, NE 68137  
(402) 697-9747  
Project No. 07.43508.0001



XRF Shot #170, Light Yellow Plaster Ceiling, Northwest Office



XRF Shot #171, White Wood Door, Side B, Northwest Office



XRF Shot #177, Yellow Support Beam, Main Area



XRF Shot #184, White Wood Window, Side A, 2<sup>nd</sup> Floor Main Area



XRF Shot #185, Yellow Metal Beam, Side A, 2<sup>nd</sup> Floor Main Area



XRF Shot #188, Silver Metal Beam, Side B, 2<sup>nd</sup> Floor Main Area

**Photographic Documentation**  
Industrial Arts Building  
State Fair Park  
Lincoln, Nebraska  
*Photographs Taken on June 29, 2012*

**ATC Associates Inc.**  
11117 Mockingbird Drive  
Omaha, NE 68137  
(402) 697-9747  
Project No. 07.43508.0001



XRF Shot #190, Brown Metal Beam, Side C, Main Area



XRF Shot #196, White Wood Window, Side D, Exterior



XRF Shot #199, White Wood Door Casing, Side C, Exterior



XRF Shot #200, White Wood Window, Side C, Exterior



XRF Shot #210 and 211, White Concrete Wall, Side A, Exterior



**Photographic Documentation**  
Industrial Arts Building  
State Fair Park  
Lincoln, Nebraska  
*Photographs Taken on June 29, 2012*

**ATC Associates Inc.**  
11117 Mockingbird Drive  
Omaha, NE 68137  
(402) 697-9747  
Project No. 07.43508.0001

## **APPENDIX B**

### **Personal And Firm License**

*Nebraska Department of  
Health and Human Services*

The Lead-Based Paint Program certifies that:  
ATC Group Services, Inc. dba ATC Associates, Inc.  
Todd Brummer, Branch Manager  
11117 Mockingbird Dr, Omaha NE 68137  
Is authorized to serve as a: Lead-Based Paint  
Firm (Consultant)  
License #: **BEC-014**



Expires: **09/12/2012**

May we extend our best wishes for the successful completion  
of Lead-Based Paint consulting activities in the State of  
Nebraska.


PHA-32 (25066) 12/07

*Nebraska Department of Health and Human Services*

**Lead-Based Paint Program**

**This is to certify that ATC Group Services, Inc. dba ATC Associates,  
Inc. (Consultant)**

Having submitted satisfactory evidence of compliance in accordance with the laws of the State of  
Nebraska, is hereby granted License# **BEC-014**, to practice as a Lead-Based Paint Firm (Consultant).

  
Douglas A. Gillespie  
Health Program Manager II



License given under the name and Seal of the State of  
Nebraska, Department of Health and Human Services,  
Division of Public Health, Lead-Based Paint Program-  
issued on this date of 09/12/2001, and expires on  
**09/12/2012.**

# Certificate of Competency

This certifies that

**Brock Flowers**  
**ATC Associates, Inc.**  
3712 S. 132nd Street, Omaha, NE 68144

has successfully demonstrated competency in the completion of the course requirements of the  
**8-hour Inspector / Risk Assessor Refresher Course**  
per the Curriculum developed by Iowa Department of Public Health

presented on November 4, 2010

at

Alloy Specialty, 22050 185th Street, Council Bluffs, IA.  
The Above Mentioned Individual has Completed the Requisite training for  
State of Iowa Chapters 69 & 70.



Darwin D. Rohde  
Signature of Instructor

November 5, 2010

Date

**Alloy Specialty**

5850 Werninghoff Road

Omaha, NE 68134

(402) 571-8833

Certificate # LIR-110110-01

Score: 93%



# Certificate of Competency

This certifies that

**Brock Flowers**  
ATC Associates, Inc.  
3712 S. 132nd Street, Omaha, NE

has successfully demonstrated competency in the completion of the course requirements of the  
**8-hour Visual Risk Assessor/Sampling Technician Refresher Course**  
per the Curriculum developed by Iowa Department of Public Health

presented on July November 3, 2010

at

Alloy Specialty, 22050 185th Street, Council Bluffs, IA.  
The Above Mentioned Individual has Completed the Requisite training for  
State of Iowa Chapters 69 & 70.



A handwritten signature in black ink that reads "Darwin D. Rohde".

Darwin D. Rohde  
Signature of Instructor

November 5, 2010  
Date

**Alloy Specialty**

5850 Weninghoff Road

Omaha, NE 68134

(402) 571-8833



Certificate # STR-110310-01

Score: 86%

**State of Nebraska**

Department of Health and Human Services  
Division of Public Health

Cert. Type: **Lead Abatement Inspector**

Certificate No. 35 Status: Active

Brock A. Flowers  
ATC Environmental, Inc.  
1117 Mockingbird Drive  
Omaha, NE 68137

Expires: 05/20/2013

*[Signature]*  
Administrator, Licensure Unit

Signature

## **APPENDIX C**

### **Niton XL Performance Characteristic Sheet**

## Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

### MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLP 300

Source:  $^{109}\text{Cd}$ 

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLP series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLP 300A, XLP 301A, XLP 302A and XLP 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLP 700A, XLP 701A, XLP 702A, and XLP 703A.

Note: The XLi and XLP versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

## FIELD OPERATION GUIDANCE

### OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

### XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm<sup>2</sup> (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

### SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

### INCONCLUSIVE RANGE OR THRESHOLD:

| K+L MODE<br>READING DESCRIPTION                           | SUBSTRATE | THRESHOLD<br>(mg/cm <sup>2</sup> ) |
|-----------------------------------------------------------|-----------|------------------------------------|
| Results not corrected for substrate bias on any substrate | Brick     | 1.0                                |
|                                                           | Concrete  | 1.0                                |
|                                                           | Drywall   | 1.0                                |
|                                                           | Metal     | 1.0                                |
|                                                           | Plaster   | 1.0                                |
|                                                           | Wood      | 1.0                                |

## BACKGROUND INFORMATION

### EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

### OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

### SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

### EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

#### TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

| Testing Times Using K+L Reading Mode (Seconds) |                             |        |                             |                                                                  |                 |          |
|------------------------------------------------|-----------------------------|--------|-----------------------------|------------------------------------------------------------------|-----------------|----------|
| Substrate                                      | All Data                    |        |                             | Median for laboratory-measured lead levels (mg/cm <sup>2</sup> ) |                 |          |
|                                                | 25 <sup>th</sup> Percentile | Median | 75 <sup>th</sup> Percentile | Pb < 0.25                                                        | 0.25 ≤ Pb < 1.0 | 1.0 ≤ Pb |
| Wood Drywall                                   | 4                           | 11     | 19                          | 11                                                               | 15              | 11       |
| Metal                                          | 4                           | 12     | 18                          | 9                                                                | 12              | 14       |
| Brick Concrete Plaster                         | 8                           | 16     | 22                          | 15                                                               | 18              | 16       |

#### CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

#### DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.