# Asbestos, Lead Based Paint, And Polychlorinated Biphenyls Assessment Report

Memorial Community Center
5315 Grand Avenue
Duluth, Minnesota 55807
*Project #3224-00*

*Prepared for:*

City of Duluth
Mr. Terry Groshong, AIA
1532 West Michigan Street
Duluth, Minnesota 55806

*July 25, 2011*

Carlson McCain

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Duluth, MN 55811
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ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

Carlson McCain

July 25, 2011

City of Duluth
Mr. Terry Groshong, AIA
1532 West Michigan Street
Duluth, MN 55806

**Re: Asbestos, Lead Based Paint, and Polychlorinated Biphenyls Assessment Report**
**Memorial Community Center**
**5315 Grand Avenue**
**Duluth, MN**

Dear Mr. Groshong

The following is a final report outlining the asbestos, lead based paint, and polychlorinated biphenyls (PCBs) assessment conducted at the above referenced site. This report contains the following information:

- Introduction
- Results
- Recommendations

## Introduction

Carlson Professional Services, Inc., now doing business as Carlson McCain, Inc., was contacted by Mr. Terry Groshong, AIA, to conduct an asbestos, lead based paint, and PCBs assessment at the Memorial Community Center prior to a proposed demolition of the building. On June 20, 2011 and July 5, 2011, Mr. Jon Dacken, a Minnesota Department of Health (MDH) Certified Asbestos Inspector and licensed Lead Risk Assessor, was on-site to collect material samples that potentially contained asbestos, lead, and PCBs. Inspector certifications are presented in Appendix A.

**Results**

*Asbestos*

Carlson McCain, Inc. identified 10 components that were potentially asbestos containing materials (ACM). These components included roof field, roof flashing, roof caulk, wall plaster, ceiling plaster, composition flooring, floor tile, floor tile mastic, base trim, and window caulk. Carlson collected one to three bulk samples from each suspect component in accordance with the MDH regulations pertaining to asbestos inspections.

Table 1, attached, lists the area that was sampled for asbestos (bold and shading indicates positive results), including the sample ID, location, friability, condition, and percent (%) asbestos (if applicable). Laboratory analytical results are presented in Appendix B.

*Lead*

The Carlson McCain, Inc. technician also collected paint samples from areas likely to be disturbed during renovation. Table 2 lists the areas of paint that were sampled for lead content (bold and shading indicate results exceeding the Environmental Protection Agency (EPA) guideline of 0.5% by weight), including the sample ID, location and results. Laboratory analytical results are presented in Appendix B.

**Table 2 - Sampled Suspect Lead Containing Paint**

| *Sample ID* | *Location* | *Result* |
|---|---|---|
| L1 | White On Wall Old Section Large Room | <0.010% Weight |
| L2 | White On Ceiling Old Section Large Room | <0.010% Weight |
| L3 | Cream On Janitor's Closet Main Level | 0.28% Weight |
| L4 | Cream On Girl's Rest Room Ceiling | <0.010% Weight |
| L5 | Cream/Aqua On Girl's Rest Room Wall | 0.40% Weight |
| L6 | Tan On Basement Mechanical Room Wall | 0.015% Weight |
| L7 | White On Ceiling Large Basement Room | <0.010% Weight |

*Polychlorinated Biphenyls*

The Minnesota Pollution Control Agency (MPCA) has identified PCBs as hazardous waste. The MPCA requires a representative sampling of potential PCB containing materials which may be disturbed during renovation or demolition. Carlson McCain, Inc. identified roof and window caulk as a potentially PCB containing material. Carlson McCain, Inc. collected bulk samples for analysis of PCBs in accordance with MPCA regulations. Table 3 lists the areas that were sampled for PCBs including the sample ID, location, and reported concentration in parts per million (ppm). Laboratory analytical results are attached with this report.

**Table 3 - Sampled Suspect PCB's**

| Object or Item | Sample ID | Location | Total PCBs in PPM* |
|---|---|---|---|
| Roof Caulk | A9 | Old Roof East | <0.0236 |
| Window Caulk | A18 | New Section Large Room South Window | 0.201 |

* parts per million

*Regulated Waste*

A regulated waste assessment was not part of the scope of work for this project. Carlson identified the following items common to most buildings scheduled for demolition. These components should be removed before demolition:

- thermostats
- dishwashers
- televisions
- smoke detectors
- water heaters
- furnaces
- microwave ovens
- fire extinguishers
- switches
- exhaust fans

If any additional material is discovered during renovation which may contain hazardous waste, work must stop until the material has been properly identified and correctly removed.

**Recommendations**

The old roof center flashing, the old roof east caulk, the new addition window caulk, the concession stand floor tile mastic, the rear entry main level floor tile mastic, the new addition large room floor tile mastic, and the basement large room ceiling plaster were all reported to contain asbestos. In addition, air cell pipe insulation was observed on both the main level and in the basement. Air cell pipe insulation is known to contain asbestos. Carlson recommends that all asbestos containing materials be removed before demolition begins by a State of Minnesota licensed Asbestos Abatement Contractor using only asbestos certified personnel and state of the art asbestos abatement practices.

No vermiculite was observed during the inspection. If vermiculite is discovered during demolition, it must be abated by a State of Minnesota licensed Asbestos Abatement Contractor.

None of the paint samples were reported to be lead based paint. All painted surfaces within the building were not sampled for lead based paint. Sampling was restricted to deteriorated paint. No additional action is required unless a an area of deteriorated paint is identified as lead based paint.

The MPCA requires all PCBs at a concentration greater than 50 ppm be removed and managed as hazardous waste. All reported PCB concentrations were less than 50 ppm. No action is required.

This inspection was conducted according to federal, state, and local regulations. If you have any questions regarding this report, please feel free to contact Mr. Jon Dacken at (218) 625-7004 (office) or (218) 343-3000 (cell).

Sincerely

Carlson McCain, Inc.

Jonathan F. Dacken
Industrial Hygienist

Attachments: Table 1 – Sampled Suspect Asbestos Containing Materials
Appendix A – Inspector Certifications
Appendix B – Laboratory Analytical Results

| Table 1 - Sampled Suspect Asbestos Containing Materials (ACM) | | | | | | Page 1 |
|---|---|---|---|---|---|---|
| *Object or Item* | | *Sample ID* | *Location* | *Friable or Non-Friable* | *Condition* | *% Asbestos* |
| Roof Field | Foam Layer | A1 | New Addition | Non-Friable | Fair | None Detected |
| | | A6 | Old Roof West | | | |
| | | A8 | Old Roof East | | | |
| | Tar | A1 | New Addition | | | |
| | | A4 | Old Roof Center | | | |
| | Tan Fiber | A1 | New Addition | | | |
| | | A4 | Old Roof Center | | | |
| | | A6 | Old Roof West | | | |
| | Brown Fiber | A1 | New Addition | | | |
| | Black Fiber | A6 | Old Roof West | | | |
| | | A8 | Old Roof East | | | |
| | Rubber | A1 | New Addition | | | |
| | | A6 | Old Roof West | | | |
| | | A8 | Old Roof East | | | |
| | White Layer | A4 | Old Roof Center | | | |
| | Black Layer | A1 | New Addition | | | |
| | | A6 | Old Roof West | | | |
| | | A8 | Old Roof East | | | |
| | Tar Felt | A4 | Old Roof Center | | | |
| Roof Flash -ing | Tar | A2 | New Addition | | | |
| | | A5 | Old Roof West | | | |
| | | A7 | Old Roof East | | | |
| | Rubber | A2 | New Addition | | | |
| | | A5 | Old Roof West | | | |
| | | A7 | Old Roof East | | | |
| | Tar Layer #1 | A3 | Old Roof Center | | | |
| | Tar Layer #2 | A3 | Old Roof Center | | | |
| | Brown Fiber | A3 | Old Roof Center | Non-Friable | Fair | 20% Chrysotile |

| Table 1 - Sampled Suspect Asbestos Containing Materials (ACM) Continued | | | | | | Page 2 |
|---|---|---|---|---|---|---|
| *Object or Item* | | *Sample ID* | *Location* | *Friable or Non-Friable* | *Condition* | *% Asbestos* |
| Roof Flashing | Black Layer | A3 | Old Roof Center | Non-Friable | Fair | None Detected |
| | Tan Mastic | A7 | Old Roof East | | | |
| | Red Layer | A7 | Old Roof East | | | |
| Caulk | | A9 | Old Roof East | Non-Friable | Fair | 3% Chrysotile |
| | | A18 | New Section Large Room South Window | | | 2% Chrysotile |
| Composition Floor | | A12 | Old Section Large Room | Non-Friable | Fair | None Detected |
| Floor Tile | Gray | A13 | Concession Stand | | | <1% Chrysotile |
| | Gray | A16 | Rear Entry Main Level | | | None Detected |
| | Gray | A17 | New Section Large Room | | | <1% Chrysotile |
| Composition Floor Mastic | Tan | A12 | Old Section Large Room | Non-Friable | Good | None Detected |
| Floor Tile Mastic | Black | A13 | Concession Stand | Non-Friable | Fair | 5% Chrysotile |
| | Black | A16 | Rear Entry Main Level | | Fair | 5% Chrysotile |
| | Black | A17 | New Section Large Room | | Poor | 5% Chrysotile |
| Wall Plaster With Surfacing | | A10 | Old Section Large Room | Non-Friable | Fair | None Detected |
| Ceiling Plaster With Surfacing | | A11 | Rear Entry | Non-Friable | Fair | None Detected |
| Wall Plaster | | A20 | Rear Stairwell To Basement | Non-Friable | Fair | None Detected |
| Wall Plaster Texture | | A20 | Rear Stairwell To Basement | Non-Friable | Fair | None Detected |
| Wall Plaster With Texture | | A22 | Basement Front Entry | Non-Friable | Fair | None Detected |
| Ceiling Plaster | | A19 | Rear Stairwell | Non-Friable | Fair | None Detected |
| | | A21 | Large Basement Room | Non-Friable | Fair | 3% Chrysotile<br><1% Crocidolite |

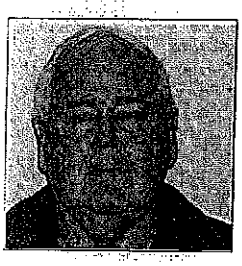
| Table 1 - Sampled Suspect Asbestos Containing Materials (ACM) Continued | | | | | Page 3 |
|---|---|---|---|---|---|
| *Object or Item* | *Sample ID* | *Location* | *Friable or Non-Friable* | *Condition* | *% Asbestos* |
| Base Trim | A14 | Concession Stand | Non-Friable | Fair | None Detected |
| | A15 | Old Section Large Room | | | |
| Base Trim Mastic | A14 | Concession Stand | Non-Friable | Fair | None Detected |
| | A15 | Old Section Large Room | | | |

MDH ASBESTOS INSPECTOR

Certified by:
State of Minnesota
Department of Health
**Expires: 04/27/2012**
Jonathan F Dacken
13 Spruce Dr
Duluth, MN 55810

Director, Env. Health Div.

No. AI3388 Issued: 05/12/2011



MDH ASBESTOS SITE SUPERVISOR

Certified by:
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Department of Health
**Expires: 04/26/2012**
Jonathan F Dacken
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Director, Env. Health Div.

No. AS3388 Issued: 05/12/2011

Director, Env. Health Div.

MDH LEAD
Risk Assessor

Licensed by:
State of Minnesota
Department of Health

**License No. LR230**
**Expires 04/18/2012**

**Jonathan F Dacken**
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**Duluth, MN 55810**

Director, Env. Health Div.

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**Expires 04/01/2012**

**Jonathan F Dacken**
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**Duluth, MN 55810**

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Project: **#3224-00 Memorial Demo**

Customer ID: PORS22
Customer PO:
Received: 07/07/11 9:25 AM
EMSL Order: 351103945
EMSL Proj:
Analysis Date: 7/8/2011

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A1-Foam Layer<br>*351103945-0001* | Roof Field | Yellow<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A1-Tar<br>*351103945-0001A* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 5% Cellulose | 95% Non-fibrous (other) | **None Detected** |
| A1-Tan Fibrous Layer<br>*351103945-0001B* | Roof Field | Tan<br>Fibrous<br>Heterogeneous | 100% Cellulose | 0% Non-fibrous (other) | **None Detected** |
| A1-Brown Fibrous Layer<br>*351103945-0001C* | Roof Field | Brown<br>Fibrous<br>Heterogeneous | 90% Cellulose | 10% Non-fibrous (other) | **None Detected** |
| A1-Black Layer<br>*351103945-0001D* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 10% Cellulose<br>5% Glass | 85% Non-fibrous (other) | **None Detected** |
| A1-Rubber Layer<br>*351103945-0001E* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |

Initial report from 07/11/2011 08:25:49

Analyst(s)
*Nicholas Asuncion (52)*

Rachel Travis, Laboratory Manager
or other approved signatory

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A4-White Layer<br>*351103945-0002* | Roof Field | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A4-Tan Fibrous Layer<br>*351103945-0002A* | Roof Field | Brown/White<br>Fibrous<br>Heterogeneous | 75% Cellulose | 5% Non-fibrous (other)<br>20% Perlite | **None Detected** |
| A4-Tar Felt<br>*351103945-0002B* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 40% Cellulose | 60% Non-fibrous (other) | **None Detected** |
| A4-Tar<br>*351103945-0002C* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A6-Foam<br>*351103945-0003* | Roof Field | Yellow<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A6-Black Fibrous Layer<br>*351103945-0003A* | Roof Field | Black<br>Fibrous<br>Heterogeneous | 50% Cellulose<br>15% Glass | 35% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **%** | **Fibrous** | **% Non-Fibrous** | **% Type** |
| A6-Tan Fibrous Layer<br>*351103945-0003B* | Roof Field | Tan<br>Fibrous<br>Heterogeneous | 100% | Cellulose | 0% Non-fibrous (other) | **None Detected** |
| A6-Black Layer<br>*351103945-0003C* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 15% | Cellulose | 85% Non-fibrous (other) | **None Detected** |
| A6-Rubber Layer<br>*351103945-0003D* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 10% | Synthetic | 90% Non-fibrous (other) | **None Detected** |
| A8-Black Fibrous Layer<br>*351103945-0004* | Roof Field | Black<br>Fibrous<br>Heterogeneous | 60%<br>15% | Cellulose<br>Glass | 25% Non-fibrous (other) | **None Detected** |
| A8-Foam<br>*351103945-0004A* | Roof Field | Yellow<br>Non-Fibrous<br>Heterogeneous | | | 100% Non-fibrous (other) | **None Detected** |
| A8-Black Layer<br>*351103945-0004B* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 15% | Cellulose | 85% Non-fibrous (other) | **None Detected** |

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EMSL Proj:
Analysis Date: 7/8/2011

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A8-Rubber<br>*351103945-0004C* | Roof Field | Black<br>Non-Fibrous<br>Heterogeneous | 10% Synthetic | 90% Non-fibrous (other) | **None Detected** |
| A2-Tar<br>*351103945-0005* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A2-Rubber Layer<br>*351103945-0005A* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A3-Tar Layer 1<br>*351103945-0006* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A3-Brown Fibrous Layer<br>*351103945-0006A* | Roof Flashing | Brown/Black<br>Fibrous<br>Heterogeneous | 40% Cellulose<br>10% Glass | 30% Non-fibrous (other) | **20% Chrysotile** |
| A3-Tar Layer 2<br>*351103945-0006B* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A3-Black Layer<br>*351103945-0006C* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | 10% Cellulose | 90% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A5-Tar<br>*351103945-0007* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A5-Rubber Layer<br>*351103945-0007A* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | 10% Synthetic | 90% Non-fibrous (other) | **None Detected** |
| A7-Rubber Layer<br>*351103945-0008* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | 10% Synthetic | 90% Non-fibrous (other) | **None Detected** |
| A7-Tan Mastic<br>*351103945-0008A* | Roof Flashing | Tan<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A7-Tar<br>*351103945-0008B* | Roof Flashing | Black<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A7-Red Layer<br>*351103945-0008C* | Roof Flashing | Red<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A9<br>*351103945-0009* | Roof Caulk | Gray<br>Non-Fibrous<br>Homogeneous | | 97% Non-fibrous (other) | **3% Chrysotile** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A10<br>*351103945-0010* | Wall Plaster with Surfacing | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A11<br>*351103945-0011* | Ceiling Plaster with Surfacing | Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A12-Flooring<br>*351103945-0012* | Composition Flooring | Black/Green<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A12-Mastic<br>*351103945-0012A* | Composition Flooring | Tan<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A13-Floor Tile<br>*351103945-0013* | Concession Floor Tile & Mastic | Gray<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **<1% Chrysotile** |
| A13-Mastic<br>*351103945-0013A* | Concession Floor Tile & Mastic | Black<br>Non-Fibrous<br>Heterogeneous | | 95% Non-fibrous (other) | **5% Chrysotile** |
| A14-Base Trim<br>*351103945-0014* | Concession Base Trim | Brown<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A14-Mastic<br>*351103945-0014A* | Concession Base Trim | Brown<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A15-Base Trim<br>*351103945-0015* | Large North Room Base Trim | Gray<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A15-Mastic<br>*351103945-0015A* | Large North Room Base Trim | Tan<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A16-Floor Tile<br>*351103945-0016* | Rear Entry Tile & Mastic | Gray<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A16-Mastic<br>*351103945-0016A* | Rear Entry Tile & Mastic | Black<br>Non-Fibrous<br>Heterogeneous | | 95% Non-fibrous (other) | **5% Chrysotile** |
| A17-Floor Tile<br>*351103945-0017* | Large South Room Tile & Mastic | Gray<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **<1% Chrysotile** |
| A17-Mastic<br>*351103945-0017A* | Large South Room Tile & Mastic | Black<br>Non-Fibrous<br>Heterogeneous | | 95% Non-fibrous (other) | **5% Chrysotile** |

Initial report from 07/11/2011 08:25:49

Analyst(s)
*Nicholas Asuncion (52)*

Rachel Travis, Laboratory Manager
or other approved signatory

**EMSL Analytical, Inc.**
14375 23rd Avenue North, Minneapolis, Mn 55447
Phone: (763) 449-4922 Fax: (763) 449-4924 Email: minneapolislab@emsl.com

Attn: **Jon Dacken**
**Carlson Professional Services, Inc.**
**1011 East Central Entrance, Ste 100**
**Duluth, MN 55811**
Fax: (218) 625-7005 Phone: (218) 625-7004
Project: **#3224-00 Memorial Demo**

Customer ID: PORS22
Customer PO:
Received: 07/07/11 9:25 AM
EMSL Order: 351103945
EMSL Proj:
Analysis Date: 7/8/2011

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| **Sample** | **Description** | **Appearance** | **% Fibrous** | **% Non-Fibrous** | **% Type** |
| A18<br>*351103945-0018* | Large South Room Window Caulk | Brown/White<br>Non-Fibrous<br>Homogeneous | | 98% Non-fibrous (other) | **2% Chrysotile** |
| A19<br>*351103945-0019* | Rear Stairwell Ceiling Plaster | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A20-Plaster<br>*351103945-0020* | Rear Stairwell Wall Plaster | Gray<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A20-Texture<br>*351103945-0020A* | Rear Stairwell Wall Plaster | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | **None Detected** |
| A21<br>*351103945-0021* | Large Basement Room Ceiling Plaster | Gray/White<br>Non-Fibrous<br>Homogeneous | | 97% Non-fibrous (other) | **3% Chrysotile**<br>**<1% Crocidolite** |
| A22<br>*351103945-0022* | Basement Front Entry Wall Plaster & Texture | Gray/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |

Initial report from 07/11/2011 08:25:49

Analyst(s)
*Nicholas Asuncion (52)*

Rachel Travis, Laboratory Manager
or other approved signatory

# Asbestos Lab Services Chain of Custody

**EMSL Order Number** *(Lab Use Only):* 3946

EMSL ANALYTICAL, INC.
Minneapolis, MN
14375 23rd Avenue North
Minneapolis, MN 55447
PHONE: (763) 449-4922
FAX: (763) 449-4924

| | |
|---|---|
| **Company:** Carlson Professional Services, Inc. | **EMSL-Bill to:** ☐ Same ☑ Different<br>If Bill to is Different note Instructions in Comments**<br>*Third Party Billing requires written authorization from third party* |
| **Street:** 1011 East Central Entrance Suite 100 | |
| **City/State/Zip:** Duluth, MN 55811 | |
| **Report To (Name):** Jon Dacken | **Fax:** |
| **Telephone:** 218-625-7004 | **Email Address:** jdacken@carlsonpsi.com |
| **Project Name/Number:** #3224-00 Memorial Demo | |
| **Please Provide Results:** Email | **Purchase Order:** NA — **State Samples Taken:** MN |

**Turnaround Time (TAT) Options* – Please Check**

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

*For TEM AHERA 3 hours/6 hours, please call ahead to schedule. There is a premium charge for a 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

**PCM – Air**
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

**PLM – Bulk (reporting limit)**
☒ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NIOSH 9002 (<1%)

**TEM – Air** ☐ 4-6 hr TAT (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

**TEM – Bulk**
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

**TEM – Water:** EPA 100.2
Fibers >10um ☐ Waste ☐ Drinking
All Fiber Sizes: ☐ Waste ☐ Drinking

**TEM – Dust**
☐ Microvac – ASTM D 5755
☐ Wipe – ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

**Soil/Rock/Vermiculite**
☐ PLM CARB 435 – A (0.25% sensitivity)
☐ PLM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – B (0.1% sensitivity)
☐ TEM CARB 435 – C (0.01% sensitivity)
☐ EPA Protocol (Semi-Quantitative)
☐ EPA Protocol (Quantitative)

**Other:**
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

**Samplers Name:** — **Samplers Signature:**

| Sample # | Sample Description | Volume/Area (Air) HA #:(Bulk) | Date/Time Sampled |
|---|---|---|---|
| A1, A4 | Roof Field | bulk | 6/30/11 |
| A6, A8 | | | |
| | | | |
| A2 A3 A5 | Roof Flashing | | |
| A7 | | | |
| | | | |
| A9 | Roof Caulk | | |
| A10 | Wall Plaster with Surfacing | | 7-5-11 |

**Client Sample # (s):** A1 . . . A22 — **Total # of Samples:** 22

**Relinquished (Client):** J. F. Dacken — **Date:** 7-6-11 — **Time:**

**Received (Lab):** [signature] — **Date:** 7/7/11 — **Time:** 9:25 AM (Fedex)

**Comments/Special Instructions:**
**Bill To:** Carlson Professional Services, Inc., 248 Apollo Drive, Suite 100, Lino Lakes, MN 55014
**Attention:** Stephanie Symoniak **Phone:** 763-489-7900 **Email:** ssymoniak@carlsonpsi.com **Purchase Order:** NA

Carlson # 3224-00

EMSL ANALYTICAL INC.

# Asbestos Lab Services Chain of Custody

**EMSL Order Number** *(Lab Use Only):*

Minneapolis, MN
14375 23rd Avenue North
Minneapolis, MN 55447
PHONE: (763) 449-4922
FAX: (763) 449-4924

| Sample # | Sample Description | Volume/Area (Air) HA # (Bulk) | Date/Time Sampled |
|---|---|---|---|
| A11 | ceiling plaster with surfacing | bulk | 7-5-1 |
| A12 | composition flooring | | |
| A13 | concession floor tile & mastic | | |
| A14 | concession base trim | | |
| A15 | large north room base trim | | |
| A16 | rear entry tile & mastic | | |
| A17 | large south room tile & mastic | | |
| A18 | large south room window caulk | | |
| A19 | rear stairwell ceiling plaster | | |
| A20 | rear stairwell wall plaster | | |
| A21 | large basement room ceiling plaster | | |
| A22 | basement front entry wall | | |
| | plaster & texture | ✓ | ✓ |
| | | | |
| | | | |
| | | | |

**Comments/Special Instructions:**

**EMSL Analytical, Inc.**
14375 23rd Avenue North, Minneapolis, Mn 55447
Phone: (763) 449-4922 Fax: (763) 449-4924 Email: minneapolislab@emsl.com

Attn: **Jon Dacken**
**Carlson Professional Services, Inc.**
**1011 East Central Entrance, Ste 100**
**Duluth, MN 55811**
Fax: (218) 625-7005 Phone: (218) 625-7004
Project: **#3244-00 Memorial Demo**

Customer ID: PORS22
Customer PO:
Received: 07/07/11 9:25 AM
EMSL Order: 351103921
EMSL Proj:

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

| *Lab ID:* | *Analyzed* | *RDL* | *Lead Concentration* | *Notes* |
|---|---|---|---|---|
| 0001 | 7/8/2011 | 0.010 % wt | <0.010 % wt | Site: white on wall-north room |
| *Client Sampl* | L1 | | | *Collected:* 7/5/2011 |
| 0002 | 7/8/2011 | 0.010 % wt | <0.010 % wt | Site: white on ceiling-north room |
| *Client Sampl* | L2 | | | *Collected:* 7/5/2011 |
| 0003 | 7/8/2011 | 0.010 % wt | 0.28 % wt | Site: cream on janitor's closet ceiling |
| *Client Sampl* | L3 | | | *Collected:* 7/5/2011 |
| 0004 | 7/8/2011 | 0.010 % wt | <0.010 % wt | Site: cream on girl's restroom ceiling |
| *Client Sampl* | L4 | | | *Collected:* 7/5/2011 |
| 0005 | 7/8/2011 | 0.010 % wt | 0.40 % wt | Site: cream/aqua girls rest room wall |
| *Client Sampl* | L5 | | | *Collected:* 7/5/2011 |
| 0006 | 7/8/2011 | 0.010 % wt | 0.015 % wt | Site: tan on bsmt. mechanical room wall |
| *Client Sampl* | L6 | | | *Collected:* 7/5/2011 |
| 0007 | 7/8/2011 | 0.010 % wt | <0.010 % wt | Site: white on large bsmt room ceiling |
| *Client Sampl* | L7 | | | *Collected:* 7/5/2011 |

Initial report from 07/08/2011 14:51:34

Rachel Travis, Laboratory Manager
or other approved signatory

Reporting limit is 0.01 % wt. The QC data associated with these results included in this report meet the method QC requirements, unless specifically indicated otherwise. Unless no 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.
Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC ELLAP 163162

EMSL ANALYTICAL, INC.

# Lead & Metals Chain of Custody

**EMSL Order Number** *(Lab Use Only)*: 3921

Minneapolis, MN
14375 23rd Avenue North
Minneapolis, MN 55447
PHONE: (763) 449-4922
FAX: (763) 449-4924

| | |
|---|---|
| **Company:** Carlson Professional Services, Inc. | **EMSL-Bill to:** ☐ Same ☑ Different<br>If Bill to Is Different note instructions in Comments**<br>*Third Party Billing requires written authorization from third party* |
| **Street:** 1011 East Central Entrance Suite 100 | |
| **City/State/Zip:** Duluth, MN 55811 | |
| **Report To (Name):** Jon Dacken | **Fax:** |
| **Telephone:** 218-625-7004 | **Email Address:** jdacken@carlsonpsi.com |
| **Project Name/Number:** # 3224-00 Memorial Demo | |
| **Please Provide Results:** Email | **Purchase Order:** **State Samples Taken:** MN |

**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 ☐ mg/cm² ☒ % by wt. | SW846-7000B/7420 or AOAC 974.02 | Flame Atomic Absorption | 0.01% | ☒ |
| Air | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES | 0.5 µg/filter | ☐ |
| Wipe* ☐ ASTM ☐ non ASTM *If no box is checked, non-ASTM Wipe is assumed | SW846-7000B/7420 | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 0.5 µg/wipe | ☐ |
| TCLP | SW846-1311/7420/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| Soil | SW846-7000B/7420 | Flame Atomic Absorption | 40 mg/kg (ppm) | ☐ |
| | SW846-7421 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 1 mg/kg (ppm) | ☐ |
| Wastewater | SM3111B or SW846-7000B/7420 | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 1 mg/kg (ppm) | ☐ |
| Drinking Water | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |

**Other:** **Preservation Method (Water):**

**Name of Sampler:** **Signature of Sampler:**

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| L1 | white on wall-north room | bulk | 7/5/11 |
| L2 | white on ceiling -north room | | |
| L3 | cream on janitor's closet ceiling | | |
| L4 | cream on girl's restroom ceiling | | |
| L5 | cream/aqua girls rest room wall | | |
| L6 | tan on bsmt. mechanical room wall | | |

**Client Sample #'s** L1 - L7 **Total # of Samples:** 7

**Relinquished (Client):** J.F. Dacken **Date:** 7-6-11 **Time:**

**Received (Lab):** [signature] **Date:** 7/7/11 **Time:** 9:25 AM (fedex)

**Comments/Special Instructions:**
**Bill To:** Carlson Professional Services, Inc., 248 Apollo Drive, Suite 100, Lino Lakes, MN 55014
**Attention:** Stephanie Symoniak **Phone:** 763-489-7900 **Email:** ssymoniak@carlsonpsi.com **Purchase Order:** None required.



* white out from client, not lab
7/7/11 ATS

# 3224-00 Memorial Demo

EMSL ANALYTICAL, INC.

## Lead & Metals Chain of Custody

**EMSL Order Number** *(Lab Use Only)*: 3921

Westmont, NJ
107 Haddon Avenue
Westmont, NJ 08108
PHONE: (856) 858-4800
FAX: (856) 858-4960

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| L7 | white on large bsmt. | bulk | 7/5/11 |
| | room ceiling | ↓ | ↓ |
| | | | |
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**Comments/Special Instructions:**

Pace Analytical®
www.pacelabs.com

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

404800?

Page: of 1233032

| Section A Required Client Information: | Section B Required Project Information: | Section C Invoice Information: |
|---|---|---|
| Company: Carlson Professional Services | Report To: Jon Docken | Attention: Stephanie Symoniak |
| Address: 1611 E. Central Entrance Suite 100 Duluth, MN 55811 | Copy To: | Company Name: Carlson Professional Services |
| Email To: jdocken@carlsonpsi.com | Purchase Order No.: | Address: 348 Apollo Drive Lino Lakes, MN 55014 |
| Phone: 218-625-7004 Fax: | Project Name: | Pace Quote Reference: |
| Requested Due Date/TAT: 1 week | Project Number: 3224-00 Memorial Demo | Pace Project Manager: |
| | | Pace Profile #: |

**REGULATORY AGENCY**

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MN

**Section D Required Client Information**

**SAMPLE ID**
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

**Matrix Codes** MATRIX / CODE

| | |
|---|---|
| Drinking Water | DW |
| Water | WT |
| Waste Water | WW |
| Product | P |
| Soil/Solid | SL |
| Oil | OL |
| Wipe | WP |
| Air | AR |
| Tissue | TS |
| Other | OT |

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COLLECTED COMPOSITE START TIME | COLLECTED COMPOSITE END/GRAB DATE | COLLECTED COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Requested Analysis Filtered (Y/N) Y/N | Analysis Test: PCB in caulk | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A9 - Roof Caulk | OT | G | | | 7/5/11 | 11 am | 80 | 1 | X | | | | | | | | X | X | N | 1 Ziplock |
| 2 | A18(c) - Window Caulk | OT | G | | | 7/5/11 | 11am | 80 | 1 | X | | | | | | | | X | X | N | 1 Ziplock |
| 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
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| 11 | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A.R. Docken | 7/6/11 | 11:58am | | | | | | | |
| | WATCO | 7/6/11 | 826 | | 7/8/11 | 820 | 4 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Jon Docken

SIGNATURE of SAMPLER: A.R. Docken DATE Signed (MM/DD/YY): 7/6/11

| Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|
| | | | |

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

# Sample Condition Upon Receipt

Client Name: CARLSON Project # 4048035

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None Other

Optional
Proj. Due Date:
Proj. Name:

Thermometer Used JB Type of Ice: (Wet) Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4° Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 2-8-11
Initials: CA

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

| | | Comments: |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| Short Hold Time Analysis (<72hr): | ☐Yes ☑No ☐N/A | 6. |
| Rush Turn Around Time Requested: | ☐Yes ☑No ☐N/A | 7. |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☑N/A | 11. |
| Sample Labels match COC: | ☑Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix: CAULK | | |
| All containers needing preservation have been checked. | ☐Yes ☐No ☑N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☐Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☐No | Initial when completed / Lot # of added preservative |
| Samples checked for dechlorination: | ☐Yes ☐No ☑N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☑N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☑N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☐N/A | |
| Pace Trip Blank Lot # (If purchased): | | |

**Client Notification/ Resolution:** Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

**Project Manager Review:** _____ Date: 2-8-11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

July 18, 2011

Jon Dacken
Carlson McCain, Inc.
1011 East Central Entrance
Suite 100
Duluth, MN 55811

RE: Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

Dear Jon Dacken:
Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten

brian.basten@pacelabs.com
Project Manager

Enclosures

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## CERTIFICATIONS

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

**Green Bay Certification IDs**
1241 Bellevue Street, Green Bay, WI 54302
California Certification #: 09268CA
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## SAMPLE SUMMARY

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 4048035001 | A9-ROOF CAULK | Solid | 07/05/11 11:00 | 07/08/11 08:20 |
| 4048035002 | A18-WINDOW CAULK | Solid | 07/05/11 11:00 | 07/08/11 08:20 |

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## SAMPLE ANALYTE COUNT

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

| Lab ID | Sample ID | Method | Analysts | Analytes Reported |
|---|---|---|---|---|
| 4048035001 | A9-ROOF CAULK | EPA 8082 | CAH | 10 |
| 4048035002 | A18-WINDOW CAULK | EPA 8082 | CAH | 10 |

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## ANALYTICAL RESULTS

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

**Sample: A9-ROOF CAULK** **Lab ID: 4048035001** Collected: 07/05/11 11:00 Received: 07/08/11 08:20 Matrix: Solid

***Results reported on a "wet-weight" basis***

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3541 | | | | | | | | |
| PCB-1016 (Aroclor 1016) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 11096-82-5 | |
| PCB, Total | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 1336-36-3 | |
| Tetrachloro-m-xylene (S) | 105 | %. | 46-130 | | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 877-09-8 | |
| Decachlorobiphenyl (S) | 73 | %. | 50-130 | | 1 | 07/12/11 12:00 | 07/14/11 15:34 | 2051-24-3 | |

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## ANALYTICAL RESULTS

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

**Sample: A18-WINDOW CAULK** **Lab ID: 4048035002** Collected: 07/05/11 11:00 Received: 07/08/11 08:20 Matrix: Solid

***Results reported on a "wet-weight" basis***

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3541 | | | | | | | | |
| PCB-1016 (Aroclor 1016) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | **165** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **36.1J** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **<23.6** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 11096-82-5 | |
| PCB, Total | **201** | ug/kg | 100 | 23.6 | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 1336-36-3 | |
| Tetrachloro-m-xylene (S) | 45 | %. | 46-130 | | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 877-09-8 | S0 |
| Decachlorobiphenyl (S) | 56 | %. | 50-130 | | 1 | 07/12/11 12:00 | 07/14/11 15:51 | 2051-24-3 | |

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# QUALITY CONTROL DATA

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

QC Batch: OEXT/11804
QC Batch Method: EPA 3541
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 4048035001, 4048035002

METHOD BLANK: 476316 Matrix: Solid
Associated Lab Samples: 4048035001, 4048035002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1221 (Aroclor 1221) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1232 (Aroclor 1232) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1242 (Aroclor 1242) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1248 (Aroclor 1248) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1254 (Aroclor 1254) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| PCB-1260 (Aroclor 1260) | ug/kg | <23.6 | 100 | 07/14/11 10:22 | |
| Decachlorobiphenyl (S) | %. | 62 | 50-130 | 07/14/11 10:22 | |
| Tetrachloro-m-xylene (S) | %. | 53 | 46-130 | 07/14/11 10:22 | |

LABORATORY CONTROL SAMPLE: 476317

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | | <23.6 | | | |
| PCB-1221 (Aroclor 1221) | ug/kg | | <23.6 | | | |
| PCB-1232 (Aroclor 1232) | ug/kg | | <23.6 | | | |
| PCB-1242 (Aroclor 1242) | ug/kg | | <23.6 | | | |
| PCB-1248 (Aroclor 1248) | ug/kg | | <23.6 | | | |
| PCB-1254 (Aroclor 1254) | ug/kg | | <23.6 | | | |
| PCB-1260 (Aroclor 1260) | ug/kg | 500 | 386 | 77 | 60-130 | |
| Decachlorobiphenyl (S) | %. | | | 70 | 50-130 | |
| Tetrachloro-m-xylene (S) | %. | | | 66 | 46-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 476318 476319

| Parameter | Units | 4047984001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1221 (Aroclor 1221) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1232 (Aroclor 1232) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1242 (Aroclor 1242) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1248 (Aroclor 1248) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1254 (Aroclor 1254) | ug/kg | <121 | | | <28.6 | <28.6 | | | | | 20 | |
| PCB-1260 (Aroclor 1260) | ug/kg | <121 | 605 | 605 | 577 | 456 | 95 | 75 | 46-130 | 23 | 20 | D6 |
| Decachlorobiphenyl (S) | %. | | | | | | 84 | 65 | 50-130 | | | |
| Tetrachloro-m-xylene (S) | %. | | | | | | 80 | 63 | 46-130 | | | |

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# QUALIFIERS

Project: 3224-00 MEMORIAL DEMO
Pace Project No.: 4048035

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

## BATCH QUALIFIERS

Batch: GCSV/6144

[1] Beginning calibration standard was >15% difference on the confirmation column. The quantitation column was within QC criteria. Results were reported from the quantitation column only.

## ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

S0 Surrogate recovery outside laboratory control limits.

# SPECIFICATION FOR ABATEMENT

## Asbestos Abatement At Memorial Community Center
## Project #3224-00

**Project Location:**
Memorial Community Center
5315 Grand Avenue
Duluth, Minnesota 55807

**Owner:**
City of Duluth
411 West First Street
Duluth, Minnesota 55802

**Asbestos Project Manager:**
Carlson McCain, Inc.
1011 East Central Entrance
Suite 100
Duluth, Minnesota 55811

**Bid Date: August 22, 2011 at 2:00 P.M.**

August 3, 2011

Carlson McCain

1011 East Central Entrance, Suite 100
Duluth, MN 55811
Tel 218-625-7004
Fax 218-625-7004
www.carlsonmccain.com

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

## SECTION 00 01 05 – CERTIFICATION

This Asbestos Abatement Project Manual was prepared by Carlson McCain, Inc. for the City of Duluth and follows accepted practices and procedures for this date and time. The Project Manual presented herein has been developed from consideration of the site characteristics and interpretation of available information. If at any time the Owner decides not to move forward with any part of this Project, the Owner or Owner's Representatives will contact all bidders.

_____ _____

Jon Dacken
Industrial Hygienist

Date

END OF SECTION

# SECTION 00 01 10 – TABLE OF CONTENTS


| SECTION | TITLE |
|---|---|
| DIV. 00 | PROCUREMENT AND CONTRACTING REQUIREMENTS |
| 00 01 05 | Certification |
| 00 01 10 | Table of Contents |
| 00 01 15 | List of Figures |
| 00 11 00 | Invitation to Bid |
| 00 41 00 | Bid Form |
| 00 43 13 | Bid Security |
| 00 45 46 | Governmental Certifications |
| 00 61 13 | Payment and Performance Bond |
| 00 62 16 | Certificate of Insurance |
| 00 73 16 | Insurance Requirements |
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| DIV. 01 | GENERAL REQUIREMENTS |
| 01 11 00 | Summary of Work |
| 01 14 19 | Use of Site |
| 01 31 00 | Project Management and Coordination |
| 01 56 00 | Temporary Barriers and Enclosures |
| 01 58 00 | Project Identification |
| 01 66 13 | Product Storage and Handling Requirements for Hazardous Materials |
| 01 74 13 | Progress Cleaning |
| 01 74 23 | Final Cleaning |
| 01 78 39 | Project Record Documents |
| DIV. 02 | EXISTING CONDITIONS |
| 02 82 00 | Asbestos Remediation |
| 02 82 13 | Asbestos Abatement (Scope of Work) |
| 02 82 33 | Removal and Disposal of Asbestos Containing Material |
| | FIGURES |
| Figure 1 | ???? |


END OF SECTION

# SECTION 00 01 15 – LIST OF FIGURES

Figure 1 ???

END OF SECTION

## SECTION 00 11 00 – INVITATION TO BID

Memorial Community Center
5315 Grand Avenue
Duluth, MN 55807

The City of Duluth is seeking qualified asbestos abatement contractors for asbestos abatement activities at the Memorial Community Center located at 5315 Grand Avenue in Duluth, Minnesota.

The work consists of furnishing all materials, labor and equipment for the asbestos and Polychlorinated Biphenyls (PCBs) abatement as outlined in the bid specifications. Bid specifications are available from Carlson McCain, Inc. located at 1011 East Central Entrance, Suite 100, Duluth, Minnesota.

Bids marked "Asbestos & Polychlorinated Biphenyls Abatement at Memorial Community Center" shall be sent to Carlson McCain, Inc. located at 1011 East Central Entrance, Suite 100, Duluth, Minnesota 55811. Bids shall be received until 2:00 pm on Monday, August 22, 1011.

A mandatory pre-bid conference and walkthrough will begin at 2:00 p.m. on Monday, August 15, 2011 at the Memorial Community Center located at 5315 Grand Avenue in Duluth, Minnesota.

Any questions may be directed to Carlson McCain, Inc., phone number (218) 625-7004 or, 1011 East Central Entrance, Suite 100, Duluth, Minnesota.

The City of Duluth reserves the right to reject a portion or all of the bids and to waive minor informalities and irregularities.

END OF SECTION

# SECTION 00 41 00 - BID FORMS

## Asbestos Abatement at Memorial Community Center
## Phase 1

Bid Submitted To: Carlson McCain, Inc.
1011 East Central Entrance
Suite 100
Duluth, Minnesota 55811

Bid From: _____
(Name of Bidder)

The undersigned, in compliance with the Bid Documents for the **Asbestos Abatement at Memorial Community Center** is now familiar with all conditions surrounding the abatement of the Project and related site conditions. We hereby agree:

a. to hold our Bid open for 60 work days from the date of the Bid Opening;
b. to complete the Work as described in the Project Manual in accordance with the schedule.
c. to furnish all labor and materials to complete abatement in compliance with regulations and the Project Manual.

**BASE BID:** _____ **Dollars**
**$**_____

**UNIT PRICES:** **Per Linear Foot $**_____ **Per Square Foot $**_____

**DAYS TO COMPLETE**_____

1. CERTIFICATION

I (we) hereby certify that I (we) are the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other persons, firm or corporation whatsoever. The Bidder hereby declares that he has carefully examined the Project Manual, that he has personally inspected the actual location of the work, that he has satisfied himself as to all the quantities and conditions, and understands that in signing this Bid he waives all right to plead any misunderstanding regarding the same. The Bidder agrees that this Bid is based upon the materials, equipment and systems required by the Project Manual without exception and that no substitutions have been made.

2. GUARANTEES

I (we) further propose to guarantee all work performed under this Contract to be done in accordance with the Project Manual in a good and workmanlike manner; and to renew or repair any work which may be rejected, due to defective materials or workmanship, prior to final completion and acceptance of the Project. The undersigned proposes that the prices stated in this proposal are guaranteed firm for a minimum of 60 consecutive calendar days, Sundays and holidays included, from the date hereof.

3. UNDERSTANDING AND ACKNOWLEDGEMENT

I (We) acknowledge the Owner's right to accept any bid, reject any or all bids or to waive any informalities or irregularities in bidding.

SIGNATURE OF BIDDER: Bidder: _____

(Print the name of firm)

Addenda Acknowledgement:

Date: _____

Address:

_____

City, State, Zip Code

_____

Telephone:

_____

Officer's Signature:

_____

Printed Name of Officer:

_____

END OF SECTION

**Asbestos Abatement at Memorial Community Center**
**Phase 2**

Bid Submitted To: Carlson McCain, Inc.
1011 East Central Entrance
Suite 100
Duluth, Minnesota 55811

Bid From: _____
(Name of Bidder)

The undersigned, in compliance with the Bid Documents for the **Asbestos Abatement at Memorial Community Center** is now familiar with all conditions surrounding the abatement of the Project and related site conditions. We hereby agree:

d. to hold our Bid open for 60 work days from the date of the Bid Opening;
e. to complete the Work as described in the Project Manual in accordance with the schedule.
f. to furnish all labor and materials to complete abatement in compliance with regulations and the Project Manual.

BASE BID: _____ Dollars
$_____

UNIT PRICES: Per Linear Foot $_____ Per Square Foot $_____

DAYS TO COMPLETE_____

1. CERTIFICATION

I (we) hereby certify that I (we) are the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other persons, firm or corporation whatsoever. The Bidder hereby declares that he has carefully examined the Project Manual, that he has personally inspected the actual location of the work, that he has satisfied himself as to all the quantities and conditions, and understands that in signing this Bid he waives all right to plead any misunderstanding regarding the same. The Bidder agrees that this Bid is based upon the materials, equipment and systems required by the Project Manual without exception and that no substitutions have been made.

2. GUARANTEES

I (we) further propose to guarantee all work performed under this Contract to be done in accordance with the Project Manual in a good and workmanlike manner; and to renew or repair any work which may be rejected, due to defective materials or workmanship, prior to final completion and acceptance of the Project. The undersigned proposes that the prices stated in this proposal are guaranteed firm for a minimum of 60 consecutive calendar days, Sundays and holidays included, from the date hereof.

3. UNDERSTANDING AND ACKNOWLEDGEMENT

I (We) acknowledge the Owner's right to accept any bid, reject any or all bids or to waive any informalities or irregularities in bidding.

SIGNATURE OF BIDDER: Bidder: _____

(Print the name of firm)

| Addenda Acknowledgement: |
|---|
| |

Date: _____

Address:

_____

City, State, Zip Code

_____

Telephone:

_____

Officer's Signature:

_____

Printed Name of Officer:

_____

END OF SECTION

# SECTION 00 43 13 - BID SECURITY

All bids must be submitted by the Contractor on bid forms included with the Project Manual. No Certified Check or a Bid Bond is required.

END OF SECTION

## SECTION 00 45 46 – GOVERNMENTAL CERTIFICATIONS

Asbestos abatement work must be completed by a Minnesota Department of Health (MDH) Asbestos Abatement Contractor using Site Supervisors and Workers that have current MDH issued hard cards on site during asbestos abatement activities.

END OF SECTION

# SECTION 00 61 13 – PAYMENT AND PERFORMANCE BOND

No payment or performance bond is required.

END OF SECTION

## SECTION 00 62 16 - CERTIFICATE OF INSURANCE

Certificate of Insurance shall be ACORD form. The Contractor shall maintain such insurance for the protection of itself, the Owner and the Asbestos Project Manager for the types of risks as required elsewhere in the Project Manual. A Certificate of Insurance shall be provided to the Owner prior to the start of work. No work shall be started until the Contractor has provided the Certificate of Insurance covering all insurance required by the Project Manual. The Contractor shall not allow any Subcontractor to commence work on a subcontract until all similar insurance required of the Subcontractor has been obtained and approved by the Owner.

END OF SECTION

# SECTION 00 73 16 - INSURANCE REQUIREMENTS

## 1. WORKER'S COMPENSATION INSURANCE

The Contractor shall maintain during the life of this contract, Worker's Compensation Insurance for all employees employed at the Site and, in case any work is sublet, the Contractor shall require all Subcontractors to provide Worker's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In the event that any class of employees engaged in hazardous work under this contract is not protected under the Worker's Compensation Statute, the Contractor shall provide, and shall cause each Subcontractor to provide adequate insurance coverage for the protection of employees not otherwise protected.

## 2. PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

The Contractor shall take out and maintain during the life of the contract such Public Liability and Property Damage Insurance, construed as including Contractor's Contingent or Protective Insurance if necessary, to protect the Contractor from damage claims arising from operations under this contract, as shall protect the Owner, the Owner's Representative, the Contractor and any Subcontractor performing work covered by this contract, from claims for damages for personal injury including accidental death, as well as from claims for property damages, which may arise from operations under this contract, whether such operations be alone or by any Subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall be as follows:

Public Liability Insurance in an amount not less that $1,000,000 for injuries, including accidental death of any one person, and subject to the same limit for each person, in an amount not less than $1,000,000 on account of one accident and Property Damage Insurance in an amount not less than $1,000,000.

The Contractor shall require Subcontractors, if any, not protected under the Contractor's Insurance policies to take out and maintain insurance of each amount as required of the General Contractor.

In lieu of the Owner and the Owner's Representative being named as additional insured on the Contractor's comprehensive general liability insurance, the insurance may provide liability coverage for the benefit of the Owner and the Owner's Representative by means of an Owner's protective liability endorsement or policy.

## 3. COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE

The Contractor shall provide comprehensive automobile liability insurance covering bodily injury and property damage with a combined single limit of $1,000,000 for each occurrence. Comprehensive automobile liability insurance shall provide coverage for all automobiles owned by the Contractor and all hired and non-owned vehicles. The Contractor shall also require that all Subcontractors maintain

the same form of insurance. The Contractor shall also provide contingent automobile liability insurance for the operations of Subcontractors to assure coverage as described in this paragraph.

4. ASBESTOS LIABILITY INSURANCE

The Contractor shall provide "occurrence" type specific asbestos liability insurance with a limit of $1,000,000. A copy of the insurance certificate and policy with endorsements and exclusions shall be submitted prior to award of the contract. The Owner and the Owner's Representative shall be named as additional insured on the policy.

END OF SECTION

## SECTION 00 91 00 - ADDENDA

The Asbestos Project Manager may prepare and issue Addenda during the bidding period as necessary to interpret or clarify the bidding documents or to change the date and/or time for receipt of bids.

Addenda will refer bidders to the affected figures or section of the Project Manual and describe the modification, clarification or correction in writing or by means of supplemental drawings if necessary.

Addenda will be serially numbered and dated, identifying the Project, Owner and the Asbestos Project Manager.

Addenda will be distributed by facsimile, email, or mail to all known bidders at the address furnished by the bidders when the Project Manual was obtained. Copies of the Addenda will be distributed at the same time to all bidders listed as having bidding documents.

Bidders shall not rely on oral instructions made to bidders by any officer, agent, or employee of the Owner or Asbestos Project Manager.

END OF SECTION

## SECTION 01 11 00 – SUMMARY OF WORK

In addition to the Scope of Work outlined in Section 02 82 13 – Asbestos Abatement, the Contractor must also ensure:

1. The Contractor shall supply, labor, transportation, material, apparatus, scaffolding and tools necessary for the entire and proper completion of the work. Contractor shall be responsible for the safe, proper and lawful performance of his equipment, maintenance and use of the same.
2. It is intended that the Figures and Project Manual shall form a guide for the entire work to be accomplished under this contract. Should questions or conflicts arise, they must be directed to the Asbestos Project Manager in writing within 24 hours.
3. The Contractor shall take field measurements and field verify conditions with the Project Manual before commencing work. Any errors, inconsistencies or omissions shall be reported to the Asbestos Project Manager. No change orders shall be awarded on account of minor differences between actual field conditions and Project Manual.
4. In the event that the Contractor fails to take corrective action (after 24 hours written notice from the Asbestos Project Manager) to ensure compliance with safety regulations, the Asbestos Project Manager shall remedy said situation according to OSHA standards and charge corrective costs to said Contractor without further notice.

END OF SECTION

## SECTION 01 14 19 - USE OF SITE

Contractors are hereby advised that the entire building is "tobacco free" and "firearm free." Smoking or use of tobacco in any manner or having possession of any firearms shall not be allowed. Violators will be requested to leave the site.

The use of radios on site is prohibited.

The use of hearing protection while on site is mandatory.

END OF SECTION

# SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

## PART 1 – GENERAL

1.1 The Asbestos Project Manager may schedule and conduct meetings/conferences at the Project site, unless otherwise indicated.

1.2 Pre-Construction Conference. There may be a pre-construction conference before starting construction, at a time convenient to all participants. The conference shall be held at the Project site or another convenient location. The meeting shall be conducted to review responsibilities and personnel assignments.

1.3 Progress Meetings will be conducted at intervals established at the pre-construction meeting. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the work.

## PART 2 – PRODUCTS

Not Used

## PART 3 – EXECUTION

The trade contractor agrees not to cause a work stoppage due to the jurisdictional assignment of work. The trade contractor agrees to maintain an adequate work force of experienced workers and the necessary materials, supplies, and equipment to meet the requirements of the Project Manual and other trades in order to maintain the construction schedule without incurring premium time. In the event that their forces are, in the judgment of the Asbestos Project Manager, inadequate to meet the established schedules during regular working hours, the trade contractor agrees to work sufficient overtime hours or increase their workforce to meet such schedules at no extra costs to the Owner.

3.1 SCHEDULE

3.1.1 A mandatory pre-bid conference and site walkthrough will occur on Monday, August 15, 2011 at 2:00 pm. All Abatement Contractors who wish to bid on this Project must be present at the Memorial Community Center, located at 5315 Grand Avenue, Duluth, MN. for the scheduled walk through. An alternative walk through may be scheduled at the discretion of Carlson McCain, Inc. provided arrangements are made before the scheduled walk though.

3.1.2 Sealed bids will be received at Carlson McCain, Inc., 1011 East Central Entrance, Suite 100, Duluth MN 55811 until 2:00 P.M. on Monday, August 22, 2011 at which time and place all bids will be opened and read. Bids may be faxed, mailed, or delivered. Mark the outside of envelope "Asbestos Abatement at Memorial Community Center".

3.1.3 All abatement work shall be coordinated with other contractors at the site and shall be completed in timely manner.

END OF SECTION

## SECTION 01 56 00 - TEMPORARY BARRIERS AND ENCLOSURES

Temporary barriers and enclosures are necessary for asbestos abatement to keep unauthorized individuals out of the asbestos work area. If applicable to the work, the following precautions shall be taken:

1. Temporary Barriers and Enclosures shall be continually inspected for rips, tears, damage or other similar conditions.
2. The exact location of temporary barriers and enclosures shall be discussed with other contractors working at the Project site prior to set up if the temporary barriers and enclosures may interfere with their work.
3. If temporary barriers and enclosures are blocking main routes of traffic, signs shall be used to direct unauthorized individuals around the temporary barriers and enclosures.
4. All temporary barriers and enclosures must be completely removed following acceptable clearance has been achieved. There shall be no duct tape or adhesive residue left on any surfaces from the barrier or enclosure. Likewise, all critical barriers shall be removed.

END OF SECTION

## SECTION 01 58 00 - PROJECT IDENTIFICATION

Minnesota Law requires "Danger Asbestos" signs be hung at eye level at all approaches to the asbestos work area during all asbestos related work.

END OF SECTION

## SECTION 01 66 13 – PRODUCT STORAGE AND HANDLING REQUIREMENTS FOR HAZARDOUS MATERIALS

Asbestos containing waste must be doubled bagged or barreled in accordance with regulations and transported between the containment area and the fully enclosed poly lined dumpster in a cart. No waste bags shall be stored outside of the containment area or the asbestos dumpster.

END OF SECTION

## SECTION 01 74 13 – PROGRESS CLEANING

All Contractors on site shall be responsible for keeping their work area clean and free from hazards associated with poor housekeeping. Daily cleaning of trash, debris and scraps is required. If electrical cords cannot be rolled up at the end of the day, they shall be taped to the floor or hung near the ceiling so that they do not present a tripping hazard.

END OF SECTION

## SECTION 01 74 23 - FINAL CLEANING

A final cleaning or the work area shall be performed by the contractor to ensure that the work area is in better condition than when work began. All tape and adhesive residue must be removed from walls, ceilings and floors. There shall be no visible dust or debris left in the work area upon completion of abatement.

END OF SECTION

## SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

The following records must be maintained at the site during the Project:

1. A daily sign-in and sign-out log
2. A copy of the asbestos project plan
3. All on site air monitoring results
4. The negative air pressure measurements if applicable.

END OF SECTION

## SECTION 02 82 00 – ASBESTOS REMEDIATION

When asbestos work is involved, contractor must conform to all pertinent provisions of Federal, State and Local regulations, rules, codes and laws for removal and control of asbestos, including, but not limited to:

- U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP); Asbestos: 40CFR (Code of Federal Regulations), Part 61, Subparts A and M
- U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Asbestos standards: 40 CFR Part 29, Section 1910.10001 (General Industry) and 1926.58 (Construction)
- ANSI Practices for Respiratory Protection (ANSI Z88-2-1969) and OSHA Personal Protection Equipment Standard: 29 CFR 1910 Subpart 1
- EPA Asbestos-Containing Materials in Schools; Final Rule and Notice 40 CFR Part 763 AHERA
- Minnesota Department of Health (MDH) Asbestos Abatement Rules Part 4620
- U.S. Department of Transportation: 49 CFR 171 and 172.

END OF SECTION

# SECTION 02 82 13 – ASBESTOS ABATEMENT

## PART 1 – GENERAL

### 1.1 SCOPE OF WORK

Contractor shall furnish all materials, equipment and labor necessary to complete the abatement of the following materials within the specified time frame.

PHASE 1 EXTERIOR

| Location | Amount and Type of ACM | Abatement Method |
|---|---|---|
| Old Roof Center | 154 ft. of flashing | Non-friable Removal |
| Roof Turrets | 128 ft. of caulk | Non-friable Removal |
| Windows | Caulking on 23 windows | Non-friable Removal |

PHASE 1 INTERIOR

| Location | Amount and Type of ACM | Abatement Method |
|---|---|---|
| Windows | Caulking on 23 windows | Non-friable Removal |
| New Addition | Floor Tile Mastic | Non-friable Chemical Removal |

END OF PHASE 1

PHASE 2

| Location | Amount and Type of ACM | Abatement Method |
|---|---|---|
| Basement Large Storage Room | 1,250 sq. ft. of ceiling plaster | Remove Inside Containment |
| Main Level Janitor's Closet | 22 ft. of air cell plus fittings | Wrap & Cut |
| Large North Room Main Level | 6 ft. of air cell plus fittings | Wrap & Cut |
| Storage Room Off Front Entry Main Level | 20 ft. of air cell plus fittings | Wrap & Cut |
| Basement Storage Roof Off Mechanical Room | 70 ft. of air cell plus fittings | Wrap & Cut |
| Basement Front Entry | 150 ft. of air cell plus fittings | Wrap & Cut |

All quantities are approximate and should be verified by the Contractor.

Contractors are requested to include on the attached bid form a per linear foot cost and a per square foot cost for abatement of asbestos containing material in the event that additional material is discovered that was not included in the Specifications.

END OF PHASE 2

END OF SECTION

1.2 SCHEDULE

1.2.1 A mandatory pre-bid conference and site walkthrough will occur on Monday, August 15, 2011 at 2:00 pm. All Abatement Contractors who wish to bid on this Project must be present at the Memorial Community Center, located at 5315 Grand Avenue in Duluth, Minnesota for the scheduled walk through unless prior arrangements have been made.

1.2.2 Bids will be received at Carlson McCain, Inc., 1011 East Central Entrance, Suite 100, Duluth MN 55811 until 2:00 P.M. on Monday, August 22, 2011 at which time and place all bids will be opened and read. Bids may be faxed, mailed, or delivered.

1.2.3 All abatement work shall be coordinated with other contractors at the site and shall be completed in timely manner. Work is to begin as soon as possible.

1.3 PLAN TO PREVENT OVERLOADED AIR SAMPLES

No demolition work of any type shall be performed during abatement. No construction work which generates dust levels sufficient to cause air monitoring overloads shall be performed. In the event that air monitoring overloads occur, work shall stop until clearance levels prescribed by MDH regulations are achieved. The cost to obtain clearance levels shall be the responsibility of the Contractor causing the high dust levels.

## PART 2 - PRODUCTS

There are no special products required for completion of abatement at the site. All Contractors and Subcontractors must have MSDS sheets on site for the chemical products that are brought to the jobsite.

All references to polyethylene sheeting or poly in this Specification shall mean that the material will be a minimum thickness of 6-mil unless otherwise specified.

## PART 3 - EXECUTION

3.1 REMOVAL OF ASBESTOS (FULL CONTAINMENT)

At a minimum, the Contractor will be responsible for adhering to the following requirements:

1. Secure work area to prevent access by unauthorized personnel.
2. Shut down or verify that the Heating, Ventilation and Air Conditioning (HVAC) system to abatement area has been shut down.
3. Pre clean all areas to be covered with critical barriers.
4. All surfaces of the containment area must be cleaned before abatement.
5. Uncontaminated, movable objects must be removed from the containment area.

6. Contaminated objects or objects suspected of being contaminated must be either vacuumed with a High Efficiency Particulate Air (HEPA) vacuum, wet-wiped or disposed of as asbestos waste.

7. Decontaminated movable objects must be removed from the contaminated area.

8. Objects that cannot be removed from the containment area must be cleaned using a HEPA vacuum or with wet wiping procedures.

9. Clean all remaining surfaces in the containment area that will be in contact with the critical barriers by HEPA vacuuming or by wet wiping.

10. Install critical poly barriers around the perimeter of the work area. Critical openings greater than four feet in length must be supported with wood framing. Install framework wall around work area, as necessary.

11. Install a five stage personal decontamination unit and a two stage material bag out unit, outside (but adjacent to) the work area.

    *NOTE*: Always keep personal decontamination and bag out units sealed when not in use.

12. Install and activate negative air system. Negative air equipment must be exhausted directly to the outside.

    *NOTE*: Contractor must submit, for approval by the Asbestos Project Manager, drawings indicating placement of all negative air equipment, personal decontamination units and material bag out units prior to the start of the Project.

13. Pre clean all walls within the containment by using HEPA vacuum or wet wiping procedures.

14. Pre clean all horizontal surfaces (all levels) within the work area by using HEPA vacuum or wet wiping procedures.

15. Install critical poly barriers over non-asbestos containing material (ACM) sections of the air handling equipment.

16. Install one layer of poly on wall independent of critical barriers, and two layers of poly on floor of work area. Wrap poly 12 inches up walls in all areas and duct tape.

17. Remove all ACM within the containment using wet methods.

18. Clean all walls, ceiling and floor of entire work area. All interior surfaces of the containment and decontamination unit must be cleaned using HEPA vacuums and wet wiping techniques. All equipment used in the work area (except for the ventilation system) must be cleaned and removed.

19. Visual Inspection (#1) of containment after post-abatement cleaning. A visual inspection of the containment and the decontamination unit must be performed by the Contractor after the containment and decontamination unit have dried completely. Any residue observed in the containment or decontamination unit must be considered to be ACM. Whenever contamination is observed, the entire area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.

20. After the post-abatement visual inspection (#1), all porous surfaces inside the containment which were not covered with poly must be encapsulated.

21. Once the lock-down encapsulant has completely dried, the primary barriers (wall and floor poly) must be removed. The critical barriers, decontamination unit and bag out should be left in place until the containment passes final clearance.

22. Visual Inspection (#2) of removal of containment walls and floor.

    22a. Following removal of the walls and floors of the containment, all surfaces previously in contact with the walls and floors of the containment and the interior surfaces of the decontamination unit must be inspected (and documented) by the Contractor.

    22b. A visual inspection of the containment and the decontamination unit must be performed after the containment and decontamination unit have dried completely. Any residue observed in the containment or decontamination unit must be considered to be ACM.

    22c. When ever contamination is observed, the entire area must be cleaned using a HEPA filter equipped vacuum, wet wiping or both until no contamination is visible.

23. The Asbestos Project Manager shall provide background, daily area samples and final air monitoring for the Project. Final air clearance shall be completed with Phase Contrast Microscopy (PEM) analysis procedures. Contractor is responsible for OSHA compliance air monitoring. If for some reason, final air clearance is not achieved, the Contractor is responsible for all cost for any additional cleaning and sampling.

24. Remove the critical barriers after the containment has passed final air clearance testing.

25. Visual Inspection (#3) of asbestos work area.

    25a. Areas where critical barriers had been placed must be inspected by the Contractor. When ever contamination is observed, the entire area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.

    25b. If contamination is found, it will be up to the discretion of the Asbestos Project Manager as to the need to run another set of final air clearance samples. If the decision is made to run another set of final air clearance samples, the cost for this additional sampling will be charged to the Contractor.

    25c. The interior of any ventilation system ductwork (inside the containment or in contact with the containment) must be visually inspected by the Contractor for the presence of ACM. If contamination is found, the Contractor will decontaminate the interior of the ductwork, replace any disposable filters and/or clean and decontaminate any non-disposable filters.

*NOTE:* All abated material being transported within the building (outside of the containment) must be containerized in barrels or double-bagged and in a cart.

DAMAGES: Care should be taken to protect adjacent surfaces and surface obstacles from damage. All duct tape residue must be removed. Damages to non-protected adjacent surfaces and surface obstacles shall be repaired at the Contractor's expense.

## 3.2 REMOVAL OF ASBESTOS (GLOVEBAG)

At a minimum, the Contractor will be responsible for adhering to the following requirements:

1. Secure work area to prevent access by unauthorized personnel.
2. A Remote Decontamination Unit shall be provided by the Contractor and used by any worker performing glovebag procedures. The Remote Decontamination Unit shall be located near the work area.
3. Pre-clean all horizontal surfaces (all levels) within the work area by using HEPA vacuum or wet wiping procedures.
4. Visual Inspection (#1) of the work area after pre-abatement cleaning. A visual inspection of the work area must be performed after pre-cleaning. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the work area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.
5. Each glovebag may be used only once. Sliding or moving the glovebag during the abatement procedure is not permitted.
6. Place a poly drop cloth on the floor under the work area. The drop cloth should extend at least 10 feet away from the work area in each direction.
7. All workers performing glovebag removal activities and working within the immediate area shall wear two full-body disposable suits and at a minimum, a half face respirator equipped with HEPA cartridges.
8. Glovebags shall be constructed of transparent six-mil polyethylene plastic or comparable material with thermally-welded seams.
9. Use glovebags according to the manufacture's directions.
10. Glovebag removal must comply with all Federal, State and Local regulations.
11. Visual Inspection (#2) of the asbestos work. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the entire work area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.
12. Visual Inspection (#3) of the asbestos work area.

    12a. Prior to exiting the work area, workers shall remove their outer disposable suit and wet wipe their face, hands and respirator. The worker with the inner-most disposable suit and respirator still on, shall proceed to the Remote Decontamination Unit and decontaminate.

    12b. The drop cloth and disposable suits shall be treated as contaminated waste and disposed of as such.

12c. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the entire work area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.

DAMAGES: Care should be taken to protect adjacent surfaces and surface obstacles from damage. All duct tape residue must be removed. Damages to non-protected adjacent surfaces and surface obstacles shall be repaired at the Contractor's expense.

## 3.3 REMOVAL OF ASBESTOS (WRAP AND CUT)

Before cutting into any pipe, the Contractor shall work with the Owner or the Owner's Representatives to verify that all pipes have been drained, disconnected, or otherwise disabled. If possible, lines should be locked out for the protection of the workers.

At a minimum, the Contractor will be responsible for adhering to the following requirements:

1. Secure Work Area to prevent access by unauthorized personnel.
2. A Remote Decontamination Unit shall be provided by the Contractor and used by any worker performing wrap and cut procedures. The Remote Decontamination Unit shall be located in an area designated by the Asbestos Project Manager.
3. Pre-clean all horizontal surfaces (all levels) within the work area by using HEPA vacuum or wet wiping procedures.
4. Visual Inspection (#1) of the work area after pre-abatement cleaning. A visual inspection of the work area must be performed after pre-cleaning. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the work area must be cleaned using a HEPA filter equipped vacuum, wet wiping or both until no contamination is visible.
5. Place a poly drop cloth on the floor under the work area. The drop cloth should extend at least ten feet away from the work area in each direction.
6. All workers performing wrap and cut activities or working within the immediate area shall wear two full-body disposable suits and at a minimum, a half face respirator equipped with HEPA cartridges.
7. Thoroughly wet the asbestos-containing TSI.
8. Wrap the section of pipe in two separate layers of poly, sealing each one with spray glue and duct tape. The ends shall also be sealed leaving an area where the pipe can be cut. The cutting area must be free of asbestos. The sections of pipe should be no longer than 10 feet. If the length of pipe run is longer than 10 feet, it will need to be divided into 10-foot sections. Areas of TSI on pipes may need to be abated using glovebag procedures (Section 3.2) to provide an area to cut the pipe into sections.
9. All wrapped sections of pipe shall be properly labeled.
10. The cut pipe should be lowered without dropping the pipe.

11. Visual Inspection (#2) of the asbestos abatement work area. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the entire work area must be cleaned using a HEPA filter equipped vacuum, wet wiping, or both, until no contamination is visible.

12. Visual Inspection (#3) of asbestos work area.

    12a. Prior to exiting the work area, workers shall remove their outer disposable suit and wet wipe their face, hands and respirator. The worker with the inner-most disposable suit and respirator still on, shall proceed to the Remote Decontamination Unit and decontaminate.

    12b. The drop cloth and disposable suits shall be treated as contaminated waste and disposed of as such.

    12c. Any residue observed in the work area must be considered to be ACM. When ever contamination is observed, the entire work area must be cleaned using a HEPA filter equipped vacuum, wet wiping or both until no contamination is visible.

DAMAGES: Care should be taken to protect adjacent surfaces and surface obstacles from damage. All duct tape residue must be removed. Damages to non-protected adjacent surfaces and surface obstacles shall be repaired at the Contractor's expense.

END OF SECTION

## SECTION 02 82 33 – REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

Asbestos-containing waste must be hauled by a waste hauler with all required licenses from all State and Local authorities with jurisdiction. Load all asbestos-containing waste material in appropriate poly disposal bags or leak-tight drums. All bags and drums must be properly labeled. Protect the interior of truck or roll-off container with Critical and Primary Barriers. Do not transport bagged disposal materials on open trucks or roll-off containers. Label drums with same warning labels as bags. Uncontaminated drums may be re-used. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this Specification.

Advise the landfill operator or processor in advance of the quantity of material to be delivered. Retain receipts from the landfill or processor for materials disposed. At completion of hauling and disposal activities for each load, submit copies of each waste manifest, chain of custody form and landfill receipt to the Owner or Owner's Representatives.

END OF SECTION