**Landmark Environmental, LLC**
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Bloomington, MN 55431
Phone: 952-295-9400

www.landmarkenv.com

**CLIENT:** Anderson Engineering of Minnesota, L.L.C. **PROJECT NUMBER:** 21175.12

**DATE OF SAMPLING:** 12/22/2023 **DATE OF REPORT:** 1/5/2024

**PROJECT:** Lead Paint Testing at the St. Cloud VA Health Care System – West Main Steam Line Project

Landmark Environmental LLC (Landmark) was retained by Anderson Engineering of Minnesota, L.L.C. (the Client) to perform lead-based paint testing (Testing) as part of a project at the St. Cloud Veterans Affairs (VA) Health Care System (VAHCS) located in St. Cloud, Minnesota (the Property). The Testing was conducted in the western portion of the tunnel system as part of the Replace/Add Steam Mains West Side Campus – St. Cloud VAHCS project (the Project). Tunnels and crawlspaces between manhole 21 and Building 51 were included in the Testing. In the crawlspaces of the buildings, approximately 20 feet on either side of the main steam lines were included in the Testing. A diagram of the locations included in the Testing has been included in this report.

Landmark conducted the Testing on December 22, 2023. All test results are included in the attached sheets. Results that exceeded the OSHA Standards have been transferred to the following table:

## *Testing Conducted by Landmark Environmental on December 22, 2023*

| Sample Number | Sample Location | Sample Description | Lead Result ($mg/cm^2$) |
|---|---|---|---|
| 5 | Crawlspace 48 | White paint on metal pipe | 10.1 |
| 6 | Crawlspace 48 | White paint on metal steam pipe hanger | 10.1 |
| 7 | Crawlspace 48 | White paint on metal pipe | 10.1 |
| 8 | Tunnel between Buildings 48 & 49 | White paint on metal steam pipe hanger | 10.1 |
| 9 | Crawlspace 49 | White paint on metal pipe | 10.1 |
| 10 | Crawlspace 49 | White paint on metal steam pipe hanger | 7.2 |
| 13 | Tunnel between Buildings 49 & 50 | Gray paint on metal steam pipe hanger | 3.2 |
| 16 | Crawlspace 50 by ladder | White paint on metal electric conduit | 0.4 |
| 18 | Tunnel between Buildings 50 & 51 | Gray paint on metal steam pipe hanger | 7.6 |
| 19 | Tunnel between Buildings 50 & 51 | Gray paint on metal steam pipe hanger beam | 0.03 |
| 20 | Tunnel between Buildings 50 & 51 | Gray paint on metal steam pipe hanger | 5.0 |
| 21 | Tunnel between Buildings 50 & 51 | Gray paint on metal steam pipe hanger | 5.7 |
| 23 | Crawlspace 51 | Gray paint on metal steam pipe hanger | 10.1 |

## INTERPRETING PAINT SAMPLING RESULTS

Minnesota Occupational Safety and Health Administration (MNOSHA) has adopted the federal Occupational Safety and Health Administration (OSHA) standards and operates an OSHA approved state plan. This Testing does not meet the Department of Housing and Urban Development (HUD) or Minnesota Department of Health (MDH) definition of a lead paint inspection.

Testing surfaces for lead and establishing "safe" levels of lead content is difficult. The OSHA standard does not identify a lower level of lead content in paint that will eliminate the initial air monitoring requirement. Landmark tested a total of fifteen (15) painted surfaces for lead. Thirteen (13) of these surfaces tested **above** the Occupational Safety and Health Administration (OSHA) guideline of 0.0 milligrams per square centimeter ($mg/cm^2$). Eleven (11) of these surfaces also tested above the Minnesota Department of Health (MDH)/Environmental Protection Agency (EPA)/ and the Housing and urban Development (HUD) lead paint level of 1.0 $mg/cm^2$. Two (2) surfaces tested at this OSHA guideline. Additionally, 2 quality control tests were performed during the Testing, and 2 tests were found to be inconclusive (Null). When a Null reading was given, a retest was performed immediately after with a result obtained. If these results are used by a contractor to comply with the OSHA interim lead in construction standard (29 CFR 1926.62), the contractor must evaluate the potential for lead dust or fume generation from all activities which will disturb paint containing **any detectable quantity of lead**.

OSHA Standards apply to any employee disturbing (creating dust or fumes) materials covered with lead-based paint. OSHA regulates lead as an airborne contaminant. Airborne concentrations during disturbance will vary with both the concentration of lead paint and with the operation (manual demolition, sanding, etc.). OSHA requires the contractor to show proof that the operations disturbing lead-based paint in any concentration will not exceed the OSHA Action Level of 30 micrograms of lead per cubic meter of air ($\mu g/m^3$) or the OSHA Permissible Exposure limit of 50 $\mu g/m^3$.

This information is provided as a general approach to compliance with OSHA 29CFR 1926.62. It is not the intent of Landmark that this information applies to all situations involving the standard. The standard should be consulted in all cases, and interpretations verified with OSHA prior to construction.

Landmark is a Certified Lead Firm with the Minnesota Department of Health (License No. LF5321).

A NITON 706A X-Ray Fluorescence field portable analyzer (XRF) was used to conduct lead paint testing in the Project work area where paint was observed. The Performance Characteristic Sheet for this instrument is included in the Appendix. The following information details information on the specific XRF used in this inspection.

| | |
|---|---|
| XRF Manufacturer | Niton |
| XRF Model Number | XL706A |
| XRF Serial Number | 89147 |
| XRF Mode of Operation | K + L + Spectra Mode |
| XRF Source Date | 08/26/20 |
| XRF Source Activity | Cadmium 109 |

The XRF was set on the mode of operation "K+L+Spectra" during the inspection phase of the work. The equipment does not need substrate corrections for brick, concrete drywall, plaster, and wood. Calibration checks were conducted at the beginning, end, and every 4 hours of work.

### *Conditions*

Landmark conducted the Testing and the Report in a manner consistent with the care and skill ordinarily exercised by members of the environmental profession in the community under similar budget and time constraints.

If you have any questions or comments, please contact me at mmeier@landmarkenv.com or at 952-295-9400. Thank you for the opportunity to assist you.

Sincerely,

Mark Meier
MDH Lead Risk Assessor (LR753)

Sarah Anderson
MDH Lead Risk Assessor (LR5769)

# Attachments

Director, Env. Health Div.

DEPARTMENT OF HEALTH **LEAD Risk Assessor**

Licensed by:
State of Minnesota
Department of Health

**License No. LR753**
**Expires 08/14/2024**

**Mark W Meier**
**7570 Dallas Ln N**
**Maple Grove, MN 55311**

LEAD
DEPARTMENT OF HEALTH Risk Assessor
Licensed by:
State of Minnesota
Department of Health

**License No. LR5769**
**Expires 07/18/2024**

**Sarah C Anderson**
**4340 Brook Ln**
**St Louis Park, MN 55436**

Director, Env. Health Div.

# LEAD PAINT TESTING RESULTS
# WEST MAIN STEAM LINE PROJECT
# ST. CLOUD VAHCS

| TEST # | TIME | FLOOR | BUILDING | COMPONENT | SUBSTRATE | CONDITION | COLOR | RESULT | Action Level | PbC | PbC Error | PbL | PbL Error | PbK | PbK Error | Units | QC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12/22/2023 11:07 | | | Calibration | | | | | | 1.52 | 0 | 0.25 | 0 | 0 | 0 | cps | |
| 2 | 12/22/2023 11:12 | | | Calibration | | | | Positive | 0.0 | 1 | 0.1 | 1 | 0.1 | 0.5 | 0.3 | mg/cm2 | |
| 3 | 12/22/2023 11:14 | | | Calibration | | | | Positive | 0.0 | 1 | 0.1 | 1 | 0.1 | 0.5 | 0.3 | mg/cm2 | |
| 4 | 12/22/2023 11:16 | | | Calibration | | | | Positive | 0.0 | 1 | 0.1 | 1 | 0.1 | < LOD | 0.45 | mg/cm2 | |
| 5 | 12/22/2023 11:26 | Crawlspace | 48 | Pipe | Metal | Solid | White | Positive | 0.0 | 14.3 | 3.6 | 10.1 | 2.1 | 14.3 | 3.6 | mg/cm2 | |
| 6 | 12/22/2023 11:27 | Crawlspace | 48 | Steam Pipe Hanger | Metal | Solid | White | Positive | 0.0 | 21.4 | 5.2 | 10.1 | 5.1 | 21.4 | 5.2 | mg/cm2 | |
| 7 | 12/22/2023 11:34 | Crawlspace | 48 | Pipe | Metal | Solid | White | Positive | 0.0 | 12.5 | 3.2 | 10.1 | 2.2 | 12.5 | 3.2 | mg/cm2 | |
| 8 | 12/22/2023 11:39 | Tunnel | 48 to 49 | Steam Pipe Hanger | Metal | Solid | White | Positive | 0.0 | 11.3 | 3.8 | 10 | 1.8 | 11.3 | 3.8 | mg/cm2 | |
| 9 | 12/22/2023 11:46 | Crawlspace | 49 | Pipe | Metal | Solid | White | Positive | 0.0 | 14.4 | 4.4 | 10.1 | 2.5 | 14.4 | 4.4 | mg/cm2 | |
| 10 | 12/22/2023 11:55 | Crawlspace | 49 | Steam Pipe Hanger | Metal | Solid | White | Positive | 0.0 | 6.4 | 2.8 | 7.2 | 1.1 | 6.4 | 2.8 | mg/cm2 | |
| 11 | 12/22/2023 11:56 | Crawlspace | 49 | Steam Pipe Beam Hanger | Metal | Solid | Gray | Null | 0.0 | < LOD | 0.03 | < LOD | 0.03 | < LOD | 5.39 | mg/cm2 | Null |
| 12 | 12/22/2023 11:56 | Crawlspace | 49 | Steam Pipe Hanger | Metal | Solid | Gray | Negative | 0.0 | < LOD | 0.03 | < LOD | 0.03 | < LOD | 2.7 | mg/cm2 | |
| 13 | 12/22/2023 12:08 | Tunnel | 49 to 50 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 3.2 | 0.7 | 3.2 | 0.7 | < LOD | 3.6 | mg/cm2 | |
| 14 | 12/22/2023 12:18 | Crawlspace | 50 | Steam Pipe Beam Hanger | Metal | Solid | Gray | Negative | 0.0 | < LOD | 0.03 | < LOD | 0.03 | < LOD | 1.35 | mg/cm2 | |
| 15 | 12/22/2023 12:22 | Crawlspace | 50 | Electrical Conduit (by ladder) | Metal | Peeling | White | Null | 0.0 | < LOD | 0.06 | < LOD | 0.06 | < LOD | 2.22 | mg/cm2 | Null |
| 16 | 12/22/2023 12:27 | Crawlspace | 50 | Electrical Conduit (by ladder) | Metal | Peeling | White | Positive | 0.0 | 0.4 | 0.1 | 0.4 | 0.1 | < LOD | 2.4 | mg/cm2 | |
| 17 | 12/22/2023 12:28 | Crawlspace | 50 | Electrical Conduit (by ladder) | Metal | Peeling | White | Positive | 0.0 | 0.3 | 0.08 | 0.3 | 0.08 | < LOD | 1.35 | mg/cm2 | QC |
| 18 | 12/22/2023 12:40 | Tunnel | 50 to 51 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 8 | 3.3 | 7.6 | 1.9 | 8 | 3.3 | mg/cm2 | |
| 19 | 12/22/2023 12:44 | Tunnel | 50 to 51 | Steam Pipe Beam Hanger | Metal | Solid | Gray | Positive | 0.0 | 0.03 | 0.02 | 0.03 | 0.02 | < LOD | 1.05 | mg/cm2 | |
| 20 | 12/22/2023 12:46 | Tunnel | 50 to 51 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 4.6 | 2.7 | 5 | 1 | 4.6 | 2.7 | mg/cm2 | |
| 21 | 12/22/2023 12:47 | Tunnel | 50 to 51 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 5.7 | 2.6 | 5.7 | 2.6 | < LOD | 9.6 | mg/cm2 | |
| 22 | 12/22/2023 12:47 | Tunnel | 50 to 51 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 4.5 | 2.5 | 5.5 | 1.1 | 4.5 | 2.5 | mg/cm2 | QC |
| 23 | 12/22/2023 12:57 | Crawlspace | 51 | Steam Pipe Hanger | Metal | Solid | Gray | Positive | 0.0 | 14.5 | 3.3 | 10.1 | 2.3 | 14.5 | 3.3 | mg/cm2 | |
| 24 | 12/22/2023 13:25 | | | Calibration | | | | Positive | 0.0 | 1 | 0.1 | 1 | 0.1 | 0.9 | 0.2 | mg/cm2 | |

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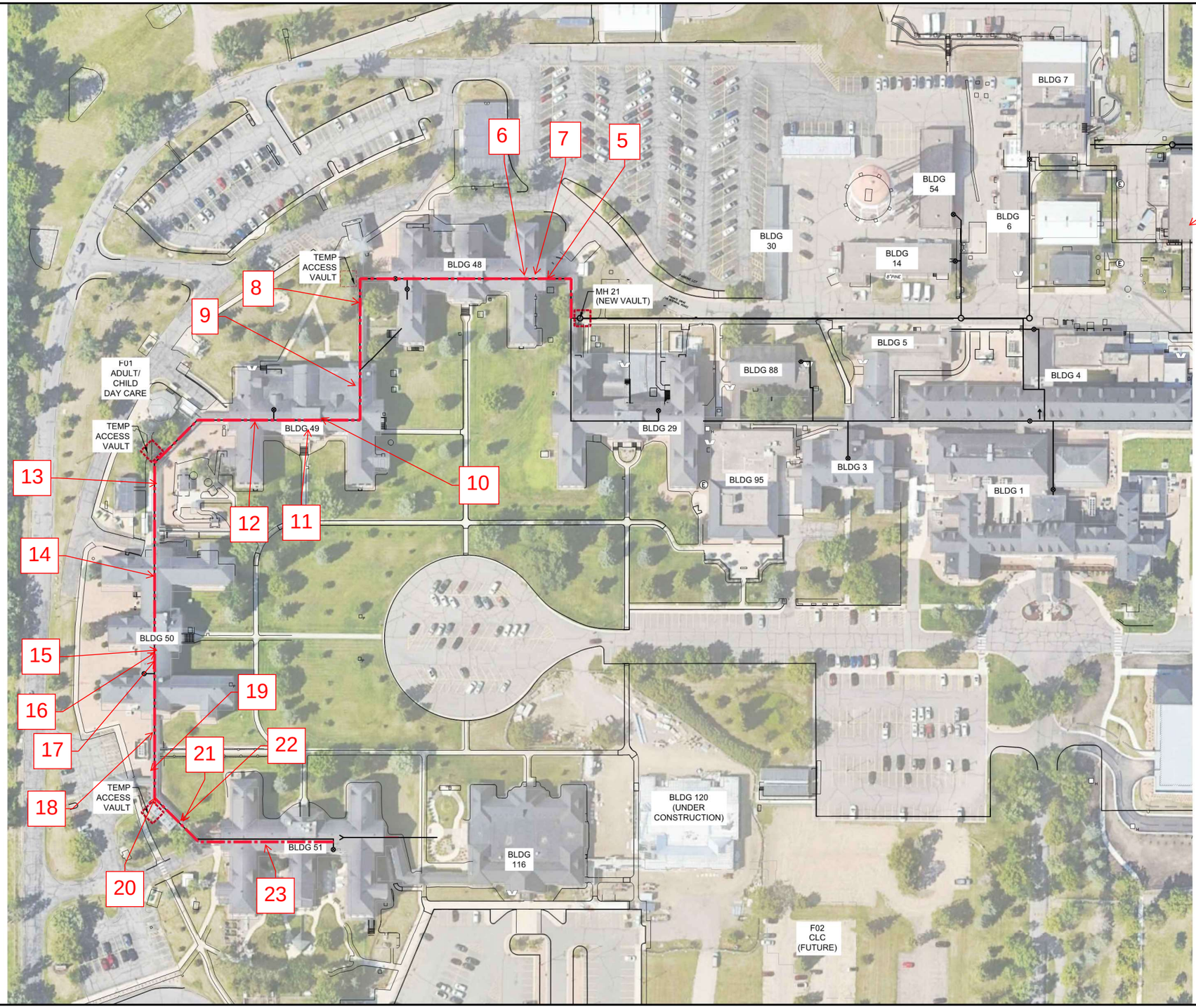
| TEST # | TIME | FLOOR | BUILDING | COMPONENT | SUBSTRATE | CONDITION | COLOR | RESULT | Action Level | PbC | PbC Error | PbL | PbL Error | PbK | PbK Error | Units | QC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 12/22/2023 13:26 | | | Calibration | | | | Null | 0.0 | 1 | 0.1 | 1 | 0.1 | 0.8 | 0.3 | mg/cm2 | |
| 26 | 12/22/2023 13:27 | | | Calibration | | | | Null | 0.0 | 1 | 0.1 | 1 | 0.1 | 0.9 | 0.4 | mg/cm2 | |
| 27 | 12/22/2023 13:28 | | | Calibration | | | | Negative | 0.0 | < LOD | 0.03 | < LOD | 0.03 | < LOD | 0.62 | mg/cm2 | |




## LEGEND

X Lead Test Location

0 60' 120'


ANDERSON

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# ST CLOUD VA STEAM TUNNEL REPLACEMENT

ST CLOUD, MINNESOTA

US DEPARTMENT OF VETERANS AFFAIRS

REVISION LOG

| NO. | DATE | DESCRIPTION OF REVISIONS |
|---|---|---|

PRELIMINARY

| DESIGNED: | DRAWN: | CHECKED BY: |
|---|---|---|
| CL | CL | LRK |

DRAWING TITLE

## CIVIL OVERALL ROUTING EXHIBIT

DRAWING NO.

C1

| PLOTTED: | COMM. NO. |
|---|---|
| --- | 17187 |


Dec 12, 2023 - 3:43pm MMiller
Xref Filename: \ 17187_ 22x34_ TitleBlock \ 17187_ c_ base \ 16505_ c_ survey \ 14859_ s_ base \ 14939_ s_ 11.15420_ s_ base \ 15433_ s_ base \ VA-SITE \ VASheet30x42_ St Cloud specific\
Y:\17100\17187 VISN 23 REPLACE STEAM MAINS WEST SIDE CAMPUS ST. CLOUD VAHCS_ 07 Civil_ 01 CAD files_ 01 SHEETS\17187 St Cloud Steam Tunnel Exhibit.dwg