



ASBESTOS AND LEAD PAINT BUILDING MATERIALS SURVEY FOR: SOUTH BOILER PLANT MEMORIAL UNIVERSITY OF NEWFOUNDLAND



Prepared for:

Memorial University of Newfoundland

St. John's, NL

Pinchin LeBlanc Environmental Ltd Project No. 02-02-00900

December 12, 2012

EXECUTIVE SUMMARY

Pinchin LeBlanc Environmental Limited (Pinchin) was retained by Memorial University of Newfoundland to perform asbestos and lead paint surveys in selected buildings on the Memorial University of Newfoundland's St. John's, NL campus. A total of twenty-seven (27) buildings were surveyed for asbestos containing materials (ACM) and lead based paints (LBP). This report will provide the findings for the following location;

BUILDING DESCRIPTION: SOUTH BOILER PLANT

BUILDING ADDRESS: MEMORIAL UNIVERSITY OF NL, ST. JOHN'S CAMPUS, NL

A summary of the findings for the South Boiler Plant (hereafter referred to as "Site Building") is provided. For specific recommendations regarding any hazardous materials listed the reader will refer to Sections 3 and 4 of this report:

- 1. Friable asbestos-containing building materials were identified in the Site Building, specifically parging cement.
- 2. Non-friable and potentially friable asbestos-containing building materials were identified in the Site Building, specifically tar mastics.
- 3. No paint with lead concentrations exceeding 600mg/kg was identified in the Site Building.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

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1.0 INTRODUCTION

Pinchin LeBlanc Environmental Limited. (Pinchin) was retained by Memorial University of Newfoundland to perform asbestos and lead paint surveys in selected buildings on the Memorial University of Newfoundland's St. John's, NL campus. A total of twenty-seven (27) buildings were surveyed for asbestos containing materials (ACM) and lead based paints (LBP). This report will provide the findings for the following location;

BUILDING DESCRIPTION: SO

SOUTH BOILER PLANT

BUILDING ADDRESS: MEMORIAL UNIVERSITY OF NL, ST. JOHN'S CAMPUS, NL

The report presents a detailed investigation of condition, quantity, location, access, and type of ACM and LBP present in the building. The Overview Report, provided under separate cover, provides detailed information regarding the survey methodology, sampling procedure, evaluation criteria, suspect materials and regulatory information.

Provincial regulations and guidelines distinguish between friable¹ and non-friable² materials. The asbestos building materials survey performed by Pinchin included a search for both friable and common non-friable ACM.

For reporting purposes, the survey will be divided into sections. The report is presented in this manner to accommodate ease in reading and to allow access to report information for specific areas or materials within the building. The report also addresses specific systems and products likely present in the building. The sections of the report are as follows:

- 2.0 Survey Information
- 3.0 ACM Survey Findings
- 4.0 LBP Survey Findings
- 5.0 Recommendations

¹ The term friable is applied to a material that can be readily reduced to dust or powder by hand or moderate pressure. Friable ACM has a much greater potential to release airborne asbestos fibres when disturbed. The most common friable ACM used in the past are sprayed or trowelled materials (for fireproofing or thermal insulation), texture plaster (decorative or acoustic), and mechanical insulations.

² Common non-friable ACM include vinyl floor tiles, ceiling tiles, gasket materials, asbestos cement pipe or board (transite), and asbestos textiles. Although a product may be considered non-friable when new, if the product releases fine dust due to deterioration or during removal, the free dust is considered friable. For example, most lay-in or glued on acoustic ceiling tiles release significant dust during removal of large quantities of these tiles.

2.0 SURVEY INFORMATION

The survey was conducted on between August and September, 2012. The survey, collection of representative bulk samples, and recording of information was performed by Mr. Trent Hardy and Mr. Philip Lowery of PLEL. All accessible areas of the building were inspected for the presence of asbestos containing materials (ACM) and lead based paints (LBP).

A total of fourteen (14) representative bulk samples were collected for analysis for asbestos content,

A total of three (3) bulk samples were collected for analysis of lead content.

3.0 ACM SURVEY FINDINGS

The ACM found during this survey are detailed in the location & data excel document provided to the client. The excel document serves as the clients active asbestos management plan. Quantities of materials identified, locations and friable or non-friable are also present in this excel file. Laboratory certificates for asbestos samples collected are presented in Appendix I and lead samples are presented in Appendix II. Sample location drawings are provided in Appendix III. A photographic record of the samples collected during the survey of the building is presented in Appendix IV. The following is summary of the findings for this building.

3.1 Sprayed or Trowelled Fireproofing and Thermal Insulation

No spray applied fireproofing was identified in the site building.

3.2 Mechanical Insulation

Insulating cement, also referred to as "parging cement", present on pipe elbows and pipe straight sections was sampled from room 1018 and contains 15% Chrysotile in the sample (reference samples 02-02-900-S003, 02-02-900-S004 02-02-900-S006). For locations and conditions of this material at the time of the building survey refer to location & data excel document.

Tar mastic around a cut off pipe was sampled from room BR 1002 and contains 2% chrysotile asbestos (reference sample 02-02-900-S006). For locations and conditions of this material at the time of the building survey refer to location & data excel document.

One (1) sample of the straight insulation jacket on heat exchange # 12 was collected supply in room 1002. Analysis of the sample did not identify the presence of asbestos (reference sample 02-02-900-S001).

3.3 Acoustic Ceiling Tiles

One (1) sample of the 2'x2' ACT acoustic ceiling tile distinguished with a pinhole and small fissure pattern was sampled from room 2006. Analysis of the sample did not identify the presence of asbestos (reference sample 02-02-900-S012).

3.4 Drywall, Plaster, and Texture Finishes

Drywall and plaster was used as a wall and ceiling finish throughout the building. Until the early to mid-1980s, drywall joint compound may have contained chrysotile asbestos. Drywall joint compound is considered a non-friable material. Most buildings of this type undergo constant renovation, including the removal and replacement of drywall partitions. Therefore extensive sampling of drywall compound and plaster is necessary to come to a reasonable conclusion regarding the extent of asbestos. Furthermore, any attempt to distinguish and delineate all asbestos-containing drywall compounds from new non-asbestos drywall compound is often unachievable. Therefore, drywall joint compound and plaster was sampled at walls, which were believed to be original to try to define the presence of asbestos content in the original drywall compound.

Three (3) samples of drywall joint compound were collected in the site building. Analysis of these samples did not identify the presence of asbestos (reference samples 02-02-900-S005, S011, and S014).

Ceiling plaster was sampled from room 2007 and analysis of the sample did not identify the presence of asbestos (reference sample 02-02-900-S010).

3.5 Vinyl Flooring Materials

3.5.1 Vinyl Floor Tiles

Two (2) types of vinyl floor tiles were observed in the site building. Analysis of both of these samples did not identify the presence of asbestos. A list of the visually different vinyl floor tiles is provided below:

- One (1) sample of the 12"x12" vinyl floor tile distinguished with white and brown streak was collected from room 1002A. Analysis of this sample did not identify the presence of asbestos (reference sample 02-02-900-S009).
- One (1) sample of the 12"x12" vinyl floor tile distinguished with white and thick brown streak was collected from room 2006. Analysis of this sample did not identify the presence of asbestos (reference sample 02-02-900-S013).

3.6 Asbestos Cement Products

No asbestos cement products were observed in the site building.

3.7 Vermiculite Insulation

No vermiculite containing products were observed. Visual observations were made above the ceiling and through any hatches.

3.8 Other Asbestos Containing Building Materials

Two (2) samples were collected of tar mastics on the sinks throughout the site building. Results from one (1) of the two (2) samples indicate the presence of 3% chrysotile asbestos (reference sample 02-02-900-S008). For locations and conditions of this material at the time of the building survey refer to location & data excel document.

4.0 LBP SURVEY FINDINGS

Analytical results indicate that none of the samples collected of painted surfaces would be considered a risk to worker exposure during construction or renovation activities (with lead concentrations exceeding 0.06%). All paints observed inside the Site Building were observed in GOOD condition.

5.0 RECOMMENDATIONS

Asbestos containing materials and lead based paints have been identified in the Site Building. Listed below are a series of general recommendations for the Site Building. Recommendations provided in the Overview Report may also be reviewed and applied to this building.

Friable ACMs

Friable asbestos containing materials identified inside the Site Building include: parging cement.

- 1. Type III (high risk) asbestos abatement procedures should be carried out for the scheduled removal of greater than 1ft² of friable asbestos containing materials. Alternatively, Type II (moderate risk) glove bag abatement procedures may be applied where practical;
- 2. Type II (moderate risk) asbestos abatement procedures should be carried out for the scheduled repair or enclosure of friable ACMs or for the removal of less than 1ft² of material;

Non-Friable Materials

Non-friable asbestos containing materials identified inside the Site Building include: tar mastics.

- 1. Type I (low risk) asbestos abatement procedures should be carried out for the scheduled disturbance of any non-friable materials provided the materials can be removed intact, and without the use of powered hand tools.
- 2. Should the use of powered hand tools or excessive breakage of the materials become necessary, Type II (moderate risk) asbestos abatement procedures should be adopted.

Should there be any questions pertaining to the contents of this report, please do not hesitate to contact the undersigned at our office.

Pinchin LeBlanc Environmental Limited

Prepared by;

Paul Staeben Regional Vice President

APPENDIX I

ASBESTOS ANALYTICAL REPORT



Bulk Asbestos Analysis

By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Pinchin LeBlanc Environmental

27 Austin St 2nd Flr

St Johns, NL A1B 4C3

Project: 02-02-00900

Attn: Dawn Benteau Lab Order ID:

Paul Staeben

Analysis ID:

1216455

Date Received:

1216455PLM 10/4/2012

Date Reported:

10/9/2012

| Sample ID | Description | Asbestos | Fibrous | Non-Fibrous | Attributes |
|--------------------|---|----------------|--|-------------|--|
| Lab Sample ID | Lab Notes | Aspestos | Components | Components | Treatment |
| 02-02-900- S001 | Straight insulation jacket on heat exchange # 12 supply line | None Detected | 20% Cellulose 20% Synthetic Fibers Fiber Glass | 50% Other | Black, White Fibrous Heterogeneous |
| 1216455PLM_I | | | 10% | | Dissolved, Teased |
| 02-02-900- S002 | Parging cement on elbows/fittings on heat exchange# 12 supply lines | 15% Chrysotile | | 85% Other | White Fibrous Heterogeneous |
| 12164S5PLM_2 | | | | | Teased |
| 02-02-900- S003 | Pipe elbow parging cement secondary loop lines | 15% Chrysotile | | 85% Other | White Fibrous Helerogeneous |
| 1216455PLM_3 | | | | | Teased |
| 02-02-900- S004 | Pipe parging cement on building water lines | 15% Chrysotile | | 85% Other | White Fibrous Heterogeneous |
| 121645SPLM_4 | 1 | | | | Teased |
| 02-02-900- S005 | DWJC | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_5 | | | | | Crushed |
| 02-02-900- S006 | Tar sealant around cut off pipe | 2% Chrysotile | | 98% Other | Black Non Fibrous Heterogeneous |
| 1216455PLM 6 | chrysotile on surface | | | | Dissolved |
| 02-02-900- S007 | Sink liner | None Detected | 15% Cellulose | 85% Other | White Non Fibrous Homogeneous |
| 1216455PLM_7 | | | | | Dissolved |
| 02-02-900- S008 | Black sink liner | 3% Chrysotile | | 97% Other | Black Non Fibrous Heterogeneous |
| 1216455PLM 8 | 1 | | | | Dissolved |

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommended that analysis of floor (lies, vermiculite, and/or beterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the ILS, government. Estimated MDL is 0.1%.

Bobby Wheatley (16)

Analyst

Nathaniel Durham, MS or Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Pinchin LeBlanc Environmental

27 Austin St 2nd Flr

St Johns, NL A1B 4C3

Project: 02-02-00900

Attn: Dawn Benteau

Paul Staeben

Lab Order ID:

1216455

Analysis ID:

Date Received:

1216455PLM

._ _

10/4/2012

Date Reported: 10/9/2012

| Sample ID | Description | Asbestos | Fibrous | Non-Fibrous | Attributes |
|------------------------|--|---------------|--|------------------------------|-------------------------------------|
| Lab Sample ID | Lab Notes | Aspestos | Components | Components | Treatment |
| 02-02-900- S009 | 1'X1 VFT white with brown streaks | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_9 | 1 | | | | Dissolved |
| 02-02-900- S010 - A | Ceiling plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_10 | finish | | | | Crushed |
| 02-02-900- S010 - B | Ceiling plaster | None Detected | | 90% Other 10% Vermiculite | Tan Non Fibrous Heterogeneous |
| 1216455PLM_15 | - base | | | | Crushed |
| 02-02-900- S011 | DWJC | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_11 | 1 | | | | Crushed |
| 02-02-900- S012 | 2'x2' ACT pinhole and small fissure | None Detected | 50% Fiber Glass 20% Cellulose 10% Wollastonite | 20% Other | Gray Fibrous Heterogeneous |
| 1216455PLM_12 | 1 | | | | Teased |
| 02-02-900- S013 - A | 1'X1 VFT white with thick brown streaks | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_13 | tile | | | | Dissolved |
| 02-02-900- S013 - B | 1'X1 VFT white with thick brown streaks | None Detected | | 100% Other | Black Non Fibrous Homogeneous |
| 1216455PLM 16 | mastic | | | | Dissolved |
| 02-02-900- S014 | DWJC | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1216455PLM_14 | | | | | Crushed |

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommended that analysis of floor illes, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Estimated MPL is 0.1%.

Bobby Wheatley (16)

Analyst

Nathaniel Durham, MS or Approved Signatory

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

APPENDIX II

LEAD PAINT ANALYTICAL REPORT



Analysis for Lead Concentration in Paint Chips



by Flame Atomic Absorption Spectroscopy EPA SW-846 3rd Ed. Method No. 3050B/Method No. 7420

Customer: Pinchin LeBlanc Environmental

Attn: Dawn Benteau

Lab Order ID:

1216464

27 Austin St

Paul Staeben

Analysis ID:

1216464_PBP

2nd Flr

Date Received:

10/4/2012

St Johns NL A1B 4C3

Date Reported:

10/8/2012

Project: 02-02-00900 MUN Asbestos and Lead

| Sample ID Lab Sample ID | Description Lab Notes | Mass (g) | Analytical Sensitivity (% by weight) | Concentration (% by weight) |
|--------------------------|------------------------|----------|--------------------------------------|-----------------------------|
| 02-02-900-L001 | Yellow floor paint | 0.0575 | 0.002% | 0.043% |
| 02-02-900-L002 | White floor paint | 0.0649 | 0.002% | 0.012% |
| 02-02-900-L003 | Grey floor paint | 0.0627 | 0.002% | 0.009% |

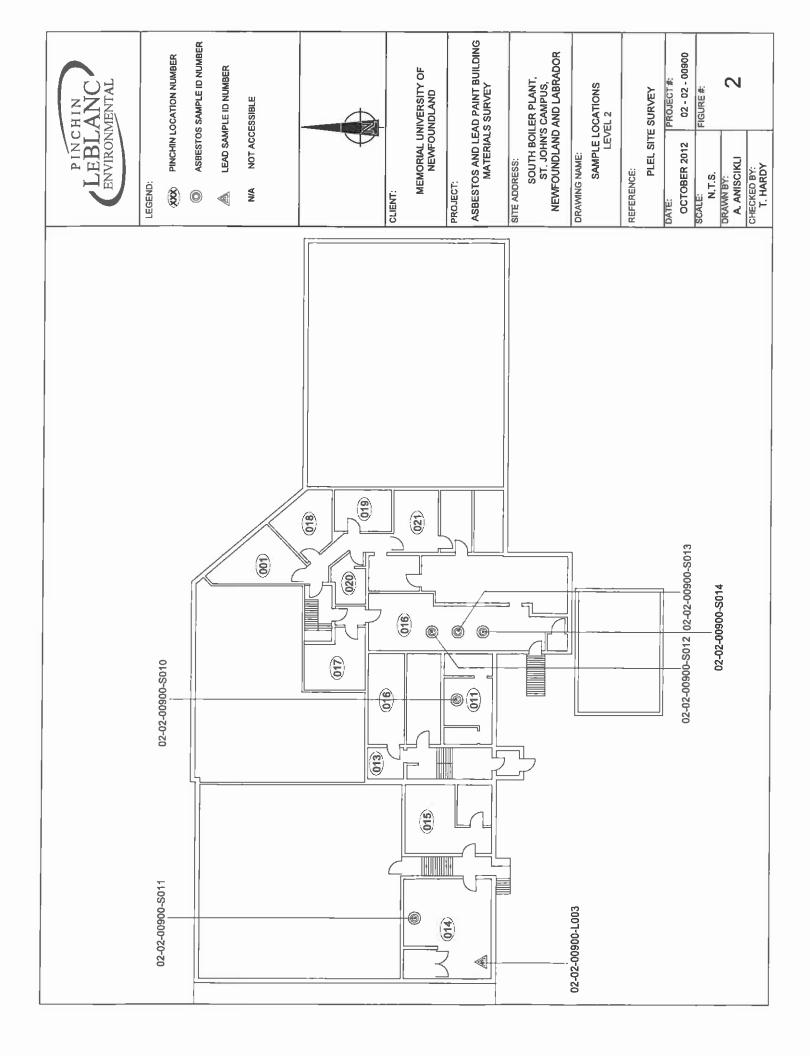
The quality control samples run with the samples in this report have passed all AIHA required specifications unless otherwise noted. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by AIHA or any other agency of the U.S. government.

Melissa Sharps (3)

Laboratory Director

APPENDIX III

SITE DRAWINGS



APPENDIX IV

SAMPLE LOG



| ONIVERSIT | | | | | | |
|-------------------|------------------|-------------|-------------------------|-----------------------|---------------------|--|
| Sample #: | S001 | | Date Sampled: | September 21, 2012 | | |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | | |
| | Plant | | | Andy Mitchell | | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | |
| | | Bulk | Sampling Parameters | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | |
| ☐ Insulation | □12'x12' Tile | \Box T | extured | ☐ Shingle | ☐ Floor | |
| □ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | |
| ☐ Fitting | □ Vinyl Sheet | \square P | opcorn | ☐ Felt | ☐ Ceiling | |
| ☐ Transite Pipe | ☐ Mastic | | WJC | ☐ Tar | ☐ Above Ceiling | |
| ☐ Gasket | Wall | \Box P | laster | | X Other | |
| ☐ Tank Insulation | ☐ Transite Panel | | coustic Tile (Dropped) | | | |
| X Pipe Wrap | □ Textured Wall | \Box A | coustic Tile (Glued-on) | | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: jacket | Straight insulation | |
| ☐ Insulation | □ DWJC | | Structural | | | |
| ☐ Tape | | \square S | teel F. P. ing | No. of Phases: | | |
| ☐ Paper Wrap | | | eck F. P. ing | Colour: | | |



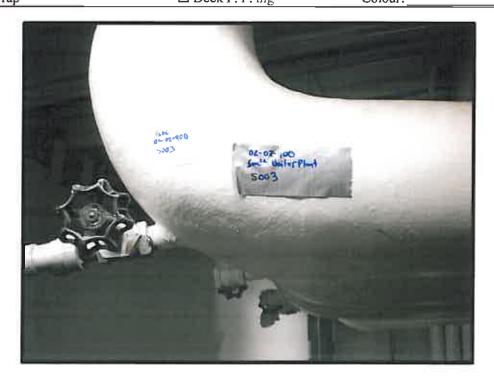


| UNIVERSIT | Y | | | | | | | | |
|-------------------|--------------------------|------------------|------------------------|-------------------------------|--------------------|--|--|--|--|
| Sample #: | S002 | | Date Sampled: | September 21, 2 | 2012 | | | | |
| Building: | South Campus Boi | iler | Sampler: | Trent Hardy | | | | | |
| _ | Plant | | - | Andy Mitchell | | | | | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | | | | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | | | | |
| | Bulk Sampling Parameters | | | | | | | | |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location | | | | |
| X Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor | | | | |
| X Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | | | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Po | pcom | ☐ Felt | ☐ Ceiling | | | | |
| ☐ Transite Pipe | ☐ Mastic | | VJC | ☐ Tar | ☐ Above Ceiling | | | | |
| ☐ Gasket | Wall | □ Pla | ister | | X Other | | | | |
| ☐ Tank Insulation | ☐ Transite Panel | ☐ Ac | oustic Tile (Dropped) | | | | | | |
| ☐ Pipe Wrap | □ Textured Wall | ☐ Ac | oustic Tile (Glued-on) | | | | | | |
| HVAC | ☐ Plaster | ПМа | netic | Miscellaneous: Main hot water | | | | | |
| HVAC | | ☐ Mastic | | supply to heat e | exchanger 12 | | | | |
| ☐ Insulation | □ DWJC | | Structural | | | | | | |
| ☐ Tape | | | el F. P. ing | No. of Phases: | | | | | |
| □ Paper Wrap | | □ Deck F. P. ing | | Colour: | | | | | |



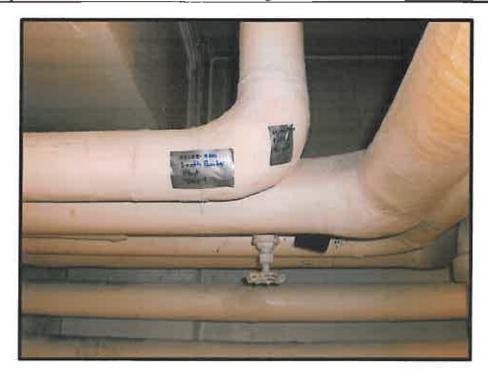


| 01411 2011011 | | | | | | |
|-------------------|------------------|-------------|-------------------------|----------------------------------|--------------------|--|
| Sample #: | S003 | | Date Sampled: | September 21, 2012 | | |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | | |
| | Plant | | | Andy Mitchell | | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | - | |
| | | Bulk | Sampling Parameters | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor | |
| X Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | |
| ☐ Fitting | □ Vinyl Sheet | \square P | opcom | ☐ Felt | ☐ Ceiling | |
| ☐ Transite Pipe | □ Mastic | |)WJC | □ Tar | ☐ Above Ceiling | |
| ☐ Gasket | Wall | \Box P | laster | | X Other | |
| ☐ Tank Insulation | ☐ Transite Panel | \square A | coustic Tile (Dropped) | | | |
| ☐ Pipe Wrap | □ Textured Wall | \Box A | coustic Tile (Glued-on) | | | |
| HVAC □ Plaster | | \square N | 1astic | Miscellaneous: Second co-op line | | |
| ☐ Insulation | □ DWJC | | Structural | | - | |
| □ Таре | | \square S | teel F. P. ing | No. of Phases: | | |
| ☐ Paper Wrap | | | leck F P ing | Colour | | |





| DIALAEKSII | I | | | | | |
|-------------------|------------------|------------------|-------------------------|--------------------|---------------------|--|
| Sample #: | S004 | | Date Sampled: | September 21, 2012 | | |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | | |
| Ů | Plant | | | Andy Mitchell | | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | |
| | | Bulk | Sampling Parameters | | | |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location | |
| ☐ Insulation | □12'x12' Tile | □ T | extured | ☐ Shingle | □ Floor | |
| X Elbow | □ 9'x9'Tile | \square S | tucco | ☐ Rolled | ☐ Wall Orientation | |
| ☐ Fitting | □ Vinyl Sheet | \square P | opcom | ☐ Felt | ☐ Ceiling | |
| ☐ Transite Pipe | ☐ Mastic | | WJC | ☐ Tar | ☐ Above Ceiling | |
| ☐ Gasket | Wall | $\square P$ | laster | | X Other | |
| □ Tank Insulation | Transite Panel | \Box A | coustic Tile (Dropped) | | | |
| ☐ Pipe Wrap | ☐ Textured Wall | \Box A | coustic Tile (Glued-on) | | | |
| HVAC | · _ · | | lastic | Miscellaneous: | Building water line | |
| ☐ Insulation | □ DWJC | | Structural | | | |
| □ Tape | | | teel F. P. ing | No. of Phases: | | |
| ☐ Paper Wrap | | □ Deck F. P. ing | | Colour: | - | |





| V1111 0 011 V 11 | 1 | | | | |
|-------------------|------------------|------------------|-------------------------|-----------------|--------------------|
| Sample #: | S005 | | Date Sampled: | September 21, 2 | 2012 |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | |
| | Plant | | | Andy Mitchell | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | |
| MUN Project #: | 02-02-900 | | Work Order#: | | |
| | | Bulk | Sampling Parameters | | |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor |
| ☐ Elbow | □ 9'x9'Tile | \square S | tucco | ☐ Rolled | X Wall Orientation |
| ☐ Fitting | □ Vinyl Sheet | \square P | opcom | ☐ Felt | ☐ Ceiling |
| ☐ Transite Pipe | ☐ Mastic | | WJC | ☐ Tar | ☐ Above Ceiling |
| ☐ Gasket | Wall | □ P | laster | | ☐ Other |
| ☐ Tank Insulation | ☐ Transite Panel | $\Box A$ | coustic Tile (Dropped) | | |
| ☐ Pipe Wrap | □ Textured Wall | $\Box A$ | coustic Tile (Glued-on) | | |
| HVAC | ☐ Plaster | \square N | lastic ` | Miscellaneous: | |
| ☐ Insulation | X DWJC | | Structural | | |
| ☐ Tape | | \square S | teel F. P. ing | No. of Phases: | |
| ☐ Paper Wrap | | ☐ Deck F. P. ing | | Colour: | |



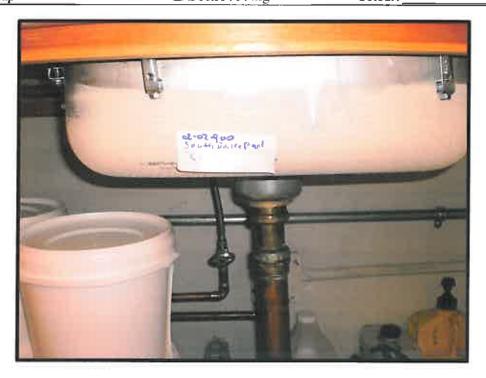


| A 14 1 4 PE U A 1 1 | | | | | |
|---------------------|------------------|----------------|-------------------------|--------------------|--------------------|
| Sample #: | S006 | | Date Sampled: | September 21, 2012 | |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | |
| | Plant | | | Andy Mitchell | |
| Location: | 001, room 1002 | | Analysis: | SAI - PLM | |
| MUN Project #: | 02-02-900 | | Work Order #: | | |
| | | Bulk | Sampling Parameters | · | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor |
| □ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | X Wall Orientation |
| ☐ Fitting | □ Vinyl Sheet | □ P | орсоги | ☐ Felt | ☐ Ceiling |
| ☐ Transite Pipe | ☐ Mastic | |)WJC | □ Tar | ☐ Above Ceiling |
| ☐ Gasket | Wall | □P | laster | | □ Other |
| ☐ Tank Insulation | ☐ Transite Panel | $\square A$ | coustic Tile (Dropped) | | |
| ☐ Pipe Wrap | □ Textured Wall | $\square A$ | coustic Tile (Glued-on) | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: | |
| ☐ Insulation | X DWJC | | Structural | | |
| ☐ Tape | | \square S | teel F. P. ing | No. of Phases: | |
| ☐ Paper Wrap | | Deck F. P. ing | | Colour | |



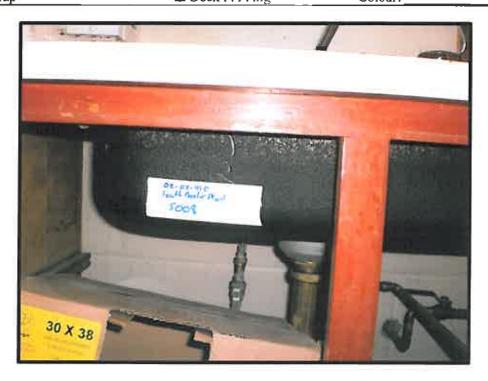


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|-------------------|------------------|-------------|-------------------------|--------------------|------------------------|--|
| Sample #: | S007 | | Date Sampled: | September 21, 2012 | | |
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | | |
| • | Plant | | | Andy Mitchell | | |
| Location: | 003, room 1003 | | Analysis: | SAI - PLM | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | |
| | | Bulk | Sampling Parameters | | | |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location | |
| ☐ Insulation | □12'x12' Tile | □Т | `extured | ☐ Shingle | ☐ Floor | |
| ☐ Elbow | □ 9'x9'Tile | \Box S | tucco | ☐ Rolled | □ Wall Orientation | |
| ☐ Fitting | □ Vinyl Sheet | \Box P | opcorn | ☐ Felt | ☐ Ceiling | |
| ☐ Transite Pipe | ☐ Mastic | |)ŴJC | ☐ Tar | ☐ Above Ceiling | |
| ☐ Gasket | Wall | □P | laster | | X Other (kitchen sink) | |
| ☐ Tank Insulation | ☐ Transite Panel | \Box A | coustic Tile (Dropped) | | , | |
| ☐ Pipe Wrap | □ Textured Wall | $\Box A$ | coustic Tile (Glued-on) | | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: | Kitchen sink liner | |
| ☐ Insulation | □ DWJC | | Structural | | | |
| □ Tape | | \square S | teel F. P. ing | No. of Phases: | | |
| ☐ Paper Wrap | | | eck F. P. ing | Colour: | | |





| Sample #: | S008 | | Date Sampled: | September 21, 2 | 2012 |
|-------------------|------------------|--------------|-------------------------|---------------------------|--------------------|
| Building: | South Campus Boi | ler | Sampler: | Trent Hardy | |
| | Plant | | | Andy Mitchell | |
| Location: | 008, room 1001A | | Analysis: | SAI - PLM | = |
| MUN Project #: | 02-02-900 | | Work Order #: | | |
| | | Bulk | Sampling Parameters | * | _ |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor |
| ☐ Elbow | ☐ 9'x9'Tile | \square S | tucco | ☐ Rolled | □ Wall Orientation |
| ☐ Fitting | □ Vinyl Sheet | □P | opcorn | ☐ Felt | ☐ Ceiling |
| ☐ Transite Pipe | ☐ Mastic | | ŴJC | □ Таг | ☐ Above Ceiling |
| ☐ Gasket | Wall | \Box P | laster | | X Other (sink) |
| ☐ Tank Insulation | □ Transite Panel | | coustic Tile (Dropped) | | |
| ☐ Pipe Wrap | □ Textured Wall | \Box A | coustic Tile (Glued-on) | | |
| HVAC | ☐ Plaster | \square M | fastic | Miscellaneous: Sink liner | |
| ☐ Insulation | □ DWJC | | Structural | | |
| □ Таре | | \square \$ | teel F. P. ing | No. of Phases: | |
| ☐ Paper Wrap | | | eck F P ing | Colour | |





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| Sample #: | S009 | | Date Sampled: | September 21, 2012 | | | |
| Building: | South Campus Boiler | | Sampler: | Trent Hardy | | | |
| | Plant | | _ | Andy Mitchell | | | |
| Location: | 010, room 1002A | | Analysis: | SAI - PLM | | | |
| MUN Project #: | 02-02-900 | | Work Order#: | | | | |
| Bulk Sampling Parameters | | | | | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | | |
| ☐ Insulation | X12'x12' Tile | ☐ Textured | | ☐ Shingle | X Floor | | |
| ☐ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Popcorn | | ☐ Felt | ☐ Ceiling | | |
| ☐ Transite Pipe | ☐ Mastic | □ DWJC | | ☐ Tar | ☐ Above Ceiling | | |
| ☐ Gasket | Wall | \square P | laster | | □ Other | | |
| ☐ Tank Insulation | ☐ Transite Panel | $\square A$ | (Coustic Tile (Dropped) | | | | |
| ☐ Pipe Wrap | ☐ Textured Wall | \Box A | coustic Tile (Glued-on) | | | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: | | | |
| ☐ Insulation | □ DWJC | | Structural | | - | | |
| □ Tape | | \square S | teel F. P. ing | No. of Phases: | | | |
| ☐ Paper Wrap | | \Box | eck F P ing | Colour: White | with brown streaks | | |





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| Sample #: | S010 | | Date Sampled: | September 21, 2012 | | | |
| Building: | South Campus Boiler | | Sampler: | Trent Hardy | | | |
| | Plant | | | Andy Mitchell | | | |
| Location: | 011, room 2007AB | | Analysis: | SAI - PLM | | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | | |
| Bulk Sampling Parameters | | | | | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | | |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | □ Floor | | |
| ☐ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | X Wall Orientation | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Popcom | | ☐ Felt | ☐ Ceiling | | |
| ☐ Transite Pipe | ☐ Mastic | □ DWJC | | □ Tar | ☐ Above Ceiling | | |
| ☐ Gasket | Wall | \Box P | laster | | ☐ Other | | |
| ☐ Tank Insulation | ☐ Transite Panel | $\Box A$ | coustic Tile (Dropped) | | | | |
| ☐ Pipe Wrap | ☐ Textured Wall | \square A | coustic Tile (Glued-on) | | | | |
| HVAC | X Plaster | ☐ Mastic | | Miscellaneous: <u>HWP</u> | | | |
| ☐ Insulation | □ DWJC | | Structural | | | | |
| ☐ Tape | | \square S | teel F. P. ing | No. of Phases: | | | |
| ☐ Paper Wrap | | | eck F. P. ing | Colour: | | | |





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| Sample #: | S011 | | Date Sampled: | September 21, 2012 | | | |
| Building: | South Campus Boiler | | Sampler: | Trent Hardy | | | |
| | Plant | | _ | Andy Mitchell | | | |
| Location: | 014, room 2012 | | Analysis: | SAI - PLM | | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | | |
| Bulk Sampling Parameters | | | | | | | |
| Pipe/Tank | Flooring | | Ceiling | Roofing | Location | | |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor | | |
| ☐ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | X Wall Orientation | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Popcorn | | ☐ Felt | ☐ Ceiling | | |
| ☐ Transite Pipe | ☐ Mastic | □ DWJC | | □ Tar | ☐ Above Ceiling | | |
| ☐ Gasket | Wall | □P | laster | | ☐ Other | | |
| ☐ Tank Insulation | ☐ Transite Panel | \Box A | coustic Tile (Dropped) | | | | |
| ☐ Pipe Wrap | ☐ Textured Wall | \Box A | coustic Tile (Glued-on) | | | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: | | | |
| ☐ Insulation | X DWJC | | Structural | | | | |
| ☐ Tape | | \square S | teel F. P. ing | No. of Phases: | | | |
| ☐ Paper Wrap | | \Box D | eck F. P. ing | Colour: | | | |





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| Sample #: | S012 | | Date Sampled: | September 21, 2012 | | | |
| Building: | South Campus Boiler | | Sampler: | Trent Hardy | | | |
| | Plant | | | Andy Mitchell | | | |
| Location: | 016, room 2006 | | Analysis: | SAI - PLM | | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | | |
| Bulk Sampling Parameters | | | | | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | | |
| ☐ Insulation | X12'x12' Tile | ☐ Textured | | ☐ Shingle | X Floor | | |
| □ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Popcom | | ☐ Felt | ☐ Ceiling | | |
| ☐ Transite Pipe | ☐ Mastic | □ DWJC | | □ Tar | ☐ Above Ceiling | | |
| ☐ Gasket | Wall | ☐ Plaster | | | □ Other | | |
| ☐ Tank Insulation | ☐ Transite Panel | \Box A | coustic Tile (Dropped) | | | | |
| □ Pipe Wrap | □ Textured Wall | \Box A | coustic Tile (Glued-on) | | | | |
| HVAC | □ Plaster | ☐ Mastic | | Miscellaneous: | | | |
| ☐ Insulation | □ DWJC | | Structural | | | | |
| ☐ Tape | | | teel F. P. ing | No. of Phases: | | | |
| ☐ Paper Wrap | | □D | eck F. P. ing | Colour: White with thick brown | | | |





| Sample #: | S013 | | Date Sampled: | September 21, 2012 | | | |
|--------------------------|---------------------|------------|-------------------------|---|--------------------|--|--|
| Building: | South Campus Boiler | | Sampler: | Trent Hardy | | | |
| · | Plant | | | Andy Mitchell | | | |
| Location: | 016, room 2006 | | Analysis: | SAI - PLM | | | |
| MUN Project #: | 02-02-900 | | Work Order #: | | | | |
| Bulk Sampling Parameters | | | | | | | |
| Pipe/Tank | Flooring | Ceiling | | Roofing | Location | | |
| ☐ Insulation | □12'x12' Tile | ☐ Textured | | ☐ Shingle | ☐ Floor | | |
| ☐ Elbow | □ 9'x9'Tile | ☐ Stucco | | ☐ Rolled | ☐ Wall Orientation | | |
| ☐ Fitting | □ Vinyl Sheet | ☐ Popcorn | | ☐ Felt | X Ceiling | | |
| ☐ Transite Pipe | ☐ Mastic | □ DWJC | | □ Таг | ☐ Above Ceiling | | |
| ☐ Gasket | Wall | ☐ Plaster | | | ☐ Other | | |
| □ Tank Insulation | □ Transite Panel | ΧA | coustic Tile (Dropped) | | | | |
| ☐ Pipe Wrap | □ Textured Wall | \Box A | coustic Tile (Glued-on) | | | | |
| HVAC | ☐ Plaster | ☐ Mastic | | Miscellaneous: 2' x 2' pinhole with small fissure | | | |
| ☐ Insulation | □ DWJC | | Structural | | | | |
| ☐ Tape | | | teel F. P. ing | No. of Phases: | | | |
| ☐ Paper Wrap | | \Box D | eck F. P. ing | Colour: | | | |

