

# ASBESTOS INSPECTION REPORT FOR MSU INNOVATION CAMPUS – NELSON DAIRY



NELSON DAIRY CENTER  
Bozeman, Montana

Report Requested By:

BIG SKY ICP, LLC  
CHARTER REALTY & DEVELOPMENT CORP.

Prepared By:



**ENVIRONMENTAL**  
solutions

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HEALTH & SAFETY - RISK MANAGEMENT CONSULTANTS

DATE OF INSPECTION: 09/19/18

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# Credentials

Authored By: \_\_\_\_\_  
Sonia Rogers, IH

Reviewed By: \_\_\_\_\_  
Scott Rogers, CIH, CHMM

**Asbestos Certifications:**

Name	MTA #	Inspector	Contractor / Supervisor	Project Designer	Management Planner
Scott Rogers, CIH CSP CHMM	2322	08/13/2019	08/15/2019	08/14/2019	08/15/2019
Sonia Rogers, IH	3150	08/13/2019	08/15/2019	08/14/2019	

## INTRODUCTION

Sonia Rogers, of Environmental Solutions LLC performed a comprehensive asbestos inspection on September 19, 2018, of Nelson Dairy Center on the MSU Innovation Campus in Bozeman, Montana. This evaluation was performed at the request of Big Sky ICP LLC and Charter Realty & Development Corp.

The intent of this report is to properly identify the presence of asbestos containing materials that will be impacted during upcoming demolition of the remaining structures.

This report and its recommendations are pursuant to the NESHAP requirements (40 CFR 61.145) and the Administrative Rules of Montana (17.75.354) as administered by the Montana Department of Environmental Quality, Asbestos Control Program.

The regulations require the building owner to have the facility inspected for the presence of asbestos containing material(s) (ACM) prior to the construction, renovation or demolition of the facility. The owner is required to provide information obtained from the inspection to those who may be impacted such as, but not limited to, contractors, sub-contractors and/or employees. ARM 17.75.354 requires that the inspection be conducted by a Montana Accredited Inspector.

## INSPECTION PROCEDURES

The inspection was conducted by our accredited inspector, Sonia Rogers, and consisted of a detailed visual survey of building materials and concrete pads. Following a brief review, the inspector entered the facility with sampling equipment and began to assess the homogenous areas. Suspect ACBM was then grouped into homogenous materials and a sampling plan was developed.

Inspector determined that 15 homogeneous materials were present and collected 46 representative samples from these materials. Five (5) of the 15 materials were found to contain asbestos quantities greater than 1% (9x9 Floor Tile & Mastic, Drywall Mud/Joint Compound, Fiberglass Insulation Backing and Vermiculite). Zero (0) materials were found to contain asbestos quantities of a trace or less than 1%. One (1) material was assumed to contain quantities greater than 1% (Stainless Steel Sink Insulation). See the Inspection Summary for a more detailed description and location of materials sampled.

Materials were collected wet to avoid dust generation and placed into Ziploc bags for transport. The materials were submitted to EMSL Laboratories, Raleigh, North Carolina. EMSL is an "accredited" laboratory under the National Voluntary Laboratory Accreditation Program (NVLAP), Laboratory Code #200671-0, which employs Polarized Light Microscopic (PLM) techniques with dispersion staining for identification of mineral forms of asbestos. The quantification of asbestos in the sample is intended to be an estimate only and the limit of detection for this method is approximately 1% by volume.

Bulk samples obtained during the inspection were assigned bulk sample numbers and entered on the sample summary / chain of custody forms. The samples were transported to the laboratory via Fed-Ex (Standard Overnight).

Sample locations for this survey were chosen in a random fashion, with emphasis placed on obtaining samples of each type of accessible, suspect material and minimizing damage to the material being

sampled. Samples were collected by carefully removing small portions of the suspect material in a non-invasive manner, when possible. If possible, samples from existing damaged areas or loose pieces of material were collected.

The intent of the inspection was to identify the suspect materials, assume that materials contain asbestos or collect samples of materials to determine if they are ACM and assess the friability of the materials. Materials that were assumed to contain asbestos or that were identified as containing greater than 1% asbestos were categorized as a regulated asbestos containing material (RACM), Category I Non-Friable ACM, Category I RACM or Category II Non-Friable ACM based on the type and the condition of the material.

**Sample analysis results are included in Appendix B and Chain of Custody documents are included in Appendix C.**

**ENVIRONMENTAL SOLUTIONS INSPECTION SUMMARY**

SAMPLE ID	SAMPLE DESCRIPTION	SAMPLE COLOR	APPROX SQ/FT	MATERIAL DESIGNATION	LAB RESULTS	MATERIAL LOCATIONS	RECOMMENDATIONS
<b>Nelson Dairy Center Building</b>							
01, 02, 03	9x9 Floor Tile w/Mastic	Multi	XX	Category I Non-Friable	Tile=2-4% Chrysotile Mastic=5-7% Chrysotile	101 Hallway, 102, 103, 106, 1 <sup>st</sup> Fl Restrooms, 201 2 <sup>nd</sup> Fl Stair Landing	*See NOTES Section for Handling of Material
04, 05, 06	Tar Paper	Black	N/A	N/A	None Detected	Under 2 <sup>nd</sup> Fl 9x9 Floor Tiles	N/A
07, 08, 09	Stair Treads & Glue	Brown Multi	N/A	N/A	None Detected	Main Stairs	N/A
10, 11, 12	2x4 Ceiling Tiles (Solid)	White/Gray	N/A	N/A	None Detected	109 & 110	N/A
13, 14, 15	Fiberglass Insulation Backing	Silver/Black	XX	Category I Non-Friable	None Detected & 10% Chrysotile	100 & 202	*See NOTES Section for Handling of Material
16, 17, 18	Concrete	Gray	N/A	N/A	None Detected	Main Building Slab	N/A
19, 20, 21	Exterior Window Glazing	White/Black	16 Windows	Category I Non-Friable	3% Chrysotile	Windows	*See NOTES Section for Handling of Material
22, 23, 24	Drywall / Mud / Texture	White	XX	RACM	Drywall=None Detected Texture & Joint Compound=2% Chrysotile	101, 102, 103, 104, 105, 106, 108, 111	*See NOTES Section for Handling of Material
25, 26, 27	CMU	Gray	N/A	N/A	None Detected	Interior & Exterior Walls	N/A
28, 29, 30	CMU Mortar	Gray	N/A	N/A	None Detected	Interior & Exterior Walls	N/A
31, 32, 33	Vermiculite	Gray Multi	XX	RACM	1.75 – 2.25 % Tremolite	Inside Exterior CMU Walls	*See NOTES Section for Handling of Material
34, 35, 36	4" Rubber Base w/Glue	Black	N/A	N/A	None Detected	101 Hallway, 102, 103, 106, 1 <sup>st</sup> Fl Restrooms, 201 2 <sup>nd</sup> Fl Stair Landing	N/A
N/A	Stainless Steel Sink Ins.	Black	1 Sink	Category I	Assumed	Room 103	*See NOTES Section for Handling of Material

## ENVIRONMENTAL SOLUTIONS INSPECTION SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	SAMPLE COLOR	APPROX SQ/FT	MATERIAL DESIGNATION	LAB RESULTS	MATERIAL LOCATIONS	RECOMMENDATIONS
<b>Additional Quonset &amp; Building Slabs</b>							
37, 38, 39	Foam Insulation	White/Yellow	N/A	N/A	None Detected	Quonset	N/A
40, 41, 42, 43, 44, 45, 46	Concrete	Gray	N/A	N/A	None Detected	Remaining Building Slabs	N/A

- Materials containing >1% Asbestos
- Materials of Note – Containing Trace Amounts of Asbestos

### DEMOLITION NOTES

**NOTE-DAIRY CENTER BUILDING:** All Positive Asbestos Containing Materials (ACM) designated as “Category I, Non-Friable”, materials are identified in present condition. Vermiculite material is considered a friable regulated material in current condition.

In the opinion of the inspector non friable materials will become friable during demolition, as such these materials shall become regulated in the opinion of the inspector during the demolition phase of the project. Standard protocols and regulatory language require removal of the materials prior to demolition or demolition in place without dust generation and all demolition debris disposed of as asbestos containing waste. In the opinion of the inspector the materials should be demolished in place with work practices in place to prevent dust generation and all materials disposed of in a Class II landfill as “asbestos containing waste”.

Demolition in place or the abatement of materials prior to demolition must be performed by an accredited asbestos abatement contractor. All abatement must be performed according to regulatory requirements and industry best practices.

## DISCLAIMERS

*This document and its contents incorporated herein, is proprietary information and as an instrument of professional services, is the property of Environmental Solutions LLC, and are not to be used, in part or in whole for any other project without the written authorization of Environmental Solutions LLC.*

This asbestos assessment report was prepared based on information obtained during the survey, interpretation of the laboratory results of bulk samples of building materials collected during the survey. The conclusions of this report are professional opinions based solely upon visual site observations and interpretations of laboratory analysis and field data as described in our report.

This report has been prepared to provide information concerning the various types and estimated quantities of asbestos-containing materials that will be impacted during demolition. While extreme effort was made to inspect every aspect of building materials, it still includes only those materials that were visible and accessible at the time of our inspection.

Our opinions are intended exclusively for use by Montana State University Innovation Campus, Big Sky ICP LLC and Charter Realty & Development Corp. The scope of services performed by Environmental Solutions LLC may not be appropriate to satisfy the needs of other users, and any use or re-use of this document, or the findings presented herein, is at the sole risk of the user.

The opinions presented herein apply to the site conditions existing at the time of our investigation. Therefore, our opinions and recommendations may not apply to future conditions that may exist at the site, which we have not had the opportunity to evaluate.

**APPENDIX A**  
PHOTOGRAPHS OF SAMPLES



**9x9 Floor Tile & Mastic**



**Stair Tread Material**



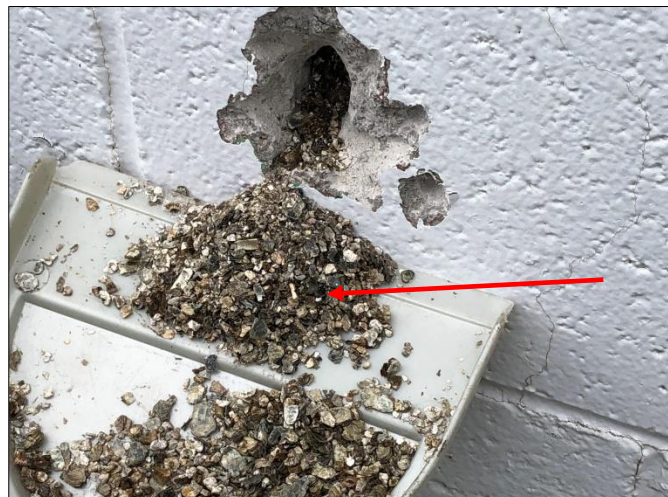
**2x4 Ceiling Tiles**



**Exterior Window Glazing**



**CMU & CMU Mortar**

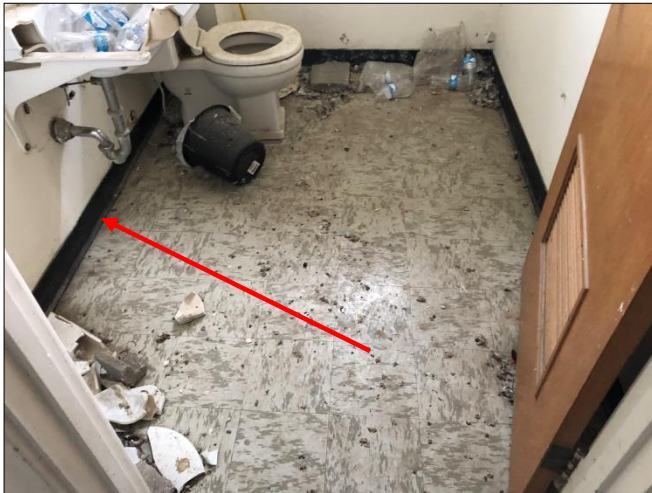


**Vermiculite Insulation**



## **APPENDIX A**

### PHOTOGRAPHS OF SAMPLES CONTINUED



**4" Rubber Base w/Glue**



**Stainless Steel Sink w/Insulation**



**Fiberglass Insulation Backing**



**Front View of Nelson Dairy Center Building**



**View of South End of Nelson Dairy Center Building**



**Back View of Nelson Dairy Center Building**

## **APPENDIX A**

### **PHOTOGRAPHS OF SAMPLES CONTINUED**



**Quonset**



**Insulation in Quonset**

### **VIEW OF ADDITIONAL STRUCTURES & CONCRETE PADS ON SITE**



## **APPENDIX B**

### **Sample Analysis Report by EMSL Raleigh, NC Laboratory**



# EMSL Analytical, Inc.

1010 Yuma Street Denver, CO 80204

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<http://www.EMSL.com/denverlab@emsl.com>

EMSL Order: 221807607

Customer ID: ENSO62

Customer PO:

Project ID:

**Attention:** Sonia Rogers  
Environmental Solutions, LLC  
PO Box 7010  
Bozeman, MT 59771

**Phone:** (406) 579-1441

**Fax:**

**Received Date:** 09/20/2018 9:50 AM

**Analysis Date:** 09/25/2018 - 09/26/2018

**Collected Date:**

**Project:** 18046 - NELSON DAIRY

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01-Floor Tile <small>221807607-0001</small> <i>Small amount of black mastic observed, insufficient material for analysis</i>	9x9 FLOOR TILE w/ MASTIC	Blue Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
02-Floor Tile <small>221807607-0002</small>	9x9 FLOOR TILE w/ MASTIC	Gray Non-Fibrous Homogeneous		35% Ca Carbonate 61% Non-fibrous (Other)	4% Chrysotile
02-Mastic <small>221807607-0002A</small>	9x9 FLOOR TILE w/ MASTIC	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
03-Floor Tile <small>221807607-0003</small>	9x9 FLOOR TILE w/ MASTIC	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
03-Mastic <small>221807607-0003A</small>	9x9 FLOOR TILE w/ MASTIC	Black Non-Fibrous Homogeneous		93% Non-fibrous (Other)	7% Chrysotile
04-Mastic <small>221807607-0004</small>	TAR PAPER (FLOOR)	Black Non-Fibrous Homogeneous	5% Min. Wool	95% Non-fibrous (Other)	None Detected
04-Tar Paper <small>221807607-0004A</small>	TAR PAPER (FLOOR)	Brown/Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
05-Mastic <small>221807607-0005</small>	TAR PAPER (FLOOR)	Black Fibrous Homogeneous	5% Min. Wool	95% Non-fibrous (Other)	None Detected
05-Tar Paper <small>221807607-0005A</small>	TAR PAPER (FLOOR)	Brown/Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
06 <small>221807607-0006</small> <i>inseparable Mastic layer.</i>	TAR PAPER (FLOOR)	Brown/Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
07-Stair Tread <small>221807607-0007</small>	STAIR TREAD w/ GLUE	Brown Non-Fibrous Homogeneous	3% Wollastonite	97% Non-fibrous (Other)	None Detected
07-Glue <small>221807607-0007A</small> <i>Inseparable brown and tan glues</i>	STAIR TREAD w/ GLUE	Brown/Tan Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
08-Stair Tread <small>221807607-0008</small>	STAIR TREAD w/ GLUE	Brown Non-Fibrous Homogeneous	3% Wollastonite	97% Non-fibrous (Other)	None Detected
08-Glue <small>221807607-0008A</small> <i>Inseparable brown and tan glues</i>	STAIR TREAD w/ GLUE	Brown/Tan Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
09-Stair Tread <small>221807607-0009</small>	STAIR TREAD w/ GLUE	Brown/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 09/26/2018 17:21:55



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**EMSL Order:** 221807607  
**Customer ID:** ENSO62  
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
09-Glue <small>221807607-0009A</small>	STAIR TREAD w/ GLUE	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10 <small>221807607-0010</small>	2x4 CEILING TILE	Gray/White Fibrous Homogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
11 <small>221807607-0011</small>	2x4 CEILING TILE	Gray/White Fibrous Homogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
12 <small>221807607-0012</small>	2x4 CEILING TILE	Gray/White Non-Fibrous Homogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
13-Mastic <small>221807607-0013</small>	FIBERGLASS INSULATION BACKING	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
13-Backing <small>221807607-0013A</small>	FIBERGLASS INSULATION BACKING	Brown/Silver Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
14-Mastic <small>221807607-0014</small>	FIBERGLASS INSULATION BACKING	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Backing <small>221807607-0014A</small>	FIBERGLASS INSULATION BACKING	Brown/Silver Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
15-Mastic <small>221807607-0015</small>	FIBERGLASS INSULATION BACKING	Black Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15-Backing <small>221807607-0015A</small>	FIBERGLASS INSULATION BACKING	Tan/Silver Fibrous Homogeneous	25% Cellulose 5% Glass	70% Non-fibrous (Other)	None Detected
16 <small>221807607-0016</small>	CONCRETE	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17 <small>221807607-0017</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
18 <small>221807607-0018</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
19 <small>221807607-0019</small>	WINDOW GLAZING	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 87% Non-fibrous (Other)	3% Chrysotile
20 <small>221807607-0020</small>	WINDOW GLAZING	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
21 <small>221807607-0021</small>	WINDOW GLAZING	Gray/Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
22-Texture <small>221807607-0022</small> <i>Inseparable paint / coating layer included in analysis</i>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Heterogeneous		98% Non-fibrous (Other)	2% Chrysotile
22-Tape <small>221807607-0022A</small>	DRYWALL/MUD/TEXTURE	Yellow Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected

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**EMSL Order:** 221807607  
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
22-Joint Compound <small>221807607-0022B</small>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
22-Drywall <small>221807607-0022C</small>	DRYWALL/MUD/TEXTURE	White Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
23-Texture <small>221807607-0023</small> <i>Inseparable paint / coating layer included in analysis</i>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Heterogeneous		10% Ca Carbonate 88% Non-fibrous (Other)	2% Chrysotile
23-Tape <small>221807607-0023A</small>	DRYWALL/MUD/TEXTURE	Yellow Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
23-Joint Compound <small>221807607-0023B</small>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Homogeneous		10% Ca Carbonate 88% Non-fibrous (Other)	2% Chrysotile
23-Drywall <small>221807607-0023C</small>	DRYWALL/MUD/TEXTURE	White Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
24-Texture <small>221807607-0024</small> <i>Inseparable paint / coating layer included in analysis</i>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
24-Tape <small>221807607-0024A</small>	DRYWALL/MUD/TEXTURE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
24-Joint Compound <small>221807607-0024B</small>	DRYWALL/MUD/TEXTURE	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
24-Drywall <small>221807607-0024C</small>	DRYWALL/MUD/TEXTURE	Brown/White Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
25 <small>221807607-0025</small>	CMU	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
26 <small>221807607-0026</small>	CMU	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
27 <small>221807607-0027</small>	CMU	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
28 <small>221807607-0028</small>	CMU MORTAR	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
29 <small>221807607-0029</small>	CMU MORTAR	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
30 <small>221807607-0030</small> <i>Inseparable paint / coating layer included in analysis</i>	CMU MORTAR	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
34-Rubber Base <small>221807607-0034</small>	4" RUBBER BASE w/ GLUE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-Glue <small>221807607-0034A</small>	4" RUBBER BASE w/ GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
35-Rubber Base <small>221807607-0035</small>	4" RUBBER BASE w/ GLUE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35-Glue <small>221807607-0035A</small>	4" RUBBER BASE w/ GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-Rubber Base <small>221807607-0036</small>	4" RUBBER BASE w/ GLUE	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-Glue <small>221807607-0036A</small>	4" RUBBER BASE w/ GLUE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-Foam Insulation <small>221807607-0037</small>	FOAM INSULATION	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-Fibrous Insulation <small>221807607-0037A</small>	FOAM INSULATION	White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
38-Foam Insulation <small>221807607-0038</small>	FOAM INSULATION	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-Fibrous Insulation <small>221807607-0038A</small>	FOAM INSULATION	White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
39-Foam Insulation <small>221807607-0039</small>	FOAM INSULATION	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39-Fibrous Insulation <small>221807607-0039A</small>	FOAM INSULATION	White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
40 <small>221807607-0040</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
41 <small>221807607-0041</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
42 <small>221807607-0042</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
43 <small>221807607-0043</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
44 <small>221807607-0044</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
45 <small>221807607-0045</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
46 <small>221807607-0046</small>	CONCRETE	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

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**EMSL Order:** 221807607

**Customer ID:** ENSO62

**Customer PO:**

**Project ID:**

Analyst(s)

*Molly Elkins (14)*

*Stuart Printz (17)*

*Timothy Kleehammer (37)*

Melanie Rech, Laboratory Director  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Denver, CO NVLAP Lab Code 200828-0

Initial report from: 09/26/2018 17:21:55





# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077  
Phone/Fax: (800) 220-3675 / (856) 786-5974  
<http://www.EMSL.com> / [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

**EMSL Order:** 041829118  
**Customer ID:** ENSO62  
**Customer PO:**  
**Project ID:**

**Attention:** Sonia Rogers  
Environmental Solutions, LLC  
PO Box 7010  
Bozeman, MT 59771  
**Phone:** (406) 579-1441  
**Fax:**  
**Received:** 09/26/2018 9:30 AM  
**Analysis Date:** 10/01/2018  
**Collected:**

**Project:** 18046 - Nelson Dairy

## Test Report: Asbestos Analysis of Bulk Building Materials via EPA 600/R-93/116 Method using PLM and Milling Prep. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
31 041829118-0001	Vermiculite	Gray Non-Fibrous Homogeneous		98.25% Non-fibrous (Other)	1.75% Tremolite
32 041829118-0002	Vermiculite	Gray Non-Fibrous Homogeneous		97.75% Non-fibrous (Other)	2.25% Tremolite
33 041829118-0003	Vermiculite	Gray Non-Fibrous Homogeneous		98.25% Non-fibrous (Other)	1.75% Tremolite

Analyst(s)

Will DiBella (3)

Benjamin Ellis, Laboratory Manager  
or other approved signatory

Disclaimer: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.25%. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 10/01/2018 18:52:01

**APPENDIX C**

**CHAIN OF CUSTODY DOCUMENTS**

9/26



Asbestos Chain of Custody  
EMSL Order Number (Lab Use Only):

041829118

221807607

EMSL Analytical, Inc.  
2500 Gateway Centre Boulevard,  
Morrisville, NC 27560

RECEIVED  
CINNAMON, HI 9465-3900  
FAX: 919-465-3950

EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

18 SEP 26 AM 11:00

Company Name: Environmental Solutions, LLC		EMSL Customer ID:	
Street: PO Box 7010		City: Bozeman	State/Province: MT
Zip/Postal Code: 59771	Country: US	Telephone #: 406-579-1441	Fax #:
Report To (Name): Sonia Rogers		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: srogers@esmontana.com		Purchase Order:	
Project Name/Number: 18046 - Nelson Dairy		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: MT		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options\* - Please Check

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

\*For TEM Air 3 hr through 6 hr, please call ahead to schedule. \*There is a premium charge for 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**  Check if samples are from NY  
 NIOSH 7400  
 w/ OSHA 8hr. TWA  
**PLM - Bulk (reporting limit)**  
 PLM EPA 600/R-93/116 (<1%) **HP**  
 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)  
 NYS 198.8 SOF-V  
 NIOSH 9002 (<1%)

**TEM - Air**  4-4.5hr 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 >10µm  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 EPA 600/R-93/116 with milling prep (<1%)  
 PLM EPA 600/R-93/116 with milling prep (<0.25%)  
 TEM EPA 600/R-93/116 with milling prep (<0.1%)  
 TEM Qualitative via Filtration Prep  
 TEM Qualitative via Drop Mount Prep  
 Cincinnati Method EPA 600/R-04/Q04 - PLM/TEM (BC only)  
 Other: **Samples PLM 435 CARB 31-32-33 Method Level A**

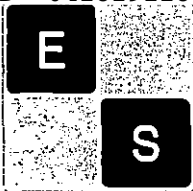
Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	* See Attached		

Client Sample # (s): **Sonia Rogers** Total # of Samples: **46**  
 Relinquished (Client): **Sonia Rogers** Date: **9-19-18** Time: **3:00pm**  
 Received (Lab): **TI** Date: **9/20/18** Time: **9:50AM**  
 Comments/Special Instructions: **E-rod 7955 6700 2322**  
 Bill To: Environmental Solutions, LLC, PO Box 7010, Bozeman, MT, 59771, US  
 Attention: Sonia Rogers Phone: 406-579-1441 Email: environmentalsol@emsl.com Purchase Order:

Per Sonia PLU400 ptct w/milling Per Email  
9-26-18 9/20/18 1/1



# ENVIRONMENTAL

# 041829118 COPY

CHAIN OF CUSTODY RECEIVED

EMSL  
CINNAMINSON, NJ

PO Box 7010, Bozeman, MT 59771-7010  
PH: (406) 679-1441 FX: (406) 507-0193 Web: esmontana.com

HEALTH & SAFETY - RISK MANAGEMENT CONSULTANTS

18 SEP 26 AM 11:00

Date Shipped: 9-19-18 Number of Samples: 46

Project ID: 18046 – Nelson Dairy

Shipped Via:  Fed-Ex Standard  Fed-Ex by 10:00 am  
 Fed-Ex Saturday  US Mail

Sample ID	Sample Description	Quantity
01-02-03	9x9 Floor Tile w/Mastic	3
04-05-06	Tar Paper (Floor)	3
07-08-09	Stair Tread w/Glue	3
10-11-12	2x4 Ceiling Tile	3
13-14-15	Fiberglass Insulation Backing	3
16-17-18	Concrete	3
19-20-21	Window Glazing	3
22-23-24	Drywall/Mud/Texture	3
25-26-27	CMU	3
28-29-30	CMU Mortar	3
31-32-33	Vermiculite *See Notes*	3
34-35-36	4" Rubber Base w/Glue	3
37-38-39	Foam Insulation	3
40-41-42-43-44-45-46	Concrete	7

**APPENDIX D**

**FLOOR PLANS**

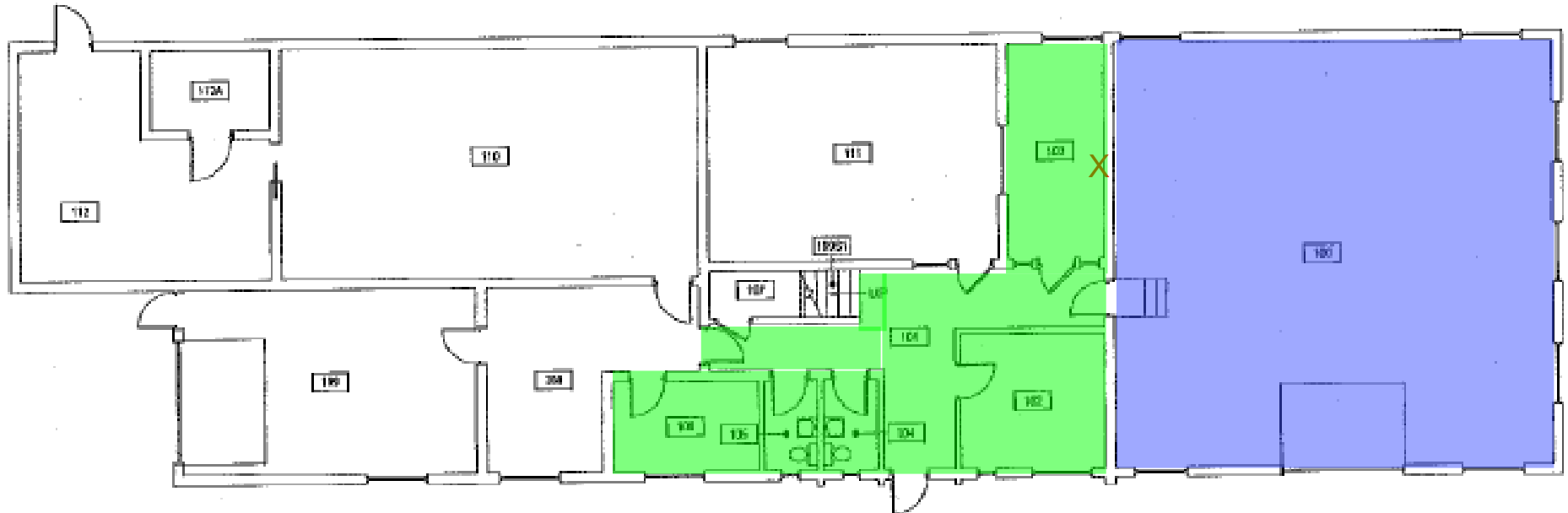


## NELSON DAIRY SITE MAP

Inspection included Nelson Dairy Center Building, Quonset w/Insulation and all remaining partial Quonsets and concrete pads shown above.

# Asbestos Containing Building Materials

- 9x9 Floor Tile w/Mastic
- Fiberglass Insulation w/Backing
- X Stainless Steel Sink w/Insulation



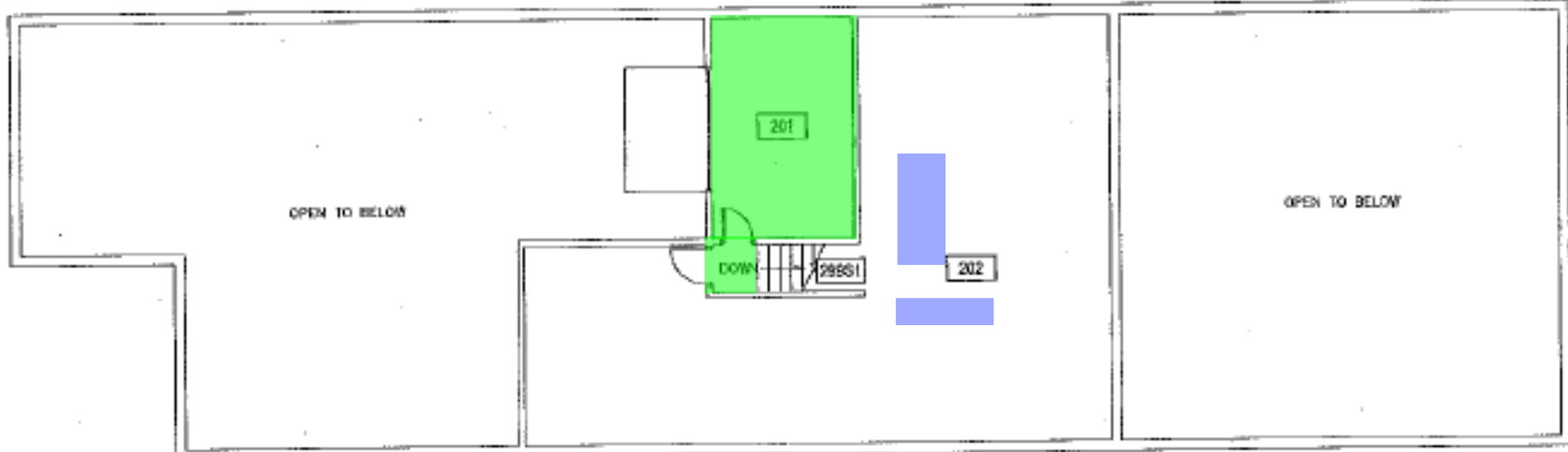
Additional Materials with >1% Asbestos

All Drywall Walls and Ceilings with Texture and Joint Compound

Vermiculite Insulation - Located Inside CMU Walls

1 NELSON DAIRY CENTER - FIRST LEVEL  
SCALE: 1/8" = 1'

MONTANA  
STATE UNIVERSITY  
BUILDING 1100  
INDEX # 17  
BUILDING # 646



1 NELSON DAIRY CENTER - SECOND LEVEL  
 SCALE: 1/8" = 1'



MONTANA STATE UNIVERSITY FUTURE PLANNING DESIGN DIVISION 300 N. UNIVERSITY AVENUE BOZEMAN, MONTANA 59717-3000	INDEX #	17
	BUILDING #	646

DATE: 08/12/09  
 DRAWN BY: J. L. HARRIS  
 CHECKED BY: J. L. HARRIS  
 PROJECT NO.: 09-001



## APPENDIX E

### ABBREVIATIONS

A/C	asbestos/cement
ACM	asbestos-containing material
AHERA	Asbestos Hazard Emergency Response Act of 1986
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BID	background information document
CAA	Clean Air Act
CPSC	Consumer Products Safety Commission
DOT	Department of Transportation
EPA	Environmental Protection Agency
ID	identification
LEV	local exhaust ventilation
NADC	National Association of Demolition Contractors
NARS	National Asbestos Registry System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
OAQPS	Office of Air Quality Planning and Standards
OSHA	Occupational Safety and Health Administration
OSW	Office of Solid Waste
PEL	permissible exposure limit
PLM	polarized light microscopy
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TEM	transmission electron microscopy
TSCA	Toxic Substances Control Act