

Mr. Steve Mooney, MS, PMP
Principal
Bray Mooney Consulting, Inc.
410 East 21st Street
Chester, PA 19013

July 03, 2012

Via email: smooney@braymooney.com

Subject: Hazardous Materials Survey Report
Level 1, Level 9, Penthouse Mechanical Room Upgrade- VA Medical Center
Philadelphia, PA
Colden Project **12289**

Dear Steve:

The following information, along with the attachments, serves as Colden Corporation's draft report for a survey of potentially regulated hazardous building materials (HBM) and lead-based paint conducted of level 1, level 9 and the penthouse mechanical room at VA Medical Center in Philadelphia, PA. The VA Medical Center is located at 3900 Woodland Avenue in Philadelphia, Pennsylvania. Bray Mooney Consulting, Inc. retained Colden Corporation to screen the identified areas for the presence of materials that may be subject to environmental regulation, and may require special handling during scheduled renovation activities.

The potentially regulated material and the lead-based paint surveys were conducted by Ben Kendon of Colden on April 19, 23 and May 7, 2012.

Excluded Areas and Items

Inaccessible areas such as crawlspaces, drains, sterile areas, and interior HVAC ducts and exterior painted surfaces were specifically excluded from the survey. In addition, the following areas were not surveyed as the areas were either locked or the area was not clearly defined:

- B113 (north end) and basement tie-ins;
- Level 8 tie-ins.

These areas will be surveyed and included once access has been arranged and the relevant tie-in areas are clearly defined.

Please note that a detailed quantification of hazardous building materials was not included in the scope of work of the survey. Sampling and laboratory analysis was not conducted on any of the identified materials apart from surface paint for lead content.

Survey Methods

Hazardous Building Material Survey

The hazardous building material survey was performed through visual observations of known categories of typical HBM as described below. The HBM were grouped into six (6) primary categories of materials, each of which require specific management procedures during their collection and removal from either existing structures or areas in accordance with their applicable state or federal regulations.

The primary categories of HBM are described below:

- **Mercury-Containing Materials:** Include fluorescent light bulbs, metal halide lighting, thermostats, sprinkler system switches, pressure gauges, smoke detectors and electronic control equipment.
- **Batteries:** Include lead-acid batteries for emergency lighting, lead-cadmium uninterrupted power supply (UPS) batteries, nickel-cadmium batteries, and dry-cell batteries.
- **PCB-Containing Equipment, Dielectric Fluids and Oils:** Fluorescent lighting and ballasts which contain no “non-PCB” or equivalent labeling; fluid containing electrical transformers or air compressor oils that bear no “Non-PCB” or equivalent labeling.
- **Chlorofluorocarbons (CFCs) and Halon:** Gases used as refrigerants or in fire suppression systems, cooling units in water fountains, air conditioning units, and fire extinguishers, which bear no “CFC-Free” or equivalent labeling.
- **Low-Level Radioactive Materials:** Tritium-containing self illuminated exit signs and Americium-124 containing smoke detectors.
- **Waste Oils:** Hydraulic oils, machinery oils, lubricating oils, motor oils, and other spent oils or oil-fuel mixes, typically found in emergency generators, machinery sumps, compressors, or other moving machinery.
- **Miscellaneous Waste Fluids, Gases and Powders:** Paints, solvents, cleaners and other fluids, gases or Powders.

Lead Paint Survey

Representative paint samples were collected from each representative surface down to the substrate (building material).

A paint chip sample was collected with a clean stainless steel tool, placed in separate clean zip locked plastic bag and submitted for lead analysis. The paint chip samples were submitted to the Bureau Veritas laboratory in Novi, Michigan. Paint chip samples were analyzed for total lead content in accordance with the U.S. Environmental Protection Agency (EPA) Analytical Method EPA 3050B/ 7000B A copy of the laboratory report is provided in Attachment C.

Survey Results

Hazardous Building Material Survey

A total of 5 out of the 7 main categories of HBM were identified within the survey area. A detailed list of all known and potential HBM, with corresponding location and description information, is provided in Attachment A. The primary categories of HBM observed and not observed are listed below.

Hazardous Building Materials Observed:

- Suspected mercury containing building materials were observed in the form of fluorescent lighting, thermostats and gauges in the penthouse mechanical room, on levels 1 and 9.
- Suspected PCB-containing equipment was observed in all areas in the form of fluorescent lighting ballasts which do not bear any visible labeling indicating the absence of PCBs.
- The potential for waste oils were observed in relation to the abandoned compressors located in the penthouse mechanical room.
- The potential for Chlorofluorocarbons (CFCs) was present as refrigerants in the penthouse mechanical room in each office on level 9.
- Cleaners and anti-freeze (for winterizing air-handling unit cooling coils) were observed in the north penthouse mechanical room and on level 1.

Hazardous Materials Not Observed:

- **Batteries:** Include lead-acid batteries for emergency lighting, lead-cadmium uninterrupt power supply (UPS) batteries, nickel-cadmium batteries, and dry-cell batteries.
- **Low-Level Radioactive Materials:** Tritium-containing self illuminated exit signs and Americium-124 containing smoke detectors.

Lead-Based Paint Survey

Paint chip sampling results are summarized in Table 1 and are discussed in the following paragraph.

Table 1. Summary of Lead Bulk Sampling Result

Sample No.	Sample Location	Material Description	Condition	Lab Result (percent lead)	Photo Log
12289-001 Pb	Penthouse mechanical room-masonry wall	Green paint	Good	0.36	NA
12289-002 Pb	Penthouse mechanical room-AHU duct	Green paint	Good	0.34	NA
12289-003 Pb	Penthouse mechanical room-concrete floor	Grey/green paint	Good	0.065	NA
12289-004 Pb	Penthouse mechanical room-concrete floor, center	Grey paint	Good	0.053	NA
12289-005 Pb	Penthouse mechanical room-wall	White paint	Good	0.59	1
12289-006 Pb	Penthouse mechanical room-ceiling, center	White paint	Good	0.24	NA
12289-007 Pb	Penthouse mechanical room-AHU duct	White paint	Good	0.52	3
12289-008 Pb	Room A904-wall	Blue paint	Good	<0.025	NA
12289-009 Pb	Room A903-wall	Blue paint	Good	<0.018	NA
12289-010 Pb	Hall Closet A907A-wall	Beige paint	Good	0.11	NA
12289-011 Pb	Room A908-wall	Beige paint	Good	<0.022	NA
12289-012 Pb	Room A917-door frame	Beige/orange/light blue paint	Good	0.55	NA
12289-013 Pb	Room A907-door frame	Beige paint	Good	0.16	NA
12289-014 Pb	Room A907-ceiling masonry	Beige paint	Good	0.20	NA
12289-015 Pb	Room 901 A (level A)-radiator	Grey/pink paint	Good	0.19	NA
12289-016 Pb	Level 9 east end room-radiator	Dark blue paint	Good	0.16	NA

Sample No.	Sample Location	Material Description	Condition	Lab Result (percent lead)	Photo Log
12289-017 Pb	Level 1 – Adjacent room 122	Beige wall paint	Good	<0.034	NA
12289-018 Pb	Level 1 – Adjacent stair No 3 – Fire equipment cupboard	Beige paint on wall support for hydrant equipment (wood)	Good	0.56	4
12289-019 Pb	Level 1 – door frame on room 124	Brown paint	Good	0.083	NA
12289-020 Pb	Level 1 – door frame on stair No. 3	Brown with a red undercoat	Good	0.27	NA

Note: ‘Lead-based paint’ is defined as paint with a lead concentration that is equal to or greater than 0.5% by weight as defined by the EPA and the U. S. Department of Housing and Urban Development’s (HUD). Results that were determined to be lead-based paint are shown in **bold**.

The concentration of lead in the paint samples were below the lead paint threshold of 0.5% by weight with the exception of the white paint on the walls and the air-handling unit duct work in the north penthouse mechanical room, the beige with orange and blue base paint on the metal door frame of office A917 on level 9 and the beige paint on the wooden wall support in the fire hydrant equipment cupboard on level 1.

Paints that are similar to the identified lead-base paints must be assumed to be similar and managed as such (e.g, all door frames on level 9). In order to comply with the Lead In Construction Standard, 29 CFR, 1926.62, the lead paint identified items that will be disturbed as part of the renovation must be handled by personnel who have completed lead awareness training or by a licensed lead abatement contractor. The door frames and duct work must be removed with minimal disturbance to the painted surface to avoid creating airborne lead based dust above the OSHA action level. These items must be disposed as construction and demolition (C&D) debris in accordance with the Philadelphia VA Solid Waste program.

To assist with your understanding of lead based paint management Colden provides the following information. Employees must be protected from lead exposure in accordance with the OSHA Lead in Construction Standard, 29 CFR 1926.62. Copies of letters of interpretations issued by OSHA on bulk paint sampling are provided in Attachment D. Please note the following:

- OSHA does not recognize the EPA and the Department of Housing and Urban Development’s (HUD) definition of lead-based paint (paints containing lead in concentrations of 0.5 percent or greater). In a 1999 standard interpretation, OSHA states:

 “The lead-in-construction standard was intended to apply to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee

exposures depending upon the method of removal and other work place conditions. Since these conditions can vary greatly, the lead-in-construction standard was written to require monitoring or the use of historical or objective data to ensure that employee exposures do not exceed the action level.”

- In a 2003 standard interpretation regarding the use of Lead Check or Lead Alert Test Kits, OSHA states:

“OSHA does not consider any method that relies solely on the analysis of bulk materials or surface content of lead to be acceptable for safely predicting employee exposure to airborne contaminants.”

Safe work practices, as defined by the U.S. Department of Housing and Urban Development (HUD) and the U.S. Environmental Protection Agency (EPA) should be used to control exposure to these materials as part of the planned renovation work. In addition, the procedures outlined in the OSHA Lead Exposure in Construction; Interim Final Rule-Inspection and Compliance Procedures (29 CFR 1926.62), must be followed by workers performing the renovation activities, and includes the completion of lead awareness training.

Conclusions and Recommendations

The items identified as potentially regulated hazardous building materials should be segregated from general demolition debris during the building renovation activities. The materials should be recycled or disposed of in accordance with applicable federal and state regulations, as well as with Philadelphia VA Hospital Hazardous Materials Disposal requirements. Federal and State regulations that may apply include the US Environmental Protection Agency (EPA) Universal Waste Rule (40 CFR Part 273), Toxic Substances Control Act (TSCA), 40 CFR Part 761, 10 CFR Parts 30-32, and 25 PA Code (Pennsylvania Department of Environmental Protection) Chapter 266 Regulations. Packaging and off-site transport of these materials, where applicable, must comply with federal Department of Transportation requirements set forth in 49 CFR Parts 171-180.

These procedures must be performed in a manner that prevents a release of any regulated substance or waste to the surroundings. Upon removal, materials should be separately staged in designated areas in proper containment, and clearly labeled in accordance with the regulations pertaining to each waste type. As a general rule, the applicable regulations favor recycling and/or reuse of wastes over disposal or destruction, as is technologically or economically feasible. Characterization through analysis or visual description may also be warranted in order to obtain approval for transportation or acceptance at a final recycling or disposal facility.

Colden trusts that this report provides you with the information you need for your records. We would be glad to further develop a lead and HBM work plan detailing the regulatory requirements.

Please contact me at 267-567-7119 or Jim Miades at 215.240.0366 if you require any further information regarding this survey.

Prepared by:

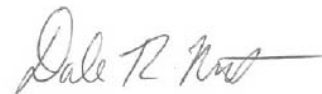
Colden Corporation



Ben Kendon - EHS Specialist
Project Manager

Reviewed by:

Colden Corporation



Dale R. Nat
Environmental Scientist
Lead Risk Assessor

Attachment A. Summary Table of Hazardous Materials
Attachment B. Photographic Log
Attachment C. Lead Paint Laboratory Report
Attachment D. OSHA Letters - Lead Exposure Interpretations
Attachment E. Figures 1 and 2 – Study Area

Attachment A

**Summary of
Hazardous Building Material**

Table 2. Hazardous Materials Summary

Room No.	HBM Category	Material Description and Quantity	Photo Log
North Penthouse Mechanical Room	Mercury and PCBs related to fluorescent light fittings	16 Bulbs and 8 light fixtures Gauges: 25 (Winters, Trerice, Colman, Weksler) Switches: 10 Note: Of these 6 pressure gauges and 3 switches appear old and are more likely to contain mercury. However, all gauges and switches must be assumed to contain mercury until proven otherwise.	5-8
	Chlorofluorocarbons (CFCs)	Compressed air drier with refrigerant R134A or R22	9
	Miscellaneous liquids, gases and powders	50 gallon drum of Ethylene Glycol (anti freeze) 50 % solution	10
Level 9	Mercury and PCBs related to fluorescent light fittings	208 Bulbs and 48 light fixtures Gauges: 3 Magnehelics Thermostats: 8 related to old fan-coil AC system	11-13
	Chlorofluorocarbons (CFCs)	A total of 10 window mounted air-conditioning units located in various offices; 1 fridge and 1 water cooler in A909A Refrigerant likely to be present in these items	14-15
Level 1	Mercury and PCBs related to fluorescent light fittings	108 Bulbs and 28 light fixtures	16
	Miscellaneous liquids, gases and powders	Cleaning agents including disinfectants (B124)	NA

Attachment B
Photographic Log



Photograph 1. White wall paint– Penthouse mechanical room – Lead-based paint: 0.59 % wt.



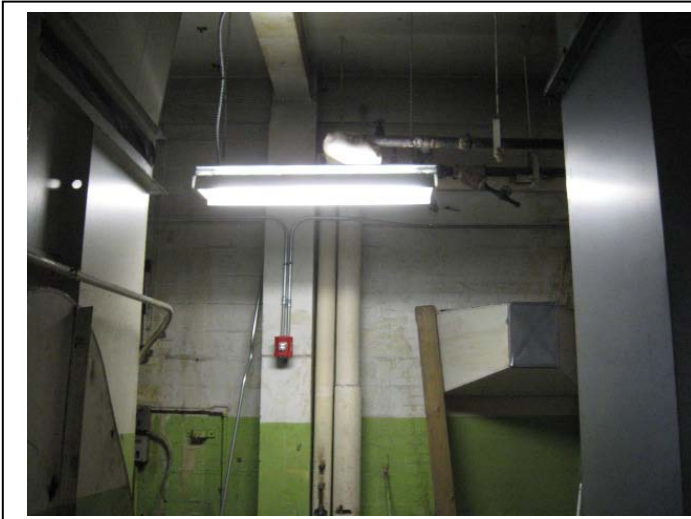
Photograph 2. White paint on duct– Penthouse mechanical room – Lead-based paint: 0.52 % wt.



Photograph 3. Beige paint – Level 9, Door metal frame – Lead-based paint: 0.55 % wt.



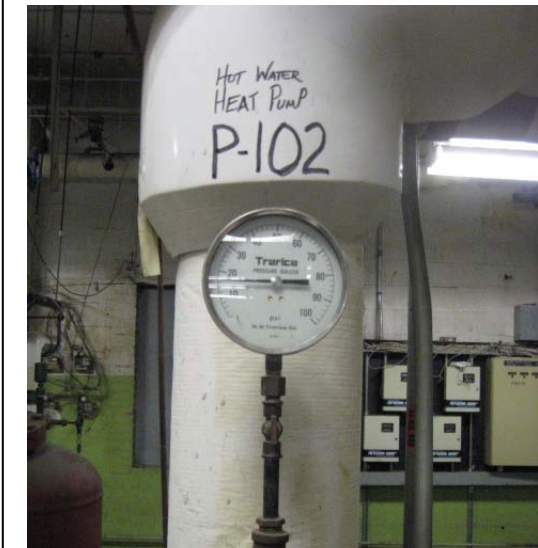
Photograph 4. Beige paint – Level 1, wood support in fire cupboard - Lead-based paint: 0.56 % wt.



Photograph 5. Florescent bulbs and ballasts – Penthouse mechanical room – HBM: Potential Mercury and PCB.



Photograph 6. Pressure gauges– Penthouse mechanical room – HBM: Potential Mercury.



Photograph 7. Pressure gauge– Penthouse mechanical room – HBM: Potential Mercury.



Photograph 8. Electrical Switches– Penthouse mechanical room – HBM: Potential Mercury.



Photograph 9. Compressed air drier – Penthouse mechanical room – HBM: Refrigerant R134A or R22



Photograph 10. 50 gallon drum of Ethylene Glycol (anti-freeze) – Penthouse mechanical room – HBM: Miscellaneous Chemicals.



Photograph 11. Florescent bulbs and ballasts – Level 9 – HBM: Potential Mercury and PCB.



Photograph 12. Air controller – Level 9 – HBM: Potential Mercury.



Photograph 13. Thermostat – Level 9 – HBM: Potential Mercury.



Photograph 14. Air-conditioner – Level 9 – HBM: CFCs related to refrigerant.



Photograph 15. Fridge – Level 9 – HBM: CFCs related to refrigerant.



Photograph 16. Florescent bulbs and ballasts – Level 1 – HBM: Mercury and PCBs.

Attachment C

Lead Paint Laboratory Report

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: cinnaminsonleadlab@emsl.com

Attn: **Ben Kendon**
Colden Corporation
1617 JFK Blvd.
Suite 1705
Philadelphia, PA 19103

Customer ID: GOLD55E
Customer PO:
Received: 04/25/12 9:56 AM
EMSL Order: 201203998

Fax:
Project: **12289 / Philadelphia VA**

Phone:

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
12289-001Pb Site: Penthouse Mech Rm-Masonry Wall Desc: Green Paint	0001	4/19/2012	4/27/2012	0.36 % wt
12289-002Pb Site: Penthouse Mech Rm-AHU Duct Desc: Green Paint	0002	4/19/2012	4/27/2012	0.34 % wt
12289-003Pb Site: Penthouse Mech Rm-Floor (Concrete) Desc: Grey/Green Paint	0003	4/19/2012	4/27/2012	0.065 % wt
12289-004Pb Site: Penthouse Mech Rm Center-Floor (Concrete) Desc: Grey Paint	0004	4/19/2012	4/27/2012	0.053 % wt
12289-005Pb Site: Penthouse Mech Rm - Wall Desc: White Paint	0005	4/19/2012	4/27/2012	0.59 % wt
12289-006Pb Site: Penthouse Mech Rm -Center-Ceiling Desc: White Paint	0006	4/19/2012	4/27/2012	0.24 % wt
12289-007Pb Site: Penthouse Mech Rm -AHU Duct Desc: White Paint	0007	4/19/2012	4/27/2012	0.52 % wt
12289-008Pb Site: Rm A904-Wall Desc: Blue Paint	0008	4/19/2012	4/27/2012	<0.025 % wt
12289-009Pb Site: Rm A903-Wall Desc: Blue Paint	0009	4/19/2012	4/27/2012	<0.018 % wt

Initial report from 04/28/2012 09:44:40

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

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

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

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: cinnaminsonleadlab@emsl.com

Attn: **Ben Kendon**
Colden Corporation
1617 JFK Blvd.
Suite 1705
Philadelphia, PA 19103

Customer ID: GOLD55E
Customer PO:
Received: 04/25/12 9:56 AM
EMSL Order: 201203998

Fax:
Project: **12289 / Philadelphia VA**

Phone:
Project: **12289 / Philadelphia VA**

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
12289-010Pb Site: Closet A907A- Wall Desc: Beige Paint	0010	4/19/2012	4/27/2012	0.11 % wt
12289-011Pb Site: Rm A908- Wall Desc: Lt. Beige Paint	0011	4/19/2012	4/27/2012	<0.022 % wt
12289-012Pb Site: Door Frame- Rm A917 Desc: Beige w/ Orange Lt.Blue Paint	0012	4/19/2012	4/27/2012	0.55 % wt
12289-013Pb Site: Door Frame- Rm A907 Desc: Beige Paint	0013	4/19/2012	4/27/2012	0.16 % wt
12289-014Pb Site: Rm A907-Ceiling Masonry Desc: Beige Paint	0014	4/19/2012	4/27/2012	0.20 % wt

Initial report from 04/28/2012 09:44:40

Julie Smith - Laboratory Director
NJ-NELAP Accredited:04653
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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10896, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01



Occupational Health, Safety &
Environmental Consultants

201203998

Lead Paint Sample Data Sheet / C.O.C.

Client Reference No/Project No.: 12289

Client: Bray Mooney Consulting Inc.

Project Name: Philadelphia VA

Date of Sample Collection: 4/19/2012

Samples Collected By: Ben Kendon

Sample I.D. No.:	Material Description:	Sample Location:	Laboratory Analysis Requested:		
			Lead Pb 80% 41%	Asbestos PLM	Asbestos TEM (NOB)
12289 - 001 Pb	Green paint on Masonry	Penthouse Mech Rm - Wall	✓		
- 002 Pb	Green paint	" " - AHU Duct	✓		
- 003 Pb	Grey/green paint	" " " - Floor (Concrete)	✓		
- 004 Pb	grey paint	" mech Rm Center - Floor "	✓		
- 005 Pb	white paint	Penthouse mech Rm - wall	✓		
- 006 Pb	white paint	Penthouse mech Rm - Center Ceiling	✓		
- 007 Pb	white paint -	Penthouse Mech Rm. AHU Duct	✓		
- 008 Pb	Blue paint -	Rm A904 - wall	✓		
- 009 Pb	" "	Rm A903 - wall	✓		
✓ - 010 Pb	Beige paint -	Ceiling A907A - wall	✓		
- 011 Pb	light beige paint -	Rm A908 - wall	✓		
- 012 Pb	Beige w/orange light blue paint	Door frame - Rm A917	✓		
- 013 Pb	Beige paint -	Door frame - Rm A907	✓		
✓ - 014 Pb	Beige paint -	Rm A907 - Ceiling Masonry	✓		

Comments: (Call Ben @ (215) 496-9237 with ANY questions) If there is a positive layer within ANY sample set PLEASE STOP at the first positive. Do not analyze ANY additional layers if there a positive layer in ANY sample set.

Kendon@Colden.com

Send INVOICE and REPORT to: Colden Corporation 1617 JFK Blvd., Suite 1705, Philadelphia, PA 19103

Email Results to: (Please email the final lab report to ONLY the checked individuals email address)

Brian Jackson ☐ Ben Kendon ☒ Chris Wesley ☐

Dale Nat ☐ William Reilly ☐ Jim Miades ☐

Laboratory Name: ~~Bureau Veritas~~ EMSL Veritas Cinnaminson NJ

Sample Analysis Turn-Around Time: 24hr 5 days

Samples Relinquished to Lab by:

Date: 4/24/2012

(Print Name)

(Signature)

Samples Received at Lab by:

Date: 4/25/12 Ex 956

(Print Name)

(Signature)

COMMENTS:

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: cinnaminsonleadlab@emsl.com

Attn: **Ben Kendon**
Colden Corporation
1617 JFK Blvd.
Suite 1705
Philadelphia, PA 19103

Customer ID: GOLD55E
Customer PO:
Received: 04/25/12 9:55 AM
EMSL Order: 201203997

Fax: Phone:
Project: **12289 / Philadelphia VA**

EMSL Proj:

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

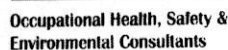
<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
12289-15Pb	0001	4/23/2012	4/27/2012	0.19 % wt
Site: Radiator Rn 901 A(level A) Desc: Grfey/Pink				
12289-16Pb	0002	4/23/2012	4/27/2012	0.16 % wt
Site: Radiator Level 9-East End Room Desc: Dark Blue				

Initial report from 04/28/2012 09:40:18

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

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

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



201203997

Client: Bray Mooney

Date of Sample Collection: 4/23/2012

Samples Collected By: Ben Kendon

[illegible]

267567 7119

Comments: (Call Ben @ (215) 496-9237 with ANY questions) If there is a positive layer within ANY sample set PLEASE STOP at the first positive. Do not analyze ANY additional layers if there a positive layer in ANY sample set.

Send INVOICE and REPORT to: **Colden Corporation 1617 JFK Blvd., Suite 1705, Philadelphia, PA 19103**

Email Results to: (Please email the final lab report to **ONLY** the checked individuals email address)

Brian Jackson ☐ Ben Kendon ☒ Chris Wesley ☐

Dale Nat ☐ William Reilly ☐ Jim Miades ☐

Laboratory Name: Bureau Veritas Cinnaminson NJ Sample Analysis Turn-Around Time: 5 days

Samples Relinquished to Lab by: B. K. Anderson

Date: 4/24/2012 (Print Name)

Samples Received at Lab by: L. V. Jones

Date: 4/25/12 9:55 PM (Print Name)

COMMENTS:

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: cinnaminsonleadlab@emsl.com

Attn: **Ben Kendon**
Colden Corporation
1617 JFK Blvd.
Suite 1705
Philadelphia, PA 19103

Customer ID: GOLD55E
Customer PO:
Received: 05/09/12 9:49 AM
EMSL Order: 201204399

Fax: Phone: (215) 496-9237
Project: **12289 / Bray Mooney Consulting Inc / 1st and 9th Floor**
Upgrade - VA Hospital Philadelphia

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
12289-17pb Site: 1st Fl. Adj. Rm 122 Desc: Paint Beige on Wall	0001	5/7/2012	5/10/2012	<0.034 % wt
12289-18pb Site: 1st Fl. Adj. Stair No. 3 (Fire Equip Closet) Desc: Paint Beige on Wall Support (Wood)	0002	5/7/2012	5/10/2012	0.56 % wt
12289-19pb Site: 1st Floor Rm 124 Door Frame Desc: Paint Brown	0003	5/7/2012	5/10/2012	0.083 % wt
12289-20pb Site: 1st Floor Exit No. 3 Door Frame Desc: Paint Brown With Red Under Coat	0004	5/7/2012	5/10/2012	0.27 % wt

Initial report from 05/10/2012 20:44:24

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

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

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**Occupational Health, Safety &
Environmental Consultants**

201204399

Lead Paint Sample Data Sheet / C.O.C.

Client Reference No/Project No.: 12289

Client: Bray Mooney Consulting Inc

Project Name: 1st and 9th Floor Upgrade - VA Hospital Philadelphia

Date of Sample Collection: 5/7/2012

Samples Collected By: Ben Kendon

[illegible]

Comments:(Call Ben @ (267) 567-7119 with ANY questions) *Lead in Paint Chips by Flame AAS (SW 846 3050B*/7000B)

Send INVOICE and REPORT to: Colden Corporation 1617 JFK Blvd., Suite 1705, Philadelphia, PA 19103

Email Results to: (Please email the final lab report to **ONLY** the checked individuals email address)

Brian Jackson ☐ Ben Kendon ☒ Chris Wesley ☐

Dale Nat ☐ William Reilly ☐ Jim Miades ☐

Laboratory Name: EMSL Cinnaminson NJ

Sample Analysis Turn-Around Time: 2 Days

Samples Relinquished to Lab by:

Ben Kender

Ben Kne

Date: 5/8/2012

(Print Name)

(Signature)

Samples Received at Lab by:

LIVERPOOL

Wolfe

Date: 5/9/12 TX

(Print Name)

(Signature)

COMMENTS:

64:6 NY 6-10112102

CHILL WINDS

Attachment D

OSHA Letters of Lead Exposure Interpretation

UNITED STATES
DEPARTMENT OF LABOR

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Standard Interpretations - Table of Contents

• Standard Number: [1926.62](#); [1926.62\(d\)](#); [1962\(d\)\(2\)](#); [1926.62\(d\)\(2\)\(i\)\(A\)](#)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

March 1, 1999

Mr. Hsin H. Chou
Project Manager
Panacea Environmental Services
7699 9th Street, Suite 102
Buena Park, California 90621

Dear Mr. Chou:

Thank you for your letter of April 22, 1998, regarding the concentration of lead in paint which triggers the lead-in-construction standard, 29 CFR 1926.62. We regret this delay in responding.

The lead-in-construction standard was intended to apply to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Since these conditions can vary greatly, the lead-in-construction standard was written to require exposure monitoring or the use of historical or objective data to ensure that employee exposures do not exceed the action level. Historical data may be applied to all construction tasks involving lead. Objective data was intended to apply to all tasks other than those listed under paragraph 1926.62(d)(2) of the standard.

OSHA does not consider X-ray fluorescence (XRF) to be an acceptable method of analysis. As stated in your letter, XRF analyzers are generally considered accurate when concentrations of lead in paint exceed 1 mg/cm². For the purposes of occupational health, these levels are considered substantial and may easily present an exposure hazard. Without having conducted monitoring, or without the benefit of historical or objective data, the employer has no assurance of the employee's exposure.

Other regulatory agencies, such as Housing and Urban Development, the Environmental Protection Agency, and the Consumer Products Safety Commission (CPSC) have designated levels of lead in paint, below which they consider the paint to be non-lead containing. The missions of these agencies differ from OSHA's, and for that reason, OSHA cannot recognize these levels as safe under workplace situations.

OSHA has recognized, however, that for certain workplace conditions, application of objective data to certain tasks listed in paragraph 1926.62(d)(2)(i)(A) may be warranted (specifically, power tool cleaning with dust collection systems, manual demolition of structures, manual scraping, and manual sanding). For these applications only, we have adopted the CPSC threshold under a very limited set of conditions.

Specifically, when a paint contains trace amounts of lead (e.g., 0.06% and below, as defined by the Consumer Products Safety Commission as non-lead containing, 16 CFR 1303), the employer may determine the concentration of lead in the air (i.e., employee exposure) by multiplying the total airborne concentration of dust times the percentage of lead in the paint. For example, if the concentration of total dust is 15 mg/m³ and the concentration of lead in paint is 0.06%, the airborne lead level will be (0.06%) x (15 mg/mm³) x (1000 µg/mg) = 9 µg/m³. Consequently, the airborne concentration of dust would have to be 50 mg/m³ before the action level of 30 µg/m³ would be reached. Arithmetically, this would read, (50 mg/m³ airborne paint) x (0.06% lead) x (1000 µg/mg) = 30 µg/m³ airborne lead.

OSHA wants to stress that this does not set 0.06% as a lower threshold for the concentration of lead in paint which would exempt the employer from the requirements of the standard. The employer must still follow all requirements of the standard and conduct an exposure assessment for the tasks involving lead. Additionally, we are not stating that the Consumer Products Safety Commission level is a "safe" concentration of lead in paint, since all tasks listed under 1926.62(d)(2) frequently entail exposures above the action level, even at extremely low concentrations of lead. We are simply stating that the application of objective data may be applied to the above-specified tasks in paragraph 1926.62(d)(2)(i)(A), under the conditions stated herein. As these are less aggressive, dust-generating methods of removal, this type of objective data may reasonably be applied.

We trust that this satisfactorily answers your concerns. If we may be of further assistance, please don't hesitate to contact the [Office of Health Enforcement] on 202-693-2190.

Sincerely,

Richard E. Fairfax
Director
Directorate of Compliance Programs

[Corrected 9/24/2008]

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• **Standard Number:** [1910.1025](#); [1926.62](#)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

July 18, 2003

Mr. Charles Hyder, CIH
28 Bartlett Drive
Schwenksville, PA 19473

Dear Mr. Hyder,

This is in response to your letter of March 4, 2003, to Mr. Richard Fairfax, Director of Enforcement Programs for the Occupational Safety and Health Administration (OSHA). You asked about the acceptability of rhodizonate-based spot test kits for determining the presence or absence of lead in paint coatings. Your letter was forwarded to the Directorate of Science, Technology and Medicine for response. You wanted to know, specifically, whether a negative finding, obtained using either the Lead Check or Lead Alert test kits, would be sufficient to conclude that lead was not present for the purpose of complying with OSHA's Lead Standards, 29 CFR 1910.1025 and/or 29 CFR 1926.62.

OSHA's mission is to provide a safe and healthful working environment for American workers. To accomplish this task in the area of occupational exposure to lead, we require the employer to perform an initial determination which requires the employer to monitor workers' exposure unless the employer has objective or historical data that can reliably demonstrate that no employee will be exposed to lead at or above the action level. OSHA's does not consider any method that relies solely on the analysis of bulk materials or surface content of lead to be acceptable for safely predicting employee exposure to airborne contaminants. Without air monitoring results or without the benefit of historical or objective data (including air sampling which clearly demonstrates that the employee cannot be exposed at or above the action level during any process, operation, or activity), as required by 29 CFR 1910.1025 or 29 CFR 1926.62, the employer cannot rule out the possibility of excess worker exposure to airborne lead.

I trust that this satisfactorily answers your concerns. If we may be of further assistance, please don't hesitate to contact [the Office of Science and Technology Assessment at (202) 693-2095].

Sincerely,

Ruth McCully
Director
Directorate of Science, Technology and Medicine

March 4, 2003

To: Mr. Richard Fairfax, Director
Directorate of Compliance Programs
U.S. Department of Labor
Occupational Safety & Health Administration
200 Constitution Avenue
Washington, D.C. 20210

From: Charles Hyder, CIH
28 Bartlett Drive
Schwenksville, PA 19473

Dear Mr. Fairfax,

Is the use of Rhodizonate-based spot test kit acceptable for determining the presence or absence of lead in a paint coating in order to comply with 29 CFR 1926.62? In 1994 the OSHA Technical Center evaluated two commercially available kits:


LEAD CHECK™ Test Kit (HybriVet System, Inc.)

LEAD ALERT™ All In One™ Professional Kit (Sensidyne)

If either of these kits (or an equivalent) are used and a negative finding for lead is made, will this be sufficient to produce a determination that lead is not present for the purpose of complying with the Standard?

Regards,

Charles Hyder, CIH

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Attachment E

Figures 1 and 2

Figure 1. Level 1 Study Area

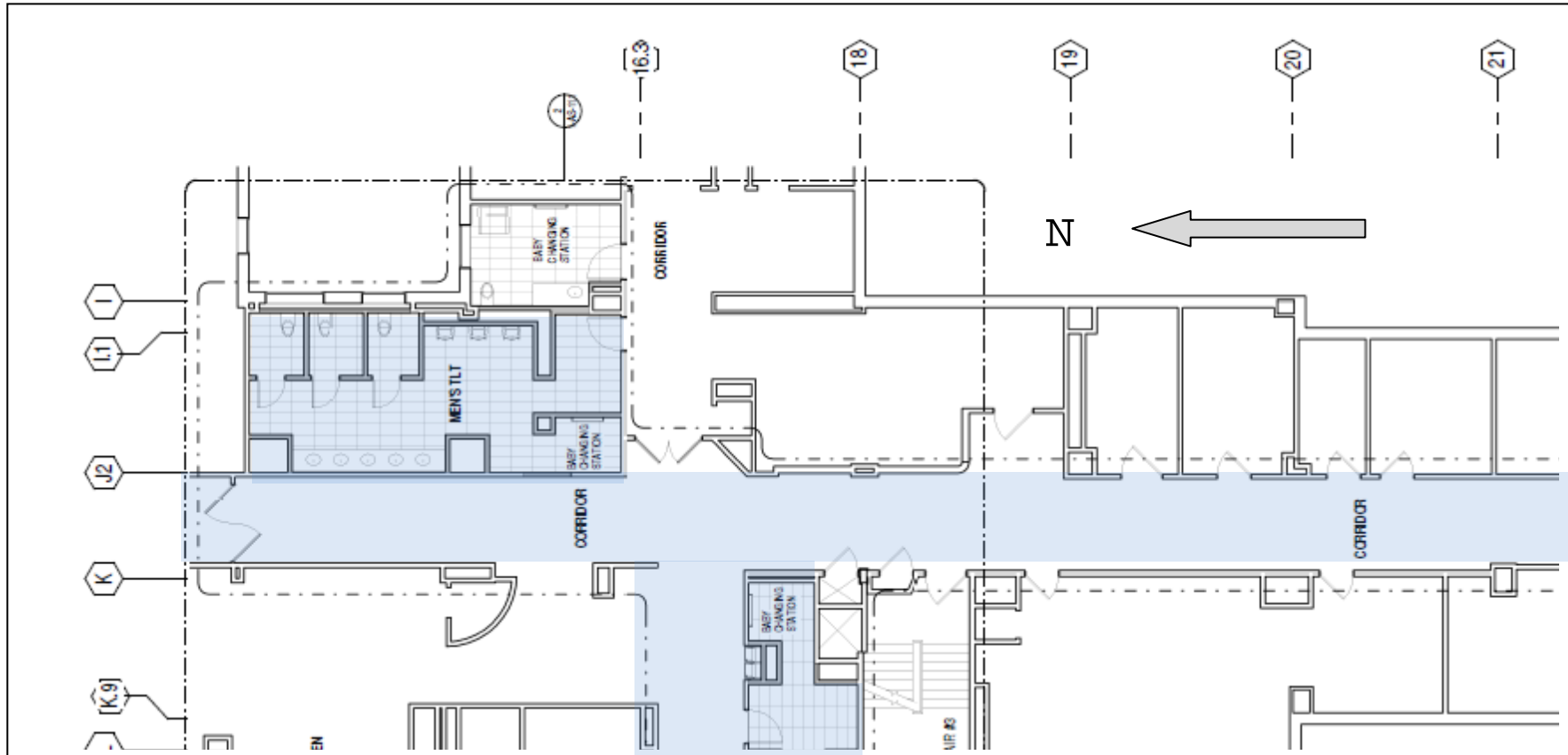


Figure 1. Level 9 Study Area

