Former National Guard Armory
Clinton, Oklahoma

Remediation Final Report

Prepared by:
Department of Environmental Quality
707 North Robinson
Oklahoma City, Oklahoma 73101

DEQ
OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
...for a clean, attractive, prosperous Oklahoma

The Oklahoma Department of Environmental Quality (DEQ) is pleased to present the City of Clinton with the Final Remediation Report for the former Clinton Armory.

DEED NOTICE

A Notice of Remediation has been filed in the county courthouse and is included in this report. It summarizes remediation performed at the former Clinton Armory and describes continuing operation and maintenance and land use restrictions. This completes the DEQ cleanup of the property. For more detail on the activities described below, see enclosed reports.

ASBESTOS REMEDIATION

DEQ and its contractors completed the following activities:

- Asbestos inspection, including:
  - Asbestos containing floor tile mastic and bedding mud
- Asbestos Abatement, including:
  - Removal of mastic
  - Removal of bedding mud

TARGETED BROWNFIELD ASSESSMENT

On July 2, 2012, DEQ provided a Phase I Targeted Brownfield Assessment to the City of Clinton. A copy of this report is available at http://www.deq.state.ok.us/lpdnew/scapIndex.htm

LEAD REMEDIATION

DEQ and its contractors completed the following activities:

- Lead-based paint (LBP) and lead dust inspection
- LBP abatement, including:
  - Scraping and sealing down spouts, window lintels and sills, overhead door frames, door guards, the IFR lintel and sill, the exterior archway, staircases, the thunderbird emblem, and walls, baseboards, trim, floors and pipes painted with LBP
  - Removal and replacement of doors and windows containing LBP
- Indoor firing range cleanup, including:
  - Lead dust cleanup: high efficiency particulate air (HEPA) vacuuming, wet washing, and sealing with appropriate sealant floors, walls, and ceiling
- HEPA vacuuming and wet washing of floors in the building

DEQ
OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

1. Deeds and Legal Documents
2. Maintenance Plan
3. Inspection Reports
4. Scope of Work
5. Final Abatement Reports
6. Confirmation Sampling

DEEDS AND LEGAL DOCUMENTS

I-2011-000357 Book 1498 Pg: 713
01/12/2011 2:11 pm Page(s) 713-714
Fee: $ 15.00 Doc: $ 0.00
Karen Fry - Custer County Clerk
State of Oklahoma

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS:

That the State of Oklahoma, acting by and through the Oklahoma Military Department by its Adjutant General, Major General Myles L. Deering, a body corporate and politic and instrumentality of the State of Oklahoma, Grantor, in consideration of the sum of One and No/100 dollars and other valuable consideration in hand paid, the receipt and sufficiency of which are hereby acknowledged, do hereby quitclaim, grant, bargain, sell and convey unto **City Clinton, Oklahoma,** Grantee, the following described real property and premises lying and situated in the Custer County, State of Oklahoma, as follows:

All of Lots Seventeen (17), Eighteen (18), Nineteen (19), Twenty (20), Twenty-one (21), Twenty-two (22), Twenty-three (23), Twenty-four (24), Twenty-five (25), Twenty-six (26) in Block 8, Lancaster's Addition to City of Clinton, Custer County, State of Oklahoma.

together with the improvements thereon and appurtenances thereunto belonging.

NOTICE: THE ABOVE DESCRIBED PROPERTY MAY HAVE BEEN CONTAMINATED WITH LEAD, ASBESTOS AND OTHER CONTAMINANTS.

TO HAVE AND TO HOLD unto the Grantee, its successors, and assigns for so long as said real property is used for a public purpose as required for this transfer in accordance with title 44, section 233.3(B) of the Oklahoma Statutes.

Signed and delivered this 4 day of January 2010.

STATE OF OKLAHOMA

By: _____
Major General Myles L. Deering,
Adjutant General of the State of Oklahoma

This Transaction is Exempt from Documentary Tax Stamps. Title 68 O.S. § 3202(11).

I-2011-000357 Book 1498 Pg 714
01/12/2011 2:11 pm Page(s) 713-714
Fee $ 15.00 Doc: $ 0.00
Karen Fry - Custer County Clerk
State of Oklahoma

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) ss
COUNTY OF OKLAHOMA)

Before me, Jennifer Meyer in and for this state, on this 4 day of January, 2011, personally appeared Major General Myles L. Deering, as Adjutant General of the State of Oklahoma, to me known to be the identical person who executed the within and foregoing Quitclaim Deed, and acknowledged to me that he executed the same as free and voluntary act and deed for the uses and purposes therein set forth.

Jennifer Meyer
Notary Public

My Commission Expires:
1/23/12

My Commission Number:
04000185

This Transaction is Exempt from Documentary Tax Stamps. Title 68 O.S. § 3202(11).

I-2014-004023 Book 1641 Pg: 420
08/01/201410:59 am Page(s) 420-422
Fee: $ 17.00 Doc: $ 0.00
Karen Fry - Custer County Clerk
State of Oklahoma

DEED NOTICE & LAND USE RESTRICTIONS

COMPLETION OF REMEDIATION
FORMER CLINTON ARMORY
CLINTON, OKLAHOMA

AFFECTED PROPERTY: The Affected Property is the former Clinton Armory located at 723 South 13th Street, City of Clinton, Custer County, Oklahoma, 73601.

(3) 12/5

The legal description is as follows:

All of lots Seventeen (17), Eighteen (18, Nineteen (19), Twenty (20), Twenty-one (21), Twenty-two (22), twenty-three (23), Twenty-four (24), Twenty-five (25) and Twenty-six (26) in Block 8, Lancaster's Addition to City of Clinton, Custer County, State of Oklahoma.

LEGAL BASIS FOR NOTICE: The Oklahoma Department of Environmental Quality (DEQ) hereby files this Notice of Remediation pursuant to Oklahoma Statutes, 27A O.S. § 2-7-123 (C). This Notice does not grant any right to any person not already allowed by law and shall not be construed to authorize or encourage any person or other legal entity to cause or increase pollution, to avoid compliance with state or federal laws and regulations regarding pollution or to escape responsibility for maintaining environmentally sound operations.

DEQ may take administrative or civil action to recover costs or to compel compliance with the Land Use Restrictions and to prevent damage to or interference with the Engineering Controls and Continuing Operation and Maintenance of said Engineering Controls herein described.

The Land Use Restrictions, Engineering Controls and Continuing Operation and Maintenance of said Engineering Controls shall apply to the Affected Property and to persons who own and/or use the Affected Property until such time as DEQ files a subsequent Notice of Remediation that changes or removes one or more of them. Activities that cause or could cause damage to the Remedy or the Engineering Controls or recontamination of soil or groundwater are prohibited.

REASON FOR NOTICE: The Affected Property was contaminated with materials that required remediation pursuant to state and federal environmental laws and regulations. Sampling performed by DEQ contractors, conducted on June 16, 2011, indicated that there was asbestos, lead-based paint, and lead dust in the building.

REMEDY: Remediation activities (Remedy) at the Affected Property included abatement of asbestos, lead-based paint and dust. The remedy was completed on April 7, 2014.

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08/01/201410:59 am Page(s) 420-422
Fee: $ 17.00 Doc: $ 0.00
Karen Fry - Custer County Clerk
State of Oklahoma

For more detailed information please refer to *Former National Guard Armory Clinton, Oklahoma Remediation Final Report.* To obtain a copy of the report, contact:

Oklahoma Department of Environmental Quality
Central Records

Mailing Address
P.O. Box 1677
Oklahoma City, Oklahoma 73101

Physical Address
707 N Robinson
Oklahoma City, OK 73102

Electronic Address
http://www.deq.state.ok.us/lpdnew/scapIndex.htm

DISCLAIMER

(A) Lead: DEQ did not test every painted surface inside and outside of the building; therefore, there is a potential for lead-based paint at the affected property.

(B) Asbestos: DEQ did not test all building materials inside and outside of the building; therefore, there is a potential for asbestos at the affected property.

CONTINUING OPERATION, MAINTENANCE AND MONITORING

(A) Lead-based paint encapsulant: Lead-based paint encapsulant was applied over lead-based paint on non-friction surfaces. These areas should be periodically inspected and maintained as appropriate.

(B) Sealant: Following cleanup, sealant was applied to the Indoor Firing Range (IFR) and room floors where lead-based paint abatement was performed. Sealant should be inspected on a periodic basis and maintained as appropriate.

(A) LAND USE RESTRICTIONS: The land use restrictions are applicable to the IFR. The IFR is located below grade along the east side of the building. The entrance to the IFR is a stairway located in the northeast corner of the building. The land use restrictions for the IFR are:

a. No residential, daily care, pre K-12 schools, or edible agriculture uses.

b. No residential use, as defined by US Housing and Urban Development, of the IFR by children age 6 or under. Residential use is defined as having a child present at the Affected Property for more than sixteen (16) hours within one twenty-four (24) hour period.

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Fee: $ 17.00 Doc: $ 0.00
Karen Fry - Custer County Clerk
State of Oklahoma

CHANGING LAND USE RESTRICTIONS: Changes to land use restrictions must be approved by DEQ or its successor agency. The person requesting the change in land use must demonstrate to DEQ's satisfaction that contamination at the site has reached levels appropriate for the proposed new land uses and that further remediation is not necessary or that additional institutional or engineering controls are adequate to achieve levels protective of human health and the environment for the proposed uses.

DEQ may require oversight costs, work plans, sampling, reports, and public participation as part of its review of the new information to support the requested change in land use restrictions. The person requesting the change will be required to follow agency procedures effective at the time of the request.

DEQ at its discretion may determine, based on the new information submitted, that contaminants are present at the Site at levels that will not pose a risk to human health or the environment if the new land use restrictions being requested are allowed. Upon making this determination, DEQ will file a recordable notice of remediation pursuant to state law in the land records in the in the office of the county clerk where the Site is located designating the new land use restrictions.

This Notice of Remediation and the restrictions and requirements contained herein run with the land and no change of ownership of the Affected Property will change the Land Use Restrictions.

Scott A. Thompson, Executive Director
Oklahoma Department of Environmental Quality

7-29-14
Date

ACKNOWLEDGMENT

STATE OF OKLAHOMA
COUNTY OF OKLAHOMA

Before me, a Notary Public, in and for said County and State, on this 29th day of July, 2014, personally appeared Scott A. Thompson to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that executed the same as free and voluntary act and deed for the uses and purposed therein set forth. In Testimony Whereof, I have hereunto set my hand and official seal the day and year above written.

My Commission expires:
January 17, 2016.

Notary Public

NOTARY PUBLIC SEAL
TERESA MCPHERSON
Notary Public
State of Oklahoma
Commission # 02000751 Expires 01/17/16

MAINTENANCE PLAN

MAINTENANCE PLAN
FORMER CLINTON ARMORY
CLINTON, OKLAHOMA

The Armory located at 723 South 13th Street, Clinton, Oklahoma, was contaminated with materials that required remediation pursuant to State and Federal environmental laws and regulations. Please refer to Attachment 1 for land use restrictions. Sampling performed by DEQ contractors, conducted on June 15, 2011, indicated that there was asbestos, lead-based paint, and lead dust in the building. Remediation activities at the Affected Property included abatement of asbestos, lead-based paint, and lead dust. The remedy was completed on 4/7/2014. The following maintenance plan is to be completed by the owner of the Affected Property. DEQ recommends inspection of remediated areas every 5 years. During site inspections the owner should note any signs of disrepair or improper maintenance. Continuing operation, maintenance and monitoring should include:

1. Firing Range – Walls, floor and ceiling of indoor firing range were cleaned and sealed with acrylic sealant to remediate surfaces below 40µg/SF for lead. These surfaces need to be resealed if acrylic sealant shows signs of deterioration, damage, or flaking.
2. All window lintels, interior and exterior window sills, down spouts, and overhead door frames, guards, and casings were scraped and encapsulated with lead-based paint encapsulant. These surfaces need to be re-encapsulated if lead-based paint encapsulant shows signs of deterioration, damage, or flaking.
3. The IFR vent fan lintel and sill, the exterior Side A red archway, the walls, ceiling, and metal frame opening to the shower in Room 2, all walls in Room 16, the red squares on the walls in Room 15, all walls and baseboards in Room 13, the white painted wall trim on Side D of Room 7, and the red and yellow thunderbird wall emblem in Room 7 were scraped and encapsulated with lead-based paint encapsulant. These surfaces need to be re-encapsulated if lead-based paint encapsulant shows signs of deterioration, damage, or flaking. See Attachment 2 for Clinton Armory Floor Plan Map.
4. The floors of Room 16, all sides of steps of both staircases in Room 7, and the floor and small metal pipe on floor of Room 13 were cleaned and sealed with epoxy sealant to remediate surfaces below 40µg/SF for lead. These surfaces need to be resealed if acrylic sealant shows signs of deterioration, damage, or flaking. See Attachment 2 for Clinton Armory Floor Plan Map.

Note – A list of DEQ approved acrylic sealant and elastomeric encapsulants is attached (Attachment 3). DEQ did not test every painted surface and all building materials inside and outside of the building, therefore there is a potential for lead-based paint and asbestos at the affected property.

If you have any questions or concerns feel free to contact me at (405) 702-5112.

Sincerely,

Brittany Downs
Environmental Programs Specialist
DEQ Land Protection Division
Site Cleanup Assistance Program

ATTACHMENT 1

Land use Restrictions

LAND USE RESTRICTIONS: The land use restrictions at the above-described Affected Property are:

a. No residential, daily care, pre K-12 schools, or edible agriculture uses of the Indoor Firing Range.

b. No residential use of the Indoor Firing Range by children age 6 or under. Residential use is defined as having a child present at the Affected Property for more than sixteen (16) hours within one twenty-four (24) hour period.

ATTACHMENT 2

Floor Plan Map

Labeled areas represent walls and floors with encapsulant and/or sealant.

ATTACHMENT 3

DEQ Approved Sealants and Encapsulants List

Acrylic Sealant approved by DEQ

KM-669 Acrylic

Lead-Based Paint Encapsulants approved by DEQ

Encapsulant Manufacturer	Encapsulant Product(s)
Coronado Paint Company	LEAD BLOCK™
Dumond Chemicals	LEAD STOP™
Dynacraft Industries, Inc.	Back to Nature Protect-A-Coat
Encap Systems Corporation	EncapSeal™ I
Encap Systems Corporation	EncapSeal™ II
Fiberlock Technologies, Inc.	Child GUARD interior/exterior
Fiberlock Technologies, Inc.	L-B-C® Type III
Global Encasement, Inc.	LeadLock™
Grace Construction Products	Lead Seal®
Grace Construction Products	Barrier Coat® II
Insl-x Products Corporation	INSL-CAP™
SAFE Encasement Systems	SE-120 Protective Skin
Specification Chemicals, Inc.	NU-WAL® #2500 Coating

INSPECTION REPORTS

CLINTON ARMORY

723 South 13th Street
Clinton, Oklahoma 73601

06-15-11

Asbestos Inspection
DCS Contract Number: ID11070-5

Prepared For:

Oklahoma Department of Environmental Quality

Land Protection Division

707 North Robinson

Oklahoma City, Oklahoma 73102

Prepared By:

Marshall Environmental Management, Inc.

1601 Southwest 89th Street, Suite A-100

Oklahoma City, Oklahoma 73159

Phone: 405.616.0401

Email: marshenv@swbell.net

TABLE OF CONTENTS

CERTIFICATION

This is to certify that, on June 15, 2011 Marshall Environmental Management, Inc was contracted by the State of Oklahoma, Department of Central Services to conduct an Asbestos Inspection of the Clinton Armory, located at 723 South 13th Street in Clinton, Oklahoma, for the State of Oklahoma Department of Environmental Quality, Land Protection Division. This Asbestos Inspection was performed by a licensed, Oklahoma Department of Labor, Asbestos Hazard Emergency Response Act Inspector Jamie Marshall, representative of Marshall Environmental Management, Inc, under the direction of a licensed, Oklahoma Department of Labor, Asbestos Hazard Emergency Response Act Management Planner Dr. Charles L. Marshall Certified Industrial Hygienist and President of Marshall Environmental Management, Inc. The findings and analytical data resulting from this Asbestos Inspection are believed to accurately, depict the condition(s) and location(s) of material(s) that contain asbestos on the date this Inspection was conducted.

10-13-11

Dr. Charles L. Marshall, CIH, CSP — ***Date***

Certified Industrial Hygienist - Comprehensive Practice Certification		***#4489***
Certified Safety Professional - Comprehensive Practice Certification		***#9941***
Registered Professional Environmental Specialist - State Department of Health		***#710***
Certified Hazardous Materials Manager, Master Level Certification		***#1909***
Certified Healthcare Safety Professional, Master Level Certification		***#521***
EPA AHERA Certifications	***Asbestos Inspector***	***#400517***
	Management Planner	***#500396***
	Project Designer	***#2415***
ODOL License	***Project Designer***	***#OKMP-0028***
	Management Planner	***#OKMP-0246***
	Asbestos Inspector	***#OK-150343***

10-13-11

Jamie Marshall, B.S., Industrial Hygiene Associate — **Date**

ODOL License	***Asbestos Inspector***	***#OK-158090***

LABORATORY ANALYSIS PERFORMED BY

Marshall Environmental Management, Incorporated
1601 Southwest 89th Street, A-100
Oklahoma City, OK 73159

CLINTON ARMORY

ASBESTOS INSPECTION

EXECUTIVE SUMMARY

On June 15, 2011, Marshall Environmental Management, Inc. (MEM) completed an Asbestos Inspection of the Clinton Armory so a strategy, which follows the regulations set forth by the Environmental Protection Agency (EPA), may be prepared for the management and/or abatement of Asbestos Containing Materials (ACM) if present. As such, the analytical results correlating with the samples that were collected as part of this Asbestos Inspection identified the presence of asbestos containing floor-tile mastic in rooms one, two and three in addition to asbestos containing bedding-mud in room three. Asbestos containing homogenous materials (i.e. suspected ACM that are uniform in color and texture and believed to be applied during the same period) include the aforementioned areas that were sampled and analyzed. It should be noted that the Indoor Firing Range (IFR) was not accessible at the time of this Inspection.

The asbestos concentrations identified in the floor-tile mastic were greater than one percent (>1%). Furthermore, the asbestos containing floor-tile mastic is considered non-friable, that which cannot be rendered to a powder by hand pressure, and is therefore categorized as a "Category I Non-Friable" ACM. Although asbestos containing floor-tile mastic exists within the Armory, no action is required as long as the material remains in good condition and undisturbed. If the floor-tile mastic remains undisturbed and in good condition, an Asbestos Management Plan should be written, by a licensed Oklahoma Department of Labor (ODOL) Management Planner, for the purpose of preventing or assisting with activities that could disturb this ACM. However, the floor-tile mastic must be abated should any activities have the potential to render this material friable. Even though the abatement of the floor-tile mastic is not regulated by the ODOL, an Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of this material to make certain that Occupational Safety and Health Administration (OSHA) and EPA compliant methods are utilized.

Since the asbestos concentrations detected in the bedding-mud are >1% and because this material is considered friable the bedding-mud is classified as a "Regulated" ACM. Therefore, as required by EPA regulations to ensure that OSHA and EPA compliant methods are utilized the abatement and disposal of this material is required to be treated as a regulated response action, which must be accomplished by a licensed ODOL Asbestos Abatement Contractor. Moreover, given that the abatement of the bedding-mud will require more than one "Glove-bag" containment a Project Design must be written by a licensed Project Designer and submitted to the ODOL for approval.

Lastly, a National Emission Standard for Hazardous Air Pollutants (NESHAP) notification must be submitted to the Oklahoma Department of Environmental Quality (ODEQ) ten business days preceding the initiation of renovation and/or demolition activities where ACM are present in quantities that meet or exceed 160-square feet (ft^2), 260-linear ft or 35-cubic ft (ft^3). The remainder of this Report is comprised of the Sampling Strategy and Methodology, Observations and Findings, Asbestos Response Actions, the Regulatory Review, Limitations of the Survey and the Appendix to this Report.

SAMPLING STRATEGY AND METHODOLOGY

Each accessible area throughout the Armory was systematically inspected in order to collect samples of building materials suspected of containing asbestos. The sample collection process thoroughly documents the location, condition, classification and the estimated quantity of material(s) suspected of containing asbestos. Suspect ACM that are uniform in color and texture and believed to be applied during the same period are described as "Homogenous." A specified number of samples are collected from a homogenous material and if laboratory analyses determine that the material contains asbestos, the entirety of the homogenous material is considered asbestos containing. The following are examples of the types of materials that were visually inspected and sampled during this Asbestos Inspection:

Surfacing Materials

- Examples include but are not limited to blown on or troweled on surfacing material commonly observed on ceilings, walls or structural steel.

Thermal System Insulation (TSI)

- Examples include but are not limited to insulation on piping, thermal process or Heating Ventilation and Air Conditioning (HVAC) equipment and components.

Miscellaneous Materials

- Examples include but are not limited to floor and ceiling tiles, mastics, vinyl sheet-flooring, wallboard, wallboard-tape and mud or joint compounds.

"Asbestos Containing Materials" are any materials, which consist of greater than one percent (>1%) asbestos as defined by the EPA Approved Analytical Method: 40 Code of Federal Regulations (CFR) Chapter I, Part 763, Subpart F, Appendix C, referred to as "*Interim Method for determination of Asbestos in Bulk Insulation Samples*," using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982. Each sample collected was submitted for analysis in accordance with the EPA authorized Method: 600 49 CFR Part 61 Subpart M, Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) Rules.

OBSERVATIONS AND FINDINGS

The Clinton Armory is a one-story structure with a basement (i.e. IFR), a brick façade and a flat roof that was constructed on a concrete slab circa 1938. The laboratory analysis associated with the samples that were collected detected asbestos containing floor-tile mastic in rooms one, two and three as well as asbestos containing bedding-mud in room three. Approximately 484-ft^2 of asbestos containing floor-tile mastic and 160-ft^2 of bedding-mud were identified. Asbestos containing homogenous materials include the areas that were sampled and analyzed. Correlating chain of custody forms and the laboratory analysis are provided for your records in the Appendix to this Report. Table I summarizes the sampling location and description of the ACM, the type of asbestos and percent detected and the type and condition of the material. Tables II and III reflect the homogenous locations and quantities of the respective ACM.

TABLE I: SUMMARY OF ASBESTOS CONTAINING MATERIALS

SAMPLE	SAMPLE LOCATION	SAMPLE DESCRIPTION	ASBESTOS TYPE	%	MATERIAL TYPE	CONDITION
0062-07	ROOM 1	BLACK FLOOR-TILE MASTIC	CHRYSOTILE	08%	MISCELLANEOUS	GOOD
0062-08	ROOM 2	BLACK FLOOR-TILE MASTIC	CHRYSOTILE	08%	MISCELLANEOUS	GOOD
0062-09	ROOM 3	BLACK FLOOR-TILE MASTIC	CHRYSOTILE	08%	MISCELLANEOUS	GOOD
0062-29	ROOM 3	BEDDING-MUD	CHRYSOTILE	04%	MISCELLANEOUS	GOOD

TABLE II: ASBESTOS CONTAINING FLOOR TILE & FLOOR-TILE MASTIC

SAMPLE LOCATION	SAMPLE DESCRIPTION	INDIVIDUAL QUANTITY
ROOM 1	BLACK FLOOR-TILE MASTIC	240-ft^2
ROOM 2	BLACK FLOOR-TILE MASTIC	64-ft^2
ROOM 3	BLACK FLOOR-TILE MASTIC	180-ft^2
	TOTAL QUANTITIES	484-ft^2

TABLE III: ASBESTOS CONTAINING BEDDING-MUD

SAMPLE LOCATION	SAMPLE DESCRIPTION	INDIVIDUAL QUANTITY
ROOM 3	BEDDING-MUD	160-ft^2
	TOTAL QUANTITIES	160-ft^2

ASBESTOS RESPONSE ACTIONS

CATEGORY I NON-FRIABLE ACM

- Although asbestos containing floor-tile mastic exists within the Armory no action is required as long as this material remains undisturbed and in good condition
- If the asbestos containing floor-tile mastic remains in the Armory an Asbestos Management Plan is recommended to be in place
- The asbestos containing floor-tile mastic must be abated should any activities have the potential to render this material friable
- Recommendations will suggest that an ODOL, licensed Asbestos Abatement Contractor carryout the abatement of the asbestos containing floor-tile mastic
- A NESHAP notification must be submitted to the ODEQ ten business days preceding the initiation of renovation and/or demolition activities where asbestos containing materials are present in quantities that meet or exceed 160-ft^2, 260-linear ft or 35-ft^3

REGULATED ACM

- Although regulated, asbestos containing bedding-mud exists within the Armory no action is required as long as this materials remains undisturbed and in good condition
- If the regulated, asbestos containing bedding-mud remains in the Armory an Asbestos Management Plan is recommended to be in place
- The regulated, asbestos containing bedding-mud must be abated should any activities have the potential to disturb this friable material
- The abatement and disposal of the regulated, asbestos containing bedding-mud is required to be treated as a regulated response action, which must be accomplished by a licensed ODOL Asbestos Abatement Contractor
- Due to the quantities of regulated, asbestos containing bedding-mud a Project Design must be submitted to and approved by the ODOL prior to the commencement of abatement activities
- A NESHAP notification must be submitted to the ODEQ ten business days preceding the initiation of renovation and/or demolition activities where asbestos containing materials are present in quantities that meet or exceed 160-ft^2, 260-linear ft or 35-ft^3

REGULATORY REVIEW

Prior to 1980 asbestos was commonly utilized during construction in addition to being found in various building materials. In 1994, Occupational Safety and Health Administration (OSHA) required employers to identify ACM in pre-1980 construction as part of its Standard for Occupational Exposure to Asbestos in Construction (29 CFR 1926.1101), this OSHA standard covers maintenance, repair and removal functions involving ACM or Presumed ACM (PACM). Without Asbestos Inspections, owners and/or operators must treat suspected ACM as asbestos. The EPA and the Oklahoma Department of Labor (ODOL) define an ACM as any material that contains concentrations of asbestos >1%.

The ODOL regulates the Hazard Communication requirements for public employees as part of the ODOL Public Employees Occupational Safety and Health (PEOSH) Program. The State of Oklahoma Hazard Communication Standard (HAZCOM), revised as of August 2006, is provided in the Oklahoma Asbestos Control Act (OAC) 380 Chapter 45: http://www.ok.gov/odol/documents/Asbestos_law_rules.pdf

Specific provisions of the OAC Standard (45-15-1) address asbestos notifications and labeling requirements. The labeling requirements specify that pipe insulation and various equipment insulation that contains asbestos as well as rooms where asbestos is present be identified with an Asbestos Warning Label. The asbestos warning labels are to be readily visible and include the following warning:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID BREATHING DUST

CANCER AND LUNG DISEASE HAZARD

Section 380:45-15-2 requires a notice to employees when ACM are used in acoustical materials on ceilings and walls this type of ACM is referred to as Surfacing Material.

The EPA requires asbestos inspections in school buildings in grades K through 12 as part of the Asbestos Hazard Emergency Response Act (AHERA), which is authorized in 40 CFR 763.6. If asbestos is present within School Facilities grades K-12 an Asbestos Management Plan is required by the Local Educational Authority (LEA) to be in place.

The AHERA sampling protocol addresses the systematic sample collection of all forms of ACM in addition to categorizing ACM materials as friable, that which can be rendered to a powder by hand pressure, Category I or II non-friable. The AHERA Inspection must also evaluate the condition and the potential for disturbance of ACM.

In addition to AHERA, the EPA also regulates commercial asbestos abatement activities. A NESHAP notification must be submitted to the ODEQ 10-business day prior to the abatement of ACM whenever the quantities meet or exceed 160-square feet, 260-linear feet or 35-cubic feet. Instruction regarding NESHAP notification requirements and ODEQ compliance are provided on the DEQ website at:
http://www.deq.state.ok.us/aqdnew/asbestos/index.htm

Land disposal requirements are also regulated by the EPA through State Landfill Permits. These efforts are now administered by the ODEQ Air Quality and Land Protection regulations. The ODEQ requires the advance filing of a

NESHAP notification when any demolition or renovation activities take place. The NESHAP notification process tracks abated ACM to an ODEQ approved landfill on a project-by-project basis.

The ODOL Asbestos Division regulates Asbestos Abatement by implementing the rules that govern the abatement of friable ACM. Under the ODOL asbestos rule, OAC 380:50, only adequately licensed Contractors can perform asbestos abatement, develop management plans and project designs. All abatement supervisors, abatement workers and asbestos inspectors must be licensed by the ODOL. The ODOL Rules are available on the ODOL web site at: http://www.ok.gov/odol/

LIMITATIONS OF SURVEY

This Asbestos Inspection was limited to certain aspects of the building construction these limitations may have restricted or prevented the complete inspection of hidden or inaccessible building materials; therefore, inaccessible building materials were not inspected. Furthermore, locations presenting a hazard to bystanders or the Inspector were not assessed.

The findings resulting from this Inspection are valid as of the date this Asbestos Inspection was performed; however, changes in the conditions of a property may certainly occur with the passage of time whether due to natural processes or the works of man. Additionally, changes in applicable or appropriate standards may also occur possibly resulting from legislation or the expansion of knowledge.

Our Investigation was conducted using the degree of care and skill ordinarily exercised by professional consultants under similar circumstances practicing in this or similar localities. Professional services have been performed; results associated with this Asbestos Inspection were obtained and reported in accordance with generally accepted principles and practices. No other representations either expressed or implied are made; thus, Marshall Environmental Management, Inc. is not responsible for independent conclusions, opinions, or recommendations made by others. It should also be noted that as-built plans were not available for review or use in the planning of this Asbestos Inspection.

APPENDIX

CHAIN OF CUSTODY & ANALYTICAL RESULTS

LICENSES

FLOOR PLAN DIAGRAM

DIGITAL PHOTOGRAPHS

1601 SW 89th St. Ste. A-100
Oklahoma City, OK 73159

Marshall Environmental Management, Inc.
Chain Of Custody

Phone: (405) 616-0401
Fax: (405) 681-6753
marshenv@swbell.net

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	**Client/Company**	State of Oklahoma Department of Central Services Construction & Properties Division	**Client/Company**	State of Oklahoma Department of Environmental Quality Land Protection Division
Project Name	Clinton Armory Asbestos Inspection	**Attention**	Cindy Melton	**Attention**	Dustin Davidson
Project Address	723 South 13th Street Clinton, OK 73601	**Invoice To Address**	P.O. Box 53448 Oklahoma City, OK 73102	**Report To Address**	P.O. Box 1677 Oklahoma City, OK 73102
Site Contact	Wade Anders	**Phone Number**	405-522-4805	**Phone Number**	405-702-5115
Phone Number		**Fax Number**	405-522-0051	**Fax Number**	
Mobile Number	580-445-7799	**Mobile Number**		**Mobile Number**	
email		**E-mail Address**	cindy.melton@dcs.state.ok.us	**E-mail Address**	dustin.davidson@deq.ok.gov

Lab Id	Sample Date	Field Id	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-NW Corner)	Sample Matrix	Sample Media	Sample Condition	Volume/ Area	Unit	Analysis/ Parameters
0062	06/15/11	PLM-01	WHITE 12X12 FLOOR TILE	ROOM 1 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-02	YELLOW MASTIC	ROOM 1 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-03	WHITE 12X12 FLOOR TILE	ROOM 2 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-04	YELLOW MASTIC	ROOM 2 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-05	WHITE 12X12 FLOOR TILE	ROOM 3 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-06	YELLOW MASTIC	ROOM 3 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-07	BLACK MASTIC	ROOM 1 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-08	BLACK MASTIC	ROOM 2 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-09	BLACK MASTIC	ROOM 3 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-10	WHITE 12X12 FLOOR TILE	ROOM 20 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION

Collected By	JAMIE MARSHALL	(print)	Date	6/15/2011	Relinquished By	N/A	(print)	Date	
		(signature)	Time	17:00		N/A	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

Turn-Around-Time			Condition Upon Receipt	ACCEPTABLE	Method of Shipment	FED EX
X	Standard	5-7 Business Days				
	Rush	Next Day				
	Immediate	Same Day	Sample Notes	N/A		

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid					

1601 SW 89th St. Ste. A-100
Oklahoma City, OK 73159

Marshall Environmental Management, Inc.
Chain Of Custody

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Fax: (405) 681-6753
marshenv@swbell.net

PROJECT INFORMATION	
Project Identification	0084-AB-061511
Project Name	Clinton Armory Asbestos Inspection
Project Address	723 South 13th Street Clinton, OK 73601
Site Contact	Wade Anders
Phone Number	
Mobile Number	580-445-7799
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Cindy Melton
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4805
Fax Number	405-522-0051
Mobile Number	
E-mail Address	cindy_melton@dcs.state.ok.us

REPORT TO	
Client/Company	State of Oklahoma Department of Environmental Quality Land Protection Division
Attention	Dustin Davidson
Report To Address	P.O. Box 1677 Oklahoma City, OK 73102
Phone Number	405-702-5115
Fax Number	
Mobile Number	
E-mail Address	dustin.davidson@deq.ok.gov

Lab Id	Sample Date	Field Id	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-N/W Corner)	Sample Matrix	Sample Media	Sample Condition	Volume/ Area	Unit	Analysis/ Parameters
0062	06/15/11	PLM-11	YELLOW MASTIC	ROOM 20 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-12	WHITE 12X12 FLOOR TILE	ROOM 21 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-13	YELLOW MASTIC	ROOM 21 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-14	WHITE 12X12 FLOOR TILE	ROOM 22 UNDER CARPET	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-15	YELLOW MASTIC	ROOM 22 UNDER FLOOR TILE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-16	CEILING TILE	ROOM 1	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-17	CEILING TILE	ROOM 3	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-18	CEILING TILE	ROOM 20	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-19	DRYWALL	ROOM 18	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-20	SURFACING MATERIAL	ROOM 20 ON WALL	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION

Collected By	JAMIE MARSHALL	(print)	Date	6/15/2011	Relinquished By	N/A	(print)	Date	
		(signature)	Time	17:00		N/A	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

Turn-Around-Time		
X	Standard	5-7 Business Days
	Rush	Next Day
	Immediate	Same Day

Condition Upon Receipt	ACCEPTABLE
Method of Shipment	FED EX
Sample Notes	N/A

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid					

Page 2 of 4

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Chain Of Custody

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marshenv@swbell.net

PROJECT INFORMATION	
Project Identification	0084-AB-061511
Project Name	Clinton Armory Asbestos Inspection
Project Address	723 South 13th Street Clinton, OK 73601
Site Contact	Wade Anders
Phone Number	
Mobile Number	580-445-7799
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Cindy Melton
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4805
Fax Number	405-522-0051
Mobile Number	
E-mail Address	cindy.melton@dcs.state.ok.us

REPORT TO	
Client/Company	State of Oklahoma Department of Environmental Quality Land Protection Division
Attention	Dustin Davidson
Report To Address	P.O. Box 1677 Oklahoma City, OK 73102
Phone Number	405-702-5115
Fax Number	
Mobile Number	
E-mail Address	dustin.davidson@deq.ok.gov

Lab Id	Sample Date	Field Id	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-NW Corner)	Sample Matrix	Sample Media	Sample Condition	Volume/ Area	Unit	Analysis/ Parameters
0062	06/15/11	PLM-21	COVE BASE	ROOM 20	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-22	YELLOW MASTIC	ROOM 20 BEHIND COVE BASE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-23	COVE BASE	ROOM 24	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-24	YELLOW MASTIC	ROOM 24 BEHIND COVE BASE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-25	COVE BASE	ROOM 26	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-26	YELLOW MASTIC	ROOM 26 BEHIND COVE BASE	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-27	DRYWALL	ROOM 3	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-28	BEDDING-TAPE	ROOM 3	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-29	BEDDING-MUD	ROOM 3	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-30	DRYWALL	ROOM 4	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION

Collected By	JAMIE MARSHALL	(print)	Date	6/15/2011	Relinquished By	N/A	(print)	Date	
		(signature)	Time	17:00		N/A	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

Turn-Around-Time		
X	Standard	5-7 Business Days
	Rush	Next Day
	Immediate	Same Day

Condition Upon Receipt	ACCEPTABLE
Method of Shipment	FED EX
Sample Notes	N/A

Matrix	Media				
	MV	MP	ST	SW	TL
Air	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Aqueous					
Bulk					
Sludge					
Soil					
Solid					

Page 3 of 4

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PROJECT INFORMATION	
Project Identification	0084-AB-061511
Project Name	Clinton Armory Asbestos Inspection
Project Address	723 South 13th Street Clinton, OK 73601
Site Contact	Wade Anders
Phone Number	
Mobile Number	580-445-7799
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Cindy Melton
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4805
Fax Number	405-522-0051
Mobile Number	
E-mail Address	cindy.melton@dcs.state.ok.us

REPORT TO	
Client/Company	State of Oklahoma Department of Environmental Quality Land Protection Division
Attention	Dustin Davidson
Report To Address	P.O. Box 1677 Oklahoma City, OK 73102
Phone Number	405-702-5115
Fax Number	
Mobile Number	
E-mail Address	dustin.davidson@deq.ok.gov

Lab Id	Sample Date	Field Id	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-NW Corner)	Sample Matrix	Sample Media	Sample Condition	Volume/ Area	Unit	Analysis/ Parameters
0062	06/15/11	PLM-31	BEDDING-TAPE	ROOM 4	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-32	BEDDING-MUD	ROOM 4	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-33	SURFACING MATERIAL	ROOM 4 ON WALL	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-34	CEILING TILE	ROOM 18	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-35	CEILING TILE	ROOM 21	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-36	CEILING TILE	ROOM 22	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-37	WINDOW CAULK	EXTERIOR EAST	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-38	WINDOW CAULK	EXTERIOR WEST	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-39	WINDOW CAULK	EXTERIOR SOUTH	BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION
0062	06/15/11	PLM-40			BULK	N/A	GOOD	N/A	N/A	PLM ANALYSIS ASBESTOS IDENTIFICATION

Collected By	JAMIE MARSHALL	(print)	Date	6/15/2011	Relinquished By	N/A	(print)	Date	
		(signature)	Time	17:00		N/A	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

Turn-Around-Time					
X	Standard	5-7 Business Days	Condition Upon Receipt	ACCEPTABLE	Method of Shipment: FED EX
	Rush	Next Day			
	Immediate	Same Day	Sample Notes	N/A	

Matrix	Media				
	MV	MP	ST	SW	TL
Air	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Aqueous					
Bulk					
Sludge					
Soil					
Solid					

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

1601 Southwest 890th Street, Suite A-100
Oklahoma City, OK 73159
Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	Client	State of Oklahoma Department of Central Services	Client	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	Attention	Cindy Melton Administrative Programs Director	Attention	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	Phone	405-522-4805	Phone	405-702-5115
Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy_melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0062-061511-PLM-01	June 15, 2001	White 12x12 Floor Tile Room 1 Under Carpet	COLOR CONDITION TYPE NOTE	White Good Miscellaneous		100%	Vinyl Aggregate
0062-061511-PLM-02	June 15, 2001	Yellow Mastic Room 1 Under Floor Tile	COLOR CONDITION TYPE NOTE	Yellow Good Miscellaneous		100%	Adhesive
0062-061511-PLM-03	June 15, 2001	White 12x12 Floor Tile Room 2 Under Carpet	COLOR CONDITION TYPE NOTE	White Good Miscellaneous		100%	Vinyl Aggregate
0062-061511-PLM-04	June 15, 2001	Yellow Mastic Room 2 Under Floor Tile	COLOR CONDITION TYPE NOTE	Yellow Good Miscellaneous		100%	Adhesive
0062-061511-PLM-05	June 15, 2001	White 12x12 Floor Tile Room 3 Under Carpet	COLOR CONDITION TYPE NOTE	White Good Miscellaneous		100%	Vinyl Aggregate

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

Lab Accreditation:
AIHA PAT ID# 102334

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

1601 Southwest 890th Street, Suite A-100
Oklahoma City, OK 73159
Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	**Client**	State of Oklahoma Department of Central Services	**Client**	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	**Attention**	Cindy Melton Administrative Programs Director	**Attention**	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	**Address**	P.O. Box 53448 Oklahoma City, OK 73152-3448	**Address**	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	**Phone**	405-522-4805	**Phone**	405-702-5115
Phone	580-445-7799	**Fax**	405-522-0051	**Fax**	
Cell		**Other**		**Other**	
email		**email**	cindy_melton@dcs.state.ok.us	**email**	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-06	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 3	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		8% ASBESTOS DETECTED			
0062-061511-PLM-07	June 15, 2001	Black Mastic	COLOR	Black	8%	Chrysotile	92%	Tar
		Room 1	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		8% ASBESTOS DETECTED			
0062-061511-PLM-08	June 15, 2001	Black Mastic	COLOR	Black	8%	Chrysotile	92%	Tar
		Room 2	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		8% ASBESTOS DETECTED			
0062-061511-PLM-09	June 15, 2001	Black Mastic	COLOR	Black	8%	Chrysotile	92%	Tar
		Room 3	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-10	June 15, 2001	White 12x12 Floor Tile	COLOR	White			100%	Vinyl Aggregate
		Room 20	CONDITION	Good				
		Under Carpet	TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:	Lab Accreditation:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.	AIHA PAT ID# 102334

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

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marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	**Client**	State of Oklahoma Department of Central Services	**Client**	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	**Attention**	Cindy Melton Administrative Programs Director	**Attention**	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	**Address**	P.O. Box 53448 Oklahoma City, OK 73152-3448	**Address**	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	**Phone**	405-522-4805	**Phone**	405-702-5115
Phone	580-445-7799	**Fax**	405-522-0051	**Fax**	
Cell		**Other**		**Other**	
email		**email**	cindy_melton@dcs.state.ok.us	**email**	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-11	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 20	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-12	June 15, 2001	White 12x12 Floor Tile	COLOR	White			100%	Vinyl Aggregate
		Room 21	CONDITION	Good				
		Under Carpet	TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-13	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 21	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-14	June 15, 2001	Whit 12x12 Floor Tile	COLOR	White			100%	Vinyl Aggregate
		Room 22	CONDITION	Good				
		Under Carpet	TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-15	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 22	CONDITION	Good				
		Under Floor Tile	TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

Lab Accreditation:
AIHA PAT ID# 102334

Bulk Asbestos Analysis

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marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	Client	State of Oklahoma Department of Central Services	Client	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	Attention	Cindy Melton Administrative Programs Director	Attention	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	Phone	405-522-4805	Phone	405-702-5115
Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy_melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	0062-061511-PLM-16	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Ceiling Tile		COLOR	White
Room 1		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		30%	Calcareous Material
		30%	Cellulose
		10%	Fibrous Glass
		30%	Perlite

LAB LOG NUMBER	0062-061511-PLM-17	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Ceiling Tile		COLOR	White
Room 3		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		30%	Calcareous Material
		30%	Cellulose
		10%	Fibrous Glass
		30%	Perlite

LAB LOG NUMBER	0062-061511-PLM-18	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Ceiling Tile		COLOR	White
Room 20		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		30%	Calcareous Material
		30%	Cellulose
		10%	Fibrous Glass
		30%	Perlite

LAB LOG NUMBER	0062-061511-PLM-19	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Drywall		COLOR	White
Room 18		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		96%	Calcareous Material
		4%	Cellulose

LAB LOG NUMBER	0062-061511-PLM-20	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Surfacing Material		COLOR	White
Room 20		CONDITION	Good
On Wall		TYPE	Surfacing
		NOTE	
NO ASBESTOS DETECTED			
		100%	Calcareous Material

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

Lab Accreditation:
AIHA PAT ID# 102334

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

1601 Southwest 890th Street, Suite A-100
Oklahoma City, OK 73159
Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	Client	State of Oklahoma Department of Central Services	Client	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	Attention	Cindy Melton Administrative Programs Director	Attention	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	Phone	405-522-4805	Phone	405-702-5115
Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy_melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-21	June 15, 2001	Cove Base	COLOR	Brown			100%	Rubber
		Room 20	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-22	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 20	CONDITION	Good				
		Behind Cove Base	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-23	June 15, 2001	Cove Base	COLOR	Brown			100%	Rubber
		Room 24	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-24	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 24	CONDITION	Good				
		Behind Cove Base	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-25	June 15, 2001	Cove Base	COLOR	Brown			100%	Rubber
		Room 26	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method: 40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.	Lab Accreditation: AIHA PAT ID# 102334

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

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Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

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Contact	Wade Anders, Fire Chief	Phone	405-522-4805	Phone	405-702-5115
Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy_melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-26	June 15, 2001	Yellow Mastic	COLOR	Yellow			100%	Adhesive
		Room 26	CONDITION	Good				
		Behind Cove Base	TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-27	June 15, 2001	Drywall	COLOR	White			96%	Calcareous Material
		Room 3	CONDITION	Good			4%	Cellulose
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-28	June 15, 2001	Bedding-Tape	COLOR	Yellow			100%	Cellulose
		Room 3	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		4% ASBESTOS DETECTED			
0062-061511-PLM-29	June 15, 2001	Bedding-Mud	COLOR	Brown	4%	Chrysotile	88%	Calcareous Material
		Room 3	CONDITION	Good			8%	Cellulose
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-30	June 15, 2001	Drywall	COLOR	White			96%	Calcareous Material
		Room 4	CONDITION	Good			4%	Cellulose
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

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Cell		Other		Other	
email		email	cindy.melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0062-061511-PLM-31	June 15, 2001	Bedding-Tape	COLOR	Yellow	100%	Fibrous Glass
		Room 4	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0062-061511-PLM-32	June 15, 2001	Bedding-Mud	COLOR	White	98%	Calcareous Material
		Room 4	CONDITION	Good	2%	Cellulose
			TYPE	Surfacing		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0062-061511-PLM-33	June 15, 2001	Surfacing Material	COLOR	White	100%	Calcareous Material
		Room 4	CONDITION	Good		
		On Wall	TYPE	Surfacing		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0062-061511-PLM-34	June 15, 2001	Ceiling Tile	COLOR	White	100%	Foam
		Room 18	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0062-061511-PLM-35	June 15, 2001	Ceiling Tile	COLOR	White	100%	Foam
		Room 21	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

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Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy.melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED			
0062-061511-PLM-36	June 15, 2001	Ceiling Tile Room 22	COLOR	White			100%	Foam
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
0062-061511-PLM-37	June 15, 2001	Window Caulk Exterior East	COLOR	Gray			100%	Calcareous Material
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
0062-061511-PLM-38	June 15, 2001	Window Caulk Exterior West	COLOR	Gray			100%	Calcareous Material
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
0062-061511-PLM-39	June 15, 2001	Window Caulk Exterior South	COLOR	Gray			100%	Calcareous Material
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

Lab Accreditation:
AIHA PAT ID# 102334

FEE: $0.00

Oklahoma Department of Labor

Charles Marshall

has filed in the office of the Commissioner of Labor of the State of Oklahoma
an application for a Limited Asbestos Contractor's license for

AHERA PROJECT DESIGNER

Now, therefore, The Commissioner of Labor of the State of Oklahoma, by virtue of
the power vested in him by law hereby issues to the
applicant license **No. OK-PD140028.**

Mark Costello

MARK COSTELLO
Commissioner of Labor

March 11, 2011
Date of Issuance

EXPIRES: March 04, 2012

FEE: $500.00

Oklahoma Department of Labor

Charles Marshall

has filed in the office of the Commissioner of Labor of the State of Oklahoma
an application for a Limited Asbestos Contractor's license for

AHERA MANAGEMENT PLANNER

Now, therefore, The Commissioner of Labor of the State of Oklahoma, by virtue of
the power vested in him by law hereby issues to the
applicant license **No. OK-MP130246.**

Mark Costello

MARK COSTELLO
Commissioner of Labor

July 18, 2011
Date of Issuance

EXPIRES: June 29, 2012

FEE: $500.00

Oklahoma Department of Labor

Jamie Marshall

has filed in the office of the Commissioner of Labor of the State of Oklahoma
an application for a Limited Asbestos Contractor's license for

AHERA MANAGEMENT PLANNER

Now, therefore, The Commissioner of Labor of the State of Oklahoma, by virtue of the power vested in him by law hereby issues to the applicant license No. OK-MP400477.

Mark Costello

MARK COSTELLO
Commissioner of Labor

June 01, 2011
Date of Issuance

EXPIRES: June 01, 2012

CLINTON ARMORY
ASBESTOS CONTAINING MATERIALS

N

ASBESTOS CONTAINING FLOOR-TILE MASTIC

ASBESTOS CONTAINING BEDDING MUD


Room 1
Floor Tile & Floor-Tile Mastic
Under Carpet


Room 2
Floor Tile


Room 3
Floor Tile

CLINTON ARMORY

DCS Contract Number: ID11070-5

06-15-11

Lead-Based Paint Inspection & Settled-Dust Sampling

Prepared For:

Oklahoma Department of Environmental Quality

Land Protection Division

707 North Robinson

Oklahoma City, Oklahoma 73102

Prepared By:

Marshall Environmental Management, Incorporated

1601 Southwest 89th Street, Suite A-100

Oklahoma City, Oklahoma 73159

Phone: 405.616.0401

Email: marshenv@swbell.net

TABLE OF CONTENTS

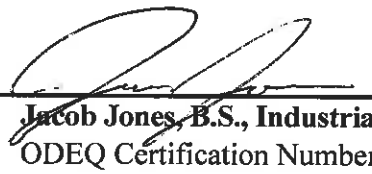
CERTIFICATION

This is to certify that, Marshall Environmental Management, Inc. was contracted by the State of Oklahoma, Department of Central Services to conduct a Lead-Based Paint Inspection in addition to collecting samples of settled dust within the Clinton Armory located at 723 South 13th Street in Clinton, Oklahoma for the State of Oklahoma Department of Environmental Quality, Land Protection Division. All services performed on June 15, 2011 were conducted by a Certified, Oklahoma Department of Environmental Quality, Lead-Based Paint Inspector/Risk Assessor Jacob Jones, representative of Marshall Environmental Management, Inc., under the direction of Dr. Charles L. Marshall Certified Industrial Hygienist and President of Marshall Environmental Management, Inc. The analytical results associated with this Lead-Based Paint Inspection and settled dust sampling are believed to accurately, reflect the concentrations of lead in paint and settled dust that were present at the time this Inspection was accomplished.

OWNER INFORMATION

City of Clinton

CERTIFIED LEAD-BASED PAINT INSPECTOR/RISK ASSESSOR



9/27/2011

Jacob Jones, B.S., Industrial Hygiene Associate — **Report Date**
ODEQ Certification Number: OKRASR13457

CERTIFIED LEAD-BASED PAINT FIRM

Marshall Environmental Management, Incorporated
1601 Southwest 89th Street, Suite A-100
Oklahoma City, Oklahoma 73159
ODEQ Certification Number: OKFIRM11160

X-RAY FLUORESCE ANALYZER

Analyzer Make: Niton XLp Spectrum Analyzer
Analyzer Model: #XLp 300A
Analyzer Serial Number: 12585
Source Date: April 2011

CLINTON ARMORY

LEAD-BASED PAINT INSPECTION & SETTLED DUST SAMPLING

EXECUTIVE SUMMARY

On June 15, 2011, Marshall Environmental Management, Inc. (MEM) performed a Lead-Based Paint (LBP) Inspection in addition to collecting samples of settled dust within the Clinton Armory located at 723 South 13th Street in Clinton, Oklahoma. This Inspection and sampling event were accomplished as part of the Oklahoma Department of Environmental Quality (ODEQ), Land Protection Division (LPD) Site Cleanup Assistance Program and Armory Cleanup Program with the purpose of establishing the presence of LBP and lead-laden dust so, if necessary, a strategy may be prepared for remediation and/or abatement activities.

The analytical data resulting from the surfaces that were analyzed and the samples that were collected during this Lead-Based Paint Inspection and settled dust sampling event did identify lead-based paint and lead-leaden dust on various surfaces throughout the Clinton Armory. It should be noted that at the time of the Inspection the Indoor Firing Range (IFR) was inaccessible and therefore not sampled. The remainder of this Report is comprised of the Sampling Methodology, Scope of Service, specific Analytical Findings and sampling locations, the Disclaimer and Standard of Care, information regarding LBP and the obligation to disclose the results of this LBP Inspection.

SAMPLING METHODOLOGY

This LBP Inspection and Settled Dust Sampling Event were conducted in accordance with the United States Department of Housing and Urban Development (HUD) guidelines, "*Guidelines for the Evaluation of Lead-Based Paint Hazards in Housing,*" in addition to the requirements set forth by the Environmental Protection Agency (EPA), "*Requirements for Lead-based Paint Activities in Target Housing and Child-occupied Facilities,*" 40 Code of Federal Regulations (CFR) Part 745.

SCOPE OF SERVICE

LEAD-BASED PAINT

All painted surfaces within the Armory were representatively sampled and analyzed for lead content excluding non-fixed and factory painted items utilizing an X-Ray Fluorescence (XRF), direct reading, data logging instrument. The street facing side of the Armory was labeled as Side A and going in a clockwise direction, the remaining sides were categorized as Side B, Side C and Side D respectively. The corresponding analytical data, including the start and stop times and calibration checks, and the floor plan diagram that illustrates room equivalents and positive LBP sampling locations are provided with the Appendix to this Report.

LEAD-LADEN DUST

Settled dust collected from randomly selected floor surfaces throughout the Armory were sampled and analyzed for lead content. The settled dust is collected by placing a template of a known dimension firmly against the selected surface; next, the area within the template is wiped in a particular pattern utilizing a specified wipe; each wipe is then placed in an approved container for transportation purposes. The laboratory data resulting from the analysis of the surface samples coincides with the sampling locations indicated on the floor plan diagram attached with the Appendix to this Report.

ANALYTICAL FINDINGS

LEAD-BASED PAINT

According to HUD/EPA "Lead-Based Paint" is characterized as paint that contains concentrations of lead greater than or equal to 1-milligram per square centimeter ($\geq$1-mg/cm^2). The following tables list and categorize the miscellaneous painted surfaces and the doors and doorjambs in which the lead concentrations exceeded 1-mg/cm^2 thus characterizing the paint lead-based. Selected windows and window lintels located on the exterior side of the Amory tested positive for LBP therefore all other exterior windows and window lintels were characterized as LBP positive. The analytical data and floor plan diagrams, that illustrate the room equivalents and the LBP surfaces, are attached with the Appendix to this Report.

TABLE I: LEAD-BASE PAINTED MISCELLANEOUS SURFACES

LOCATION	SIDE	COMPONENT	SUBSTRATE	COLOR
EXTERIOR	A	ARCHWAY	CONCRETE	RED
ROOM 2	D	DOOR FRAME	METAL	WHITE
ROOM 16	N/A	FLOOR	CONCRETE	RED
EXTERIOR	B	GARAGE FRAME 1	METAL	WHITE
EXTERIOR	B	GARAGE FRAME 3	METAL	WHITE
EXTERIOR	B	GARAGE FRAME 5	METAL	WHITE
EXTERIOR	A	LINTEL	METAL	WHITE
EXTERIOR	A	LINTEL 1	METAL	WHITE
ROOM 13	D	PIPE	METAL	RED
EXTERIOR	B	ROOF DRAIN	METAL	WHITE
EXTERIOR	C	ROOF DRAIN 1	METAL	BEIGE
EXTERIOR	D	ROOF DRAIN 1	METAL	WHITE
EXTERIOR	B	ROOF DRAIN 2	METAL	WHITE
EXTERIOR	C	ROOF DRAIN 2	METAL	BEIGE
EXTERIOR	D	ROOF DRAIN 2	METAL	WHITE
ROOM 7	D	STAIR 1	CONCRETE	YELLOW
ROOM 7	D	STAIR 2	CONCRETE	YELLOW
ROOM 7	D	STAIR RAIL 1	METAL	YELLOW
ROOM 7	D	STAIR RAIL 2	METAL	YELLOW
ROOM 7	D	WALL TRIM	CONCRETE	WHITE
ROOM 13	B	BASEBOARD	CONCRETE	RED
ROOM 13	D	BASEBOARD	CONCRETE	RED

LOCATION	SIDE	COMPONENT	SUBSTRATE	COLOR
ROOM 7	D	WALL TRIM 2	CONCRETE	WHITE
ROOM 2	A	WALL	CONCRETE	WHITE
ROOM 2	B	WALL	CONCRETE	WHITE
ROOM 2	C	WALL	CONCRETE	WHITE
ROOM 2	D	WALL	CONCRETE	WHITE
ROOM 13	B	WALL	CONCRETE	WHITE
ROOM 15	D	WALL	CONCRETE	RED
ROOM 16	A	WALL	CONCRETE	WHITE
ROOM 16	C	WALL	CONCRETE	RED
ROOM 7	A	WALL (EMBLEM)	CONCRETE	YELLOW
ROOM 2	A	WINDOW GUARD	METAL	WHITE
ROOM 3	A	WINDOW GUARD	METAL	WHITE
ROOM 5	B	WINDOW GUARD	METAL	SILVER
ROOM 16	D	WINDOW GUARD	METAL	WHITE
ROOM 2	A	WINDOWSILL	CONCRETE	WHITE

TABLE II: DOORS AND DOORJAMBS

DOOR NUMBER	DOOR RESULT	DOORJAMB RESULT	DIMENSIONS
1	FACTORY FINISH	FACTORY FINISH	3 X 7
2	NO DOOR	POSITIVE	3 X 7
3	POSITIVE	POSITIVE	3 X 7
4	NO DOOR	POSITIVE	3 X 7
5	POSITIVE	POSITIVE	3 X 7
6	NO DOOR	NO DOORJAMB	N/A
7	NO DOOR	NO DOORJAMB	N/A
8	NO DOOR	NO DOORJAMB	N/A
9	NO DOOR	POSITIVE	3 x 7
10	POSITIVE	POSITIVE	4 X 8
11	POSITIVE	POSITIVE	6 X 8
12	FACTORY FINISH	POSITIVE	3 X 7
13	UNABLE TO ACCESS	UNABLE TO ACCESS	UNABLE TO ACCESS
14	UNABLE TO ACCESS	UNABLE TO ACCESS	UNABLE TO ACCESS
15	NEGATIVE	NEGATIVE	N/A
16	POSITIVE	POSITIVE	3 X 7
17	POSITIVE	POSITIVE	3 X 7
18	POSITIVE	POSITIVE	3 X 7
19	NEGATIVE	NEGATIVE	N/A
20	NEGATIVE	POSITIVE	3 X 7
21	POSITIVE	POSITIVE	3 X 7
22	POSITIVE	POSITIVE	4 X 7
23	POSITIVE	POSITIVE	3 X 7
24	NEGATIVE	NEGATIVE	N/A

DOOR NUMBER	DOOR RESULT	DOORJAMB RESULT	DIMENSIONS
25	NEGATIVE	POSITIVE	3 X 7
26	POSITIVE	POSITIVE	3 X 7
27	NO DOOR	POSITIVE	3 X 7
28	FACTORY FINISH	FACTORY FINISH	N/A
29	FACTORY FINISH	FACTORY FINISH	N/A

LEAD-LADEN DUST

In accordance with HUD/EPA, settled dust containing concentrations of lead equal to or greater than 40-micrograms per square foot (40-µg/ft^2) represent lead contamination; this action level applies to all surfaces within the Armory excluding the IFR. According to the Departments of the Army National Guard (ARNG) and the Air Force National Guard (ANG) Bureau guidelines, "*Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*", lead concentrations within an IFR equal to or greater than 200-µg/ft^2 represent lead contamination; however, at the time of the Inspection the IFR was inaccessible. As such, the table below reflects the concentrations of lead in settled dust that were established throughout the Armory, excluding the IFR, the "Bolded" data represents lead concentrations which exceeded the respective clearance levels.

TABLE III: SURFACE WIPE ANALYSIS

SAMPLE ID	LOCATION	CONCENTRATION	CLEARANCE LEVEL
0085-1	ROOM 1	<21.3	40-µg/ft^2
0085-2	ROOM 2	**106**	40-µg/ft^2
0085-3	ROOM 3	**41.3**	40-µg/ft^2
0085-4	ROOM 4	**78.0**	40-µg/ft^2
0085-5	ROOM 5	<21.3	40-µg/ft^2
0085-6	ROOM 6	**187**	40-µg/ft^2
0085-7	ROOM 7	**117**	40-µg/ft^2
0085-7E	ROOM 7 East	**93.4**	40-µg/ft^2
0085-7C	ROOM 7 Center	39.6	40-µg/ft^2
0085-7W	ROOM 7 West	**79.8**	40-µg/ft^2
0085-8	ROOM 8	**361**	40-µg/ft^2
0085-9	ROOM 9	**464**	40-µg/ft^2
0085-10	ROOM 10	**212**	40-µg/ft^2
0085-11	ROOM 11	**384**	40-µg/ft^2
0085-12	ROOM 12	**261**	40-µg/ft^2
0085-13	ROOM 13	**374**	40-µg/ft^2
0085-14	ROOM 14	**1,010**	40-µg/ft^2
0085-15	ROOM 15	**369**	40-µg/ft^2
0085-16	ROOM 16	**1,440**	40-µg/ft^2
0085-17	ROOM 17	**81.3**	40-µg/ft^2
0085-18	ROOM 18	35.2	40-µg/ft^2
0085-19	ROOM 19	**143**	40-µg/ft^2
0085-20	ROOM 20	38.9	40-µg/ft^2
0085-22	ROOM 21	25.5	40-µg/ft^2
0085-23	ROOM 22	<21.3	40-µg/ft^2

HISTORICAL OVERVIEW OF LEAD-BASED PAINT ACTIVITIES

Historical records were not provided for review nor was there evidence or information that would suggest that a prior LBP Inspection or Risk Assessment occurred within the Clinton Armory.

DISCLAIMER AND STANDARD OF CARE

The Clinton Armory is a one-story structure with a basement (i.e. IFR), a brick façade and a flat roof that was constructed on a concrete slab circa 1938. Although the paint on various surfaces does not contain lead in concentrations that exceed the federal standard, a hazard could be presented if painted surfaces are disturbed. Occupational Safety and Health Administration (OSHA) regulations covering worker safety and health may apply when painted surfaces, lead-based paint or not, are disturbed. For any renovation that may disturb more than 2-square feet (2-ft^2) of painted surface in a facility built before 1978 the EPA pre-renovation rule requires that the contractor provide a copy of the booklet "*Protect Your Family From Lead in Your Home*" or "*Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools.*" Furthermore, if renovation of any kind takes place the contractor should provide a copy of "*Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools.*" This Report was generated utilizing HUD/EPA protocols referenced in the Certification portion of this Report. The analytical results associated with this LBP Inspection are only applicable on the date(s) indicated and future activities may alter the results. At the time these services were completed, no deviations from the Scope of Service took place.

DISCLOSURE STATEMENT AND OWNERS LEGAL OBLIGATION

Under Federal law (24 CFR Part 35 and 40 CFR Part 745), this LBP Inspection Report must be disclosed and made available to prospective tenants before becoming obligated under a lease or sales contract where LBP is present. If an Inspection finds that LBP is not present in certain multifamily dwelling units, which are to be leased, the dwelling unit(s) is exempt from disclosure requirements. However, under federal law **even if no LBP is identified** the owner is still required to fulfill certain legal responsibilities when the property is sold not leased. Property owners and sellers are also required to distribute an educational pamphlet and include standard warning language in their **leases** or sales contracts to ensure that information is provided in order to protect children from LBP hazards.

Information regarding the legal obligation to disclose results associated with LBP inspections and/or risk assessments to tenants and/or purchasers can be obtained from the National Lead Information Center Clearinghouse (1-800-424-LEAD). This information is specified in 24 CFR Part 35 and 40 CFR Part 745 (published in the *Federal Register*, Volume 61, Number 45, April 6, 1996, beginning on p. 9064).

LEAD-BASED PAINT INFORMATION

You may contact the National Lead Information Center Clearinghouse (1-800-424-LEAD) to obtain HUD/EPA brochures, question and answer booklets, regulations, mentioned in this Report, and other information regarding LBP disclosure.

APPENDIX

XRF ANALYTICAL DATA

(CALIBRATION CHECKS & START & STOP TIMES)

SURFACE WIPES CHAIN OF CUSTODY & ANALYTICAL DATA

FLOOR PLAN DIAGRAMS

LBP MISCELLANEOUS SURFACES

DOORS & DOORJAMBS

LEAD CONCENTRATIONS IN SURFACE DUST

LBP WIDOWS

CERTIFICATIONS

DIGITAL PHOTOGRAPHS

Clinton Armory

Marshall Environmental Management, Inc.
1601 Southwest 89th Street, Suite A-100
Oklahoma City, OK 73159

Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	Pb%	PbK
2	2011-06-15 14:44	PAINT	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	< LOD : 0.75
3	2011-06-15 14:45	PAINT	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	< LOD : 0.60
4	2011-06-15 14:45	PAINT	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	< LOD : 0.75
5	2011-06-15 14:50	PAINT	mg / cm ^2	CURB	CONCRETE	A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.21
6	2011-06-15 14:50	PAINT	mg / cm ^2	ARCHWAY	CONCRETE	A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.35
7	2011-06-15 14:51	PAINT	mg / cm ^2	ARCHWAY	CONCRETE	A	RED	Positive	1.00	< LOD : 4.35	< LOD : 4.35
8	2011-06-15 14:52	PAINT	mg / cm ^2	WALL BASE	CONCRETE	A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.35
9	2011-06-15 14:53	PAINT	mg / cm ^2	WINDOW SILL	CONCRETE	A	WHITE	Negative	1.00	0.70 ± 0.10	1.20 ± 0.50
10	2011-06-15 14:53	PAINT	mg / cm ^2	WINDOW	METAL	A	WHITE	Positive	1.00	2.20 ± 0.90	< LOD : 3.75
11	2011-06-15 14:55	PAINT	mg / cm ^2	LENTEL	METAL	A	WHITE	Positive	1.00	< LOD : 4.65	< LOD : 5.40
12	2011-06-15 14:56	PAINT	mg / cm ^2	CORNER	CONCRETE	A	WHITE	Negative	1.00	< LOD : 0.10	< LOD : 1.20
13	2011-06-15 14:57	PAINT	mg / cm ^2	ELECTRICAL POLE	WOOD	A	WHITE	Negative	1.00	< LOD : 0.08	< LOD : 2.95
14	2011-06-15 14:58	PAINT	mg / cm ^2	ROOF DRAIN	METAL	B	WHITE	Positive	1.00	< LOD : 6.30	< LOD : 6.30
15	2011-06-15 14:59	PAINT	mg / cm ^2	GARAGE FRAME 1	METAL	B	WHITE	Positive	1.00	< LOD : 4.20	< LOD : 4.20
16	2011-06-15 14:59	PAINT	mg / cm ^2	GARAGE FRAME 1	METAL	B	WHITE	Positive	1.00	6.60 ± 4.20	6.60 ± 4.20
17	2011-06-15 15:00	PAINT	mg / cm ^2	GARAGE FRAME 3	METAL	B	WHITE	Positive	1.00	< LOD : 6.15	< LOD : 6.15
18	2011-06-15 15:00	PAINT	mg / cm ^2	ROOF DRAIN 2	METAL	B	WHITE	Positive	1.00	3.60 ± 2.00	4.80 ± 2.90
19	2011-06-15 15:01	PAINT	mg / cm ^2	WINDOW 1	METAL	B	WHITE	Positive	1.00	2.50 ± 1.20	< LOD : 3.30
20	2011-06-15 15:03	PAINT	mg / cm ^2	WINDOW SILL 1	CONCRETE	B	WHITE	Negative	1.00	0.30 ± 0.09	< LOD : 1.05
21	2011-06-15 15:05	PAINT	mg / cm ^2	DOOR FRAME	CONCRETE	B	WHITE	Negative	1.00	< LOD : 0.07	< LOD : 3.32
22	2011-06-15 15:05	PAINT	mg / cm ^2	GARAGE FRAME 5	METAL	B	WHITE	Positive	1.00	4.60 ± 2.90	4.60 ± 2.90
23	2011-06-15 15:06	PAINT	mg / cm ^2	GARAGE FRAME 5 (DUP)	METAL	B	WHITE	Positive	1.00	3.90 ± 2.40	3.90 ± 2.40
25	2011-06-15 15:06	PAINT	mg / cm ^2	DOOR GUARD	WOOD	B	WHITE	Negative	1.00	< LOD : 0.62	< LOD : 3.72
26	2011-06-15 15:08	PAINT	mg / cm ^2	WINDOW 1	METAL	C	WHITE	Positive	1.00	3.40 ± 1.80	< LOD : 3.90
27	2011-06-15 15:09	PAINT	mg / cm ^2	ROOF DRAIN 1	METAL	C	BEIGE	Positive	1.00	< LOD : 5.85	< LOD : 5.85
28	2011-06-15 15:12	PAINT	mg / cm ^2	ROOF DRAIN 2	METAL	C	BEIGE	Positive	1.00	6.30 ± 4.00	6.30 ± 4.00
29	2011-06-15 15:13	PAINT	mg / cm ^2	PLATE ON VENT	METAL	D	BROWN	Negative	1.00	< LOD : 0.09	< LOD : 2.26
30	2011-06-15 15:13	PAINT	mg / cm ^2	PLATE ON VENT	METAL	D	BROWN	Negative	1.00	< LOD : 0.09	< LOD : 2.14
31	2011-06-15 15:14	PAINT	mg / cm ^2	WINDOWSILL 1	CONCRETE	D	WHITE	Negative	1.00	0.10 ± 0.05	1.20 ± 0.50
32	2011-06-15 15:15	PAINT	mg / cm ^2	WINDOW 1	METAL	D	WHITE	Positive	1.00	2.00 ± 0.80	< LOD : 3.60
33	2011-06-15 15:16	PAINT	mg / cm ^2	ROOF DRAIN 1	METAL	D	WHITE	Positive	1.00	< LOD : 6.00	< LOD : 6.00
34	2011-06-15 15:17	PAINT	mg / cm ^2	ROOF DRAIN 2	METAL	D	WHITE	Positive	1.00	< LOD : 6.00	< LOD : 6.00
35	2011-06-15 15:23	PAINT	mg / cm ^2	LENTEL 1	METAL	A	WHITE	Positive	1.00	3.20 ± 1.50	< LOD : 3.90
36	2011-06-15 15:29	PAINT	mg / cm ^2	WALL	DRYWALL	RM 1 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.50
37	2011-06-15 15:30	PAINT	mg / cm ^2	WALL	DRYWALL	RM 1 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.50
38	2011-06-15 15:30	PAINT	mg / cm ^2	WALL	DRYWALL	RM 1 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.94
39	2011-06-15 15:30	PAINT	mg / cm ^2	WALL	DRYWALL	RM 1 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.65
40	2011-06-15 15:32	PAINT	mg / cm ^2	WINDOW SILL	DRYWALL	RM 1 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
41	2011-06-15 15:33	PAINT	mg / cm ^2	WINDOW SILL	CONCRETE	RM 2 A	WHITE	Positive	1.00	2.50 ± 0.90	2.50 ± 0.90
42	2011-06-15 15:34	PAINT	mg / cm ^2	WINDOW GUARD	METAL	RM 2 A	WHITE	Positive	1.00	3.10 ± 2.00	< LOD : 5.40

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Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbK
43	2011-06-15 15:35	PAINT	mg / cm ^2	WALL	CONCRETE	RM 2 A	WHITE	Negative	1.00	0.09 ± 0.05	1.20 ± 0.50
44	2011-06-15 15:35	PAINT	mg / cm ^2	WALL	CONCRETE	RM 2 A	WHITE	Positive	1.00	1.40 ± 0.30	1.40 ± 0.30
45	2011-06-15 15:36	PAINT	mg / cm ^2	WALL	CONCRETE	RM 2 B	WHITE	Positive	1.00	1.50 ± 0.50	1.50 ± 0.50
47	2011-06-15 15:37	PAINT	mg / cm ^2	WALL	CONCRETE	RM 2 C	WHITE	Positive	1.00	1.50 ± 0.40	1.50 ± 0.40
48	2011-06-15 15:37	PAINT	mg / cm ^2	WALL	CONCRETE	RM 2 D	WHITE	Positive	1.00	1.40 ± 0.40	1.40 ± 0.40
49	2011-06-15 15:38	PAINT	mg / cm ^2	DOOR FRAME	METAL	RM 2 D	WHITE	Positive	1.00	2.50 ± 1.10	< LOD : 3.75
50	2011-06-15 15:40	PAINT	mg / cm ^2	FLOOR	CONCRETE	RM 2	RED	Negative	1.00	0.11 ± 0.04	1.20 ± 0.50
51	2011-06-15 15:42	PAINT	mg / cm ^2	WALL	CONCRETE	RM 3 A	RED	Negative	1.00	< LOD : 0.06	1.20 ± 0.50
52	2011-06-15 15:42	PAINT	mg / cm ^2	PIPE	METAL	RM 3 A	WHITE	Negative	1.00	< LOD : 0.95	< LOD : 3.45
54	2011-06-15 15:45	PAINT	mg / cm ^2	WALL	CONCRETE	RM 3 C	WHITE	Negative	1.00	< LOD : 0.09	1.10 ± 0.60
55	2011-06-15 15:46	PAINT	mg / cm ^2	WINDOW GUARD	METAL	RM 3 A	WHITE	Positive	1.00	4.30 ± 2.70	< LOD : 10.80
56	2011-06-15 15:49	PAINT	mg / cm ^2	WALL	DRYWALL	RM 4 A	WHITE	Negative	1.00	< LOD : 0.05	< LOD : 1.65
57	2011-06-15 15:49	PAINT	mg / cm ^2	WALL	DRYWALL	RM 4 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.98
58	2011-06-15 15:49	PAINT	mg / cm ^2	WALL	DRYWALL	RM 4 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.65
59	2011-06-15 15:50	PAINT	mg / cm ^2	WALL	DRYWALL	RM 4 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
60	2011-06-15 15:51	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 A	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.20
61	2011-06-15 15:52	PAINT	mg / cm ^2	PIPE	METAL	RM 5 A	SILVER	Negative	1.00	< LOD : 0.07	< LOD : 3.83
62	2011-06-15 15:53	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 B	RED	Negative	1.00	0.06 ± 0.03	1.20 ± 0.50
63	2011-06-15 15:54	PAINT	mg / cm ^2	WINDOW GUARD	METAL	RM 5 B	SILVER	Positive	1.00	3.80 ± 2.40	< LOD : 10.95
64	2011-06-15 15:55	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 B	SILVER	Negative	1.00	< LOD : 0.31	< LOD : 1.20
65	2011-06-15 15:55	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 B	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
66	2011-06-15 15:56	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
67	2011-06-15 15:56	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 C	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.20
69	2011-06-15 15:56	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 C	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.05
70	2011-06-15 15:57	PAINT	mg / cm ^2	WALL	CONCRETE	RM 5 D	WHITE	Negative	1.00	0.10 ± 0.05	< LOD : 1.05
71	2011-06-15 15:57	PAINT	mg / cm ^2	WALL	WOOD	RM 5 D	BEIGE	Negative	1.00	< LOD 0.03	< LOD : 2.53
72	2011-06-15 15:59	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 A	RED	Negative	1.00	0.24 ± 0.05	< LOD : 1.05
73	2011-06-15 15:59	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
74	2011-06-15 15:59	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
75	2011-06-15 16:00	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 B	WHITE	Negative	1.00	< LOD . 0.03	< LOD : 1.05
76	2011-06-15 16:00	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
77	2011-06-15 16:00	PAINT	mg / cm ^2	WALL	CONCRETE	RM 6 D	RED	Negative	1.00	0.30 ± 0.06	< LOD : 1.05
78	2011-06-15 16:01	PAINT	mg / cm ^2	PIPE	CONCRETE	RM 6 C	RED	Negative	1.00	0.80 ± 0.10	< LOD : 1.20
79	2011-06-15 16:01	PAINT	mg / cm ^2	PIPE	CONCRETE	RM 6 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 3.66
80	2011-06-15 16:22	PAINT	mg / cm ^2	WALL	CONCRETE	RM 7 A	RED	Negative	1.00	< LOD : 0.06	< LOD : 1.20
81	2011-06-15 16:22	PAINT	mg / cm ^2	WALL	CONCRETE	RM 7 A	RED	Negative	1.00	< LOD : 0.04	< LOD : 1.05
82	2011-06-15 16:24	PAINT	mg / cm ^2	WALL	CONCRETE	RM 7 B	SILVER	Negative	1.00	< LOD : 0.04	< LOD : 1.05
83	2011-06-15 16:25	PAINT	mg / cm ^2	WALL	CONCRETE	RM 7 C	RED	Negative	1.00	0.04 ± 0.02	0.80 ± 0.30
84	2011-06-15 16:27	PAINT	mg / cm ^2	STAIRS 1	CONCRETE	RM 7 C	RED	Negative	1.00	0.06 ± 0.02	1.20 ± 0.50
85	2011-06-15 16:28	PAINT	mg / cm ^2	STAIR RAIL 1	METAL	RM 7 D	YELLOW	Positive	1.00	4.50 ± 2.90	< LOD : 12.15

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Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbK
86	2011-06-15 16:29	PAINT	mg / cm ^2	STAIR 1	CONCRETE	RM 7 D	YELLOW	Positive	1.00	2.00 ± 0.90	< LOD : 5.85
87	2011-06-15 16:30	PAINT	mg / cm ^2	STAIR 2	CONCRETE	RM 7 D	YELLOW	Positive	1.00	1.70 ± 0.50	< LOD : 3.60
88	2011-06-15 16:31	PAINT	mg / cm ^2	STAIR 2	CONCRETE	RM 7 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.20
89	2011-06-15 16:31	PAINT	mg / cm ^2	STAIR RAIL 2	METAL	RM 7 D	YELLOW	Positive	1.00	6.70 ± 4.30	< LOD : 15.30
90	2011-06-15 16:33	PAINT	mg / cm ^2	WALL TRIM	CONCRETE	RM 7 D	WHITE	Positive	1.00	1.70 ± 0.60	2.90 ± 1.90
91	2011-06-15 16:34	PAINT	mg / cm ^2	WALL TRIM 2	CONCRETE	RM 7 D	WHITE	Positive	1.00	2.60 ± 1.00	3.70 ± 2.40
92	2011-06-15 16:36	PAINT	mg / cm ^2	WALL	CONCRETE	RM 8 A	WHITE	Negative	1.00	0.13 ± 0.06	< LOD : 1.05
93	2011-06-15 16:37	PAINT	mg / cm ^2	WALL	CONCRETE	RM 8 B	WHITE	Negative	1.00	0.06 ± 0.03	1.00 ± 0.50
94	2011-06-15 16:38	PAINT	mg / cm ^2	WALL	CONCRETE	RM 8 C	WHITE	Negative	1.00	0.06 ± 0.03	< LOD : 1.05
95	2011-06-15 16:38	PAINT	mg / cm ^2	WALL	CONCRETE	RM 8 D	WHITE	Negative	1.00	0.04 ± 0.02	1.00 ± 0.60
97	2011-06-15 16:42	PAINT	mg / cm ^2	WALL	CONCRETE	RM 9 C	SILVER	Negative	1.00	0.05 ± 0.02	1.00 ± 0.30
98	2011-06-15 16:42	PAINT	mg / cm ^2	WALL	CONCRETE	RM 9 D	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.20
99	2011-06-15 16:43	PAINT	mg / cm ^2	WALL	WOOD	RM 10 A	BEIGE	Negative	1.00	< LOD : 0.04	< LOD : 2.52
100	2011-06-15 16:44	PAINT	mg / cm ^2	WALL	WOOD	RM 10 C	BEIGE	Negative	1.00	< LOD . 0.20	< LOD : 1.51
101	2011-06-15 16:44	PAINT	mg / cm ^2	WALL	CONCRETE	RM 10 D	SILVER	Negative	1.00	< LOD : 0.05	< LOD : 1.20
102	2011-06-15 16:45	PAINT	mg / cm ^2	WALL	CONCRETE	RM 11A	SILVER	Negative	1.00	< LOD : 0.07	< LOD : 1.05
105	2011-06-15 16:46	PAINT	mg / cm ^2	WALL	CONCRETE	RM 11B	SILVER	Negative	1.00	0.05 ± 0.02	0.90 ± 0.30
107	2011-06-15 16:46	PAINT	mg / cm ^2	WALL	CONCRETE	RM 11D	SILVER	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
108	2011-06-15 16:47	PAINT	mg / cm ^2	WALL	CONCRETE	RM 12 B	WHITE	Negative	1.00	< LOD : 0.08	< LOD : 1.05
109	2011-06-15 16:48	PAINT	mg / cm ^2	WALL	CONCRETE	RM 12 B	RED	Negative	1.00	0.05 ± 0.03	< LOD : 1.05
110	2011-06-15 16:48	PAINT	mg / cm ^2	WALL	CONCRETE	RM 12 C	WHITE	Negative	1.00	0.04 ± 0.02	0.70 ± 0.30
111	2011-06-15 16:49	PAINT	mg / cm ^2	WALL	CONCRETE	RM 12 D	WHITE	Negative	1.00	< LOD : 0.23	< LOD : 1.05
112	2011-06-15 16:49	PAINT	mg / cm ^2	FLOOR	CONCRETE	RM 12	RED	Negative	1.00	0.06 ± 0.02	1.10 ± 0.50
113	2011-06-15 17:00	PAINT	mg / cm ^2	FLOOR	CONCRETE	RM 13	RED	Negative	1.00	0.50 ± 0.10	1.20 ± 0.50
114	2011-06-15 17:00	PAINT	mg / cm ^2	WALL	CONCRETE	RM 13 A	WHITE	Negative	1.00	< LOD : 0.09	1.30 ± 0.40
115	2011-06-15 17:01	PAINT	mg / cm ^2	WALL	CONCRETE	RM 13 B	WHITE	Positive	1.00	1.50 ± 0.50	1.50 ± 0.50
116	2011-06-15 17:02	PAINT	mg / cm ^2	BASEBOARD TRIM	CONCRETE	RM 13 B	RED	Positive	1.00	1.70 ± 0.70	< LOD : 2.55
117	2011-06-15 17:03	PAINT	mg / cm ^2	WALL	CONCRETE	RM 13 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
118	2011-06-15 17:03	PAINT	mg / cm ^2	WALL	CONCRETE	RM 13 D	WHITE	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
119	2011-06-15 17:04	PAINT	mg / cm ^2	WINDOW SILL 1	CONCRETE	RM 13 D	WHITE	Negative	1.00	0.12 ± 0.06	1.10 ± 0.60
120	2011-06-15 17:05	PAINT	mg / cm ^2	BASEBOARD TRIM	CONCRETE	RM 13 D	RED	Positive	1.00	2.40 ± 1.10	< LOD : 3.60
121	2011-06-15 17:05	PAINT	mg / cm ^2	BASEBOARD TRIM (DUP)	CONCRETE	RM 13 D	RED	Positive	1.00	2.60 ± 1.10	< LOD : 3.45
122	2011-06-15 17:06	PAINT	mg / cm ^2	PIPE	METAL	RM 13 D	RED	Positive	1.00	1.60 ± 0.60	1.60 ± 0.60
123	2011-06-15 17:07	PAINT	mg / cm ^2	PIPE	METAL	RM 13 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 3.56
124	2011-06-15 17:10	PAINT	mg / cm ^2	WALL	CONCRETE	RM 14 A	SILVER	Negative	1.00	< LOD : 0.03	1.10 ± 0.50
125	2011-06-15 17:10	PAINT	mg / cm ^2	WALL	CONCRETE	RM 14 B	SILVER	Negative	1.00	< LOD : 0.09	1.10 ± 0.60
126	2011-06-15 17:11	PAINT	mg / cm ^2	WALL	CONCRETE	RM 14 C	SILVER	Negative	1.00	< LOD : 0.03	1.10 ± 0.60
127	2011-06-15 17:11	PAINT	mg / cm ^2	WALL	CONCRETE	RM 14 C	SILVER	Negative	1.00	< LOD : 0.04	< LOD : 1.05
128	2011-06-15 17:11	PAINT	mg / cm ^2	WALL	CONCRETE	RM 14 D	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.20
129	2011-06-15 17:12	PAINT	mg / cm ^2	WALL	CONCRETE	RM 15 A	SILVER	Negative	1.00	< LOD : 0.08	< LOD : 1.20

Clinton Armory

Marshall Environmental Management, Inc.
1601 Southwest 89th Street, Suite A-100
Oklahoma City, OK 73159

Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbK
130	2011-06-15 17:13	PAINT	mg / cm ^2	PARTITION	METAL	RM 15 A	RED	Negative	1.00	< LOD : 0.60	< LOD : 0.60
131	2011-06-15 17:13	PAINT	mg / cm ^2	WALL	CONCRETE	RM 15 B	SILVER	Negative	1.00	< LOD : 0.03	< LOD : 1.05
134	2011-06-15 17:14	PAINT	mg / cm ^2	WALL	CONCRETE	RM 15 C	SILVER	Negative	1.00	< LOD : 0.08	< LOD : 1.20
135	2011-06-15 17:14	PAINT	mg / cm ^2	PIPE	METAL	RM 15 C	SILVER	Negative	1.00	< LOD : 0.34	< LOD : 5.10
136	**2011-06-15 17:15**	**PAINT**	**mg / cm ^2**	**WALL**	**CONCRETE**	**RM 15 D**	**RED**	**Positive**	**1.00**	**1.50 ± 0.50**	**1.50 ± 0.50**
137	2011-06-15 17:16	PAINT	mg / cm ^2	WALL	CONCRETE	RM 15 D	SILVER	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
138	**2011-06-15 17:17**	**PAINT**	**mg / cm ^2**	**FLOOR**	**CONCRETE**	**RM 16**	**RED**	**Positive**	**1.00**	**3.40 ± 1.80**	**< LOD : 7.20**
139	**2011-06-15 17:19**	**PAINT**	**mg / cm ^2**	**WALL**	**CONCRETE**	**RM 16 A**	**WHITE**	**Positive**	**1.00**	**1.40 ± 0.40**	**1.40 ± 0.40**
140	2011-06-15 17:20	PAINT	mg / cm ^2	WALL	CONCRETE	RM 16 B	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
141	2011-06-15 17:20	PAINT	mg / cm ^2	WALL	CONCRETE	RM 16 B	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
142	2011-06-15 17:20	PAINT	mg / cm ^2	WALL	CONCRETE	RM 16 C	GREEN	Negative	1.00	< LOD : 0.03	1.20 ± 0.50
143	**2011-06-15 17:21**	**PAINT**	**mg / cm ^2**	**WALL**	**CONCRETE**	**RM 16 C**	**RED**	**Positive**	**1.00**	**1.40 ± 0.40**	**1.40 ± 0.40**
144	2011-06-15 17:22	PAINT	mg / cm ^2	PIPE	METAL	RM 16 C	GREEN	Negative	1.00	< LOD : 0.48	< LOD : 3.90
145	2011-06-15 17:23	PAINT	mg / cm ^2	WALL	CONCRETE	RM 16 D	GREEN	Negative	1.00	0.30 ± 0.06	1.20 ± 0.50
146	**2011-06-15 17:24**	**PAINT**	**mg / cm ^2**	**WINDOW GUARD**	**METAL**	**RM 16 D**	**WHITE**	**Positive**	**1.00**	**3.20 ± 2.00**	**< LOD : 11.85**
147	2011-06-15 17:25	PAINT	mg / cm ^2	FLOOR	CONCRETE	RM 15	RED	Negative	1.00	0.13 ± 0.04	< LOD : 1.05
148	2011-06-15 17:25	PAINT	mg / cm ^2	WALL	CONCRETE	RM 15	RED	Negative	1.00	0.40 ± 0.10	1.20 ± 0.50
149	2011-06-15 17:27	PAINT	mg / cm ^2	WALL	DRYWALL	RM 18 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.35
150	2011-06-15 17:28	PAINT	mg / cm ^2	WALL	DRYWALL	RM 18 B	WHITE	Negative	1.00	< LOD : 0.14	< LOD : 1.50
151	2011-06-15 17:28	PAINT	mg / cm ^2	WALL	DRYWALL	RM 18 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.96
152	2011-06-15 17:28	PAINT	mg / cm ^2	WALL	DRYWALL	RM 18 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.49
153	2011-06-15 17:29	PAINT	mg / cm ^2	WALL	DRYWALL	RM 19 A	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.65
154	2011-06-15 17:29	PAINT	mg / cm ^2	WALL	DRYWALL	RM 19 B	WHITE	Negative	1.00	< LOD : 0.06	< LOD : 1.65
155	2011-06-15 17:29	PAINT	mg / cm ^2	WALL	DRYWALL	RM 19 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.50
156	2011-06-15 17:30	PAINT	mg / cm ^2	WALL	DRYWALL	RM 19 D	WHITE	Negative	1.00	< LOD : 0.17	< LOD : 2.26
157	2011-06-15 17:33	PAINT	mg / cm ^2	WALL	DRYWALL	RM 20 A	WHITE	Negative	1.00	< LOD . 0.03	< LOD : 1.65
158	2011-06-15 17:33	PAINT	mg / cm ^2	WALL	DRYWALL	RM 20 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.65
159	2011-06-15 17:33	PAINT	mg / cm ^2	WALL	DRYWALL	RM 20 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.77
160	2011-06-15 17:34	PAINT	mg / cm ^2	WALL	DRYWALL	RM 20 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.16
161	2011-06-15 17:34	PAINT	mg / cm ^2	WALL	DRYWALL	RM 21 A	WHITE	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
162	2011-06-15 17:35	PAINT	mg / cm ^2	WALL	DRYWALL	RM 21 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.94
163	2011-06-15 17:35	PAINT	mg / cm ^2	WALL	DRYWALL	RM 21 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.50
164	2011-06-15 17:35	PAINT	mg / cm ^2	WALL	DRYWALL	RM 22 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.50
165	2011-06-15 17:35	PAINT	mg / cm ^2	WALL	DRYWALL	RM 22 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
166	2011-06-15 17:36	PAINT	mg / cm ^2	WALL	DRYWALL	RM 22 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.79
167	2011-06-15 17:36	PAINT	mg / cm ^2	WALL	DRYWALL	RM 22 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 2.05
168	2011-06-15 17:36	PAINT	mg / cm ^2	WALL	DRYWALL	RM 22 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.16
169	**2011-06-15 17:40**	**PAINT**	**mg / cm ^2**	**DOOR JAMB**	**METAL**	**2**	**BROWN**	**Positive**	**1.00**	**3.10 ± 1.60**	**3.10 ± 1.90**
170	**2011-06-15 17:41**	**PAINT**	**mg / cm ^2**	**DOOR JAMB**	**METAL**	**3**	**BLUE**	**Positive**	**1.00**	**1.80 ± 0.70**	**< LOD : 2.55**
171	**2011-06-15 17:42**	**PAINT**	**mg / cm ^2**	**DOOR**	**WOOD**	**3**	**BLUE**	**Positive**	**1.00**	**< LOD : 5.25**	**< LOD : 5.55**

Clinton Armory

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Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	Pb%	Pb/K
172	2011-06-15 17:43	PAINT	mg / cm ^2	DOOR JAMB	METAL	4	WHITE	Positive	1.00	1.60 ± 0.60	1.60 ± 0.60
173	2011-06-15 17:45	PAINT	mg / cm ^2	DOOR JAMB	METAL	5	BROWN	Positive	1.00	2.50 ± 1.40	< LOD : 5.25
174	2011-06-15 17:45	PAINT	mg / cm ^2	DOOR	WOOD	5	BROWN	Positive	1.00	2.10 ± 0.80	< LOD : 2.85
175	2011-06-15 17:48	PAINT	mg / cm ^2	DOOR JAMB	METAL	9	BROWN	Positive	1.00	2.30 ± 1.30	< LOD : 3.30
176	2011-06-15 17:49	PAINT	mg / cm ^2	DOOR JAMB	METAL	10	BROWN	Positive	1.00	2.70 ± 1.10	2.70 ± 1.10
177	2011-06-15 17:49	PAINT	mg / cm ^2	DOOR	WOOD	10	BROWN	Positive	1.00	1.60 ± 0.60	1.90 ± 0.70
178	2011-06-15 17:50	PAINT	mg / cm ^2	DOOR	WOOD	11	BROWN	Positive	1.00	1.90 ± 0.70	< LOD : 1.95
179	2011-06-15 17:51	PAINT	mg / cm ^2	DOOR JAMB	METAL	11	BROWN	Positive	1.00	2.70 ± 1.70	< LOD : 4.65
180	2011-06-15 17:52	PAINT	mg / cm ^2	DOOR JAMB	METAL	12	BEIGE	Positive	1.00	2.80 ± 1.70	< LOD : 4.95
181	2011-06-15 17:55	PAINT	mg / cm ^2	DOOR JAMB	WOOD	15	BEIGE	Negative	1.00	< LOD : 0.12	< LOD : 2.70
182	2011-06-15 17:55	PAINT	mg / cm ^2	DOOR	WOOD	15	BEIGE	Negative	1.00	< LOD : 1.11	< LOD : 2.38
183	2011-06-15 17:56	PAINT	mg / cm ^2	DOOR	WOOD	16	GREY	Positive	1.00	2.00 ± 1.00	< LOD : 4.05
184	2011-06-15 17:56	PAINT	mg / cm ^2	DOOR JAMB	METAL	16	GREY	Positive	1.00	2.00 ± 0.60	< LOD : 4.05
185	2011-06-15 17:57	PAINT	mg / cm ^2	DOOR JAMB	METAL	17	BROWN	Positive	1.00	2.00 ± 0.70	< LOD : 3.60
186	2011-06-15 17:57	PAINT	mg / cm ^2	DOOR	WOOD	17	BROWN	Positive	1.00	1.50 ± 0.40	< LOD : 2.10
187	2011-06-15 17:59	PAINT	mg / cm ^2	DOOR JAMB	METAL	18	RED	Positive	1.00	2.20 ± 0.90	< LOD : 3.75
188	2011-06-15 18:00	PAINT	mg / cm ^2	DOOR	WOOD	18	WHITE	Positive	1.00	2.10 ± 0.90	< LOD : 2.70
189	2011-06-15 18:00	PAINT	mg / cm ^2	DOOR	METAL	19	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 3.34
190	2011-06-15 18:01	PAINT	mg / cm ^2	DOOR JAMB	WOOD	19	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.55
191	2011-06-15 18:02	PAINT	mg / cm ^2	DOOR JAMB	METAL	20	WHITE	Positive	1.00	2.90 ± 1.90	< LOD : 5.10
192	2011-06-15 18:02	PAINT	mg / cm ^2	DOOR	METAL	20	BLACK	Negative	1.00	< LOD : 0.06	< LOD : 3.52
193	2011-06-15 18:03	PAINT	mg / cm ^2	DOOR	WOOD	21	GREY	Positive	1.00	2.00 ± 0.70	< LOD : 2.40
194	2011-06-15 18:04	PAINT	mg / cm ^2	DOOR JAMB	WOOD	21	GREY	Positive	1.00	3.80 ± 2.50	< LOD : 12.15
195	2011-06-15 18:05	PAINT	mg / cm ^2	DOOR JAMB	METAL	22	BROWN	Positive	1.00	< LOD : 4.20	< LOD : 4.20
196	2011-06-15 18:06	PAINT	mg / cm ^2	DOOR	WOOD	22	BROWN	Positive	1.00	4.00 ± 2.20	3.70 ± 2.30
197	2011-06-15 18:07	PAINT	mg / cm ^2	DOOR	METAL	23	BEIGE	Positive	1.00	< LOD : 4.80	< LOD : 10.20
198	2011-06-15 18:07	PAINT	mg / cm ^2	DOOR JAMB	METAL	23	BEIGE	Positive	1.00	< LOD : 6.60	< LOD : 12.90
199	2011-06-15 18:08	PAINT	mg / cm ^2	DOOR JAMB	WOOD	24	GREY	Negative	1.00	< LOD : 0.21	< LOD : 2.70
200	2011-06-15 18:09	PAINT	mg / cm ^2	DOOR	WOOD	24	GREY	Negative	1.00	< LOD : 0.10	< LOD : 1.27
201	2011-06-15 18:10	PAINT	mg / cm ^2	DOOR	WOOD	25	BROWN	Negative	1.00	< LOD : 0.18	< LOD : 3.90
202	2011-06-15 18:10	PAINT	mg / cm ^2	DOOR JAMB	WOOD	25	BROWN	Positive	1.00	3.10 ± 1.90	< LOD : 4.80
203	2011-06-15 18:11	PAINT	mg / cm ^2	DOOR JAMB	WOOD	26	BROWN	Positive	1.00	3.90 ± 2.50	< LOD : 4.95
204	2011-06-15 18:12	PAINT	mg / cm ^2	DOOR	WOOD	26	BROWN	Positive	1.00	3.40 ± 1.90	< LOD : 5.25
205	2011-06-15 18:12	PAINT	mg / cm ^2	DOOR DUPLICATE	WOOD	26	BROWN	Positive	1.00	3.80 ± 2.10	< LOD : 5.85
206	2011-06-15 18:14	PAINT	mg / cm ^2	DOOR JAMB	METAL	27	BROWN	Positive	1.00	2.90 ± 1.60	< LOD : 4.05
207	2011-06-15 18:16	PAINT	mg / cm ^2	WALL	CONCRETE		BROWN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
208	2011-06-15 18:19	PAINT	mg / cm ^2			CALIBRATE		Positive	1.00	1.10 ± 0.10	0.90 ± 0.40
209	2011-06-15 18:19	PAINT	mg / cm ^2			CALIBRATE		Positive	1.00	1.00 ± 0.10	1.00 ± 0.30
210	2011-06-15 18:20	PAINT	mg / cm ^2			CALIBRATE		Positive	1.00	1.00 ± 0.10	1.00 ± 0.30
212	2011-06-15 18:27	PAINT	mg / cm ^2	FLOOR	CONCRETE	RM 7 A	YELLOW	Negative	1.00	< LOD : 0.04	< LOD : 2.78

Clinton Armory

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Index	Time	Type	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbK
213	2011-06-15 18:27	PAINT	mg / cm ^2	WALL	CONCRETE	RM 7 A	RED	Negative	1.00	< LOD : 0.05	< LOD : 1.20
219	2011-06-15 18:31	PAINT	mg / cm ^2	WALL (EMBLEM)	CONCRETE	RM 7 A	YELLOW	Positive	1.00	1.30 ± 0.30	1.30 ± 0.30

1601 SW 89th St. Ste. A-100
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Marshall Environmental Management, Inc.
Chain Of Custody

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0085-LBP-061511	Client/Company		Client/Company	
Project Name		Attention / Title		Attention / Title	
Project Address		Invoice To Address		Address	
Site Contact		Phone Number		Phone Number	
Phone Number		Fax Number		Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email		E-mail Address		E-mail Address	

Lab Id.	Sample Date	Field Id.	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-NW Corner)	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
1	6/15/2011	1	Room 1	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
2	6/15/2011	2	Room 2	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
3	6/15/2011	3	Room 3	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
4	6/15/2011	4	Room 4	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
5	6/15/2011	5	Room 5	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
6	6/15/2011	6	Room 6	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
7	6/15/2011	7	Room 7	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
8	6/15/2011	7E	Room 7 East	NA	NA	Dust	Wipe	1 ft^2	NA	Total Pb
9	6/15/2011	7C	Room 7 Center	NA	NA	Dust	Wipe	1 ft^2	NA	Total Pb
10	6/15/2011	7W	Room 7 West	NA	NA	Dust	Wipe	1 ft^2	NA	Total Pb

Collected By	Jamie Marshall	(print)	Date		Relinquished By	(print)	Date	
		(signature)	Time			(signature)	Time	
Received By	[signature] 6/24/11 4:25	(print)	Date		Relinquished By	(print)	Date	
		(signature)	Time			(signature)	Time	

Turn-Around-Time		
X	Standard	5-7 Business Days
	Rush	Next Day
	Immediate	Same Day

Condition Upon Receipt:

Method of Shipment:

Sample Notes: Please email results to: dustin.davidson@deq.ok.gov

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid					
Page	1	of	3		

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0085-LBP-061511	Client/Company		Client/Company	
Project Name		Attention Title		Attention Title	
Project Address		Invoice To Address		Address	
Site Contact		Phone Number		Phone Number	
Phone Number		Fax Number		Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email		E-mail Address		E-mail Address	

Lab Id.	Sample Date	Field Id.	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling-NW Corner)	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
11	6/15/2011	8	Room 8	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
12	6/15/2011	9	Room 9	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
13	6/15/2011	10	Room 10	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
14	6/15/2011	11	Room 11	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
15	6/15/2011	12	Room 12	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
16	6/15/2011	13	Room 13	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
17	6/15/2011	14	Room 14	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
18	6/15/2011	15	Room 15	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
19	6/15/2011	16	Room 16	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
20	6/15/2011	17	Room 17	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jamie Marshall	(print)	Date		Relinquished By		(print)	Date		Matrix
		(signature)	Time				(signature)	Time		Air
Received By	SRuffwell 6/24/11	(print)	Date		Relinquished By		(print)	Date		Aqueous
	8:00	(signature)	Time				(signature)	Time		Bulk
Turn-Around-Time										Sludge
X	Standard	5-7 Business Days	Condition Upon Receipt		Method of Shipment					Soil
	Rush	Next Day								Solid
	Immediate	Same Day	Sample Notes:	Please email results to: dustin.davidson@deq.ok.gov						Page 2 of 3

Media				
MV	MP	ST	SW	TL
Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0085-LBP-061511	Client/Company		Client/Company	
Project Name		Attention / Title		Attention / Title	
Project Address		Invoice To Address		Address	
Site Contact		Phone Number		Phone Number	
Phone Number		Fax Number		Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email		E-mail Address		E-mail Address	

Lab Id	Sample Date	Field Id	Sample Description (Floor tile, Mastic, Drywall, Etc.)	Sample Location (Lobby-Ceiling NW Corner)	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
21	6/15/2011	18	Room 18	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
22	6/15/2011	19	Room 19	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
23	6/15/2011	20	Room 20	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
24	6/15/2011	21	Room 21	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb
25	6/15/2011	22	Room 22	NA	NA	Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jamie Marshall	(print)	Date		Relinquished By	(print)	Date	
		(signature)	Time			(signature)	Time	
Received By	S. Pfeiffer 6/24/11 8:00	(print)	Date		Relinquished By	(print)	Date	
		(signature)	Time			(signature)	Time	

Turn-Around-Time

X	Standard	5-7 Business Days
	Rush	Next Day
	Immediate	Same Day

Condition Upon Receipt

Method of Shipment

Sample Notes: Please email results to: dustin.davidson@deq.ok.gov

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid					

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Environmental Chemistry Analysis Report

QuanTEM Set ID: 196759
Date Received: 06/24/11
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 9/1/2011

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: N/A
Location: N/A
Project No.: 0085-LBP-061511

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
002	2	Wipe	Lead	106	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
003	3	Wipe	Lead	41.3	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
004	4	Wipe	Lead	78.0	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
005	5	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
006	6	Wipe	Lead	187	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
007	7	Wipe	Lead	117	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
008	7E	Wipe	Lead	93.4	16	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
009	7C	Wipe	Lead	39.6	16	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
010	7W	Wipe	Lead	79.8	16	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
011	8	Wipe	Lead	361	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
012	9	Wipe	Lead	464	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
013	10	Wipe	Lead	212	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
014	11	Wipe	Lead	384	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
015	12	Wipe	Lead	261	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
016	13	Wipe	Lead	374	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
017	14	Wipe	Lead	1,010	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)

Note: Sample results have not been corrected for blank values.

This report applies only to the standards or procedures indicated and to the specific samples tested. It is not indicative of the qualities of apparently identical or similar products or procedures, nor does it represent an ongoing assurance program unless so noted. These reports are for the exclusive use of the client and are not to be reproduced without specific written permission.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7420 (1) = EPA 600/R-93/200 Preperation Modified. EPA 7420 Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preperation Modified. EPA 7082 Analysis Modified

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Environmental Chemistry Analysis Report

QuanTEM Set ID: 196759
Date Received: 06/24/11
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 9/1/2011

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: N/A
Location: N/A
Project No.: 0085-LBP-061511

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	15	Wipe	Lead	369	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
019	16	Wipe	Lead	1,440	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
020	17	Wipe	Lead	81.3	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
021	18	Wipe	Lead	35.2	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
022	19	Wipe	Lead	143	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
023	20	Wipe	Lead	38.9	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
024	21	Wipe	Lead	25.5	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)
025	22	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	06/30/11 11:30	W EPA 7420 (1)

Authorized Signature: _____

Benton Miller, Analyst

Note: Sample results have not been corrected for blank values.

This report applies only to the standards or procedures indicated and to the specific samples tested. It is not indicative of the qualities of apparently identical or similar products or procedures, nor does it represent an ongoing assurance program unless so noted. These reports are for the exclusive use of the client and are not to be reproduced without specific written permission.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7420 (1) = EPA 600/R-93/200 Preperation Modified. EPA 7420 Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preperation Modified. EPA 7082 Analysis Modified

Supplemental Report
QAQC Results

QA ID: 8910
Test: Lead
Date: 6/30/2011
Matrix: Wipe
Lab Number: 196759
Approved By: Benton Miller
Date Approved: 6/30/2011

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
ICB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	4.9	5.5
FCV	4.5	4.7	5.5
ICV	0.8	1.1	1.2
RLVS	0.256	0.327	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W3	0.000	5.438	5.489	100.9	5.273	97.0	4.0
MS-W2	0.000	5.470	5.458	99.8	5.475	100.1	0.3
MS-W1	0.000	5.416	5.340	98.6	5.661	104.5	5.8

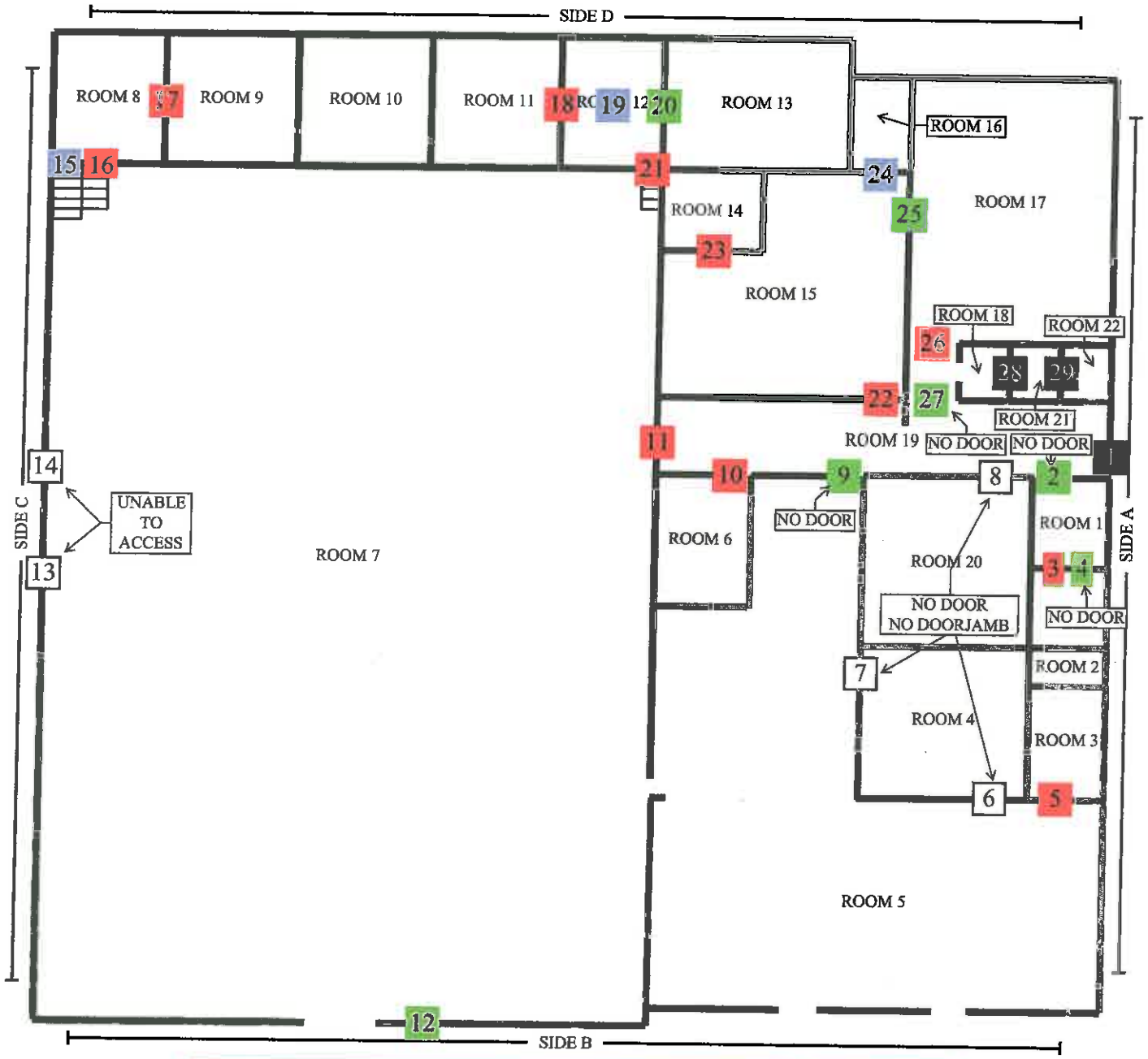
Authorized Signature: _____

Benton Miller, Analyst

CLINTON ARMORY

LEAD-BASE PAINTED MISCELLANEOUS SURFACES

CLINTON ARMORY
DOORS & DOORJAMBS



N

LEAD-BASE PAINTED DOORS & DOORJAMBS

LEAD-BASE PAINTED DOOR

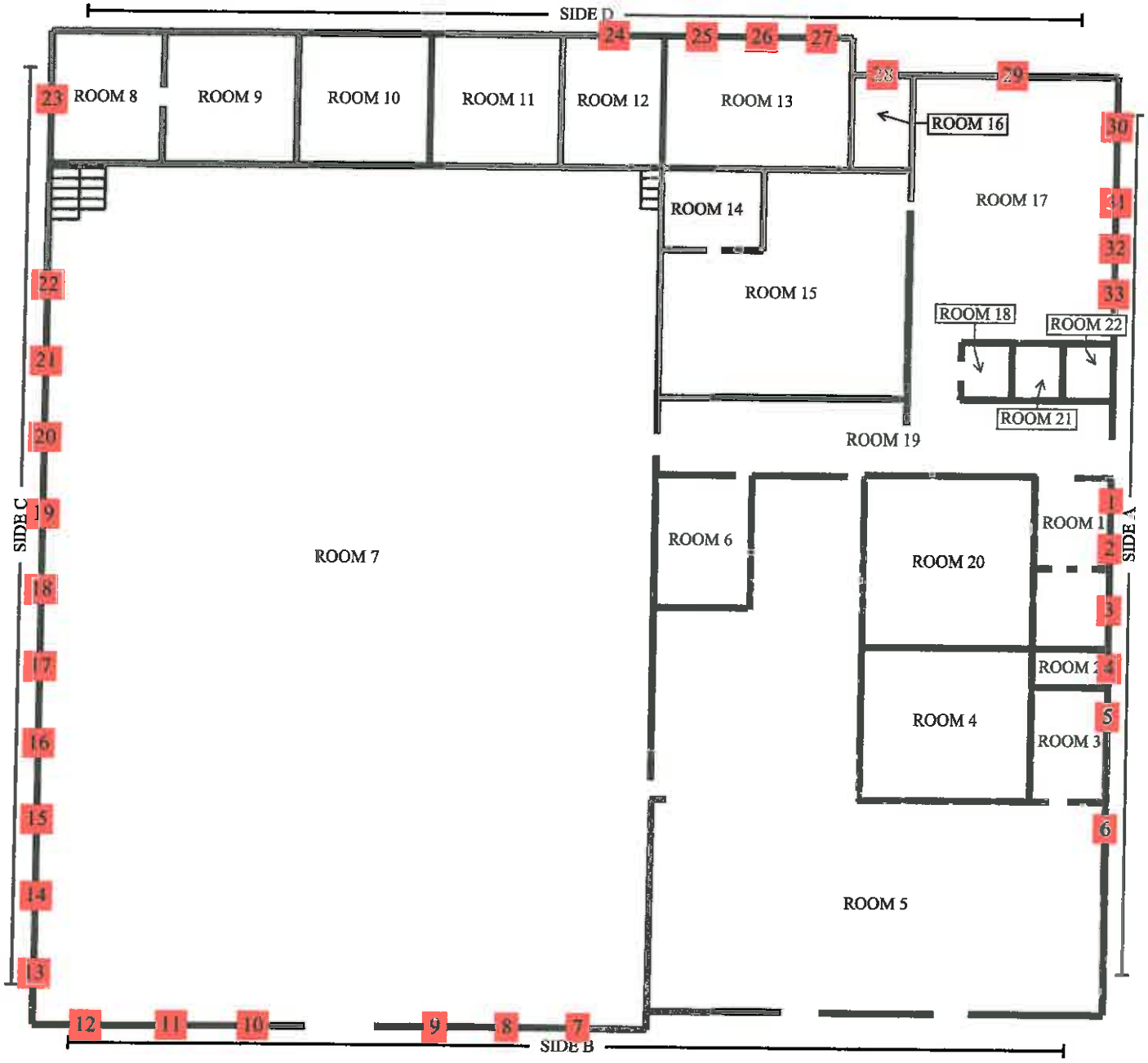
LEAD-BASE PAINTED DOORJAMBS

DOORS/DOORJAMBS NEGATIVE FOR LEAD-BASED PAINT

FACTORY FINISH DOORS/DOORJAMBS

CLINTON ARMORY

LEAD-BASE PAINTED WINDOWS



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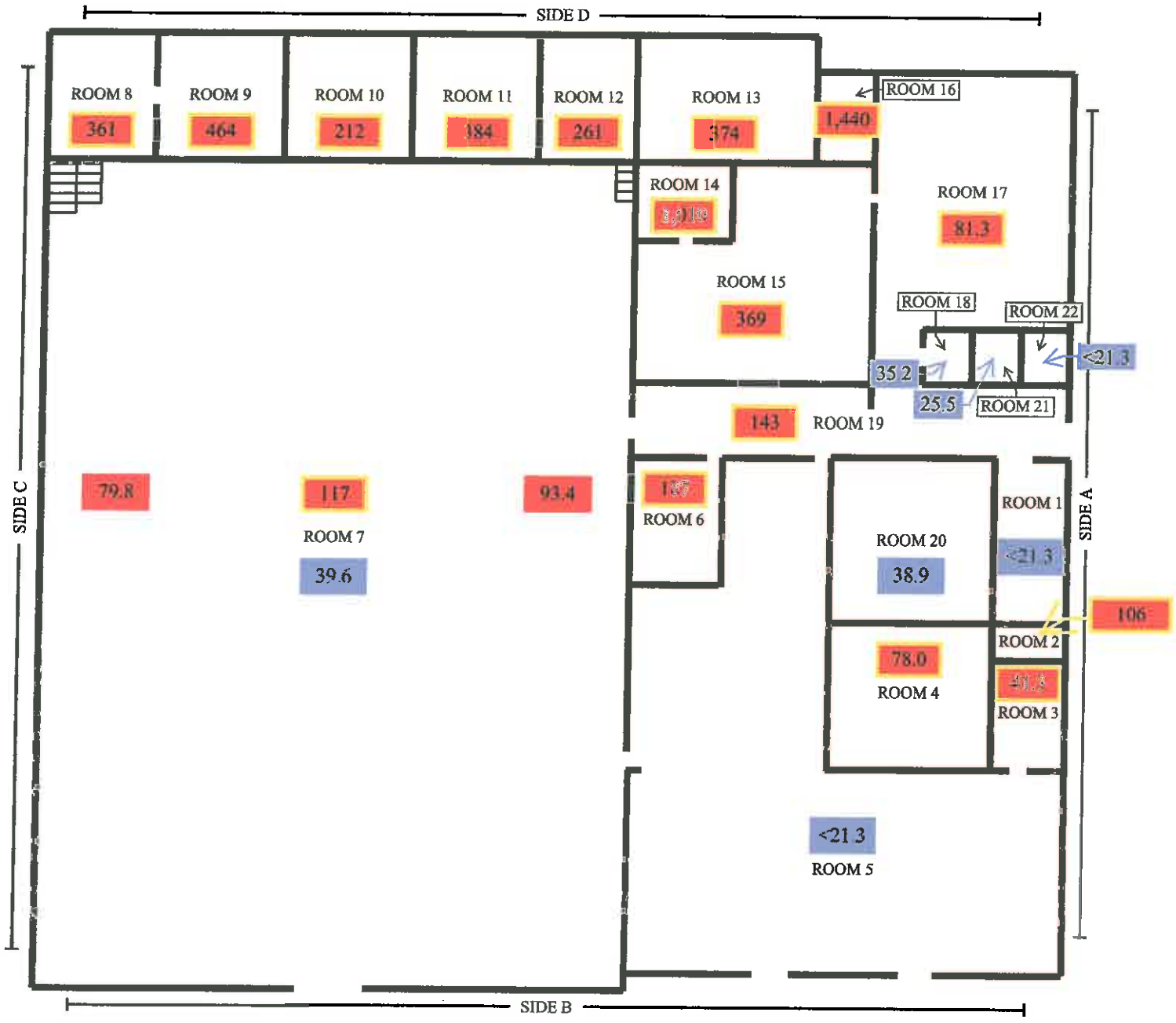
CLINTON ARMORY



N

LEAD CONCENTRATIONS IN SURFACE DUST

COMPOSITE SAMPLE

SAMPLE RESULT < ACTION LEVEL

Department of Environmental Quality

This is to Certify That

MARSHALL ENVIRONMENTAL MANAGEMENT

has met the specifications of the Oklahoma Lead-Based Paint Management Act and is certified as a Lead Based Paint

FIRM

Certification #: OKFIRM11360

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 4/1/2011 Expires on: 3/31/2012

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

JACOB JONES

has met the specifications of the Oklahoma Lead-Based Paint Management Act and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13457

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 4/1/2011 Expires on: 3/31/2012

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division


Side B
White Paint
on Roof Drain


Side B
White Paint
on Roof Drain

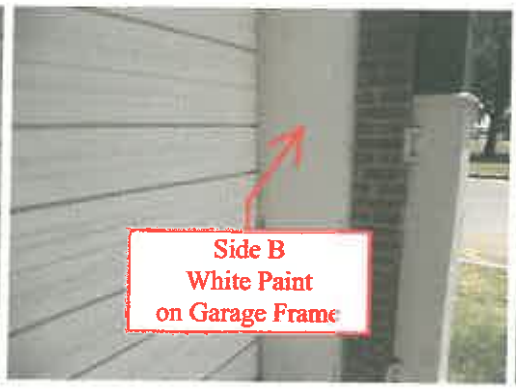

Side C
White Paint
on Roof Drain


Side D
White Paint
on Roof Drain


Side D
White Paint
on Roof Drain


Side A
Red Paint on
Exterior Archway


Side B
White Paint
on Garage Frame


Side B
White Paint
on Garage Frame


Side A
White Paint
on Window Lintel


Side A
White Paint
on Window & Lintel


Side B
White Paint
on Window


Side C
White Paint
on Window


Side D
White Paint
on Window


Room 3
Paint on
Window Guard


Room 5
Paint on
Window Guard


Room 16
White Paint
on Window Guard


Room 2
White Paint
on Wall


Room 2
White Paint
on Window Guard


Room 2
White Paint
on Windowsill


Room 7
Red & Yellow Paint
in Wall Emblem


Room 7
Yellow Paint
on Stair Rail


Room 7
Yellow Paint
on Stairs

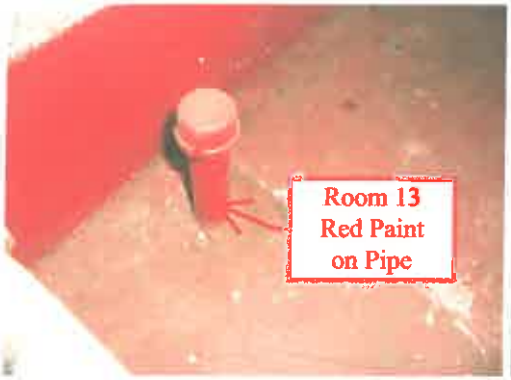

Room 7
Yellow Paint
on Stair Rail


Room 7
White Paint
on Wall Trim


Room 7
White Paint
on Wall Trim


Room 13
Red Paint
on Baseboard


Room 13
White Paint on Wall


Room 13
Red Paint
on Pipe


Room 15
Red Paint
on Wall


Room 16
Red Paint on Floor


Room 16
White Paint on Wall


Room 16
Red Paint on Wall


Room 7
Yellow Paint on
Concrete Stairs

SCOPES OF WORK

SCOPE OF WORK
For
Abatement of Friable and Non-Friable Asbestos at The Former Guthrie and Clinton National Guard Armories

The Oklahoma Department of Environmental Quality (DEQ) is requesting bids from licensed asbestos abatement contractors for asbestos remediation services at two former National Guard armories located in Guthrie and Clinton, Oklahoma. **All bids must be submitted to DEQ on company letterhead by close of business (4:30pm) on Monday, February 18. 2013.** Qualified bidder shall follow all appropriate OSHA requirements. This scope of work (SOW) describes the friable and non-friable and/or non-regulated asbestos containing materials (ACM) that will be removed. For details on the ACM including locations, please refer to the updated floor plan maps in Attachment 1. Inspection reports have been provided for your reference in Attachment 2, however these reports do not include the additional square footage of floor tile to be removed in the Guthrie Armory. For this reason, please use the floor plan maps in Attachment 1 for accurate square footage and locations.

Friable asbestos is present in the heater flue of Room 6 in the Guthrie Armory and also present in 160ft^2 of bedding mud in Room 3 of the Clinton Armory. A project design for the removal of friable asbestos in the Clinton armory is included in this Scope of Work (Attachment 3). Friable asbestos in the heater flue insulation of the Guthrie Armory shall be removed as small quantity short duration and thus does not require a project design.

Marshall Environmental will be performing oversight on this project. Once asbestos has been removed, contractor shall contact Marshall Environmental to perform the final inspection. Marshall Environmental will determine if all asbestos has been appropriately removed or if additional work needs to be performed. Marshall Environmental can be reached by phone at (405) 606-0401 or via email at marshenv@swbell.net.

The Guthrie Armory is located at 720 East Logan Avenue in Guthrie, Oklahoma, and the Clinton Armory is located at 723 South 13th Street in Clinton, Oklahoma. Both buildings will have water and electricity to use during remediation.

SPECIAL PROVISIONS:

1. The contractor shall schedule all work to be complete within thirty (30) days of the date contract is awarded. Coordination of work shall be scheduled with DEQ.
    a. A pre-construction meeting shall be held at the site after contract is awarded to review the Scope of Work and answer any questions the contractor may have.
    b. All on-site work shall be completed by the contractor five (5) days prior to the scheduled contract completion date, with the remaining five (5) days utilized for final inspection and correction of all deficiencies.
2. All work shall be performed in accordance with all applicable State and Federal regulations.

a. Disposal of Removed Materials: All materials removed by the Contractor under this contract shall be disposed of in accordance with State and Federal regulations.

CONTRACTOR SHALL:

- Possess a current Oklahoma Department of Labor (ODOL) Asbestos Abatement Contractor License in order to perform asbestos abatement
- Follow all appropriate OSHA requirements

Submit With Bid:

- Copy of ODOL Asbestos Abatement Contractor License
- Three references with name, type of project, phone number, and location of similar work in the last three years

Submit After Contract Award:

- A Work Plan with planned activities and schedule to DEQ for approval

NON-FRIABLE ASBESTOS ABATEMENT INSTRUCTIONS

Below is a summary of the non-friable and/or non-regulated asbestos containing materials (ACM) that shall be removed from the Guthrie and Clinton Armories. See the Floor Plan Maps for both armories for locations of ACM to be removed (Attachment 1).

- Remove floor tile and mastic from:
  - Guthrie Armory Rooms 1, 2, 6, 8, 10, 11, 19, and 20
    - **Total of 2,807 square feet**
- Remove floor tile and mastic from:
  - Clinton Armory Rooms 1, 2, and 3
    - **Total of 484 square feet**

FRIABLE ASBESTOS ABATEMENT INSTRUCTIONS

Below is a summary of the friable asbestos containing materials (Regulated ACM) that shall be removed from the Guthrie and Clinton Armories according to Oklahoma Department of Labor (ODOL) regulations and DOL approved Project Design (Attachment 3). See Guthrie and Clinton Armory Floor Plan Maps for locations of friable ACM to be removed (Attachment 1).

- Remove bedding mud from:
  - Clinton Armory Room 3
    - **Total of 160 square feet**
- Remove heater flue insulation from:
  - Guthrie Armory Room 6
    - **Total of 10 linear feet**
  - For details and location of the heater flue see the Guthrie Armory Asbestos Survey Report (Attachment 2).
  - Heater flue insulation can become friable so contractor shall remove as small quantity short duration and take care not to disturb or cut the fibers during removal.

FINAL REPORT

- Write final report containing the following information and submit to DEQ:
  - A detailed summary of work
  - Waste manifests (if any)
  - Photo documentation of work
    - Photo documentation of work will have color digital photos with captions describing photo
    - Photos will show before and after photos of work completed.
- Final report will be submitted in hard copy and electronically on disc.

OWNER REPRESTATIVE

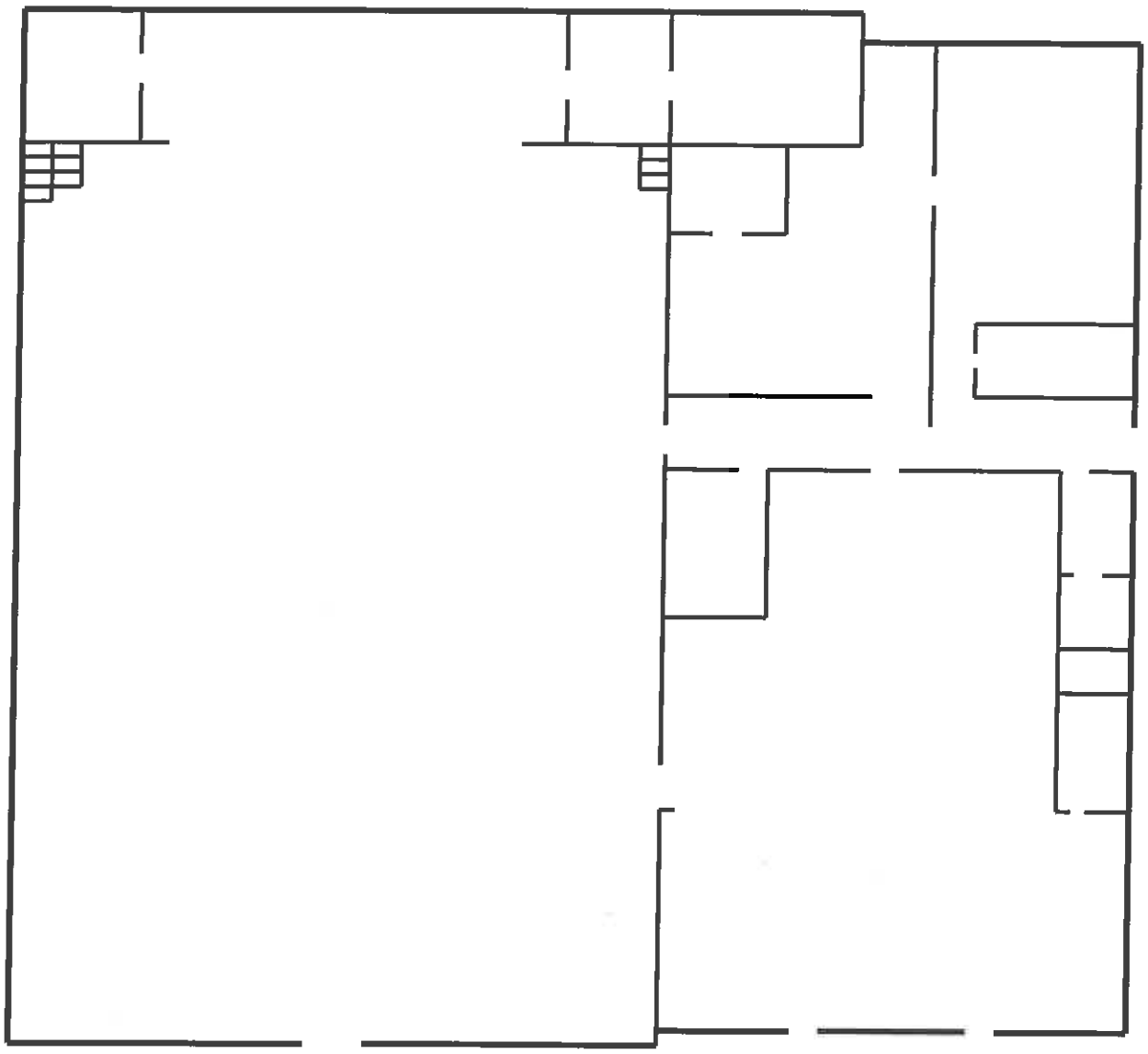
Owner's Representative: Rebecca Marfurt
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102
(405) 702-5112 (Office)
(405) 702-5101 (Fax)
E-Mail: Rebecca.Marfurt@deq.ok.gov

ATTACHMENT 1

GUTHRIE ARMORY AND CLINTON ARMORY

FLOOR PLAN MAPS

Clinton Armory – Floor Plan
Construction date 1938



Floor plan approximate
Not drawn to scale

ATTACHMENT 2

GUTHRIE ARMORY AND CLINTON ARMORY

ASBESTOS INSPECTION REPORTS

ATTACHMENT 3

CLINTON ARMORY

FRIABLE ASBESTOS PROJECT DESIGN

CLINTON ARMORY

723 SOUTH 13TH STREET,
CLINTON, OK 73601

October 25, 2012

Asbestos Project Design
Version 1.0

Prepared For:

Oklahoma Department of Environmental Quality

Land Protection Division

707 North Robinson

Oklahoma City, Oklahoma 73102

Prepared By:

Marshall Environmental Management, Inc.

1601 Southwest 89th Street, Suite A-100

Oklahoma City, Oklahoma 73159

Phone: 405.616.0401

Email: marshenv@swbell.net

Oklahoma Department of Labor Project #:

TABLE OF CONTENTS

Clinton Armory
ASBESTOS PROJECT DESIGN

SCOPE OF WORK

This Project Design has been prepared to allow for the safe and economical removal of approximately 160square feet of asbestos containingbedding mudfrom the building located at 723 South 13th Street in Clinton,Oklahoma in support of the renovation project currently scheduled. Asbestos removal will be conducted utilizing 380:50-23-4 (Ceiling Texture methods).

RESPONSIBLE PARTIES & CONSULTANTS

LICENSED CONTRACTOR SELECTION:

A Licensed Asbestos Abatement Contractor who shall hold a valid Oklahoma Department of Labor (ODOL) Asbestos Abatement Contractor License will be selected to perform the abatement work.

LICENSED ASBESTOS ABATEMENT CONTRACTOR:

To Be Determined

LICENSED ASBESTOS PROJECT DESIGNER:

Jamie Marshall, B.S.
Industrial Hygiene Associate
Marshall Environmental Management, Inc.
1601 Southwest 89th Street, Suite A-100
Oklahoma City, Oklahoma 73159
Office:405.616.0401
Fax: 405.681.6753
Email: marshenv@swbell.net

OWNER REPRESENTATIVE:

Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 North Robinson
Oklahoma City, Oklahoma 73102
(405) 702-5115

AGENCY STATEMENT

For the duration of this project all local, state and federal regulations will apply. This includes, but is not limited to, the Oklahoma Asbestos Control (OAC) Act,Abatement of Friable Asbestos Materials Rules 380:50-1-1 through 380:50-29-1.

SEQUENCING & PHASING OF WORK

This project will consist of one Phase with one work area. The Licensed Asbestos Abatement Contractor shall file the notification of the intended start date based upon the schedule to be determined by the Owner. The Project duration is estimated to take less than 5 days to complete. The Licensed Asbestos Abatement Contractor will place the centralized decontamination in an area where it is close to water and a drain. Waste will be loaded out which ever exterior door is closest to the waste dumpster or trailer. The Licensed Asbestos Abatement Contractor will follow the following sequence of events:

1) The Licensed Asbestos Abatement Contractor shall file required Oklahoma Department of Labor (ODOL) and National Emission Standard for Hazardous Air Pollutants (NESHAP) Notifications.
    a. **NOTE: Copies of the notifications are to be provided to Project Designer and Owner Representative.**
2) The Licensed Asbestos Contractor will mobilize to begin prep work based upon the notice to proceed and after coordination is confirmed with the Owner Representative.
3) The initial job site setup work shall include the establishment of ground fault circuit interrupters (GFCI's) for use with all portable electric equipment, lighting and the power used by the decontamination unit equipment, HEPA vacuums and all negative air machines. All power within the work area that the workers have the potential to come in contact with will be isolated or disconnected.
4) The centralizeddecontamination units and negative pressure machines shall be set up as soon as possible for use during all prep work. The boundary of the regulated work area is to be surrounded by asbestos hazard communication warning tape.
5) The contractor will prep all asbestos waste dumpsters in accordance with section 380:50-17-9 of the OAC Act.
6) Once the Prep Inspection is approved, the contractor may begin gross removal. Only asbestos workers wearing the appropriate PPE will be allowed within the asbestos barrier tape.
7) During the abatement process, asbestos containing materials will be continuously wetted down until asbestos removal is complete.
8) After completion of the final cleaning, call for the ODOL Visual Inspection.
9) Upon ODOL Visual Inspection approval, the contractor may apply lockdown sealant where applicable and 3rd party clearance air monitoring may be conducted.
10) Conduct a final inspection to verify the completion of the Scope of Work with the Project Design Representative.
11) Lastly, schedule an ODOL Final Inspection.
12) Tear down any prep work and demobilize after approval by the ODOL and Project Design Representative.
13) Submit all required project documents and waste manifests to the ODOL and provide the Project Design Representative copies of all required project completion documents.

EGRESS, EMERGENCY ESCAPE ROUTES& FIRE EXTINGUISHER PLACEMENT

No work will be at performed without adequate lighting. The work area will be clearly illuminated by droplights, light stands or equivalent lighting. All work will be performed using a buddy system. All power to the area is to be supplied by the GFCI power source. All exit routes from the containment work area will be clearly marked with signs and highly visible arrows designating the exit path. Emergency lights will be in place, where necessary, in all areas that are not properly illuminated to assist in the identification of the exit locations.

Fire extinguishers shall meet the requirements of the OAC Act 380:50-15-14. A minimum of one 10A:B:C fire extinguisher shall be provided for each 3,000 square feet of the work area, or major fraction thereof travel distance from any point of the work area to the nearest fire. A minimum of two fire extinguishers will be inside the work area. A minimum of one fire extinguisher shall be placed in the clean room of the decontamination facility.

Prior to beginning the prep and abatement work, all licensed asbestos workers will be given a briefing on the emergency egress procedures by the asbestos supervisor.

QUANTITY, TYPE& PERCENTAGE OF FRIABLE ACM

The ACM consists of bedding mud that is located on the ceilings and walls of a room in the building.

Total quantity of ACM to be removed:

- Approximately 160Square Feet of Texture on wall

The friable asbestos consists of the following:

- 4% Chrysotile

ABATEMENT METHODS, TECHNIQUES& NUMBER OF CONTAINMENTS

All work will be conducted will be done in accordance with agency rules. 380:50-23-4 (Ceiling Texture methods). Work areas will be prepped by sealing off all critical barriers within the work area. Work areas will be separated from non-work areas utilizing triple flaps constructed with 6 mil poly. The contractor will lockdown everything within the work area.

AIR MONITORING REQUIREMENTS

SAMPLING REQUIREMENTS

All samples will be collected and analyzed by a technician that is NIOSH 582e trained and analyzed by Phase Contrast Microscopy (PCM), in conjunction with a laboratory that is currently proficient with the American Industrial Hygiene Association's Proficiency in Analytical Testing Program.

Clearance samples will be analyzed by PCMin conjunction with a laboratory that is currently proficient with the American Industrial Hygiene Association's Proficiency in Analytical Testing Program.

PREPMONITORING:

- Prep work air monitoring is required due to the significantly damaged asbestos containing material. A minimum of 25% of the workers will be monitored during preparation of the containment.

DURING ABETMENT

- A minimum of 2 or 25% (whichever is greater) of the workers will be monitored during the abatement activities for all abatement work efforts. Personal monitoring is required during work to assure adequate respirator protection factors are applied in respirator selection.
- At least one, 30-minute excursion sample will be collected during the removal of the asbestos. This sample is to be representative of the work conducted for each activity that may generate a potential for worker exposure in excess of the OSHA PEL for the 30 minute excursion limit of 1.0 f/cc as specified in 29 CFR 1926.1101.
- The Contractor may use prior air monitoring for compliance with the requirement to collect an excursion sample if the representative sampling was conducted for work in the previous 12 months as specified in 29 CFR 1926.1101(f)(2)(iii)(B). ODOL has no excursion limit requirement; therefore it is the Contractor's responsibility to see that appropriate excursion sampling is conducted. This sampling work can be coordinated with the IH Technician provided by the Third Party Air Monitoring firm.

AREA MONITORING

- One inside work area sample should be placed inside around the vicinity where the work is being conducted
- One outside area sample will be collected outside the Clean Room for the decontamination facility for each shift that the decontamination unit is in use
- One area sample will be collected outside an adjacent side of the containment during the demolition
- One area sample will be collected outside the Load-out chamber as an adjacent area samplewhile the work procedures are being conducted.
- One area sample will be collected at the load out trailer during load out procedures
- Negative Air Machine Air Monitoring: One sample will be collected for each negative air machine that is used.

NUMBER & LOCATIONS OF CLEARANCE SAMPLES

Five clearance samples will be collected within the work areas with a minimum volume of 1,200 liters. Clearance samples will be analyzed by PCM in conjunction with a laboratory that is currently proficient with the American Industrial Hygiene Association's Proficiency in Analytical Testing Program.

NUMBERS, CAPACITIES& DISCHARGE POINTS OF NEGATIVE AIR MACHINES

The centralized decontamination systemwill have one negative air machinerunning and show a visible negative pressure when in use. Visible negative pressure will be determined by the Project Designer's Representative.Because the size of the room is so small (approximately 25 square feet) a variance is being requested for the 2 air exchanges per hour.

DETAILS OF PROJECT & GENERAL REQUIREMENTS

This project does not require negative pressure containments. This project will be conducted in accordance with ceiling texture methods. Prior to the commencement of work, the asbestos contractor will erect an centralized decontamination, establish the regulated work area by placing asbestos warning tape around the work area, seal all critical barriers, disconnect power or lockout/tag out electrical inside the containment areas, and prep waste trailers. All electricity will be disconnected or locked out/tagged out within the containment area for the duration of the project. After approval from the project manager and owners representative, the asbestos contractor will call for a prep inspection.

After the prep has been accepted by the ODOL, asbestos removal can commence. Structures will be adequately wetted in a manner that minimizes the dispersal of dust for the entirety of the removal process. No one other than ODOL licensed asbestos workers will be allowed inside the regulated areas. Once all of the asbestos has been removed and loaded into waste trailers, the asbestos contractor will final clean the area where necessary. After the area has been inspected and accepted by the project manager, a visual inspection will be scheduled with the ODOL. Upon approval of the ODOL the contractor will lockdown the containment area. Once lockdown has had adequate dry time, clearance air samples will be collected. When clean air has been established the contractor may call for a final inspection.

The Asbestos Abatement Contractor shall abide by this Project Design and the requirements, which govern friable asbestos removal in OAC Act 380:50, and require notification, worker training, and applicable transportation and disposal requirements for asbestos waste materials to include, but not limited to the following:

CODES & REGULATIONS:

Wherever conflicts arise within the Project Design General Requirements or Procedures and/or among the applicable Rules and Regulations, the most stringent rules shall apply. This is subject to approval by ODOL or other authorities having jurisdiction (e.g. DEQ). If allowed by the authority with jurisdiction, a request for a variance can be submitted, provided it is acceptable to the Project Designer and Project Manager.

- 29 CFR 1910, OSHA General Industry Standards
- 29 CFR 1926, OSHA Construction Industry Standard
- 29 CFR 1926, 1101 OSHA Asbestos Construction Standard

- 40 CFR 61, Subpart M (NESHAP) enforced by ODEQ
- ANSI Z88.2 latest edition (Respiratory Protection)
- Oklahoma Asbestos Control Act Title 40 Sections 450-456
- OAC 380:50 (All-inclusive), Oklahoma Rules for Abatement of Friable Asbestos Materials
- The Asbestos Hazard Emergency Response Act (AHERA) of 9186 PL (99-519) and rules and regulations adopted by EPA for its implementation, latest edition.
- 49 CFR (USDOT) Hazardous Material Transportation Regulations
- OAC 252:100-40, Air Pollution Control Rules, Control of Emission of Friable Asbestos during Demolition and Renovation Operations (replaces OAC 252:100-41-16)
- OAC 252:515-19, Management of Solid Wastes (DEQ Asbestos Land Protection Division Asbestos Disposal Requirements)
- All Applicable State Statutes, County and City Codes/Ordinances

DETAILS OF DECONTAMINATION SYSTEM

A three chamber Centralized decontamination system will be utilized and constructed in accordance with Subchapter 15 of the Oklahoma Asbestos Control Act 380:50 -15-7, 15-8 and 15-12.

SOIL SAMPLING

This Project does not require the removal of any soils contaminated with ACM.

MATERIALS OR METHOD USED TO PROTECT OBJECTS IN THE WORK AREA

All materials within the work area that removed will be covered with 4 mil poly.

REQUEST FOR VARIANCES

Because the size of the room is so small (approximately 25 square feet) a variance is being requested for the 2 air exchanges per hour.

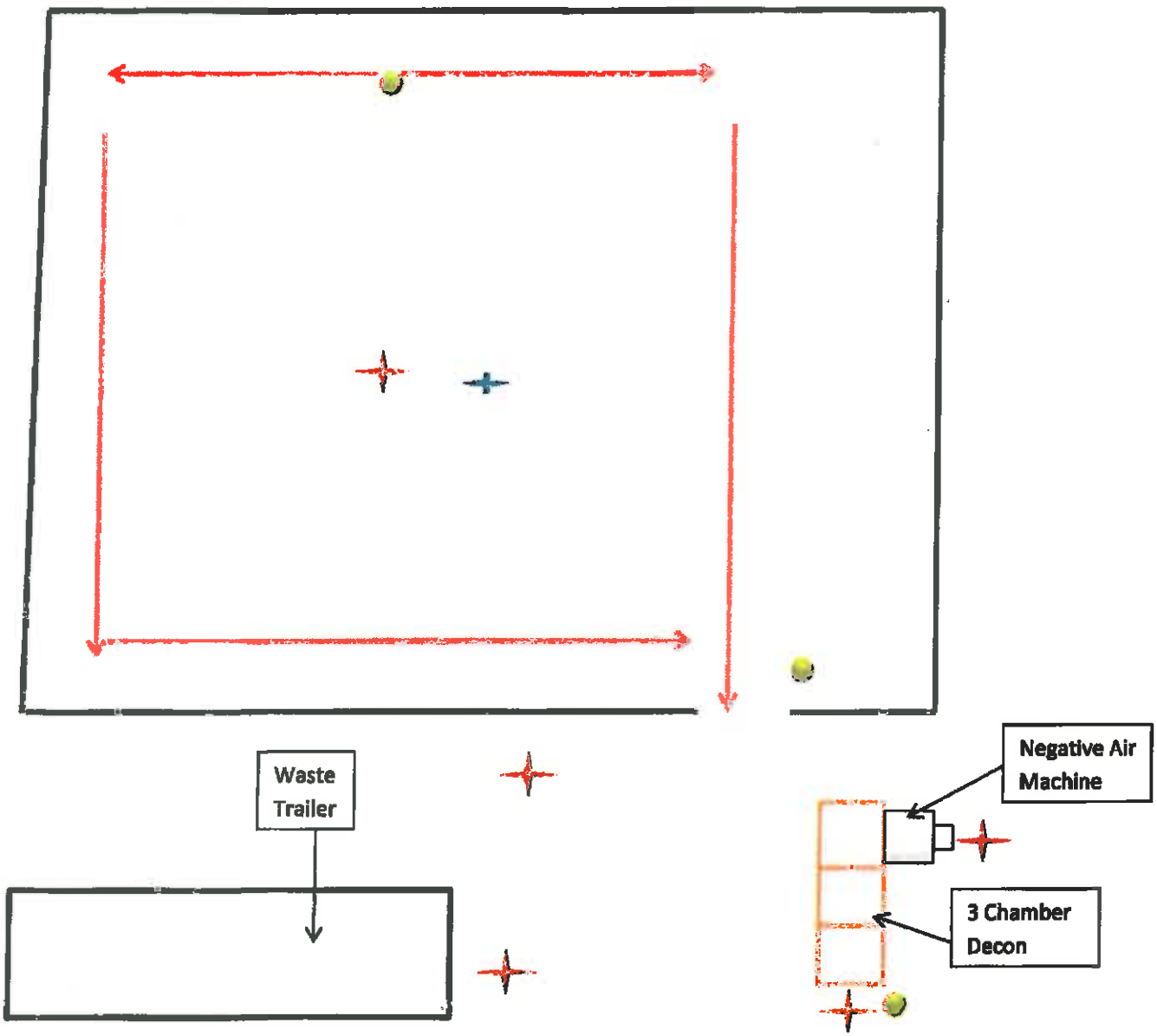
APPENDIX

EXAMPLE CONTAINMENT DRAWING

ASBESTOS CONTAINING MATERIAL FLOOR PLAN

ANALYTICAL RESULTS

ASBESTOS PROJECT DESIGNER LICENSE



Containment Drawing

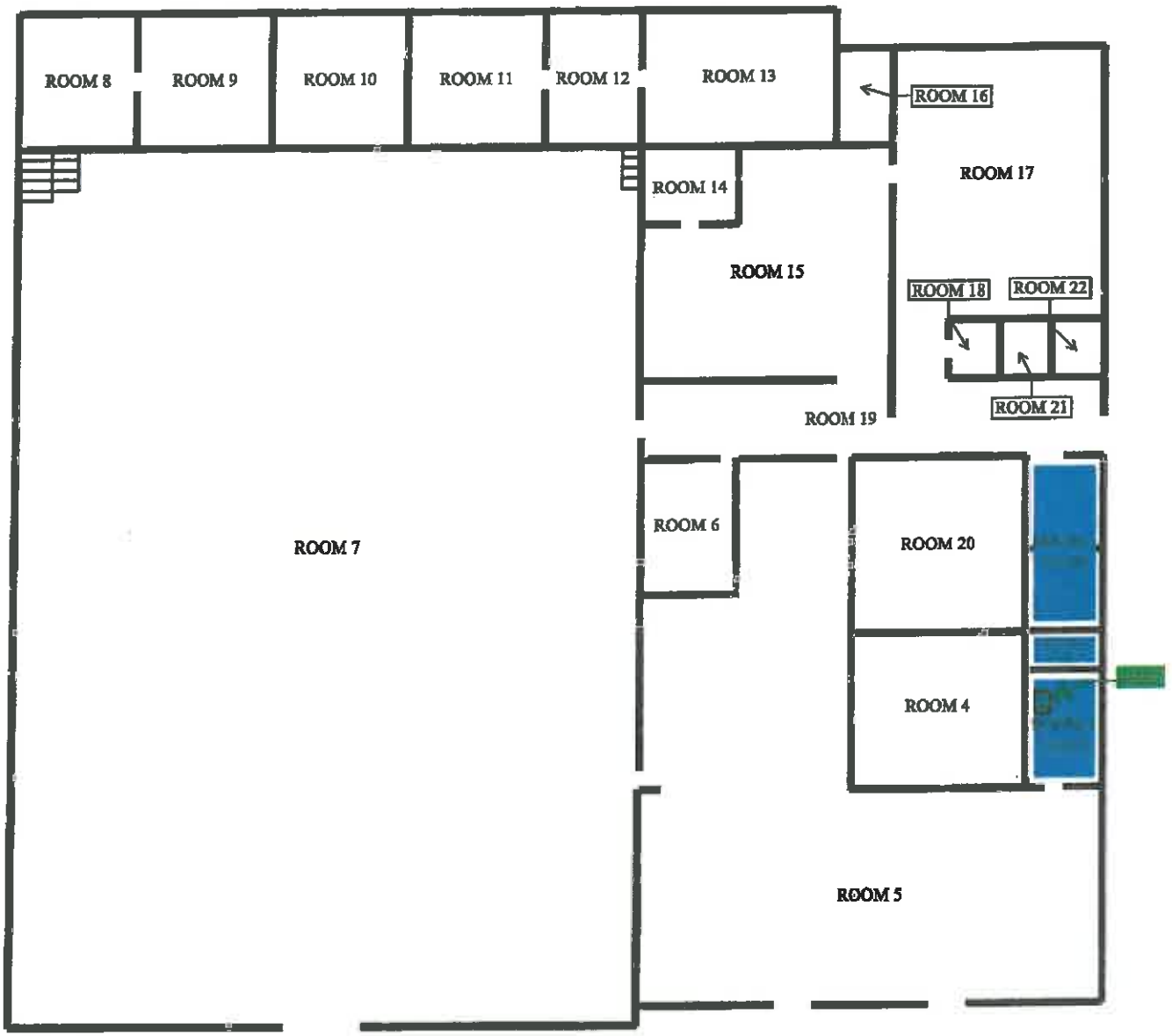
Egress Routes

Clearance Pumps

Area Pumps

Fire Extinguisher

CLINTON ARMORY
ASBESTOS CONTAINING MATERIALS



Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

1601 Southwest 89Oth Street, Suite A-100
Oklahoma City, OK 73159
Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0084-AB-061511	Client	State of Oklahoma Department of Central Services	Client	OK Department of Environmental Quality Land Protection Division
Project	Clinton Armory Asbestos Inspection	Attention	Cindy Melton Administrative Programs Director	Attention	Dustin Davidson Environmental Programs Specialist
Project Address	723 South 13th Street Clinton, OK 73601	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Wade Anders, Fire Chief	Phone	405-522-4805	Phone	405-702-5115
Phone	580-445-7799	Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	cindy.melton@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	0062-061511-PLM-26	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Yellow Mastic		COLOR	Yellow
Room 26		CONDITION	Good
Behind Cove Base		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		100%	Adhesive

LAB LOG NUMBER	0062-061511-PLM-27	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Drywall		COLOR	White
Room 3		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		96%	Calcareous Material
		4%	Cellulose

LAB LOG NUMBER	0062-061511-PLM-28	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bedding-Tape		COLOR	Yellow
Room 3		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		100%	Cellulose

LAB LOG NUMBER	0062-061511-PLM-29	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bedding-Mud		COLOR	Brown
Room 3		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
4% ASBESTOS DETECTED			
4%	Chrysotile	88%	Calcareous Material
		8%	Cellulose

LAB LOG NUMBER	0062-061511-PLM-30	DATE OF SAMPLING	June 15, 2001
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Drywall		COLOR	White
Room 4		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
		96%	Calcareous Material
		4%	Cellulose

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	June 21, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.

Lab Accreditation:
AIHA PAT ID# 102334

Project Design Review Form

Oklahoma Department of Labor
Asbestos Division
3017 N. Stiles, Oklahoma City, OK 73105
Phone – (405)521-6464 Fax – (405)521-6025

Project Name: Clinton Armory
Project No: 12-7267 Date: 11/01/12
Project Designer: Jamie Marshall

Approved: X

Disapproved: _____

	ITEM	ACCEPTED	REJECTED	COMMENTS
1.	A statement that DOL Abatement of Friable Materials Rules apply.	X		This project to be performed according to DOL OAC 380:60-1-1 through 380:30-29-1.
2.	Sequencing and phasing of work.	X		One Phase
3.	Identification of means of egress and a fire protection plan and a diagram for emergency escape routes, and fire extinguisher placements	X		Workers briefed on emergency egress procedures. One 10A:B:C fire extinguisher placed every 3,000 SF of work area and one placed in the clean room of the decon.
4.	The quantity, type, percentage with bulk analysis unless presumed and a diagramed location of asbestos materials to be abated	X		Approximately 160 SF of wall texture containing 4% chrysotile.
5.	Abatement methods, and techniques, and numbers of containments, glove bags or mini-containments.	X		ODOL OAC 380:50-23-4. Ceiling Texture methods.
6.	Details of personal and area air monitoring samples.	X		25% of work force with a minimum of (2) samples, inside work area, outside work area, outside and adjacent to containment, load out, AFD discharge,.
7.	Numbers and locations of Clean Test samples and type of analysis to be employed.	X		(3) PCM clearance samples achieving 1200 L each sample.
8.	Numbers, capacities, a diagram to identify locations, and discharge points, if any, of negative air machines.	X		One AFD at the dirty room of the decon
9.	Details of project containment(s), glove bag or mini-containments, including drawings. Details shall include all applicable subchapters, including but not limited to scaffolding and live electric isolation.	X		All electrical within work area locked out / tagged out. Critical barriers only.
10.	Details of decontamination system(s).	X		Attached three stage decon adhering to DOL OAC 380: 50-15-7,8 and 12.
11.	The extent to which asbestos-contaminated soils, if any, must be removed and the sampling methods of determining the efficacy of such removal.	N/A		
12.	Special materials or methods required to protect objects in the work area should be detailed, (plywood over carpeting or hardwood floors to prevent damage from scaffolds and/or falling materials.	X		All material within the work area not being removed will be covered with 4-mil poly.
13.	Any variances from the Abatement of Friable Asbestos Materials Rules.	N/A		

The Department of Labor reserves the right to require additional engineering or environmental controls consistent with the Abatement of Friable Asbestos Materials Rules which may be necessary because of discrepancies between Project Design and field conditions or from unanticipated changes in field conditions.

REVIEWED BY: _____ DATE: 11/2/12 REVIEWED BY: _____ DATE: 11/2

STATEMENT OF WORK
For
Remediation of Lead-Based Paint and Lead Contamination at Clinton Armory

The Oklahoma Department of Environmental Quality (DEQ) is requesting bids from qualified bidders for remediation services at a former National Guard armory located in Clinton, Oklahoma. This statement of work (SOW) describes the cleanup of lead contamination associated with the indoor firing range (IFR), lead contaminated dust on the floors of the building and lead-based paint (LBP) located on surfaces throughout the building. This work must be performed to provide for safe re-use of the facility with unrestricted use such as storage areas, classrooms, or office space. A mandatory site visit and walk through will be held to give a better understanding of the site. A floor plan map of the Clinton Armory is attached for review **(Attachment 1)**.

The building is located at **723 South 13th Street, Clinton, Oklahoma 73601**. The building **does** have available water and electricity to use during remediation.

SPECIAL PROVISIONS:

1. Work Schedule: The Contractor shall schedule all work to be complete within 90 days after date of the written "Notice to Proceed".
    a. A pre-construction meeting shall be held at the site after the Notice to Proceed date to review Scope of Work and answer any questions the contractor may have.
    b. All on-site work shall be completed by the Contractor five (5) days prior to the scheduled contract completion date, with the remaining five (5) days utilized for final inspection and correction of all deficiencies.
2. Conditions of Work: The following conditions of work will apply in accomplishment of this contract:
    a. All work shall be performed in accordance with all applicable State and Federal regulations.
    b. The contractor shall perform this work in such a manner as to cause a minimum of interruption to normal work being performed in the contract area.
    c. Coordination of work areas shall be scheduled with DEQ.
    d. Disposal of Removed Materials: All materials removed by the Contractor under this contract shall be disposed of in accordance with State and Federal regulations. DEQ will sign as generator, if necessary.

CONTRACTOR SHALL:

- Attend mandatory pre-bid meeting and site walk through;
- Possess a current lead-based paint firm license and have a certified lead-based paint supervisor in order to perform lead-based paint abatement;
- Follow all appropriate OSHA requirements;
- Follow OSHA Lead in Construction Interim Final Standard (29 CFR 1926.62) for lead-based paint abatement, indoor firing range remediation, and lead dust remediation;
- Read Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges, November 3, 2006, Departments of the Army and Air Force, National Guard Bureau **(Attachment 2)**, and refer to this document as a reference and guideline for remediating IFR lead contamination.

Submit With Bid:

- Copy of lead-based paint firm license;
- Copy of lead-based paint supervisor license;
- Three references with name, type of project, phone number, and location of similar work in the last three years.

Submit After Contract Award:

- A Work Plan with planned activities and schedule to DEQ for approval.

LEAD-BASED PAINT ABATEMENT INSTRUCTIONS

- **Non-Friction and Non-Impact Surfaces**

  - All items listed below shall be wet scraped, painted with a neutral colored primer, and encapsulated with DEQ approved elastomeric encapsulant. A list of DEQ approved elastomeric encapsulants is attached (**Attachment 4**). Encapsulant shall be a minimum of 20 mils thick. The Lead-Based Paint and Settled Dust Sampling Report with floor plan maps detailing the locations of the lead-based paint is attached for review (**Attachment 7**);
    - All Down Spouts (Roof Drains);
    - All Window Lintels;
    - All Interior and Exterior Window Sills;
    - All Overhead Door Frames, Guards, and Casings;
    - The Indoor Firing Range lintel and sill;
    - The exterior Side A red archway;
    - All walls, ceiling, and metal frame opening to shower in Room 2;
    - All walls in Room 16;
    - The red squares on the walls in Room 15;
    - All walls and baseboards in Room 13;
    - The white painted wall trim on Side D of Room 7;
    - The red and yellow thunderbird wall emblem in Room 7;

  - The drill floor hand rails shall have all paint removed and then be painted with a neutral colored primer;

  - All interior window bars shall be removed and properly disposed;

  - Deteriorated paint removed from building surface will be properly disposed.

- **Friction and Impact Surfaces**

A. Floors

- The floor of Room 16, all steps (top and side) of both staircases in Room 7, and the floor and small metal pipe on floor of Room 13 contains lead-based paint. All paint shall be visibly removed from the concrete floors and metal pipe. Once visibly removed, the floors shall be HEPA vacuumed, wet washed, and floors and pipe shall be sealed with Epoxy-Coat Garage Floor Coating Kit or equivalent. Specifications are attached (**Attachment 4**);

B. Windows (See Attachment 6)

- A Window-Scope of Work with map, window measurements, specifications for window replacement, and specific details on abatement requirements for each window is attached (**Attachment 6**);
- Windows installed must meet all attached specifications;

- Window installation and oversight of window removal shall be performed by a third party professional window installation company that is certified and recommended by the window manufacturer of the windows being installed;
    - Window installer shall have no less than five (5) years installation experience;
- Window installer shall have experience with removal of steel casement windows;
- All interior and exterior window sills shall be HEPA vacuumed and wet washed after windows have been removed and replaced;
    - Once window sills have been cleaned, contractor shall encapsulate with DEQ approved lead-based paint encapsulant.

C. Doors and Frames (See Attachment 5)

- A Door-Scope of Work with map, door measurements, and specific details on abatement requirements for each door is attached (**Attachment 5**);
- Specifications for replacement items are attached **(Attachment 5)**;
- Doors will be replaced with UL listed 90 minute standard metal doors;
- Doors will be replaced with Steelcraft L18 and L16 – Series Honeycomb Doors (Specifications Attached) or equivalent;
- Contractor must submit product data for approval if different from doors or door frames in bid package;
- Replacement doors and frames must meet all compliance and fire rating requirements in the attached specifications;

a. Exterior Doors

- Exterior doors will be replaced with galvannealed, 16 gage, honeycomb core insulated doors;
- Continuous Geared Door Hinges: As manufactured by Pemko or approved equal – Satin Nickel – Half Surface Safety Hinges: Standard (Specifications Attached);
- Threshold: As manufactured by National Guard Products or approved equal – 426E (Specifications Attached);
- Weather Strip: As manufactured by National Guard Products or approved equal – 160VA (Specifications Attached);
- Lever: As manufactured by Schlage or approved equal – D Series "Rhodes", 626 finish, function ND60PD (Specification Attached);
- Keying: All doors to be keyed alike;
- Provide sealant per 07920 specification attached.

b. Interior Doors (All Except Indoor Firing Range Door)

- Interior doors will be replaced with non-galvannealed, 18 gage, honeycomb core insulated doors;
- Continuous Geared Door Hinges: As manufactured by Pemko or approved equal – Satin Nickel – Half Surface Safety Hinges: Standard (Specifications Attached);

- Knob: As manufactured by Schlage or approved equal – A Series "Orbit", 626 finish, function A10S (Specification Attached);
- Provide sealant (caulking) per 07920 specification attached.

c. Indoor Firing Range Door

- Door will be replaced with non-galvannealed, 18 gage, honeycomb core insulated doors;
- Frame will be replaced with Steelcraft F16 and F14 Series Flush frames (Specifications Attached) or equivalent;
- Knob: As manufactured by Schlage or approved equal – A Series "Orbit", 626 finish, function A10S (Specification Attached);
- Provide sealant (caulking) per 07920 specification attached.

D. Clearance Inspection

- Once lead-based paint has been removed from surfaces, DEQ will perform a visual inspection to confirm lead-based paint has been removed appropriately before surfaces are painted or sealed.
- Once lead-based paint abatement is complete and after room floors are cleaned, contact Marshall Environmental Management to perform post abatement clearance sampling in these areas. See Section C (Confirmation and Clearance Sampling) for additional information.
- If samples do not meet EPA and HUD standards for lead dust (40 µg/SF for floors), areas shall be re-cleaned and re-sampled.

E. Sampling and Disposal

- DEQ assumes that all lead-based paint chips removed from surfaces are considered hazardous waste. Lead-based paint removed from surfaces shall be disposed as hazardous waste.
  - If Contractor uses a paint stripper that exhibits a characteristic of hazardous waste, or contains hazardous waste constituents, it is the Contractor's responsibility to characterize this waste under 40 CFR 262.11 and if they are determined to be hazardous waste, disposing of them as such. The Final Report shall contain all relevant information regarding the waste determination.
  - A completed and signed waste manifest, Land Disposal Notification Form, and Certificate of Disposal demonstrating that the paint chips were properly disposed at a hazardous waste facility must be included in the Final Report.

LEAD DUST REMEDIATION INSTRUCTIONS

Sequence of Events

The initial cleaning of the building shall be as follows:

1. First Phase –
    a. The indoor firing range (IFR) shall be cleaned (See *Section 1. Indoor Firing Range (IFR)* below for details).
    b. The Drill Floor and Stage Rooms shall be cleaned (See *Section 2. Remaining Building* for details).
2. Second Phase –
    a. All floors of the remaining building shall be cleaned (See *Section 2. Remaining Building* for details).
        i. Once the First Phase is complete there will be a one to two week delay before starting the Second Phase.

1. Indoor Firing Range (IFR)

The IFR in these buildings is a long narrow basement room with attached small side room where the Oklahoma Military Department would target practice with weapons. Sometimes the IFR will have a steel bullet deflection plate and sand trap. The IFR is to be cleaned by removal of all lead contaminated materials, including debris (if present), sand (if present), steel plate (if present), lead-based paint (if present), and lead contaminated dust and other lead containing particulates on the floor, walls, and ceiling of the IFR.

- **Pre-remediation Preparation**
    - To ensure cross contamination does not occur, use engineering controls such as:
        - Sealing openings with 6 mil poly sheeting to contain dust inside IFR;
        - Covering floor of area outside IFR with 6 mil poly sheeting to make sure not to track lead dust into clean areas;
        - Securing IFR at the end of the work day. At no time shall the IFR be accessible for unauthorized entry without the contractor present;
    - When inside IFR wear appropriate personal protective equipment (See **Attachment 3**).

- **Water Removal**
    - All wash water from the IFR shall be filtered through a 1 micron filter and then sampled for total lead and total phosphorus. Total lead shall be run by ICP and total phosphorus shall be run by EPA Method 365.3. Wash water shall be disposed appropriately. Sample results can be submitted to DEQ to determine if wash water can be disposed at the local Waste Water Treatment Facility.

- **Pre-remediation Removal**

  - Decontaminate door to IFR side room, remove from frame, wrap in poly sheeting, and properly dispose;

  - Remove all paint from side room door frame to bare metal and paint frame with neutral colored primer;

  - Sand Trap:
    - Decontaminate metal backstop, wrap in poly sheeting and properly dispose;
    - Decontaminate sand trap framework, wrap in poly sheeting and properly dispose;
    - Place sand in sealed drums and dispose of sand as hazardous waste.

  - Decontaminate all items to be removed from the IFR, wrap in poly sheeting, and properly dispose.
    - Items such as acoustical tiles, carpet, or other porous materials shall be HEPA vacuumed, washed, and sampled for TCLP. Acoustical tile, if present, will have 3 – five part composite samples taken. All other materials shall have 1 – five part composite sample taken of each material. If samples pass TCLP then properly dispose. If any samples fail TCLP, dispose of that item as hazardous waste.

- **Remediation**

  - HEPA vacuum and wet wash walls, floor, ceiling, vent fan, and other structures that are contaminated;

  - Dispose lead contaminated dust, wash water, and appropriate cleaning materials as hazardous waste or as appropriate (See section 3. Disposal of Materials for detailed information).

- **Post-remediation**

  - All post-remediation sampling shall be performed by Marshall Environmental Management (MEM). The Contractor shall provide MEM a minimum of five (5) calendar days prior notice to perform sampling. See *Section 4. Confirmation and Clearance Sampling* for contact information;

  - Post remediation sampling is required to confirm the IFR has been remediated to 200 micrograms per square foot (ug/SF);
    - Areas above 200 ug/SF shall be re-cleaned and re-tested until results are at or below 200 ug/SF;

- If surfaces of the IFR cannot be cleaned and DEQ determines that these surfaces contain imbedded lead fragments, construction grout shall be used over these surfaces.
  - Surfaces shall be thoroughly cleaned;
  - A two part epoxy mixture designed for concrete shall be applied to surfaces according to manufacturer's specifications at 1/8 inch thick. Use Epoxy-Coat Garage Floor Coating Kit or equivalent. Specifications are attached (**Attachment 4**);

- Once the IFR has been remediated to 200 ug/SF, seal the floor, ceiling, and walls with appropriate sealant;
  - Floor, ceiling, and walls will be sealed with KM-669 Acrylic Sealer or equivalent. Specifications attached (**Attachment 4**);
  - IFR area will have forced air applied to room 4 days after sealer is applied. This will be done to remove all vapors from the area;

- After surfaces are sealed, the Contractor shall provide MEM a minimum of five (5) calendar days prior notice to perform post remediation wipe sampling to confirm the IFR has been remediated to 40 ug/SF;

- Areas above 40 ug/SF shall be cleaned to remove lead dust from sealed surface. Once cleaned, the area shall be retested to confirm area has been remediated to 40 ug/SF;

- All re-testing of previously failed areas shall be performed by MEM. Contractor shall provide MEM a minimum of five (5) calendar day's prior notice to perform sampling.

- The chart below summarizes the clearance numbers for the indoor firing range. All lead wipe samples must be at or below these numbers in order for the room to be considered clean.

Post Remediation	Post Sealant
200 ug/SF	40 ug/SF

2. Remaining Building

Lead Dust Remediation (See Attachment 7)

- Properly clean up any large oil, grease, etc. spills on the floors and properly dispose before lead remediation begins;

- Surfaces above the floors such as walls, shelves, etc. may have accumulated dust that has settled. This accumulation shall be removed prior to the cleaning of the floors. This shall be done to prevent recontamination of the floors after they are cleaned.

- Floors of the entire building shall require lead dust remediation;

    - Remove dust from all equipment, shelving, trash, etc, and remove these items from room before remediation begins;
    - Remove dust from all carpet, remove carpet from rooms, and dispose of all carpet as non-hazardous waste before lead dust remediation of floor begins;
    - Dispose any materials, determined by the DEQ to be trash, as non-hazardous waste;
    - HEPA vacuum and wet wash floors of entire building;
        - Lead levels on the floor are high in many areas of the building and lead contaminated dust may be ground into the pores and cracks of the concrete. It may be necessary to clean floors several times or use alternate cleaning methods after HEPA vacuuming and wet washing to remove the lead dust from the concrete and get the lead levels down to 40 micrograms per square foot (ug/SF).
    - Contact Marshall Environmental Management (MEM) to perform independent third-party post remediation wipe sampling to confirm that room floors with lead contamination have been appropriately remediated to 40 micrograms per square foot (ug/SF). See Section 4 (Confirmation and Clearance Sampling) for additional information;
    - Areas above 40 ug/SF shall be re-cleaned and re-tested until results are at or below 40 ug/SF;
    - Lead dust and appropriate cleaning materials shall be disposed as appropriate.
    - Wash Water Disposal
        - All wash water from the building shall be filtered through a 1 micron filter and stored on site in containers;
        - The wash water will be sampled for total lead and total phosphorus; Total lead shall be run by ICP and total phosphorus shall be run by EPA Method 365.3;
        - Sample results shall be submitted to DEQ to determine if wash water can be disposed at the local Waste Water Treatment Facility;
        - Wash water shall be disposed appropriately.

3. Disposal of Materials

Hazardous Waste

- Lead contaminated sand shall be disposed as hazardous waste;
- Lead contaminated dust from the cleaning of the IFR and remaining building shall be disposed as hazardous waste;
- Wash water filters shall be disposed as hazardous waste;
- Mop heads, towels, brushes, wipes, and other cleaning supplies shall be disposed as hazardous waste.

Other

- Poly Sheeting shall be disposed as appropriate. If contractor plans to dispose as non-hazardous waste, best management practices such as vacuuming, washing, wiping down, or cleaning poly sheeting prior to disposal shall be implemented.
- Personal protective equipment (gloves, tyvec, face masks, etc.) shall be disposed as appropriate.

4. Confirmation and Clearance Sampling

- Contractor may use his own lab to check progress of remediation, however all DEQ decisions shall be based on analytical data from MEM.
- Marshall Environmental Management (MEM) will be responsible for taking all post remediation samples.
- MEM shall be notified five (5) days prior to each sampling event.
- Contact Information: **Marshall Environmental Management Inc.**
  1601 Southwest 89th Street, Suite 100-A
  Oklahoma City, Oklahoma 73159
  Contact: Sara Marshall
  Phone: (405) 616 – 0401

- <u>The third-party sampling shall not be included in the contractors base bid;</u>
- All post remediation sampling done outside the indoor firing range will be performed after all initial abatement, remediation, and cleaning is complete.
- The chart below summarizes the clearance numbers for the building. All lead wipe samples shall be at or below these numbers in order for these areas to be considered clean.

IFR Post Remediation	IFR Post Sealant	Room Floors
200 ug/SF	40 ug/SF	40 ug/SF

FINAL REPORT

- Write final report and submit to DEQ;
  - Final report shall include asbestos, lead dust and lead-based paint abatement;
- Final report shall include:
  - A detailed summary of work including any warranties and data;
  - sample results;
  - waste manifests; and
  - photo documentation of work;
    - Photo documentation of work will have color digital photos with captions describing photo;
    - Photos will show before and after photos of work completed.
- Final report will be submitted in hard copy and electronically on disc.

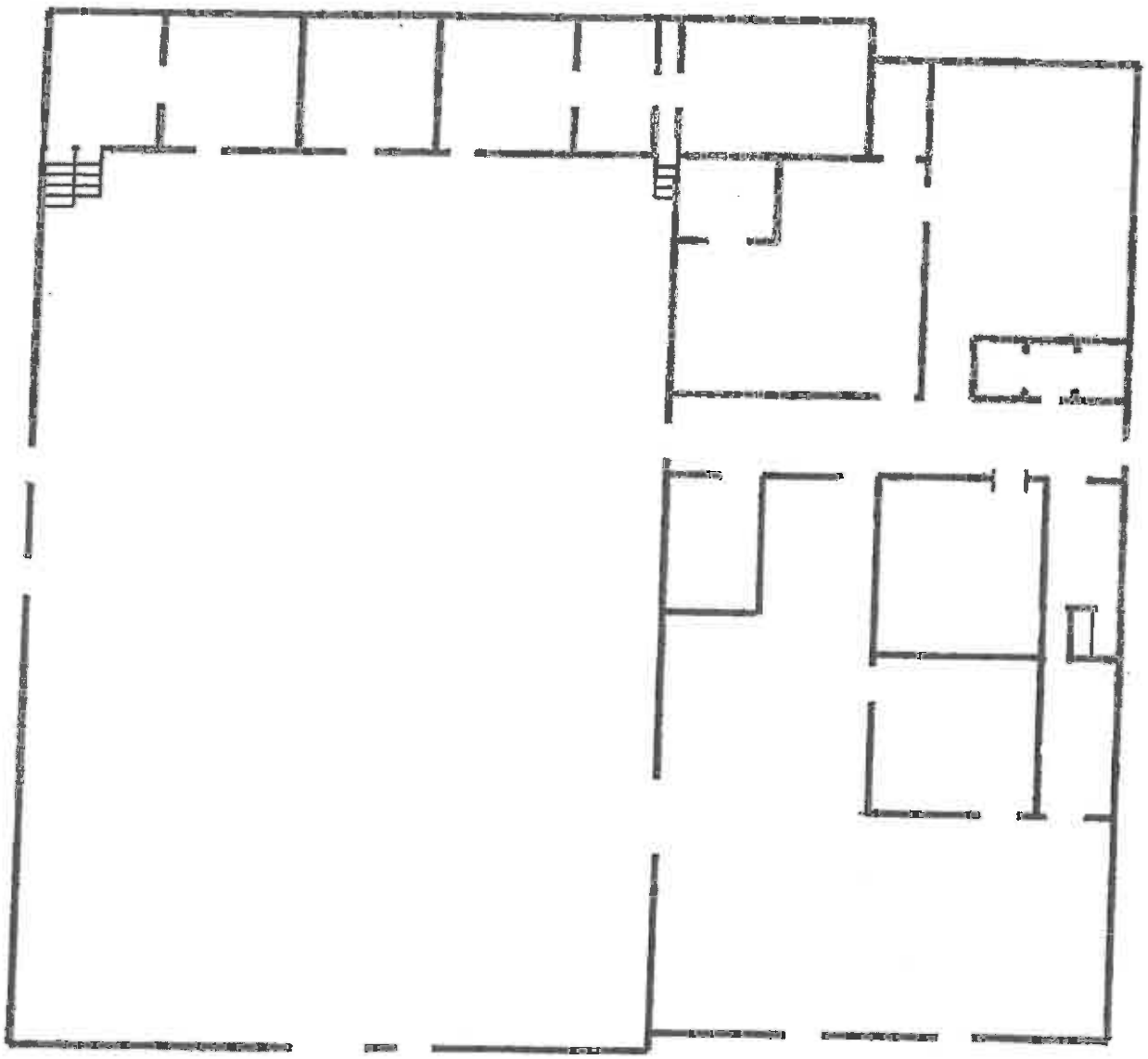
OWNER REPRESTATIVE

Owner's Representative: Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73101
(405) 702-5115 (Office)
(405) 702-5101 (Fax)
E-Mail: Dustin.Davidson@deq.ok.gov

ATTACHMENT 1

Floor Plan Map

CLINTON ARMORY
DOOR MAP



ATTACHMENT 2

Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges

Departments of the Army and the Air Force
National Guard Bureau
Arlington, VA 22202-3231
3 November 2006

***NG Pam 420-15**

Facilities Engineering

Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges

By Order of the Secretaries of the Army and the Air Force:

H STEVEN BLUM
Lieutenant General, USA
Chief, National Guard Bureau

Official:

GEORGE R. BROCK
Chief, Plans and Policy Division

History. This printing publishes a revision of NG Pam (AR) 385-16/ANGPAM 91-101.

Summary. This pamphlet prescribes policy for rehabilitation and conversion of National Guard Indoor Firing Ranges (IFR).

Applicability. This guidance applies to all persons responsible for the operation of National Guard IFRs. As no regulation/guidance can foresee all situations that might arise, the following is written in a broad scope and is intended to be interpreted so as to ensure compliance with all applicable Federal and State laws and regulations.

Proponent and exception authority. The proponent of this regulation is Chief, NGB-SG-IH. The proponent has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation.

Suggested Improvements. Users of this pamphlet are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to NGB-SG-IH, 1411 Jefferson Davis Highway, Arlington, VA 22202-3231.

Distribution. A.

Table of Contents

* This publication supersedes NP Pam (AR) 385-16/ANGPAM 91-101, dated 31 January 1994.

1-1. Purpose
This pamphlet establishes the policy and procedures for rehabilitation and conversion, of National Guard IFRs.

1-2. References
Required and related publications and referenced and prescribed forms are listed in Appendix A.

1-3. Explanation of abbreviations and terms
Abbreviations and special terms used in this publication are listed in the glossary.

1-4. Policy and Procedures
Indoor firing ranges can be safely rehabilitated or converted for other uses, such as a storage area, classrooms or office space, provided the following –

a. Prior to conversion active ranges must be thoroughly decontaminated and cleaned to acceptable levels. *All ranges converted prior to the publication date of this pamphlet, must be inspected and evaluated to determine lead contamination.* This will be accomplished by a certified National Guard Industrial Hygienist (IH) or a person certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs.

b. The level of cleanliness is to be determined by sampling. The Occupational Safety and Health Administration's (OSHA) Technical Manual, 5th Edition, provides guidance on the methods and techniques needed to collect wipe samples (Appendix B).

(1) Wipe samples must be collected and analyzed prior to and after cleaning.

(2) Post-cleaning surface wipe sample results must be less than 200 micrograms per square foot (ug/ft^2) (40 micrograms in the case of child exposure). The sampling strategy, which is the amount and location of wipe samples to be collected, is provided in Appendix C.

c. Equipment/Items previously stored in the range must be decontaminated and cleaned to acceptable levels as determined by a person certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs.

(1) Samples must be collected from equipment/items stored in the range. Sample selection is critical, because the number of items stored, length of storage, and level of contamination differs from range to range. The amount and location of the samples should be representative of the areas where lead dust is most likely to accumulate. The more samples collected, the better the statistical comparison of the results.

(2) Samples must be collected from the smooth surfaces of the equipment/items, as much as possible. Results of samples collected from a rough surface will be inaccurate due to the minimal surface contact of the media. Further, the likelihood of tearing the media filter is greater on rough surfaces.

(3) Samples should also be collected on items stored the longest period of time, and which have not been disturbed. Items stored closest to the bullet trap and firing line are likely to have higher concentrations of lead dust.

1-5. Goal
To ensure that every IFR is free of lead dust which means to test less than 200 micrograms and to reduce the number of unsafe National Guard IFRs.

1-6. Deviation
Deviations from this guidance will require a written exception to policy from your Regional Industrial Hygiene Office. Questions and/or comments regarding this subject should be directed to your Regional Industrial Hygiene Office or Chief, National Guard Bureau, Office of the Joint Surgeon, ATTN: NGB-SG-IH, 1411 Jefferson Davis Highway, Arlington, VA 22202-3231.

Chapter 2
Health and Medical Aspects

2-1. Health Effects
29 Code of Federal Regulations (CFR) 1910.1025, Appendix A, identifies lead as a highly toxic metal. Elemental lead is indestructible, and common in the environment. Lead can enter the body by inhalation (breathing) or

ingestion (eating). In addition, lead is a cumulative poison. It accumulates in the blood, bones, and organs, including the kidneys, brain and liver. Effects include nervous and reproductive system disorders, delays in neurological and physical development, cognitive and behavioral changes, and hypertension. Symptoms include loss of appetite, difficulty sleeping, irritability, fatigue, headache, and inability to concentrate. It can stay in the bones for decades. Worker awareness and training are important to ensure that employees can recognize the symptoms of exposure and get prompt medical attention.

2-2. Medical Surveillance for Occupational Exposure to Lead (Pb)

a. Per 29 CFR 1910.1025 (j)(i-ii), Medical Surveillance - General, "The employer shall institute a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year. The employer shall assure all medical examinations and procedures are performed by or under the supervision of a licensed physician."

b. The DOD 6055.5-M, Occupational Medical Surveillance Manual - Table 2-1 lists medical surveillance criteria for employees "who are or may be exposed above the action level for 30 days/year."

2-3. Air Monitoring

Worker breathing zone air samples must be collected to ensure that personnel are not overexposed to airborne lead during the cleanup phase. Daily air samples will be collected from all personnel involved in the cleanup operation. These exposure levels will be used to evaluate work practices and medical surveillance requirements.

2-4. Wipe Sampling Protocol and Media

A template measuring 10 centimeters by 10 centimeters square, approximately 4 inches square, should be used to accurately measure and mark the area before collecting wipe samples. Samples should be staggered to different areas of the range. A grid system should be utilized. Samples should not be collected all on one section of a wall, or end of the building. OSHA Technical Manual provides the necessary guidance on the technique needed to collect wipe samples (Appendix B). Only distilled or deionized water will be used to saturate dry sample media. At least one field blank must be submitted with every 10 samples. The field blank must be from the same lot, and labeled as a blank.

2-5. Personal Protective Equipment

29 CFR 1910.1025 (f) (2), for housekeeping and rehabilitation the employer shall select respirators from among those approved for protection against dust, fume, and mist by the National Institute for Occupational Safety and Health (NIOSH), under the provision of 42 CFR part 84. The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e) and (f). As a minimum, personnel conducting the decontamination of the range will be provided with the following personal protective equipment.

a. Under 29 CFR 1910.1025 (g). For employees engaged in range rehabilitation and/or range conversion, the employer shall provide at no cost to the employee, and ensure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:

(1) Protective coveralls with hood and shoe covers or disposable Tyvek ™ full body suit.
(2) Disposable rubber gloves; and disposable shoe coverlets (If necessary).
(3) Full-face air purifying respirator with P-100 cartridges.

b. The employer shall provide the clothing required in a clean and dry condition at least daily to employees engaged in the conversion of IFRs.

c. The employer shall provide for the cleaning, laundering, or disposal of used or contaminated protective clothing and equipment.

d. The employer shall assure that all protective clothing is removed at the completion of a work shift only in areas designated for that purpose (Change Areas or Change Rooms).

e. The employer will ensure that contaminated protective clothing that is to be cleaned, laundered, or disposed of, is placed in a closed container in the change area that seals sufficiently enough to prevent dispersion of lead dust.

f. The employer will further inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.

g. The employer will ensure that the containers of contaminated protective clothing and equipment are labeled as follows: CAUTION: *CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.*

Chapter 3
Education, Maintenance, Cleaning and Conversion

3-1. Worker Education

a. 29 CFR 1910.1025, Appendix B, requires an information and training program for all employees exposed to lead above the action level or who may suffer skin or eye irritation from lead. The program must inform the employees of the specific hazards associated with their work environment, protective measures which can be taken, the danger of lead to their bodies (including their reproductive systems), and their rights under the standard. In addition you must make readily available to all employees, including those exposed below the action level, a copy of this standard and its appendices. This training program will be repeated annually for personnel in range cleanup operations.

b. The commander/supervisor will ensure that each soldier or Army National Guard (ARNG) employee is informed of the following:

(1) The content of the standard and its appendices.
(2) The specific nature of operations that could result in exposure to lead above the action level.
(3) The purpose, proper selection, fitting, use and limitations of respirators.
(4) The purpose and a description of medical surveillance program.
(5) Eating and drinking are prohibited in lead contaminated areas.
(6) Smoking and smoking materials will not be permitted in contaminated areas.
(7) Soldiers and ARNG employees must wash their hands and other exposed skin whenever they leave the work area.
(8) The engineering controls and work practices associated with the individual's job assignment.
(9) The contents of any compliance plan in effect.
(10) Instructions to soldiers and ARNG employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

3-2. Range Cleaning Instructions

a. Written procedures, such as a scope of work, or standing operating procedure that complies with all Federal, State and local regulations must be established prior to decontamination operations.

b. The range ventilation system will be in operation during range cleaning to ensure that a negative pressure environment is maintained. In the absence of mechanical ventilation system, all doors and windows will be sealed to eliminate fugitive emissions.

c. A High Efficiency Particulate Air (HEPA) filtered vacuum system, which is designed to collect loose surface lead dust particles, is the preferred method of cleanup. If a HEPA filtered vacuum is not available, the range can be cleaned using a wet method.

d. Prohibited methods include:

(1) Wet cleaning using high-pressure systems, since this method may embed the lead into the substratum and generate large quantities of hazardous waste.
(2) Dry sweeping is not permitted.

e. All surface areas of the range must be cleaned. In addition, areas outside of the IFR where lead can be tracked must be cleaned.

f. The preferred progression of cleaning is from top to bottom and from behind the steel bullet trap to the firing line.

(1) Clean the steel bullet trap, areas in front of and behind the bullet trap, and the steel bullet trap plate(s), after removing the sand (if applicable).
(2) Clean the ceiling, floors, lights, baffles, retrieval system, heating system(s), and ventilation duct(s).
(3) Vacuum and remove acoustical material. ***Painting over this material is not recommended.***
(4) Clean the floor the last, starting at the bullet trap and ending behind the firing line.

g. When using a HEPA filtered vacuum, vacuum all surface areas until no dust or residue is visible.

h. Any general purpose cleaning solutions can be used for the wet method. However, Spic and Span™ has been found to be an effective cleaning solution by other Army organizations. Mix new solutions of cleaning solution frequently. Wet wiping will require dual containers of water, one container for wetting the applicator (mops, rags, sponge, etc.) and the other container for rinsing the applicator after the dust has been wiped from the surfaces. After wet wiping all surfaces, permit the area to dry.

i. *Properly dispose of all hazardous waste. Do not place lead contaminated waste into the sewer system or onto the ground.*

[redacted]

(2) Mop-heads, sponges and rags will be discarded as hazardous waste following cleanup.

j. A thorough visual inspection to detect dust should be made following cleanup and prior to collecting post surface wipe samples.

k. Wood floors should receive a coat of deck enamel or urethane; concrete floors should be sealed with deck enamel.

l. As a variety of conditions exist in ranges, unique situation may arise and specific written guidance from your Regional Industrial Hygiene Office may be required.

m. Any cleaning activities must be under the supervision by a trained and competent personnel IAW with OSHA and other nationally accepted standards and the work shall be according to current industry engineering standards under the control of the State Construction and Facilities Management Officer. Cleaning must recognize that there likely will be "background" lead presence in the readiness center totally independent of the existence of an indoor range and that the method of cleaning is less important than achieving the goal of less than 200 micrograms (40 micrograms in the case of child exposure).

3-3. Cleaning Stored Contaminated Equipment

a. Equipment contaminated (sample result is higher than 200 ug/ft^2) with lead dust must be decontaminated before it is removed from the range.

b. Equipment located near the bullet trap and firing line should be cleaned first and then removed. The cleaning method depends on the size of the equipment and the material it is comprised of, i.e. metal, wood, concrete, porous, non-porous, smooth or rough finish etc. However, either HEPA vacuum or the wet wipe method will be used. Refer to paragraph 3-2 for additional guidance.

c. Every attempt should be made to clean and reclaim items since disposing of equipment, as hazardous waste is costly and wasteful. Only as a last resort will the item be discarded as hazardous waste. Porous items, such as office partitions and carpet that were present during firing should be considered grossly contaminated and be discarded unless analysis proves otherwise. Consult your State Environmental Office for the proper hazardous waste disposal methods.

3-4. Contaminated Sand and Lead Waste

Consult your State Environmental Office for specific disposal guidance to ensure compliance with local laws and regulations.

3-5. Range Rehabilitation

This chapter applies to all IFRs that have been identified as candidates for rehabilitation. It provides further guidance for cleaning and/or sampling that might be required prior to the start of rehabilitation.

a. The portion(s) of the range to under go rehabilitation must be sampled to determine the level of lead contamination. Wipe samples will be taken per the established sampling protocol. See Appendix B.

b. All personnel involved in range rehabilitation will wear a NIOSH approved respirator (P-100) and proper personal protective equipment as prescribed in paragraph 2-5 above.

c. Prior to the start of rehabilitation, the environmental office must be notified to determine the disposition of any debris containing hazardous materials (lead).

d. Supervision shall be by a person who is certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs. All work shall be according to current industry engineering standards under the control of the State Construction and Facilities Management Officer.

3-6. Conversion of Indoor Firing Ranges

Prior to the start of decontamination, employers must ensure that all procedures to be used comply with Federal, State, and local regulations. To ensure that all lead contamination is eradicated, the following procedure is established.

a. The State shall follow the project approval process as delineated in NGR 420-10 (or NGR 415-5 if the use of the military construction appropriation is required).

b. All ranges slated for conversion will be inspected and evaluated by the NGB Regional Industrial Hygiene Office.

c. All equipment stored in the range, if applicable, prior to the start of decontamination must be sampled, decontaminated, re-sampled and removed or turned in as lead contaminated material.

d. All acoustical tiles and/or sound proofing material (if applicable) must be removed and turned in as lead contaminated material through the environmental office.

e. The bullet trap, target retrieval system and firing line stations must be removed and turned in as lead containing material through the environmental office.

f. Light fixtures and ventilation system grills must be removed and decontaminated.

g. Ventilation system ducts need to be decontaminated or removed and replaced.

h. The exhaust fans and/or the complete ventilation air-handling unit (if applicable) must be decontaminated or removed to include roof fans.

i. Cover all openings of any component previously decontaminated prior to start of interior decontamination of the firing range.

j. Prior to start of washing, the interior of the range should be vacuumed with a HEPA filtered vacuum. The range should be washed using a cleaning solution of hot water and Spic and Span in five gallons of hot water. A progression of cleaning from top to bottom, and from back to front should be used. All surface areas of the range must be cleaned. Mix new solutions of water frequently. Washing will require dual containers of water; one container for wetting the applicators (mops, rags, sponges, etc.), and the other container for rinsing the applicators. [redacted] *Properly dispose of all hazardous waste and do not place any lead contaminated waste into the sewer system or onto the ground.* Mop heads, sponges and rags will be discarded as hazardous waste following decontamination of the range. After completion of decontamination, and prior to taking clearance samples, the ventilation system must be run for a period of 36 hours. Wipe clearance samples will be taken from ceiling, walls and floors. The range will be considered clean if no clearance sample is greater than 200 ug/ft^2, if any sample is above 200 ug/ft^2, the range is not considered clean, the range will need to be re-washed until clearance samples are below 200 ug/ft^2.

k. The regional industrial hygienist will do quality assurance sampling as needed.

l. After obtaining clearance, the walls of the range will be coated with a sealant (Not Paint), which is smooth, wood floors will receive a coat of deck enamel or urethane, concrete floors will be sealed with deck enamel. After sealing, floors will be tiled or covered with linoleum.

m. As a variety of conditions exist in ranges, unique situations may arise and specific written guidance from the Regional Industrial Hygiene Office may be required.

n. All personnel involved in the decontamination/conversion of IFRs as a minimum will be provided with the following personal protective equipment.

(1). Full Face air purifying respirator with HEPA cartridges. The requirements outline in 29 CFR 1910.134, must be met prior to placing workers in respiratory protection.

(2). Individuals will be provided personal protective equipment as required per paragraph 2-5, this pamphlet.

o. Any conversion must be supervised by a person certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs. All work shall be according to current industry engineering standards under the control of the State Construction and Facilities Management Officer. Cleaning must recognize that there likely will be "background" lead presence in the readiness center totally independent of the existence of an indoor range and that the method of cleaning is less important than achieving the goal of less than 200 micrograms (40 micrograms in the case of child exposure).

p. After conversion, lead testing shall continue on an annual basis to verify that no lead migration from the substrate is occurring.

Appendix A
References

Section I
Required Publications

There are no entries in this section

Section II
Related Publications

ASTM E1792-03
Standard Specification for Wipe Sampling Materials for Lead in Surface Dust

AR 11-34
The Respiratory Protection Program

AR 40-5
Preventive Medicine

DODI 6055.5
Industrial Hygiene and Occupational Health

DOD 6055.5-M
Occupational Medical Surveillance Manual

29 CFR, Part 1910
Occupational Safety and Health Administration, Department of Labor

National Institute for Occupational Safety and Health (NIOSH) 76-130
Lead Exposure and Design Considerations for Indoor Firing Ranges, Department of Health, Education and Welfare

NGR 385-15
Policy and Responsibilities for Inspection, Evaluation and Operation Army National Guard National Guard Indoor Firing Ranges (IFRs).

NGR 415-5
Army National Guard Military Construction Program Development and Execution

NGR 420-10
Construction and Facilities Management Office Operations

Technical Manual, 5th Edition
Occupational Safety and Health Administration, Department of Labor

Section III
Prescribed Forms

There are no entries in this section

6

Section IV
Referenced Forms

There are no entries in this section

Appendix B
Protocol for Collecting Wipe Samples

B-1. If multiple samples are to be collected at the work site, prepare a rough sketch of the area(s) or room(s), which are to be wipe sampled.

B-2. A new set of clean, impervious gloves should be used for each sample to avoid contamination of the media by previous samples and to prevent contact with the substance.

B-3. Wipe Samples
a. If using Ghost Wipes™, tear open the individually sealed package. Remove the moistened wipe. Unfold the wipe.
b. If using a dry media such as MCE or Whatman™ filter, moisten the filter with distilled or deionized water prior to sampling.

B-4. Place a 10 centimeter by 10 centimeter template on the area to be wiped.

B-5. Apply uniform firm pressure while wiping the area inside the template.

B-6. To ensure that all portions of the partitioned area are wiped, start at the outside edge and progress toward the center making concentric squares decreasing in size.

B-7. After collecting a sample, fold the filter or wipe inward and place into a container and number it. Note the number at the sample location on the sketch.

B-8. At least one blank filter treated in the same fashion but without wiping, should be submitted to the laboratory.

Appendix C
Sampling Strategy for Collection of Wipe Samples

C-1. Prior to cleaning the ranges, three samples must be collected and analyzed for total lead dust on each surface, i.e , floor, ceiling, bullet trap, and wall to include the plenum wall, if applicable. In addition, a total of three samples should be collected from areas which have been least disturbed by airflow. Established walkways should be avoided.

C-2. Samples should be collected from different areas of the range. A grid system should be utilized. Each range surface areas should be divided evenly into 3 by 3 sections. Samples should not be collected from only one section of a wall or end of the building.

7

Glossary

Section I
Abbreviations

ARNG
Army National Guard

CFR
Code of Federal Regulations

HEPA
High Efficiency Particulate Air

IFR
Indoor Firing Range

NIOSH
National Institute for Occupational Safety and Health

OSHA
Occupational Safety and Health Administration

ug/ft^2
Micrograms per square foot

Section II
Terms

Air monitoring
The sampling for and measuring of pollutants in the atmosphere.

Breathing zone
The imaginary globe of two feet radius surrounding the head

General area
Collection of and later analysis of airborne contaminants in a given work environment. As the sampling pump and collection media are not attached to a worker, the concentrations found represent average concentrations in that area but may not representative of the actual exposure of the worker.

HEPA
Refers to high efficiency particulate air filter systems capable of capturing up to 99.97 percent of particles 0.3 microns in size or larger.

Lead-Contaminated Range
It is assumed that all IFRs, which have been fired in, are lead-contaminated.

Respirator
A device designed to provide the wearer with respiratory protection against inhalation of airborne contaminants.

Wipe Sample
The terms wipe, swipe, or smear samples are used synonymously to describe the techniques utilized for assessing lead surface contamination.

ATTACHMENT 3

Health & Safety Aspects to Consider

Health & Safety Aspects to Consider

Project Goal: To ensure that former National Guard Armories are free of lead dust. Specifically, indoor firing ranges (IFR's) and other areas that contain lead contamination.

Please Note: the following information is from the Departments of the Army and the Air Force, National Guard Bureau, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges (**Attachment 2**).

Health and Medical Aspects

Health Effects

29 Code of Federal Regulations (CFR) 1910.1025, Appendix A, identifies lead as a highly toxic metal. Elemental lead is indestructible and common in the environment. Lead can enter the body by inhalation (breathing) or ingestion (eating). In addition, lead is a cumulative poison. It accumulates in the blood, bones, and organs, including the kidneys, brain and liver. Effects include nervous and reproductive system disorders, delays in neurological and physical development, cognitive and behavioral changes, and hypertension. Symptoms include loss of appetite, difficulty sleeping, irritability, fatigue, headache, and inability to concentrate. It can stay in the bones for decades. Worker awareness and training are important to ensure that employees can recognize the symptoms of exposure and get prompt medical attention.

Medical Surveillance for occupational Exposure to Lead

a. 29 CFR 1910.1025(j)(i-ii), Medical Surveillance - General: "The employer shall institute a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year. The employer shall assure all medical examinations and procedures are performed by or under the supervision of a licensed physician."

b. The DOD 6055.5-M, Occupational Medical Surveillance Manual - Table 2-I lists medical surveillance criteria for employees "who are or may be exposed above the action level for 30 days/year."

Personal Protective Equipment

29 CFR 1910.1025(f)(2),for housekeeping and rehabilitation the employer shall select respirators from among those approved for protection against dust, fume, and mist by the National Institute for Occupational Safety and Health (NIOSH), under the provision of 42 CFR part 84. The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134(b), (d), (e), and (f). As a minimum, personnel conducting the decontamination of the range shall be provided with the following personal protective equipment.

a. Under 29 CFR 1910.1025 (g). For employees engaged in range rehabilitation and/or range conversion, the employer shall provide at no cost to the employee, and ensure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:

(1) Protective coveralls with hood and shoe covers or disposable Tyvek ™ full body suit.

(2) Disposable rubber gloves; and disposable shoe coverlets (If necessary).

(3) Full-face air purifying respirator with P-100 cartridges.

b. The employer shall provide the clothing required in a clean and dry condition at least daily to employees engaged in the conversion of IFRs.

c. The employer shall provide for the cleaning, laundering, or disposal of used or contaminated protective clothing and equipment.

d. The employer shall assure that all protective clothing is removed at the completion of a work shift only in areas designated for that purpose (Change Areas or Change Rooms).

e. The employer shall ensure that contaminated protective clothing that is to be cleaned, laundered, or disposed of, is placed in a closed container in the change area that seals sufficiently enough to prevent dispersion of lead dust.

f. The employer shall further inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.

g. The employer shall ensure that the containers of contaminated protective clothing and equipment are labeled as follows: CAUTION: *CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.*

Education, Maintenance, Cleaning and Conversion

Worker Education

a. 29 CFR 1910.1025, Appendix 13, requires an information and training program for **all employees exposed** to lead above the action level **or** who may suffer skin or eye irritation from lead. The program must inform the employees of the specific hazards associated with their work environment, protective measures which can be taken, the danger of lead to their bodies (including their reproductive systems), and their rights under the standard. In addition you must make readily available to all employees, including those exposed below the action level, a copy of this standard and its appendices. This training program shall be repeated annually for personnel in range cleanup operations.

b. The supervisor shall ensure that each individual employee is informed of the following:

(1) The content of the standard and its appendices.

(2) The specific nature of operations that could result in exposure to lead above the action level.

(3) The purpose, proper selection, fitting, use, and limitations of respirators.

(4) The purpose and a description of medical surveillance program.

(5) Eating and drinking are prohibited in lead contaminated areas.

(6) Smoking and smoking materials shall not be permitted in contaminated areas.

(7) Employees must wash their hands and other exposed skin whenever they leave the work area.

(8) The engineering controls and work practices associated with the individual's job assignment.

(9) The contents of any compliance plan in effect.

(10) Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

REFERENCES

Section 1 Required Publications

There are no entries in this section

Section II Related Publications

ASTM E1792-03
Standard Specification for Wipe Sampling Materials for Lead in Surface Dust

AR 11-34
The Respiratory Protection Program

AR 40-5
Preventive Medicine

DODI 6055.5
Industrial Hygiene and Occupational Health

DOD 6055.5-M
Occupational Medical Surveillance Manual

29 CFR, Part 1910
Occupational Safety and Health Administration, Department of Labor

National Institute for Occupational Safety and Health (NIOSH) 76-130
Lead Exposure and Design Considerations for Indoor Firing Ranges, Department of Health, Education and Welfare

NGR 385-15
Policy and Responsibilities for Inspection, Evaluation and Operation Army National Guard National Guard Indoor Firing Ranges (IFRs).

NGR 415-5
Army National Guard Military Construction Program Development and Execution

NGR 420-10
Construction and Facilities Management Office Operations

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ATTACHMENT 4

DEQ Approved Lead-Based Paint Encapsulants and Sealant Specifications

Lead-Based Paint Encapsulants

Encapsulant Manufacturer	Encapsulant Product(s)
Coronado Paint Company	LEAD BLOCK™
Dumond Chemicals	LEAD STOP™
Dynacraft Industries, Inc.	Back to Nature Protect-A-Coat
Encap Systems Corporation	EncapSeal™ I
Encap Systems Corporation	EncapSeal™ II
Fiberlock Technologies, Inc.	Child GUARD interior/exterior
Fiberlock Technologies, Inc.	L-B-C® Type III
Global Encasement, Inc.	LeadLock™
Grace Construction Products	Lead Seal®
Grace Construction Products	Barrier Coat® II
Insl-x Products Corporation	INSL-CAP™
SAFE Encasement Systems	SE-120 Protective Skin
Specification Chemicals, Inc.	NU-WAL® #2500 Coating

KELLY-MOORE PAINTS

INDUSTRIAL COATINGS

HIGH PERFORMANCE SYSTEMS

KM-669

Acrylic Sealer

THIS PRODUCT MAY NOT BE AVAILABLE IN SOME AREAS DUE TO VOC REGULATIONS
Contact your Kelly-Moore representative for more information

Product Description
A one component, solvent borne, high gloss, clear acrylic sealer designed for use on concrete, masonry, and brick. Dustproofs concrete by penetrating surface pores leaving a tough, durable film.

Performance Features

- Non-Yellowing
- Excellent Adhesion to Concrete
- Good Water & Salt Chemical Resistance
- Good Abrasion Resistance
- Can be Sprayed, Padded or Rolled

Product Specifications

Resin Type	Acrylic
Color Range	Clear
Finish	High Gloss
Drying Time	8 hours to recoat
Practical Coverage	250-450 Sq. Ft. / Gallon
Recommended Dry Film Thickness	1.2 - 2.2 mils per coat
Solids By Volume	35%
Sizes	Five gallon pails
V.O.C.	560 Grams per liter
Clean Up	KM-S-74 or KM-SA-50

Surface Preparation
WARNING! If you scrape, sand or remove old paint from any surface, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Carefully clean up with a wet mop or HEPA vacuum. Before you start, find out how to protect yourself and your family by contacting the U.S. EPA/Lead Information Hotline at 1-800-424-LEAD (5323) or log on to www.epa.gov/lead.

Surface Preparation:
Remove all dirt, grease, oil, soil, chemical contaminants, and other matter. Allow surface to dry.

Application Procedure:
When mixing, use an EXPLOSION PROOF SLOW SPEED DRILL WITH A JIFFY MIXER. Apply a uniform wet film, do not puddle material. Do not cover more area than can be worked in 10 minutes due to fast dry time. When spraying, use a low pressure machine. Two coats may be necessary depending on porosity or type of service.

For safety and product curing, proper ventilation is necessary throughout application and cure.

Dry Times: 8 hours

See Precautions and Limited Warranty next page

KM-669 (cont.)

Precautions
KM-669 is Flammable. KM-669 contains flammable solvents. Keep away from all sources of ignition during mixing, application, and cure. In confined areas, provide adequate forced air ventilation. The use of goggles, fresh air masks or NIOSH approved respirators, protective skin cream and protective clothing is a recommended standard practice when spraying coatings

Proper Disposal
For proper disposal of excess material, please contact your local city or county waste management agency.

Limited Warranty: The statements made on this bulletin, product labels or by any of our agents concerning this material are given for information only. They are believed to be true and accurate and are intended to provide a guide to approved construction practices and materials. As workmanship, weather, construction equipment, quality of other materials and other variables affecting results are all beyond our control, Kelly-Moore Paint Company, Inc., does not make nor does it authorize any agent or representative to make any warranty of MERCHANTABILITY OR FITNESS for any purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material except that it conforms to Kelly-Moore's quality control standards. Any liability whatsoever of Kelly-Moore Paint Company, Inc. to the buyer or user of this product is limited to the purchaser's cost of the product itself.

SEE MATERIAL SAFETY DATA SHEETS FOR FULL SAFETY PRECAUTIONS.

KM-669 IS FOR PROFESSIONAL USE ONLY

KM-669 IS FOR INDUSTRIAL USE ONLY

KEEP AWAY FROM CHILDREN

MATERIAL SAFETY DATA SHEET

For Coatings, Resins & Related Materials

Section I

Manufactured For: Kelly-Moore Paints
Address: 987 Commercial Street
San Carlos, CA 94070

Prep Date: 07/28/06

Emergencies Involving Spills, Leaks, Fires, Exposure, Or Accident Contact Chemtrec: 1-800-424-9300

Information Phone: 1-888-677-2468

Product Class: Acrylic Lacquer Sealer
Trade Name: KM-669 CLEAR
H.M.I.S. Codes: H F R P
2* 3 0 –

Section II - HAZARDOUS INGREDIENTS

Ingredient	C.A.S.#	Weight Percent	Occupt. Exposure Limits OSHA PEL	ACGIH TLV	Vapor Pressure mm Hg & Temp.F	
Acrylic Resins	Mixture	30-40	Not Established		Not Determined	
*Xylene	1330-20-7	40-50	100 ppm	100 ppm	5.1	68
*Ethyl Benzene	100-41-4	15-20	100 ppm	100 ppm	7.1	68

*Indicates toxic chemical(s) subject to reporting requirements of Section 313 of Title III and of 40 CFR 372.

Section III - PHYSICAL DATA

Boiling Range (Deg. F): 240*
Evaporation Rate: Slower than Ether
Percent Volatile By Volume: 70 ± 3%

Vapor Density: Heavier than air

Weight Per Gallon (lbs.): 7.75 ± .25

Section IV - FIRE & EXPLOSION HAZARD DATA

Flash Point (Deg. F): 80*

Lower Explosive Limit: 1.0

Extinguishing Media: Foam, alcohol foam, CO2, dry chemical, water spray

OSHA Flammability Classification: Flammable Liquid IC

Special Firefighting Procedures: Wear a NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Use water to keep fire exposed containers cool. Water may be ineffective as an extinguishing agent.

Unusual Fire & Explosion Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation to ignition sources at locations distant from material handling point. Pressure may build up in containers and create an explosion hazard.

KM-669 CLEAR

Section V - HEALTH HAZARD DATA

THIS PRODUCT IS FLAMMABLE

Effects Of Overexposure:
Eyes: Irritation, burning, tearing and redness.
Skin: Moderate irritation or defatting of skin upon prolonged or repeated contact.
Ingestion: Abdominal pain, nausea, vomiting and diarrhea.
Inhalation: Excessive exposure to vapors can cause headache, dizziness, uncoordination, nausea and loss of consciousness.

Emergency & First Aid Procedures:
Eyes: Flush with water for 15 minutes.
Skin: Remove contaminated clothing, wash skin with soap and water.
Ingestion: Do not induce vomiting. Get medical attention immediately.
Inhalation: Move to fresh air, aid breathing if necessary.

In all cases, consult a physician for best treatment.

Chemical listed as carcinogen or potential carcinogen:
NTP: No IARC: No OSHA: No

Section VI - REACTIVITY DATA

Stability: Product Stable
Conditions to Avoid: All sources of ignition
Incompatibility (Materials to Avoid): Oxidizing agents, strong acids & bases
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides and organic compounds.
Hazardous Polymerization: Will Not Occur

Section VII - SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled: Dike spill area. Absorb spill with inert absorbent material. Place in sealed metal containers for proper disposal.

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations.

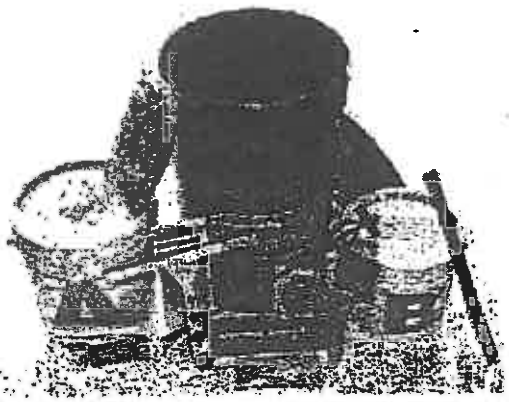
Section VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use a NIOSH/MSHA jointly approved respirator
Ventilation: Use mechanical ventilation
Protective Gloves: Neoprene or rubber
Eye Protection: Chemical splash goggles
Other Protective Equipment: Protective clothing, barrier cream, eye bath, safety shower

Section IX - SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling & Storing: Store in dry area. Keep away from open flames and high temperatures.
Other Precautions: Minimize contact. Avoid breathing vapors. Practice good industrial hygiene and safe working practices.

State and Local Regulations
California Proposition 65
This product contains the following substances known to the State of California to cause cancer, birth defects or other reproductive hazards: Benzene, Toluene.



Epoxy-Coat 3-Gallon Interior High Gloss Clear Garage Floor Coating Kit

Item #: 373342 | Model #: SK-0000

Be the first to

Description

3-Gallon Interior High Gloss Clear Garage Floor Coating Kit

- Commercial/Industrial grade
- 100% solids
- Over 30 years experience with automotive, industrial, commercial and government customers
- After-hours, live technical support
- Over 3 times stronger than concrete
- 10.8 times more durable than water-based epoxies
- 4.8 times thicker than water-based epoxies
- Self-leveling

Specifications

Warranty	Lifetime
Sheen Finish	High Gloss
Paint Color	Clear
Unit of Measure Quantity	3.0
Coverage (Sq. Feet)	500.0
Base Material	Epoxy
Color Family	Clear
Where to Use	Interior
Tintable	No
Primer Recommended	No
Dry To Touch	18 Hours
Flammable	No
Combustible	No
Waterproof	Yes
Number of Coats Recommended	1.0
Soap and water clean-up	No
Low-odor formula	Yes
Mildew-resistant finish	Yes
Scrubbable and washable finish	Yes
Stain-Resistant	Yes
Fade-Resistant	Yes
UV-resistant	Yes
Type	Other
Paint and Primer in One	Yes

ATTACHMENT 5

Door Scope of Work Including Measurements and Specifications

Clinton Armory Door Measurements
And
Scope of Work

- **Door measurements are listed as approximate Width X Height; Contractor to field verify.**
- **All removed doors will be properly disposed.**
- **All removed lead-based paint will be properly disposed.**
- **Attached is a Clinton armory Floor Plan with designated door numbers that correspond with the numbers on this Scope of Work.**
- **Specifications for replacement doors are attached.**

1. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous gear hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 3' X 7'

2. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 2'4" X 7'

3. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 2'4" X 7'

4. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 3' X 7'

5. Remove all paint from door frame. Once paint is removed, paint frame with neutral colored primer.

6. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 3' X 7'

7. Remove all paint from door frame. Once paint is removed, paint frame with neutral colored primer.

8. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 3' X 7'

9. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
   Door Measurements – 2'8" X 7'

10. Remove all paint from vault door and door frame. Once paint is removed, paint door and frame with neutral colored primer.

11. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 4' X 6'11"

12. Remove double doors. Remove all paint from door frame. Install replacement doors equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Double Door Measurements – 6' X 6'11"

13. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 7'

14. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 7'

15. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 7'

16. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 7'

17. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.

Door Measurements – 3' X 7'

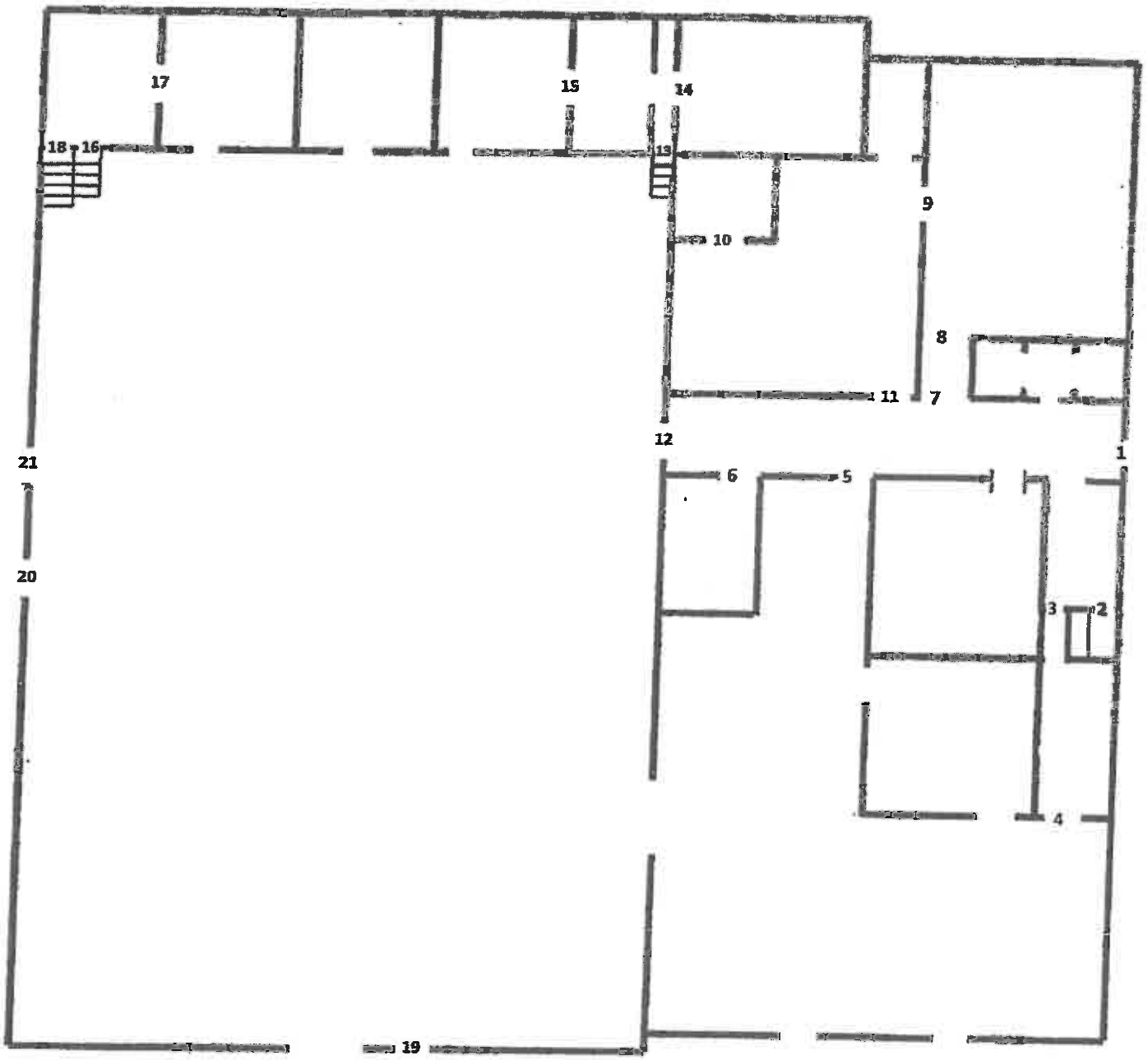
18. Remove and replace Indoor Firing Range door and door frame.
    Door Measurement – 3' X 7'
    Approximate Opening Size – 3'6" X 7'9.5"

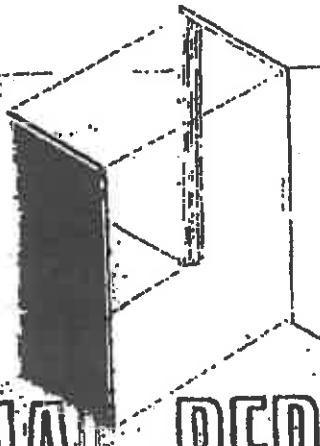
19. Remove all paint from interior and exterior side of original door frame. Once paint is removed, paint frame with neutral colored primer.

20. Remove interior and exterior plywood covering door opening. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 6'6"

21. Remove interior and exterior plywood covering door opening. Remove door. Remove all paint from door frame. Install replacement door equipped with continuous geared hinges. Original frame will be painted with a neutral colored primer.
    Door Measurements – 3' X 6'6"

CLINTON ARMORY
DOOR MAP



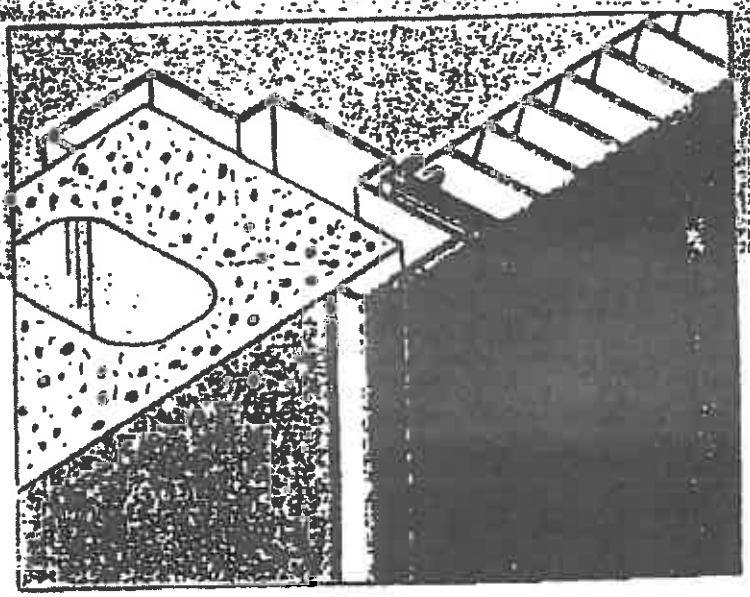


UL LISTED
1½ HR (B) LABEL
can be used in existing non-listed or listed steel frame.

Install a pre-hung

Steelcraft

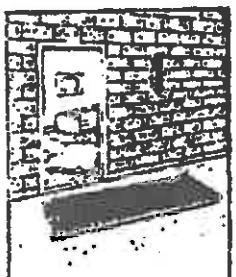
COMMERCIAL REPLACEMENT DOOR UNIT



New beauty and security for worn out doors.

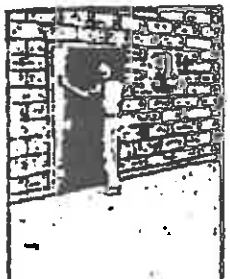
The Steelcraft Commercial Replacement Unit is the only product of its kind specifically designed for the rehab market. Fits these nominal sizes: 2868, 3068, 3668, 3868, 4068, 2870, 3070, 3670, 3870, 4070 single, and 5468, 5068, 5470 and 8070 double doors.

- Does not require removal of existing frame.
- Fits an "out-of-square" opening.
- Works with grouted or non-grouted frames.
- Installs quickly and easily.
- Includes rugged steel adapter frame.
- Permits door swing to be changed without major rework.
- Fills opening without re-mortising and filling hardware cutouts.
- Can be installed in existing steel or wood frame.
- Provides additional security.



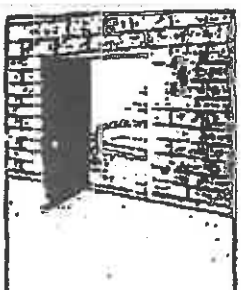
QUICK

1. Remove old door, hardware, sill and any other item(s) projecting into opening.



'N EASY

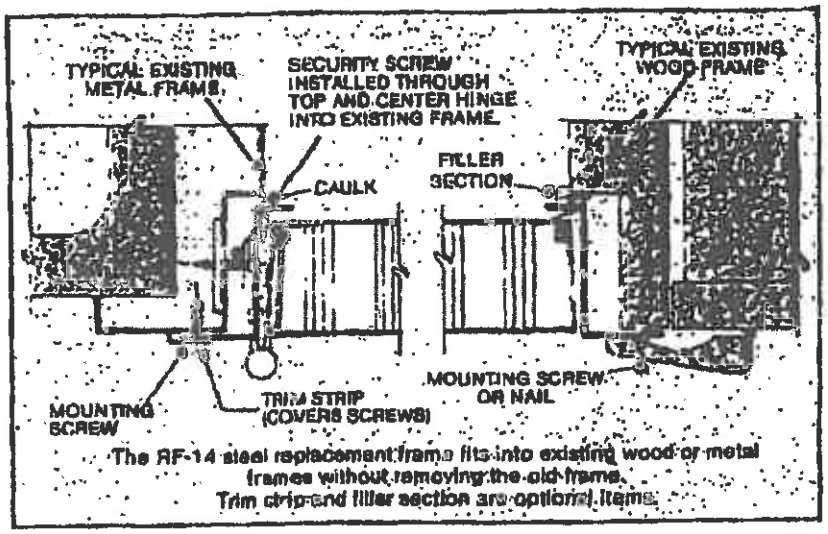
2. Set pre-hung unit into frame opening. Install mounting screws through face, cut banding and install security screws.



INSTALLATION

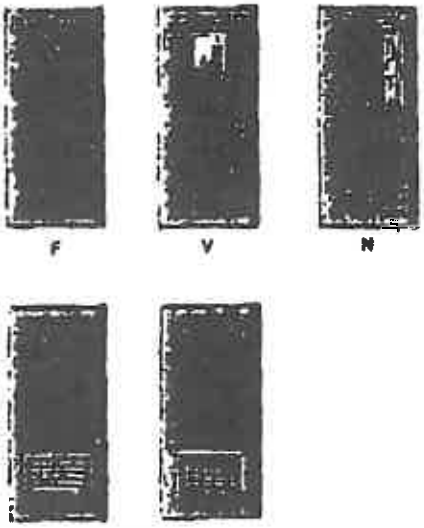
3. Mount hardware as required. Paint.

TYPCIAL SECTION



The RF-14 steel replacement frame fits into existing wood or metal frames without removing the old frame. Trim strip and filler section are optional items.

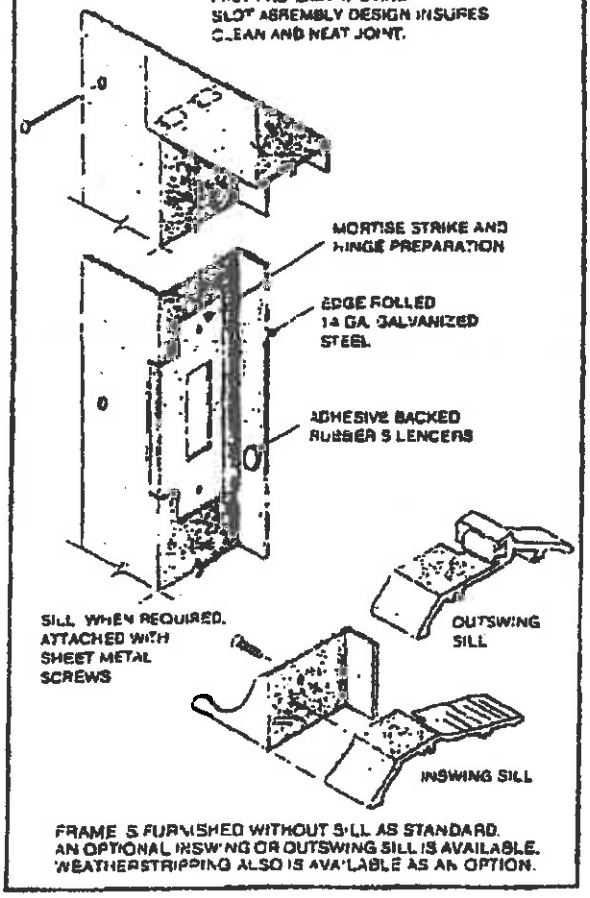
DESIGNS AND FINISHES AVA



LOUVERS

FRAME DETAIL

KNOCKED DOWN CORNER CONSTRUCTION. FAST AND EASY TAB AND SLOT ASSEMBLY DESIGN INSURES CLEAN AND NEAT JOINT.



FRAME IS FURNISHED WITHOUT SILL AS STANDARD. AN OPTIONAL INSWING OR OUTSWING SILL IS AVAILABLE. WEATHERSTRIPPING ALSO IS AVAILABLE AS AN OPTION.

SPECIFICATIONS

Commercial Replacement Unit shall be supplied as a complete unit, consisting of 18 ga. door (RL-18) and 14 ga. frame (RF-14).

*Single openings shall be pre-hung, ready for quick and easy installation. Double openings shall be supplied as separate units (frame and two door leaves) not pre-hung.

Doors shall conform to the following:

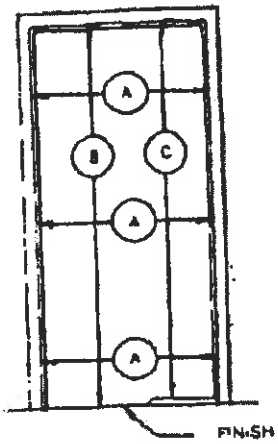
- Doors shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RL-18 (1¾" 18 ga. steel).
- Doors shall be fabricated from cold rolled steel.
- Doors shall have ⅛" bevel in 2" on hinge and lock edges.
- Doors shall have vertical mechanical interlocking seams on hinge and lock edges with visible edge seam.
- Doors shall be provided with top and bottom inverted steel channels spot welded within the door.
- Doors shall be reinforced, stiffened and sound deadened with impregnated kraft honeycomb core completely filling the inside of the door and laminated to the inside faces of panels.
- Doors shall be mortised and adequately reinforced for all hardware.
- Doors shall be phosphatized and receive one coat of baked-on prime paint.

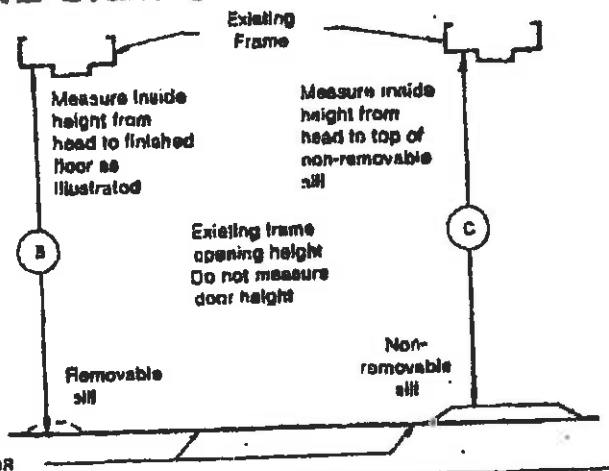
Frames shall conform to the following:

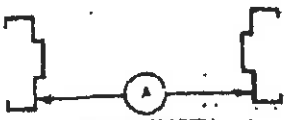
- Frames shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RF-14 (14 ga.).
- Frames shall be accurately formed from galvanized steel.
- Frames shall be furnished knocked down (KD). Corners shall have tabs for secure and easy interlocking of jambs to head at each corner.
- Frames shall be adequately reinforced for all hardware.
- Frames shall be supplied with adhesive backed rubber bumpers; three per strike jamb, two per double door frame head.
- Frames shall be phosphatized and receive one coat of baked-on prime paint.

*Single openings are designed to be pre-hung and installed. Units are supplied KD for pre-hanging at job site or by distributor.

HOW TO DETERMINE SIZE OF EXISTING FRAME







FRAME WIDTH

Measure in 3 places. Use narrowest dimension for ordering

SIZE (Nominal)	FITS THESE EXISTING OPENINGS			
	A WIDTHS		B C HEIGHTS	
	MIN.	MAX.	MIN.	MAX.
2'8" x 6'8"	31⅛"	32⅛"	79½"	80½"
3'0" x 6'8"	35⅛"	36⅛"	79½"	80½"
3'6" x 6'8"	41⅛"	42⅛"	79½"	80½"
3'8" x 6'8"	43⅛"	44⅛"	79½"	80½"
4'0" x 6'8"	47⅛"	48⅛"	79½"	80½"
2'8" x 7'0"	31⅛"	32⅛"	83½"	84½"
3'0" x 7'0"	35⅛"	36⅛"	83½"	84½"
3'6" x 7'0"	41⅛"	42⅛"	83½"	84½"
3'8" x 7'0"	43⅛"	44⅛"	83½"	84½"
4'0" x 7'0"	47⅛"	48⅛"	83½"	84½"
2'4" x 6'8"	63⅛"	64⅛"	79½"	80½"
5'0" x 6'8"	71⅛"	72⅛"	79½"	80½"
5'4" x 7'0"	63⅛"	64⅛"	83½"	84½"
5'0" x 7'0"	71⅛"	72⅛"	83½"	84½"

*MAX. OPENING HEIGHT MAY BE EXCEEDED BY BLOCKING DOWN EXISTING OPENING.

NOTE: ORDER UNITS BY NOMINAL SIZES. DO NOT ORDER BY ACTUAL DIMENSIONS.

TO HAND A DOOR — FACE IT FROM THE OUTSIDE OR KEYSIDE

LEFT HAND Hinges on Left Opens Inward	RIGHT HAND Hinges on Right Opens Inward	LEFT HAND REVERSE Hinges on Left Opens Outward	RIGHT HAND REVERSE Hinges on Right Opens Outward
LEFT HAND Hinges on Left Opens Inward	RIGHT HAND Hinges on Right Opens Inward	LEFT HAND REVERSE Hinges on Left Opens Outward	RIGHT HAND REVERSE Hinges on Right Opens Outward

Steelcraft®

9017 Blue Ash Road Cincinnati, Ohio 45242 513/745-8400

Printed in U.S.A.

Cat. No. 518 Rev. 6/88

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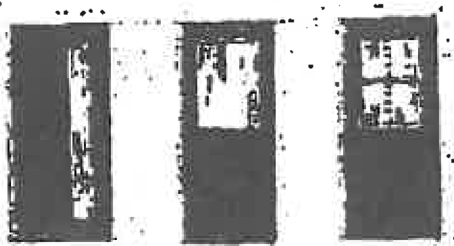
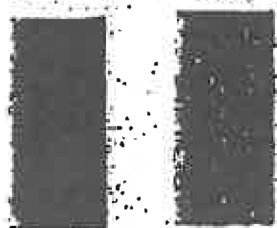


LNL G G2/G4



FINISH PAINTED AND WOOD GRAIN FINISHES

HARDWARE

Replacement Units shall be prepared for the following hardware:

- Hinges:
  1-1/2 pair of 4-1/2 x 4-1/2 x .134 template hinges
- Lock and Strike:
  Government 161 (ANSI-A115.2) cylindrical or Government 86 (ANSI-A115.1) mortise lock with an ANSI-A115.1 or .2 strike.

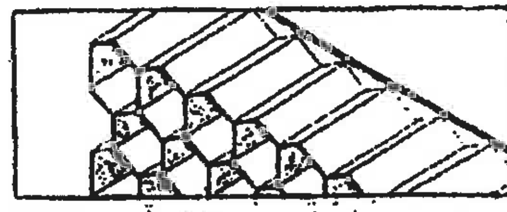
Consult distributor for other hardware preparations.

	NOMINAL SIZE	FRAME SIZE (FINISHED OPENING)		NET DOOR SIZE*	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE	2868	31"	79¼"	30-13/16"	79¼"
	3068	35"		34-13/16"	
	3668	41"		40-13/16"	
	3868	43"		42-13/16"	
	4068	47"		46-13/16"	
	2870	31"	83¼"	30-13/16"	82¼"
	3070	35"		34-13/16"	
	3670	41"		40-13/16"	
	3870	43"		42-13/16"	
	4070	47"		46-13/16"	
PAIR	5468	63"	79¼"	30-13/16" & 31-13/16"	78¾"
	6068	71"		34-13/16" & 35-13/16"	
	5470	63"	83¼"	30-13/16" & 31-13/16"	82¾"
	6070	71"		34-13/16" & 35-13/16"	

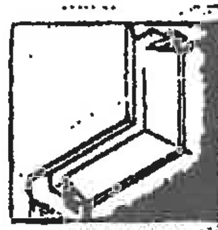
*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF

CONSULT DISTRIBUTOR FOR OTHER SIZES.

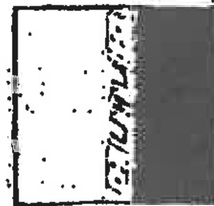
DOOR DETAILS



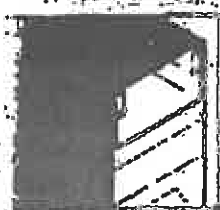
Full honeycomb core of phenolic resin-impregnated kraft paper reinforces the door every 1 inch, providing superlative resistance to impact and assuring a flat surface.



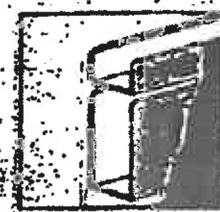
Aluminum glass trim (snap-in).



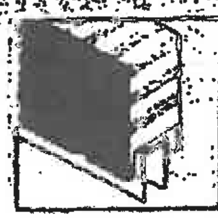
8-gage thick hinge reinforcement.



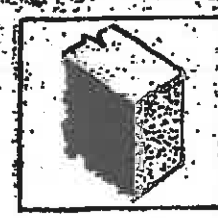
Snap-[illegible] caps for exterior openings.



Steel top and bottom reinforcing channels. 14-gage closer reinforcement when required.

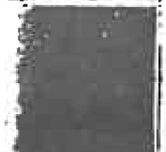


Door bottom with double sweep when required.



Insulated doors: one pound polystyrene core, 1½ pound polyurethane core when required.

PAIRS OF DOORS



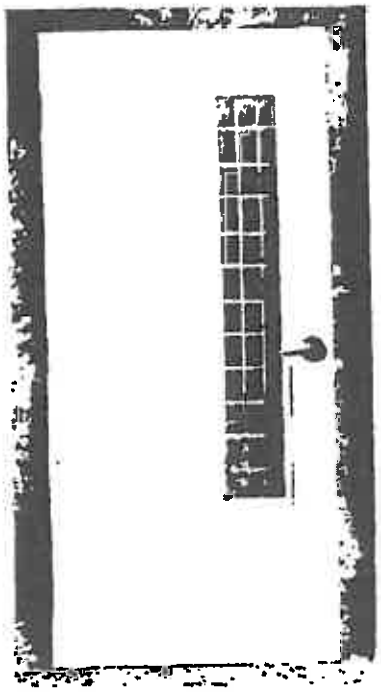
Designs shown may be combined for pairs of doors.

Pairs of doors consist of two leaves and a 14 ga. steel "Z" astragal field mounted to inactive leaf of pair. Inactive leaf may be secured with flush bolts or surface bolts.

Note: For pairs of doors, right hand will be active, unless specifically ordered.

STEELCRAFT

L18 AND L16-SERIES HONEYCOMB DOORS



ABOUT THE PRODUCT:

The L18 and L16-Series Flush Doors are designed to meet the architectural requirements for full flush doors. This premium door construction combines the strength and dimensional stability of steel with the structural integrity of the honeycomb core. The continuous bonding of core to metal provides an attractive flat door, free of face welding marks. Tests have proven that the L-Series door has integral high resistance to impact damage, low thermal conductivity, and high STC ratings.

To meet application, specification and performance requirements, the L-Series doors offer a wide range of specifiable options including sizes, glass lite designs, hardware (mechanical, pneumatic, electrical) preparations and edge constructions.

FEATURES AND BENEFITS:

Steelcraft's L-Series Doors offer the following standard unique features, which enhance long term performance and durability.

1. **Honeycomb core system** enhances the structural integrity of the door, while significantly reducing the weight.
2. **Full height, epoxy filled mechanical interlock edges** provide structural support and stability the full height of the door edges.
3. **Patented universal hinge preparations** allow for easy field conversion from standard weight (.134) hinges to heavy weight (.180) hinges.
4. **14 gage top and bottom channels** provide stability and protection for the top and bottom edges from abuse.
5. **Beveled hinge and lock edges** allow for tighter installation tolerances, ensure easier operation, and eliminate binding and sticking.
6. **Recessed Dezignor™ glass trim** provide a clean, neat, and flush finish with the door surface.
7. **Factory applied baked on rust inhibiting primer** in accordance with ANSI A250.10.

SPECIFICATION COMPLIANCE:

1. Door construction for the Steelcraft L18 and L16-Series Full Flush Doors meet the requirements of ANSI A250.8-1998 (commonly referred to as SDI-100)
2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-1997. Locations are in accordance with ANSI/DHI A115.

FIRE RATINGS:

The L-Series doors meet the broadest fire rating requirements. They are listed for installations requiring compliance to both negative pressure testing (ASTM E152 and UL-10B) and positive pressure standards (UBC 7-2 and UL-10C)

Steel Thickness	Opening	Usage Frequency[1]	Frame Applications
16 gage (1.3mm)	Interior & Exterior	Extra-heavy duty	• 16 & 14 gage steel frames
18 gage (1mm)	Interior & Exterior	Heavy duty	• 16 gage steel frames
Steel Type	**Opening**	**Building Applications**	
Non Galvannealed[3]	Mainly Interior	• Typical building conditions	
Galvannealed[2]	Mainly Exterior	• Used in locations with high humidity and/or weather exposure	

MATERIAL:

Depending on environmental conditions, exterior doors are generally galvannealed and interior doors non galvanneal. All doors are supplied with a factory applied baked on primer for field applied finish paints.

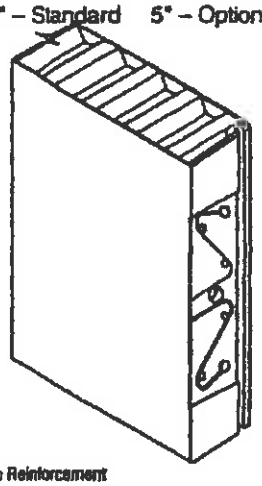
[1] Usage frequency is based on ANSI A250.8-1998
[2] Reinforcements for galvannealed doors are also galvannealed
[3] Commercial quality carbon steel

OCT 24 2008

IR Security & Safety

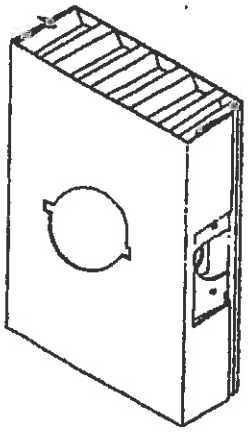
Details are subject to change without prior notice.

Universal Mortise Hinge Prep
4½" – Standard 5" – Optional



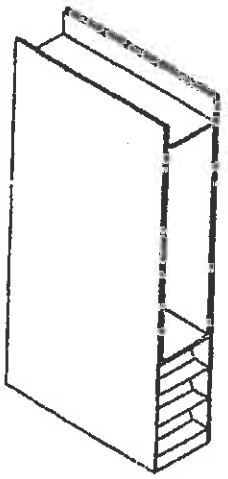
7 Gage Hinge Reinforcement

Lock Prep

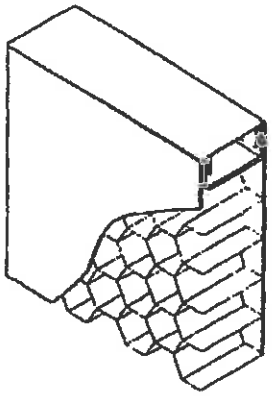


161 Cylindrical Lock shown

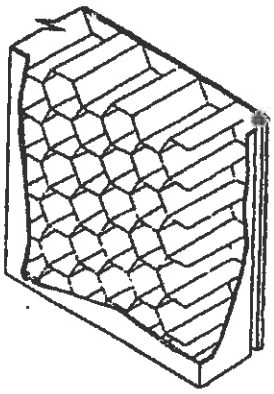
Optional 14 Gage Closer Reinforcement



Optional Snap-in Top Cap



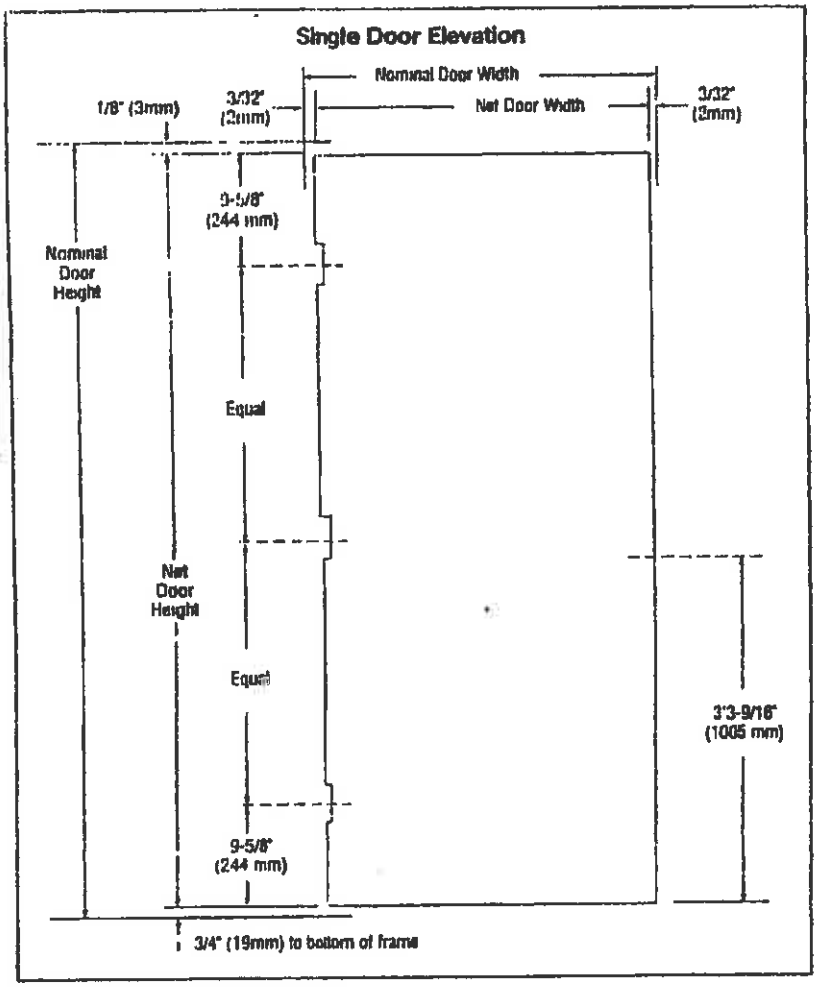
Rigid Honeycomb Core



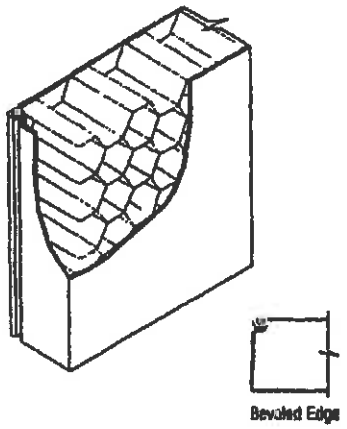
GENERAL NOTES:

1. **Edge construction:**
   - Vertical edges (both hinge and lock) are beveled with a visible seam.
   - Top and bottom edges are closed with inverted 14 gage welded channels. Exterior applications require the addition of snap-in top caps to protect against the weather.
2. **Optional edge seams** available in the L-Series door construction are as follows:
   - LF – The mechanical edge seam is filled and finished prior to applying the factory primer.
   - LW – The mechanical edge seam is welded and finished prior to applying the factory primer.
3. **Optional cores** available in the L-Series door construction:
   - **Polystyrene** for exterior applications in extreme weather conditions.
   - **Polyurethane** for exterior applications in arctic weather conditions. Not Fire Rated.
4. **Standard hardware preparations:** standard mortised and reinforced for:
   - **Universal hinge preps** – 4½"(114mm) patented preparation which allows easy and quick field conversion from standard to heavy weight hinges.
   - **Locks** – A multitude of standard lock preps are available. The most commonly used with a 4⅞" (124mm) strike are 161, 61L and 86.

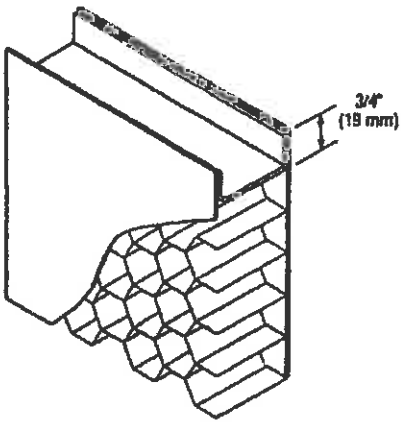
Single Door Elevation



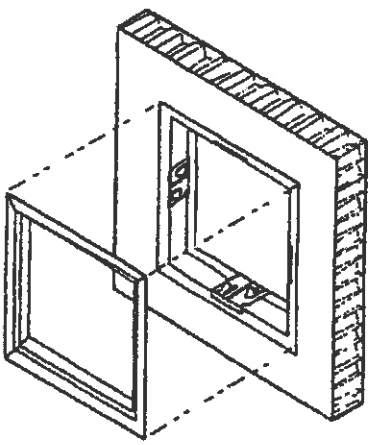
Beveled Edge with Full Height Mechanical Interlock



Inverted Top & Bottom Channels 14 Gage



Designer Trim Option
¼" – Standard ½" – Optional



CONSTRUCTION NOTES:

1. **Doors** are 1¾" (45mm) thick.
2. **Door opening size maximum:**
   Single door opening size 4'0" x 10'0" (1219mm x 3048mm)
   Double door opening size 8'0" x 10'0" (2438mm x 3048mm)
3. **Standard operating clearances** *(installed in frame)*:
   Head = ⅛" (3mm) to bottom of head or transom panel
   Hinge and lock side = 3/32" (2mm) to rabbet on jamb
4. **Standard core system:**
   1" (25mm) cell Kraft honeycomb core is laminated to both face sheets with contact adhesive. The honeycomb is phenolic resin impregnated and sanded to insure ultimate lamination and performance. To further enhance the structural stability of the door the honeycomb core material is subjected to several unique operations prior to assembly. If any of these operations are eliminated, the strength and durability of the door is compromised.
5. **Hardware preparations:** to meet specifications, doors can be prepared for all commercial mortised hardware, and can be factory reinforced for surface applied hardware applications.
   - **Lock preps** – details and dimensions shown are for cylindrical (ANSI 115.2) type locks. For mortise (ANSI A115.1) locks, the centerline of the lock is located ⅜" (9mm) lower.
6. **Glass lites with Dezigner® trim and louvers:** doors with glazed cutouts and doors with louvers are available (see *Lites and Louvers* section of *Spec Manual*).

INSTALLATION:

1. Installation shall conform to the published Steelcraft installation instructions, SDI 105 *Recommended Installation Instructions for Steel Frames*, and ANSI/DHI A115-IG *Installation Guide for Doors and Hardware.*
2. Fire Rated Assemblies must be in accordance with NFPA Pamphlet 80. The *Authority Having Jurisdiction* is the final authority in issues related to the installation and use of installed Fire Rated Doors.

DOOR EDGE APPLICATIONS:

The L-Series Doors are used in virtually all buildings and construction applications. The application and functionality dictate the door edge construction specified.

Edge	Usage	Application
L	Heavy & Extra-heavy duty	High traffic in all commercial applications
LF	Heavy & Extra-heavy duty	High traffic, in sanitation conditions
LW	Heavy & Extra-heavy duty	High traffic, in sanitation and high abuse conditions

CONVERSION CHART

ANSI A250.8 (SDI 100) *Recommended Specification for Standard Steel Doors and Frames.*

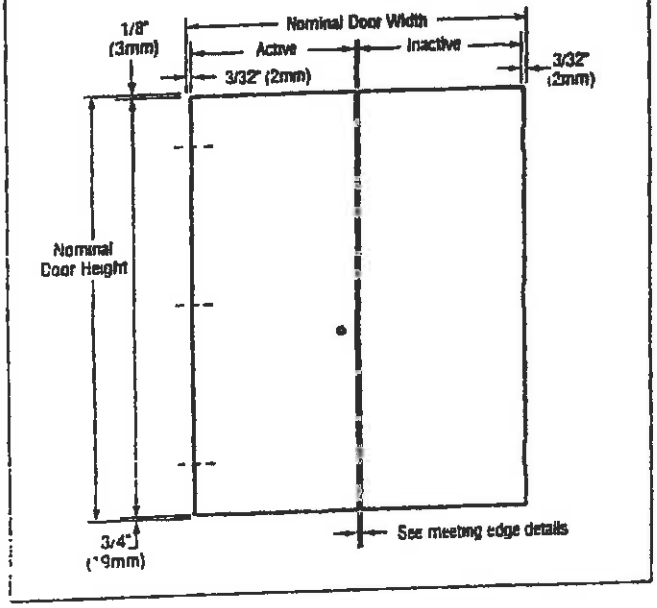
Series	Level	Model	Description	Edge Construction
L18	2	1	Full Flush	Full height, visible mechanical interlocked edge
LF18	2	2	Seamless	L-Series with epoxy filled edge seams
LW18	2	2	Seamless	L-Series with welded edge seams
L16	3	1	Full Flush	Full height, visible mechanical interlocked edge
LF16	3	2	Seamless	L-Series with epoxy filled edge seams
LW16	3	2	Seamless	L-Series with welded edge seams

DOUBLE DOOR APPLICATIONS:

L-Series doors are available in double door elevations, with active and inactive leaves and an overlapping astragal.

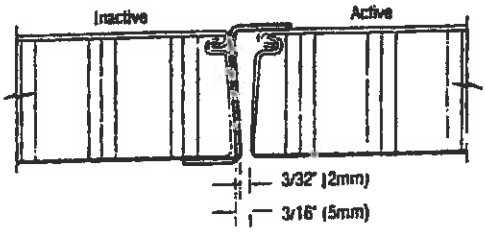
- **Standard operating clearances** *(installed in frame)*:
  - Head = ⅛" (3mm) to bottom of head or transom panel
  - Hinge side = 3/32" (2mm) to rabbet on jamb
  - Meeting edges = 3/32" (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
  - Bottom = ¾" (19mm) to bottom of frame
- **Meeting edges:**
  - 14 Gage astragal is furnished loose for installation in the field by others.
  - Overlapping astragal kits are available to convert an active leaf to an inactive leaf.
  - When an astragal is not used, the width of the inactive leaf is increased 3/32" (2mm).
- **Hardware preparations:** the inactive leaf can be prepared for hardware as specified.

Double Door Elevation

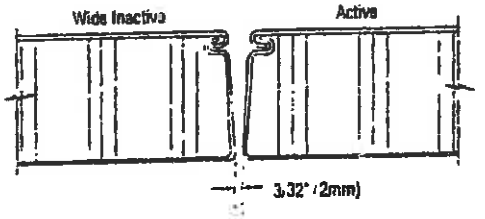


MEETING EDGE DETAILS:

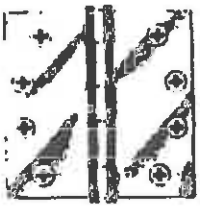
Typical Astragal 14 Gage



Pairs without Astragal



Five Knuckle



Plain Bearing - Standard Weight

For use on medium weight doors or doors requiring low frequency service

1191 Brass with Stainless Steel pin - ANSI A2133
Stainless Steel with Stainless Steel pin - ANSI A5133

1279 Steel with Steel pin - ANSI A8133

- Non-rising removable pin with button tip and plug
- With door closer use ball bearing hinge

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
2 x 2	51 x 51	0.083	4	-	3/4 x 8
2 1/2 x 2 1/2	64 x 64	0.089	6	-	3/4 x 8
3 x 3	76 x 76	0.097	6	-	1 x 9
3 1/2 x 3 1/2	89 x 89	0.119	6	1/2 x 10-24	1 x 9
4 x 4	102 x 102	0.129	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 4	114 x 102	0.134	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 4 1/2	114 x 114	0.134	8	1/2 x 12-24	1 1/4 x 12
5 x 4	127 x 102	0.145	8	1/2 x 12-24	1 1/4 x 12
5 x 4 1/2	127 x 114	0.145	8	1/2 x 12-24	1 1/4 x 12
5 x 5	127 x 127	0.145	8	1/2 x 12-24	1 1/4 x 12
6 x 4 1/2	152 x 114	0.160	10	1/2 x 1/4-20	1 1/2 x 14
6 x 5	152 x 127	0.160	10	1/2 x 1/4-20	1 1/2 x 14
6 x 6	152 x 152	0.160	10	1/2 x 1/4-20	1 1/2 x 14

Five Knuckle

Plain Bearing - Standard Weight - Wide Throw

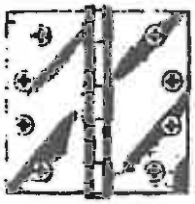
For use on medium weight doors or doors requiring low frequency service

1191 Wide Throw
Brass with Stainless Steel pin - ANSI A2133
Stainless Steel with Stainless Steel pin - ANSI A5133

1279 Wide Throw
Steel with Steel pin - ANSI A8133

- Non-rising removable pin with button tip and plug
- With door closer use ball bearing hinge

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
3 1/2 x 5	89 x 127	0.119	6	1/2 x 10-24	1 x 9
3 1/2 x 6	89 x 152	0.119	6	1/2 x 10-24	1 x 9
4 x 5	102 x 127	0.129	8	1/2 x 12-24	1 1/4 x 12
4 x 6	102 x 152	0.129	8	1/2 x 12-24	1 1/4 x 12
4 x 7	102 x 178	0.129	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 5	114 x 127	0.134	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 6	114 x 152	0.134	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 7	114 x 178	0.134	8	1/2 x 12-24	1 1/4 x 12
4 1/2 x 8	114 x 203	0.134	8	1/2 x 12-24	1 1/4 x 12
5 x 6	127 x 152	0.145	8	1/2 x 12-24	1 1/4 x 12
5 x 7	127 x 178	0.145	8	1/2 x 12-24	1 1/4 x 12
5 x 8	127 x 203	0.145	8	1/2 x 12-24	1 1/4 x 12



Concealed Bearing - Standard Weight

For use on medium weight doors or doors requiring medium frequency service

CB1191 Stainless Steel with Stainless Steel pin - ANSI A5112

- Non-rising removable pin with button tip and plug
- Only available with SecureCoat® Lifetime finish (US3SC)
- Specify machine screws

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
3 1/2 x 3 1/2	89 x 89	0.119	6	-	1 x 9
4 x 4	102 x 102	0.129	8	-	1 1/4 x 12
4 1/2 x 4	114 x 102	0.134	8	-	1 1/4 x 12
4 1/2 x 4 1/2	114 x 114	0.134	8	-	1 1/4 x 12
5 x 4	127 x 102	0.145	8	-	1 1/4 x 12
5 x 4 1/2	127 x 114	0.145	8	-	1 1/4 x 12
5 x 5	127 x 127	0.145	8	-	1 1/4 x 12
6 x 4 1/2	152 x 114	0.160	10	-	1 1/2 x 14
6 x 5	152 x 127	0.160	10	-	1 1/2 x 14
6 x 6	152 x 152	0.160	10	-	1 1/2 x 14

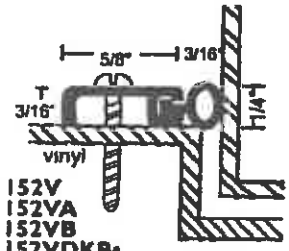
Vinyl Seals

Properties:
- Synthetic polymer: Polyvinyl Chloride
- Economical
- Flame resistant
- Moisture resistant
- Temperature range 0F to 140F
- Plasticizers evaporate with age and exposure to UV, Cold, Heat causing hardening, loss of memory, loss of resilience, cracking and crazing

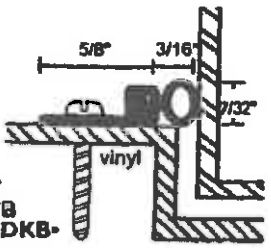
#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

All vinyl seals this section

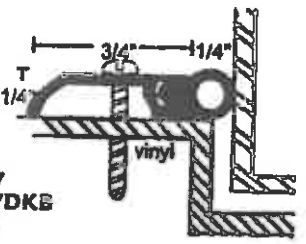
A - clear
B - gold
DKB - dark bronze
no suffix - mill
Vinyl is gray
(exception: *vinyl is black)



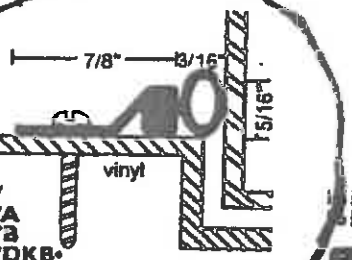
152V
152VA
152VB
152VDKB*



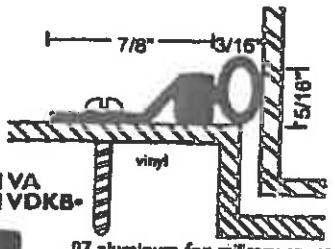
155V
155VB
155VDKB*



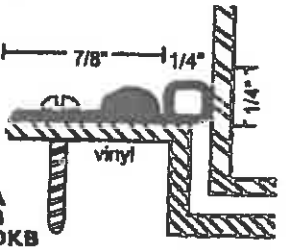
156V
156VDKB



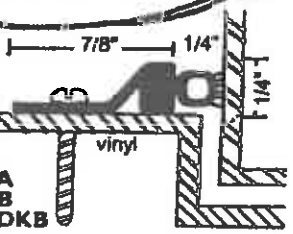
160V
160VA
160VB
160VDKB*



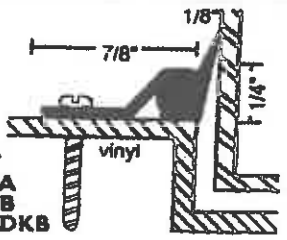
161VA
161VDKB*
.07 aluminum for military specs



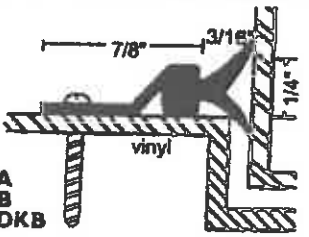
162V
162VA
162VB
162VDKB



164V
164VA
164VB
164VDKB

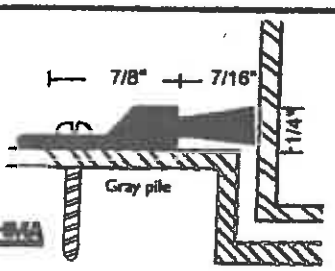


188V
188VA
188VB
188VDKB



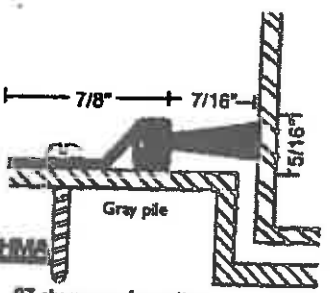
190V
190VA
190VB
190VDKB

Pile Seals



185P
185PA
185PB
185PDKB

BHMA



161PA
161PDKB

BHMA

.07 aluminum for military specs

Saddle Thresholds

All thresholds this page

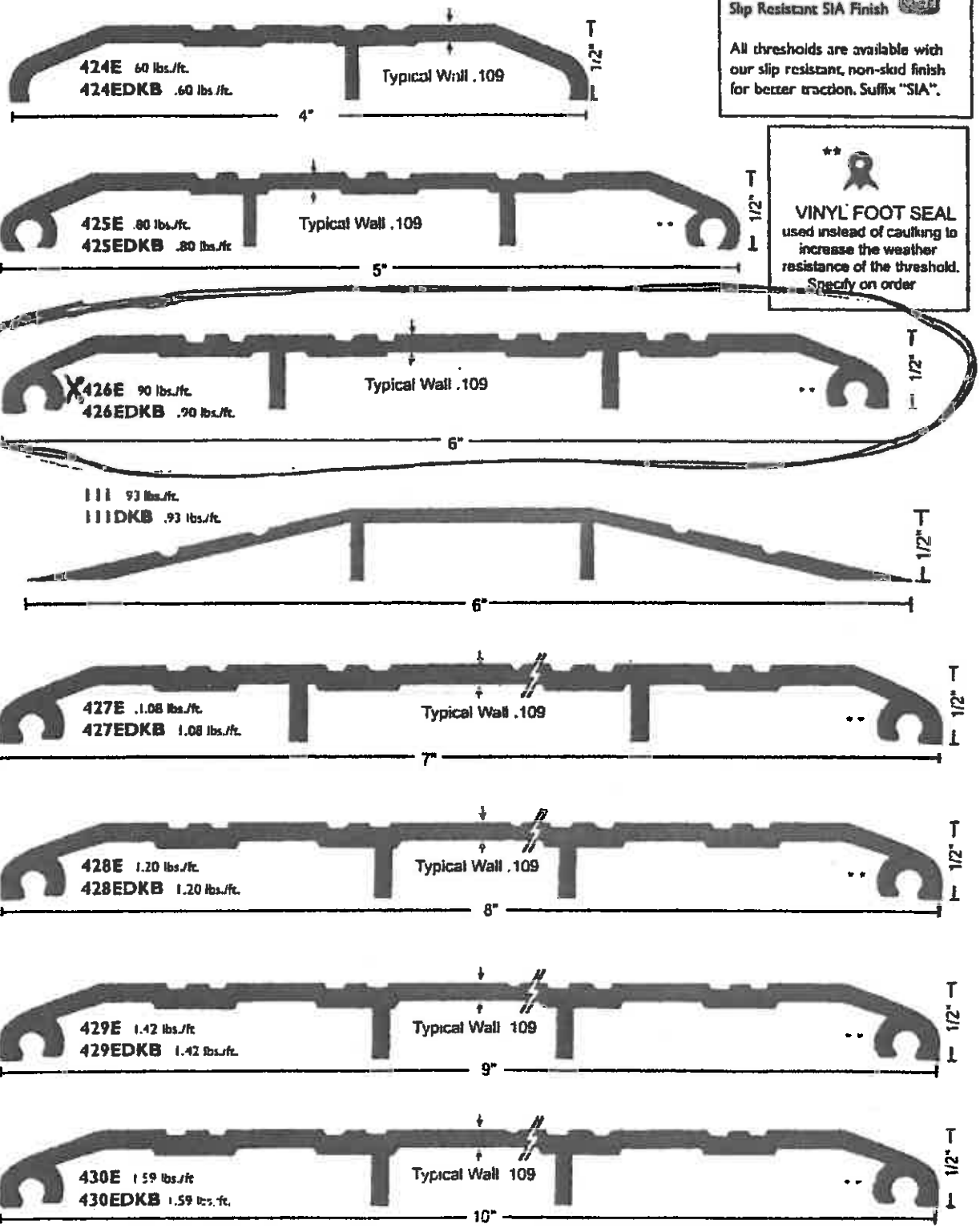
MATERIALS & FINISHES

- Aluminum mill finish
- DKB - Aluminum dark bronze finish

Slip Resistant SIA Finish

All thresholds are available with our slip resistant, non-skid finish for better traction. Suffix "SIA".

VINYL FOOT SEAL
used instead of caulking to increase the weather resistance of the threshold. Specify on order



Specifications

Handing:
All D-Series lever locksets are non-handed.

Door Thickness:
1⅜" to 2⅛" (41mm–54mm) standard including Vandlgard® functions.
See accessories (Page 12) for spacers required for 1⅜" doors.

Backset:
2¾" (70mm) standard. 2⅜", 3¾" and 5" (60mm, 95mm, 127mm) optional.

Faceplate:
Brass, bronze or stainless steel. 1⅛" x 2¼" (29 mm x 57mm) square corner, beveled.

Lock Chassis:
Zinc plated for corrosion resistance.

Latch Bolt:
Steel, ½" (12mm) throw, deadlocking on keyed and exterior functions. ¾" (19mm) throw anti-friction latch available for pairs of fire doors.

Exposed Trim:
Levers: Pressure cast zinc, plated to match finish symbols.
Roses: Solid brass.

Strike:
ANSI curved lip strike 1¼" x 4⅞" x 1³⁄₁₆" lip to center standard. Optional strikes, lip lengths and ANSI strike box available. See page 11.

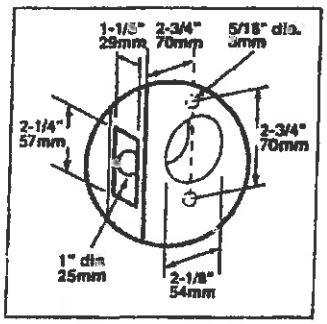
Cylinder & Keys:
6-pin Everest C123 keyway standard with two patented nickel silver keys per lock.

Keying Options:
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying and construction keying.

Warranty:
Seven-year limited for all functions including Vandlgard®.

Door Preparation

Lever Designs



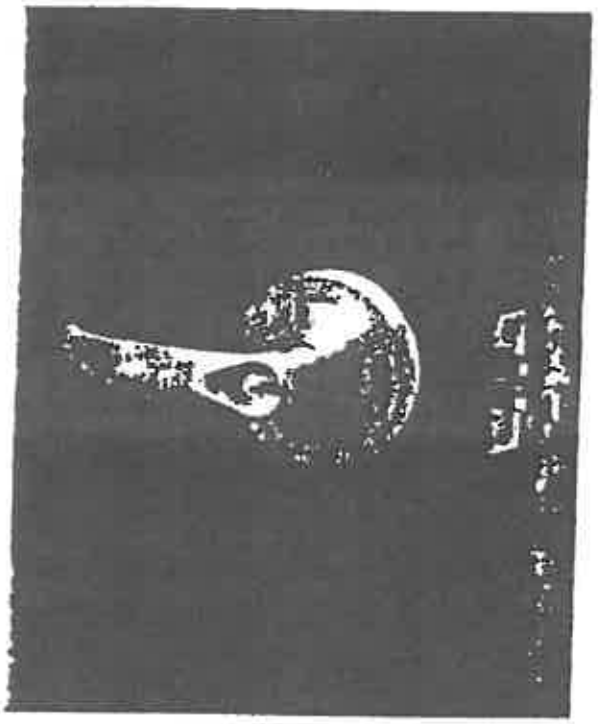
Certifications

ANSI
Meets or exceeds A156.2 Series 4000, Grade 1 strength and operational requirements. Meets A117.1 Accessibility Code.

Federal
Meets FF-H-106C Series 161.

California State Reference Code
(Formerly Title 19, California State Fire Marshal Standard)
All levers with returns comply; levers return to within ½" of door face.

UL / cULs
All locks listed for A label single doors, 4' x 8'.
Letter F and UL symbol on latch front indicate listing.
Electrified functions are UL19X Listed for single point locking applications.
UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.



Specifications

Handing:
Keyed functions are reversible. Non-keyed functions are not handed.

Door Thickness:
1⅜" to 1⅞" (35 mm to 48 mm) standard.
2" (51 mm) to 2½" (64 mm) optional extended inside.

Backset:
2⅜" (60 mm) standard. 2¾" (70 mm), 3¾" (95 mm) and 5" (127 mm) optional.

Front:
Steel, 1⅛" x 2¼" square corner, beveled, for 2⅜" backset standard. Optional 1" square corner, 1" radius corner, and non-UL drive-in / round face. For availability with specific backsets, see page 6.

Lock Chassis:
Steel, zinc dichromate plated for corrosion resistance.

Latch Bolt:
Brass, chrome plated, ½" throw, deadlocking on keyed and exterior functions.

Exposed Trim:
Wrought brass, bronze or stainless steel. Levers are pressure cast zinc, plated to match finish symbols.

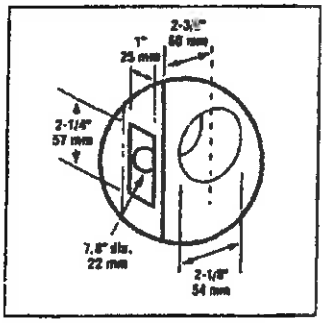
Strike:
T-strike 1⅛" x 2¾" (29 mm x 70 mm) x 1⅛" (29 mm) lip to center with box standard. Optional strikes, lip lengths and ANSI strike box available. See page 7.

Cylinder & Keys:
Commercial: 6-pin patented Everest C123 keyway standard with two nickel silver keys per lock.
Residential: 6-pin C keyway, keyed 5-pin.

Keying Options:
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying, and construction keying.

Warranty:
Commercial: three-year limited.
Residential: Full mechanical lifetime.

Door Preparation



Certifications

ANSI
Meets or exceeds A156.2 Series 4000, Grade 2 strength and operational requirements.

Federal
Meets FF-H-106C.

California State Reference Code
(Formerly Title 19, California State Fire Marshal Standard)
All levers with returns comply; levers return to within ½" of door face.

UL / ULC:
All locks listed for A label single doors, 4' x 8'.
Letter F and UL symbol on latch front indicate listing.
UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.

Designs & Finishes

GEORGIAN

Symbol: GEO
Material: Wrought brass
Finishes: 605, 606, 609, 610, 625, 626

609

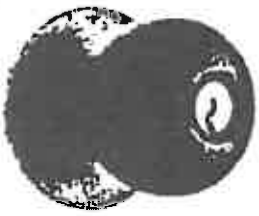
LEVON

Symbol: LEV
Material: Pressure cast zinc lever; wrought brass or bronze rose
Finishes: 605, 612, 613, 626

605

ORBIT

Symbol: ORB
Material: Wrought brass or bronze
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 625, 626



613

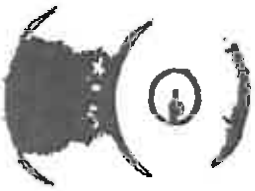
PLYMOUTH

Symbol: PLY
Material: Wrought brass, bronze, or stainless steel
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 625, 626, 629, 630

605

TULIP

Symbol: TUL
Material: Wrought brass
Finishes: 605, 606, 609, 610, 625, 626



626

Note: Levon available as inside trim only on deadlatch functions. Specify complete trim application and door handing when ordering with deadlatch functions.

Finishes

605	Bright Brass
606	Satin Brass
609	Antique Brass
610	Bright Brass, Blackened
611	Bright Bronze
612	Satin Bronze
613	Oil Rubbed Bronze
616	Antique Bronze
625	Bright Chromium Plated
626	Satin Chromium Plated
629	Bright Stainless Steel
630	Satin Stainless Steel

8 Keyed functions available with full size interchangeable core option for Orbit design.

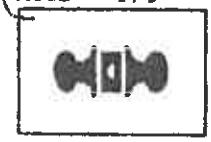
Functions

ANSI A156.2 Series 4000 Grade 2

Non-Keyed Functions

SCHLAGE ANSI

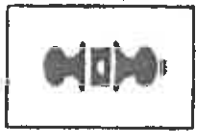
A10S F75 — **Passage Latch**
Both knobs always unlocked.



A25D — **Exit Lock**
Blank plate outside. Inside knob always unlocked. Specify door thickness, 1⅜" or 1¾".

A30D F77 — **Patio Lock**
Push-button locking. Turning inside knob or closing door releases button, preventing lock-out.

A40S F76 — **Bath/Bedroom Privacy Lock**
Push-button locking. Can be opened from outside with small screwdriver. Turning inside knob or closing door releases button.



A43D F79 — **Communicating Lock**
Turn-button in outer knob locks and unlocks knob and inside thumbturn.

A170 — **Single Dummy Trim**
Dummy trim for one side of door. Used for door pull or as matching inactive trim.

Keyed Functions

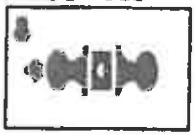
SCHLAGE ANSI

A53PD F109 — **Entrance Lock**
Turn/push-button locking: pushing and turning button locks outside knob requiring use of key until button is manually unlocked. Push-button locking: pushing button locks outside knob until unlocked by key or by turning inside knob.

A70PD F84 — **Classroom Lock**
Outside knob locked and unlocked by key. Inside knob always unlocked.

A79PD — **Communicating Lock**
Locked or unlocked by key from outside. Blank plate inside.

A80PD F86 — **Storeroom Lock**
Outside knob fixed. Entrance by key only. Inside knob always unlocked.



A85PD F93 — **Hotel/Motel Lock**
Outside knob fixed. Entrance by key only. Push-button in inside knob activates visual occupancy indicator, allowing only emergency masterkey to operate. Rotation of inside spanner-button provides lock-out feature by keeping indicator thrown.

Keyed functions available with full size interchangeable core option for Orbit design.

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

B. Warranty: Warranty materials and workmanship of sealing against leaks, adhesion, and cohesive failure for a period of two years from the date of substantial completion.

C. References:

1. American Society for Testing and Materials
   a) ASTM C790 – Recommended practices for use of latex sealing compounds.
   b) ASTM C920 – Elastomer Joint Sealants.
2. Federal Specifications
   a) FS TT-S-00230C (2), Sealing Compound, Elastomeric Type, Single Component (for caulking, sealing and glazing in buildings and other structures).
   b) FS TT-S-00227E (3), Sealing Compound, Elastomeric Type, Multi-component (for caulking, sealing and glazing in buildings and other structures).

PART 2 - PRODUCTS

2.1 JOINT SEALANTS

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that have been tested and found compatible with one another and with joint substrates under service and application conditions.

B. Interior Sealant: Provide ASTM C 834. If no color is specified, use Gray. Location(s) of sealant for the following:
1. Small voids between walls or partitions and adjacent door frames, and similar items.
2. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.

C. Exterior Sealant: Provide ASTM C 920, polyurethane or polysulfide, Type M, Grade NS, Class 25, Shore A hardness of 20-40. If no color is specified, use Gray. Location(s) of sealant for the following:
1. Joints and recesses formed where frames and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations. Color to match adjacent surface.

2.2 ACCESSORIES

A. Primers: Provide a nonstaining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

B. Bond Breakers: Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

C. Cleaning Solvents: Provide type(s) recommended by the sealant manufacturer, except for aluminum and bronze surfaces that will be in contact with sealant.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean surfaces from dirt frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Remove oil and grease with solvent. Surfaces must be wiped dry with clean cloths. When resealing an existing joint, remove existing calk or sealant prior to applying new sealant. For surface types not listed below, contact sealant manufacturer for specific recommendations.
1. Steel Surfaces: Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finish work, scraping and wire brushing. Remove protective coatings by sandblasting or using a residue-free solvent.
2. Aluminum or Bronze Surfaces: Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive just prior to sealant application. For removing protective coatings and final cleaning, use nonstaining solvents recommended by the manufacturer of the item(s) containing aluminum or bronze surfaces.
3. Concrete and Masonry Surfaces: Where surfaces have been treated with curing compounds, oil, or other such materials, remove materials by sandblasting or wire brushing. Laitance, remove efflorescence and loose mortar from the joint cavity.

4. Wood Surfaces: Keep wood surfaces to be in contact with sealants free of splinters and sawdust or other loose particles.

B. Do not add liquids, solvents, or powders to the sealant. Mix multi-component elastomeric sealants in accordance with manufacturer's instructions.

3.2 INSTALLATION

A. Joint Width-to-Depth Ratios: Install per manufacturer's recommendation or as described below, whichever is more stringent.

			Minimum	Maximum
1.	Acceptable Ratios:			
a)	For metal, glass, or other nonporous surfaces:			
(1)	1/4 inch (6 mm) (minimum)		1/4 inch (6 mm)	1/4 inch (6 mm)
(2)	Over 1/4 inch (6 mm)		1/2 of width	Equal to width
b)	For wood, concrete, masonry, or stone:			
(1)	1/4 inch (6 mm) (minimum)		1/4 inch (6 mm)	1/4 inch (6 mm)
(2)	Over 1/4 inch(6 mm) to 1/2 inch (13 mm)		1/4 inch (6 mm)	Equal to width
(3)	Over 1/2 inch (13 mm) to 2 inch (50 mm)		1/2 inch (50 mm)	5/8 inch (16 mm)
(4)	Over 2 inch (50 mm)		(As recommended by sealant mfr.)	

2. Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is not required on metal surfaces.

B. Masking Tape: Place masking tape on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Remove masking tape within 10 minutes after joint has been filled and tooled.

C. Immediately prime prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.

D. Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

E. Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Make sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Apply sealer over the sealant when and as specified by the sealant manufacturer.

F. Thresholds: Place double band of sealant under and along all sides of all exterior thresholds.

END OF SECTION 07920

Pemko Manufacturing Company
5535 Distribution Drive
Memphis, TN 38141
Phone: (800) 824-3018
Fax: (800) 243-3656
E-mail: pemkosales@pemko.com
www.pemko.com

SECTION 08710
DOOR HARDWARE
(CONTINUOUS GEARED DOOR HINGES)

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Continuous Geared Door Hinges.

Specifier Note: Revise paragraph below to suit project requirements. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the paragraph below. Add section numbers and titles per CSI *MasterFormat* and specifier's practice. In the absence of related sections, delete paragraph below.

B. Related Sections:

1. Division 6 Section(s): Wood Frames.
2. Division 8 Section(s): Steel Doors, Wood Doors, Sound Control Doors, Aluminum Frame Storefront Doors.
3. Division 10 Section(s): Compartments and Cubicles, Partitions.
4. Division 13 Section(s): Special Facilities, Integrated Construction, Special Structures, Special Purpose Rooms.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard. It is a listing of all references used in this section.

1.02 REFERENCES

A. ASTM International:

1. ASTM E2074 Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies.

B. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):

1. ANSI/BHMA A156.18 Materials and Finishes.
2. ANSI/BHMA A156.26 Standards for Continuous Hinges.

C. American National Standards Institute/Steel Door Institute (ANSI/SDI):

1. ANSI A250.8/SDI-100 Recommended Specifications for Standard Steel Doors and Frames.

D. American National Standards Institute/Window and Door Manufacturers Association (ANSI/WDMA):

1. ANSI/WDMA I.S.1-A Architectural Wood Flush Doors.

E. Federal Government:

1. U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG), 1992.
2. Federal Standard FED-STD-795-1988 (Revised 1989) Uniform Federal Accessibility Standards.

F. Underwriters Laboratories, Inc. (UL):

1. UL 10B Fire Tests of Door Assemblies.

2. UL 10C Fire Tests of D[illegible] Assemblies.
3. UL 752 Bullet Resistant Equipment.

G. International Code Council (ICC):
1. UBC 7-2 Fire Test of Door Assemblies (Positive Pressure).
2. International Building Code (IBC) Code 2000 (Positive Pressure).
3. ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities.

H. British Standards (BS):
1. BS 476 Fire Tests on Building Materials and Structures.

I. National Fire Protection Association (NFPA):
1. NFPA 1 Fire Prevention Code.

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

1.03 SYSTEM DESCRIPTION

A. Design Requirements: Provide continuous geared door hinges which have been manufactured, fabricated and installed to meet the following design criteria:
1. Continuous geared configuration, designed to distribute loads uniformly.
2. Identical operation in each leaf, designed to reduce door opening effort.
3. UL labeled for 3 hour fire classification.
4. Durability tested to ANSI/BHMA A156.26 Grade 1, 2, 3.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Product Data: Submit manufacturer's product data and installation instructions.

C. Shop Drawings: Provide drawings indicating required component locations, installation interface with adjacent materials, anchorage, fastening and similar information.

D. Samples: Submit one each of manufacturer's standard selection samples.

E. Quality Assurance/Control Submittals: Submit the following:
1. Test Reports: Upon request, submit [Fire] [And] [Durability] test reports from recognized testing laboratory.
2. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

F. Closeout Submittals: Submit the following:
1. Warranty documents specified herein.

Specifier Note: Article below should include statements of prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section and authority having jurisdiction. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

B. Regulatory Requirements and Approvals: [Specify applicable requirements of regulatory agencies.].

1. [Code agency name].
    a. [Report or approval number].

C. Certifications: [Specify requirement for certifications.].

D. Field Samples: [Specify requirement for field samples.].

E. Mock-Ups: [Specify requirements for mock-up.].

1. Subject to acceptance by owner, mock-up may be retained as part of finish work.
2. If mock-up is not retained, remove and properly dispose of mock-up.

Specifier Note: Retain paragraph below if preinstallation meeting is required.

F. Preinstallation Meetings: [Specify requirements for meeting.].

Specifier Note: Article below should include specific protection and environmental conditions required during storage. Coordinate article below with Division 1 Product Requirements Section.

1.06 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirement Section.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section. Use this article to require special or extended warranty or bond covering the work of this section.

1.07 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

Specifier Note: Coordinate subparagraph below with manufacturer's warranty requirements.

1. Warranty Period: Warranty for life of door opening, beginning with date of substantial completion.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 CONTINUOUS GEARED DOOR HINGES

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain, edit or delete paragraph below to suit project requirements and specifier practice.

A. Manufacturer: Pemko Manufacturing Company.

1. Contact: PO Box 3780, 4226 Transport Street, Ventura, CA 93003; Telephone: (800) 283-9988, (805) 642-2600; Fax: (805) 642-4109; E-mail: pemkosales@pemko.com; website: www.pemko.com.

B. Proprietary Products/Systems: Continuous Geared Door Hinges, including the following:

1. Continuous Geared PemkoHinges:
    a. Material: Extruded tempered aluminum.
    b. Material Standard: 6063-T6 alloy.
    c. Configuration: Three interlocking extrusions in pinless assembly, installed to full height of door frame.
    d. Finish (ANSI/BHMA A156.18): [Clear anodized] [Dark anodized] [Gold anodized].
    e. Type: [Full mortise] [Full surface] [Half surface] [Full mortise residential: 1 3/4 inches (45 mm)] [Full

mortise residential[3/8 inches (35 mm)] [Special full mortise][le throw full mortise].

f. Length: [79 inches (2007 mm)] [83 inches (2108 mm)] [85 inches (2159 mm)] [95 inches (2413 mm)] [120 inches (3048 mm)].

g. Hinge Options: [Safety] [Short leaf flush] [Short leaf inset] [Standard] [Safety short leaf inset] [Center pivot].

h. Electrical Modifications: [Specify electrical modifications.].

i. Strength: [Standard Duty: 14 bearings each leaf for 83 inch (2108 mm) hinge, minimum door weight 280 lb (127 kg)] [Heavy Duty: 27 bearings each leaf for 83 inch (2108 mm) hinge, minimum door weight 540 lb (245 kg)].

j. Mortise Fasteners: TEK, #12 × 3/4 inch, FHUC, Phillips head screws.

k. Fire Label Certification: Comply with ASTM E2074, NFPA 1, UBC 7-2, BS 476, UL 10B, UL 10C, [90 minutes for wood doors] [3 hours for hollow metal doors].

l. Testing Standard: Tested according to ANSI/BHMA A156.26.

Specifier Note: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

A. Comply with the instructions and recommendations of the continuous geared door hinge manufacturer.

Specifier Note: Specify actions to physically determine that conditions are acceptable to receive primary products of the section.

3.02 EXAMINATION

A. Site Verification of Conditions:

1. Verify that site conditions are acceptable for installation of continuous geared door hinges.
   a. Examine doors and frames for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction and other conditions affecting performance.
   b. Ensure frame is square and plumb before installation.
   c. Examine roughing-in for electrical wiring connections.
2. Do not proceed with installation of continuous geared door hinges until unacceptable conditions are corrected.

Specifier Note: Specify actions required to physically prepare the surface, area or site or to incorporate the primary products of the section.

3.03 PREPARATION

A. Wood Door Preparation: Comply with ANSI/WDMA I.S.1-A.

B. Steel Door and Frame Preparation: Drill doors and frames for hardware per manufacturer's installation instructions. Comply with ANSI A250.8/SDI-100.

Specifier Note: Coordinate article below with manufacturer's recommended installation requirements.

3.04 INSTALLATION

A. Mounting Location: Comply with the following requirements, unless otherwise indicated:

1. Steel Doors and Frames:
   a. Comply with ANSI A250.8/SDI-100.
   b. Ensure frames are properly sized, plumb and square.

c. [Specify standard or specific requirements.].

2. Wood Doors:

a. Comply with ANSI/WDMA I.S.1-A.

b. Ensure doors are properly sized, plumb and square.

c. [Specify standard or specific requirements.].

B. Adjust and reinforce attachment substrates as necessary for proper installation and operation.

C. Space fasteners and anchors according to manufacturer's product instructions.

Specifier Note: Specify the final actions required to prepare installed equipment or other completed work to properly function or perform.

3.05 ADJUSTING

A. Perform adjustments required to ensure that continuous geared door hinges function in compliance with manufacturer's performance criteria prior to acceptance by Owner.

1. Adjust door control devices to compensate for final operation of HVAC system and to comply with accessibility requirements.

Specifier Note: Specify the final actions required to clean installed equipment or other completed work to properly function or perform. Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.

3.06 CLEANING

A. Remove any protective films and clean components as necessary following manufacturer's recommended procedures.

Specifier Note: Specify provisions for protecting work after installation but prior to acceptance by Owner. Coordinate article below with Division 1 Execution Requirements Section.

3.07 PROTECTION

A. Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION

PEMKO

ASSA ABLOY

PEMKOHINGE™ CONTINUOUS GEARED HINGES:
HALF SURFACE SAFETY HINGES:
STANDARD

TITLE:
PREPARED FOR:
PREPARED BY:
DATE:
COMMENTS:

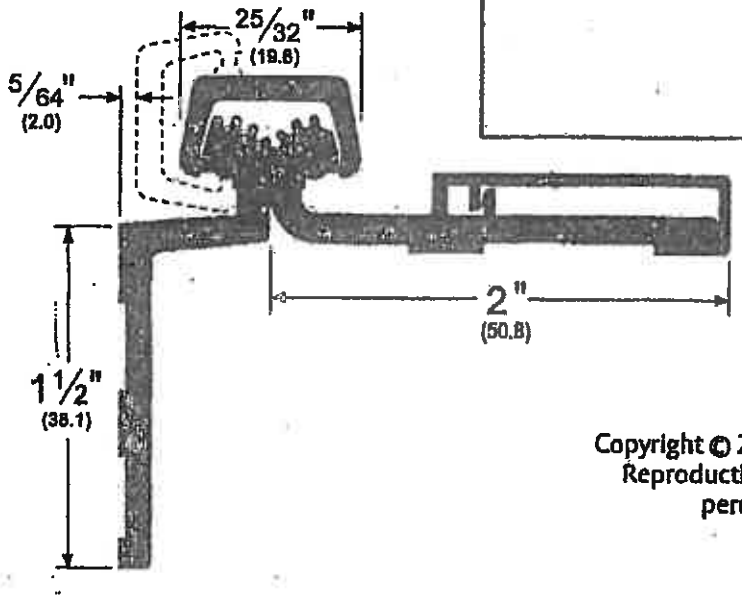
_HS_SF BHMA

AVAILABLE FINISHES: BL, C, D, PW, SN

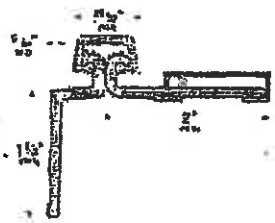
WIDTH: 2" (50.8 mm)
(between frame leaf and door leaf edge)

CAP WIDTH: 25/32" (19.8 mm)

HEIGHT: 1-1/2" (38.1 mm)
(frame edge side - leaf)



BL (Black Anodized) - special request only
C (Clear Anodized)
D (Dark Bronze Anodized)
PW (Painted White) - special request only
SN (Satin Nickel Anodized)



Enlarge Image

_HS_SF

Pemko's standard duty anodized aluminum Half Surface Safety continuous geared hinges are designed mainly for retrofit work in child care and nursing facilities and are applied to the exposed surface of the frame rabbet. Also available in heavy duty models.

- Designed for use with hollow metal frames, where the inset conforms to S.D.I specifications for aligning doors and frames.
- Allows for adjustments in order to properly align the edge of the door to the frame.
- BL (Black Anodized) and PW (Painted White) are special finishes available upon request.
- Fasteners - Frame Portion - All fasteners are #12-24 x 7/16" FHUC, Type C, threadforming.
- Standard model: 16 fasteners required for each leaf.
- Wood screws available on request (specify on order).
- Fasteners - Door Portion - a. Thru-bolt - 1/4-20 x 1-5/8". - Standard Duty Hinges - 4 required. - b. Shoulder Bolt - 1/4-20 x 1" PCH. - Standard Duty Hinges - 4 required. - c. Pan Head Self Drilling #12 x 3/4". - Standard Duty Hinges - 6 required.
- Standard duty hinge. 6" between bearing centers.
- Standard duty hinges conform to Grade 3-150 and Grade 3-300 cycle requirements per BHMA standard ANSI/BHMA A156.26-2006.
- Aluminum continuous hinge for use on swinging type fire doors of the hollow metal, tin-clad, sheet metal and steel covered composite type rated up to 3 hours, wood covered composite type rated up to and including 1-1/2 hours. Also wood core rated up to and including 20 minutes without hose stream.
- PemkoHinge products are guaranteed for the life of the opening against defects in material or workmanship with the exception of AL, RS, standard duty and Grade 3 hinges, which carry a 10 year warranty.
- Weight bearing (per BHMA standard ANSI/BHMA A156.26-2006) for standard models: 83" and 85" = 14 bearings, door weight = 280 lbs.; 95" = 16 bearings, door weight = 320 lbs.; 120" = 20 bearings, door weight = 400 lbs.
- Width: 2" (50.8 mm) (between frame leaf and door leaf edge).
- Cap Width: 25/32" (19.8 mm).
- Height: 1-1/2" (38.1 mm) (frame edge side - leaf).

BHMA

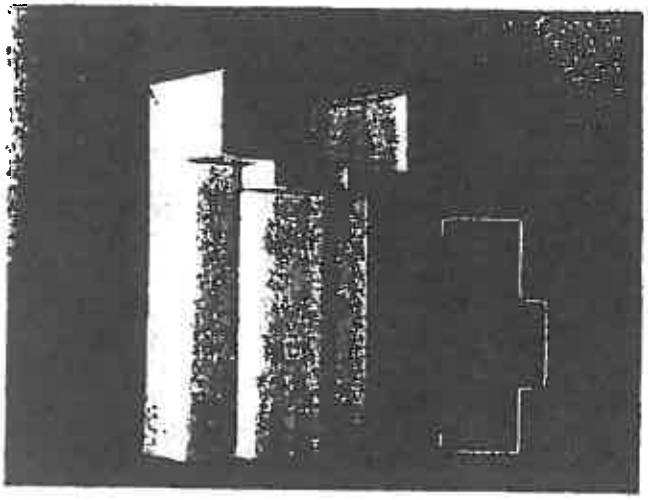
Ratings Explained | View Finishes

☐	CHSSF	C - Clear Anodized Aluminum
☐	DHSSF	D - Dark Bronze Anodized Aluminum
☐	GHSSF	G - Gold Anodized Aluminum, (Special Order Finish)
☐	BLHSSF	BL - Black Anodized Aluminum, (Special Order Finish)
☐	PWHSSF	PW - Painted White Aluminum, (Special Order Finish)
☐	SNHSSF	SN - Satin Nickel Anodized Aluminum, (Special Order Finish)

STEELCRAFT

F16 AND F14-SERIES FLUSH FRAMES

HD X-HD



ABOUT THE PRODUCT:

The F16 and F14-Series 3-Sided Flush Frames are designed for heavy and extra-heavy duty applications in both commercial and institutional buildings. They can be installed in both interior and exterior locations, and in virtually all types of buildings and wall constructions. These frames are to be installed as part of the wall framing sequence. They can be specified and/or supplied as either KD (knock-down) for field assembly prior to installation, or SUA (set-up and welded) for installation as a pre-welded unit.

APPLICATIONS:

The F-Series Frames are typically used in the following types of wall constructions:

Wall Construction	Application	Typical Wall Anchors
Masonry	wrap or butted	Wire masonry
Existing masonry	butted	Bolted through soffit
Wood stud	wrap	Lock-in wood stud anchor
Steel stud	wrap	Lock-in steel stud anchor

FEATURES AND BENEFITS:

Steelcraft F-Series Flush Frames offer the following unique features, which enhance long term functionality and durability:

1. **Die-mitered corner connections** (head/jamb) Standard corners insure attractive, tight and closed miters.
2. **Patented universal hinge preparations** allow for easy field conversion from standard weight (.134) hinges to heavy weight (.180) hinges.
3. **Adjustable base anchors** allow for installation adjustment when the floor is not level.
4. **Rubber silencers** are factory installed.
5. **Factory applied baked on rust inhibiting primer** in accordance with ANSI A250.10.

SPECIFICATION COMPLIANCE:

1. Overall frame construction for the Steelcraft F16 and F14-Series Flush Frames meet the requirements of ANSI A250.8-1998 (commonly referred to as SDI-100).
2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-1997. Locations are in accordance with ANSI/DHI A115.

FIRE RATINGS:

The F-Series Frames meet the broadest fire rating requirements. They are listed for installations requiring compliance to both negative pressure testing (ASTM E152 and UL-10B) and positive pressure standards (UBC 7-2 and UL-10C). Refer to the "Fire Rated" section of the Steelcraft Spec Manual for particular listings.

Steel Thickness	Opening	Usage Frequency[1]	Applications
14 gage (1.7mm)	Interior & Exterior	Extra-heavy to Maximum duty	• 16 & 14 gage steel doors
16 gage (1.3mm)	Interior & Exterior	Heavy to Extra-heavy duty	• 20, 18 & 16 gage steel doors • Commercial grade wood doors
Steel Type	**Opening**	**Applications**	
CRS	Mainly Interior	• Typical building conditions	
Galvannealed[2]	Mainly Exterior	• Used in locations with high humidity and/or weather exposure	

MATERIAL:

F-Series Frames are supplied from either 14 gage (1.7mm) or 16 gage (1.3mm) steel. Depending on environmental and usage conditions, the steel can be either cold rolled steel (CRS) or galvannealed. All frames are supplied with a factory applied baked on primer for ultimate field paint adhesion.

[1] Usage frequency is based on ANSI A250.8-1998
[2] Reinforcements for galvannealed frames are also galvannealed

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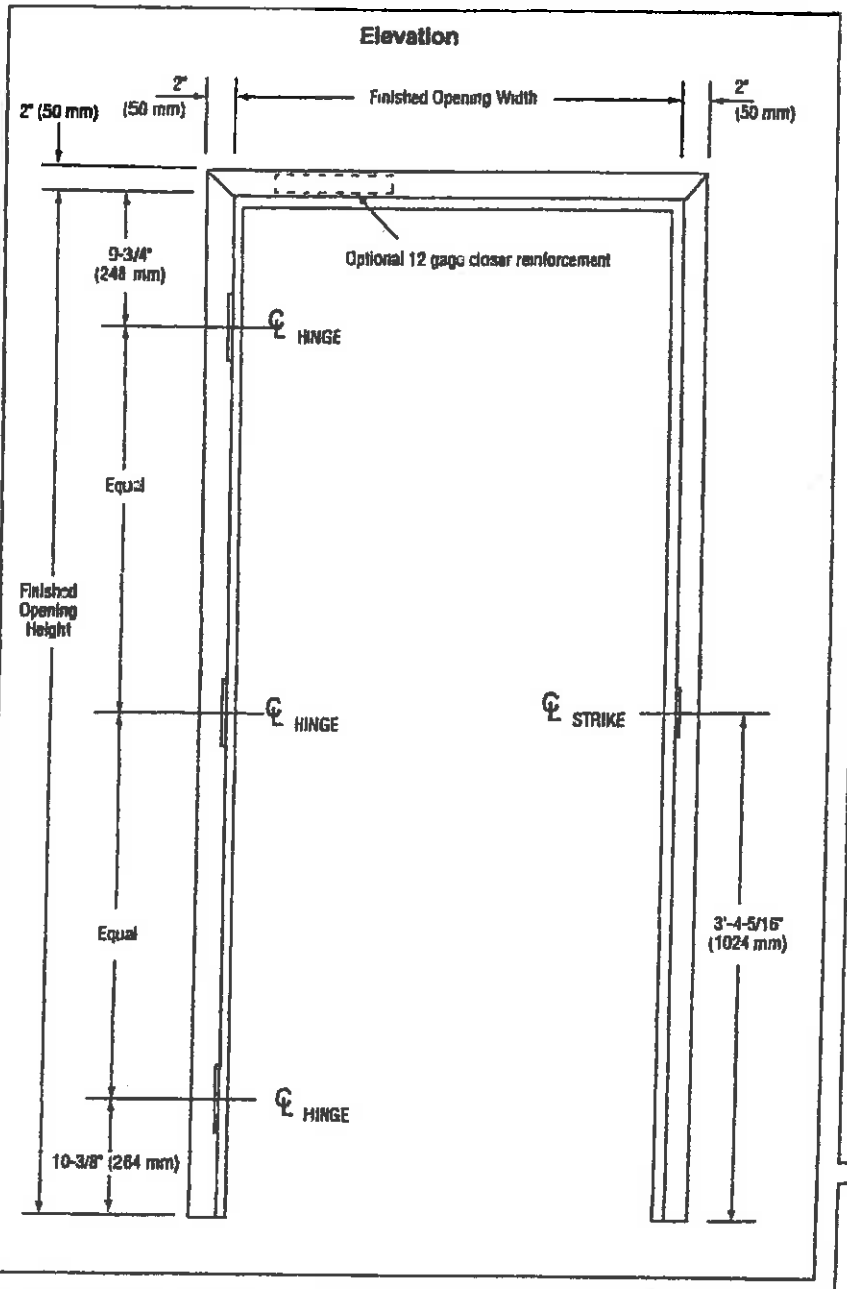
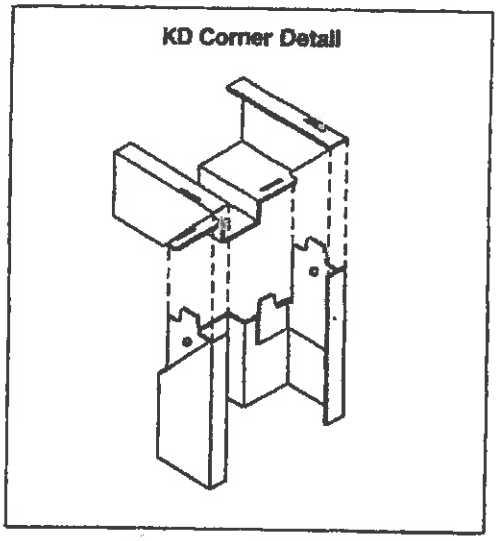
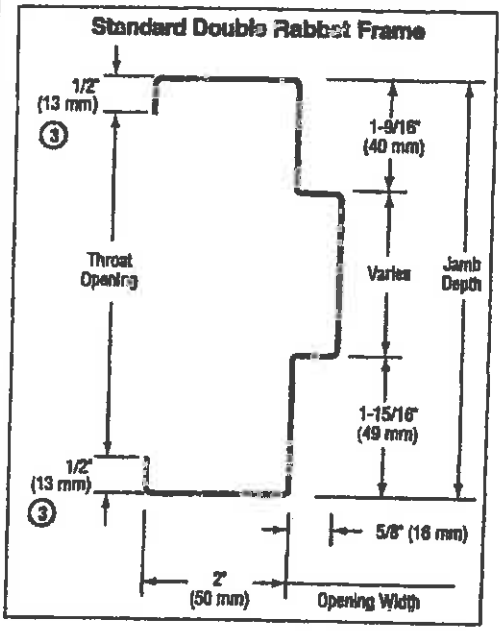
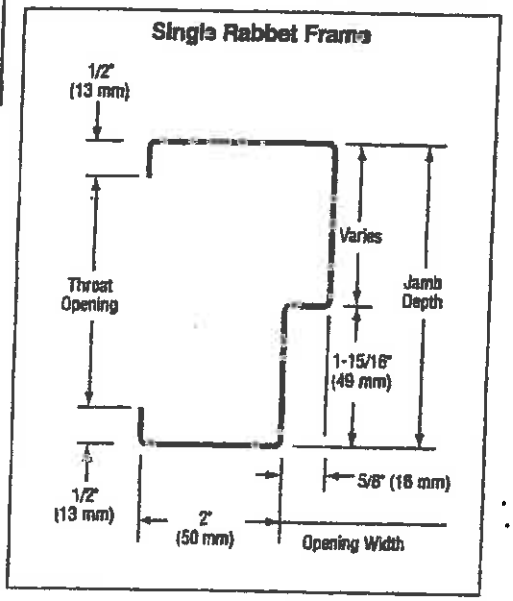
Details are subject to change without prior notice.

IR Security & Safety





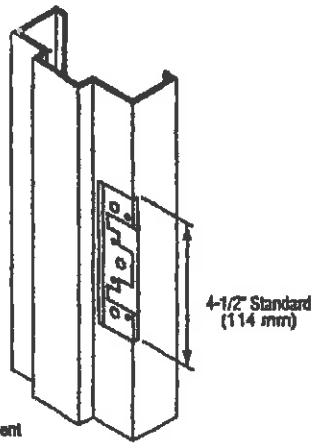




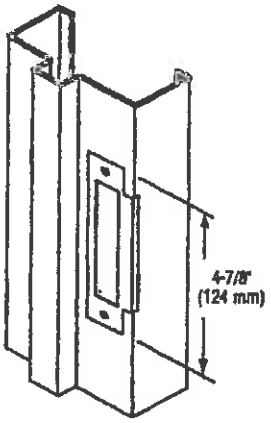
CONSTRUCTION NOTES:

1. **Door opening size maximum:**
   Single door opening size 5'0" x 11'0" (1524mm x 3353mm)
   Double door opening size 10'0" x 11'0" (3048mm x 3353mm)
2. **Jamb depths (profile) availability:**
   Single rabbet:
   minimum = 3" (76mm)
   maximum = 12¾" (324mm)
   Double rabbet:
   minimum = 4¾" (121mm)
   maximum = 14¾" (375mm)
3. **Standard profile dimensions (variations available):**
   Face = 2" (50mm)
   Stop = ⅝" (16mm)
   Returns = ½" (13mm) all frames except 5¾" (146mm) which is 7/16" (11mm)
4. **Standard die-mitered corners:**
   Four (4) concealed tabs interlocking head and jambs

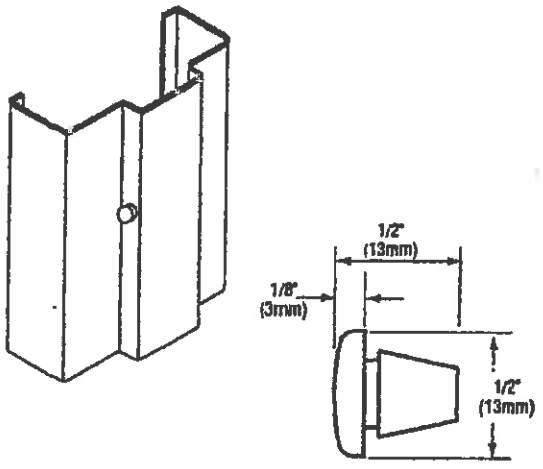
Universal Mortise Hinge Prep



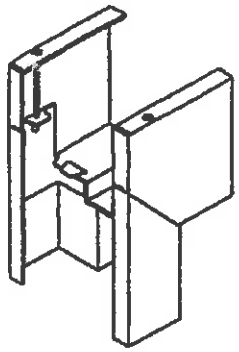
4⅞" Strike Prep



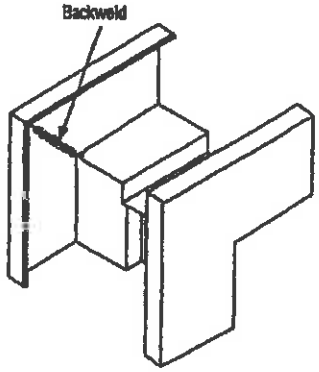
Rubber Silencer



Optional 4" (102mm) Head Detail



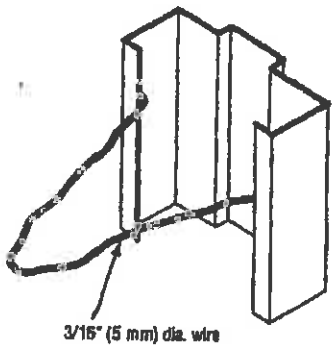
Welded Corner



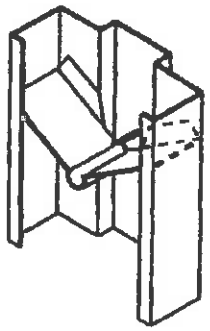
GENERAL NOTES:

1. **Frame profile** – variations in jamb depths available in ⅛" (3mm) increments:
   Single rabbet – typically for walls less than 3¾" (95mm) thick (2" min.[50mm])
   Double rabbet – typically for walls 3¾" (95mm) thick and over
2. **Corner connections:**
   - **KD (knock-down)** – Factory die-mitered
     Double rabbet frames – 4 tabs per miter
     Single rabbet frames – 3 tabs per miter
   - **Corner Connections – SUA (set-up and welded)** Available when specified, and in accordance with ANSI A250.8-1998.
3. **4" (102mm) heads** – die mitered for use with 2" (50mm) face double rabbet jambs. Available when specified for KD or SUA applications.
4. **Standard hardware preparations:**
   Standard mortised and reinforced with mortar guards for:
   - **Universal hinge preps** – 4½" (114mm) patented preparation which allows easy and quick conversion from standard to heavy weight hinges.
   - **Strikes** – 4⅞" (124mm) conforming to ANSI A115.1 and ANSI A115.2.
5. **Rubber silencers:** All frames are supplied with factory installed silencers to cushion the closing of the door and to eliminate the field problems related to installing the silencers after the frames are installed and grouted. Three (3) silencers per strike jamb and two (2) per double door head.

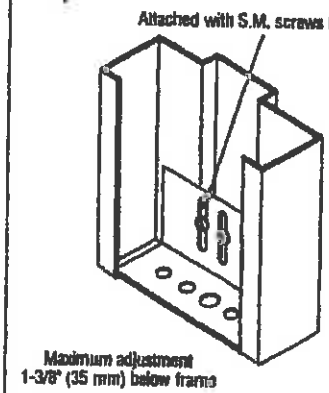
Wire Masonry Anchor



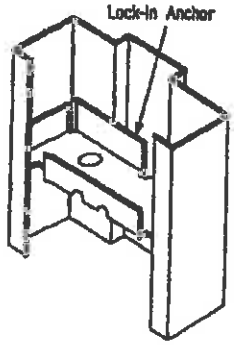
Existing Wall Anchor



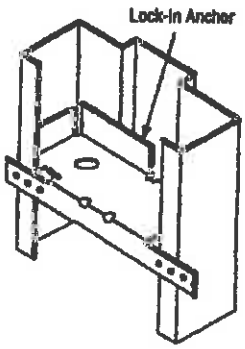
Adjustable Base Anchor



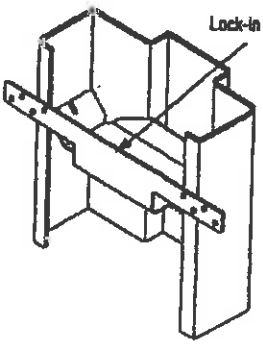
Anchor for Stud Partitions



Anchor for Wood Stud Partition



Universal Stud Anchor



ANCHORING AND INSTALLATION NOTES:

1. **F16 and F14-Series Commercial and Institutional Frames** are supplied standard with masonry wire or lock-in jamb anchors and adjustable base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility.
2. **Anchoring applications:**
   - **Masonry wall** – Masonry wire anchors (3/16" [5mm] dia.) provide maximum engagements in mortar joints, and allow for full internal grouting during installation. Adjustable base anchors are attached directly to the floor and adjusted. The wall is built around the anchored frame. (Refer to installation sheet #INS-2004.)
   - **Existing masonry walls (EMA)** – Specifically designed (18 Ga. steel) jamb anchors are used to add support for bolting the frame into the rough opening of an existing wall. An existing wall anchor is used as the base anchor in this application. (Refer to installation sheet #INS-2014.)
   - **Wood stud walls** – Lock-in (18 Ga. steel) jamb anchors are designed to be attached to the wood stud rough opening. After the frame is anchored, the wallboard is installed and finished. (Refer to installation sheet #INS-2005.)
   - **Steel stud walls** – Lock-in (18 Ga. steel) jamb anchors are designed to be attached to the webbing of the closed steel studs which are built around the frame. Adjustable base anchors are attached directly to the floor and adjusted. After frame is anchored, the wallboard is installed and finished. (Refer to installation sheets #INS-2006 and 2007.)
3. **Special frame anchorage:** Frame anchorage details shown on this sheet are applicable to double rabbet frames with 2" (50mm) faces. Anchorage details and availability of lock-in anchors will vary with the following frame profile changes:
   - **Single rabbet** – all details will vary.
   - **Double rabbet** – over 8¾" (222mm) jamb depth
4. **Installation caution notice:** When temperature conditions necessitate an additive to be used in the plaster or mortar to prevent freezing, the contractor installing the frames shall coat the inside of the frames in the field with a non-corrosive bituminous material.
5. Installation shall conform to the published Steelcraft installations instructions, SDI 105 *Recommended Installation Instructions for Steel Frames*, and ANSI/DHI A115-IG *Installation Guide for Doors and Hardware.*
6. All fire rated frames must be installed in accordance with NFPA Pamphlet 80 and the *Authority Having Jurisdiction.*

ATTACHMENT 6

Window Scope of Work Including Measurements And Specifications

Clinton Armory Window Measurements
And
Scope of Work

- **Window measurements are listed as approximate Width X Height; Contractor to field verify.**
- **All window bars shall be removed and properly disposed.**
- **Caulking shall be removed from outside edges of window and properly disposed prior to window removal.**
- **All removed windows shall be properly disposed.**
- **Window lintels and any remaining metal with lead-based paint shall be wet scraped and sealed with a DEQ approved encapsulant (See Attachment 3).**
- **Interior and Exterior window sills shall be HEPA vacuumed and wet washed to remove remaining lead dust. Once loose paint and lead dust is removed, window sills shall be sealed with a DEQ approved encapsulant (See Attachment 3).**
- **Attached is a Clinton Armory Floor Plan with designated window numbers that correspond with the numbers on this Scope of Work.**
- **Specifications for replacement windows are attached.**

1. 1' 1 ½" X 4' 3 ½" – Replacement window will be non-opening window. A window sized opening will need to be cut into interior wall to access window.

2. 2'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

3. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

4. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

5. 2'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

6. 2'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

7. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

8. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

9. 3'2" X 6'8" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

10. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

11. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

12. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

13. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

14. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

15. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

16. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

17. 3'2" X 6'8" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

18. 3'2" X 6'8" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

19. 3'2" X 9'3" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

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24. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

25. 3'2" X 6'2 ½" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

26. 3'2" X 6'2 ½" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

27. 3'2" X 6'2 ½" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

28. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

29. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit. A window sized opening will need to be cut into interior wall to access window.

30. 2'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

31. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

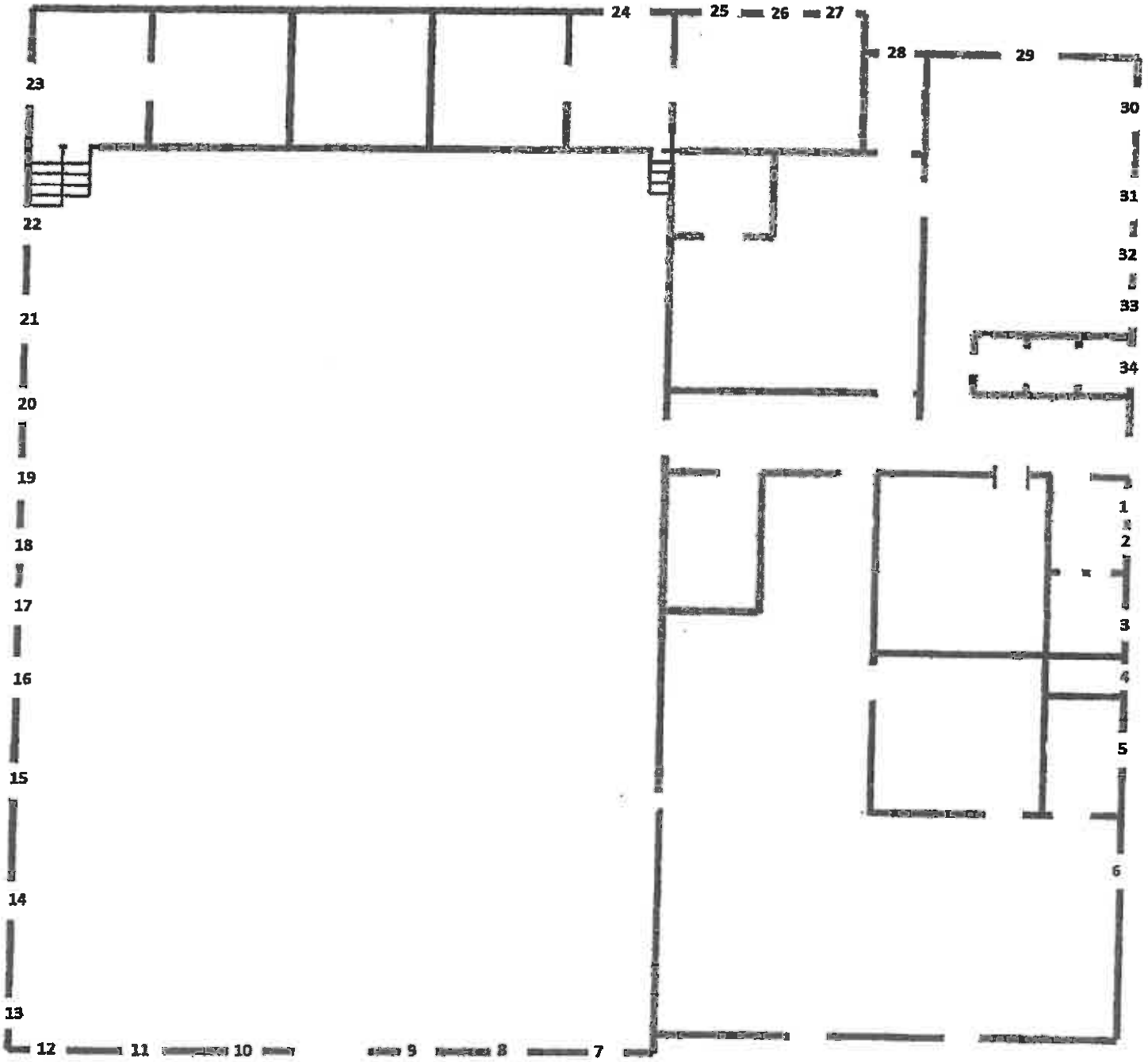
32. 3'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

33. 2'2" X 7'9" - Lower portion of window to be 4ft single hung opening window with top remainder to be fixed mapes panel all within one frame unit.

34. 1' 1 ½" X 4' 3 ½" – Replacement window will be non-opening window. A window sized opening will need to be cut into interior wall to access window.

CLINTON ARMORY

WINDOW MAP



SECTION 08520 – ALUMINUM WINDOWS

PART 1 – GENERAL

1.1 SECTION REQUIRMENTS

A. Submit Product Data and Shop Drawings.
B. Product Substitution: Substitutions include products differing from those required by this specification.
   1. Submit two (2) copies of each request for product substitution. Identify product to be replaced and provide complete documentation showing compliance of proposed substitution with applicable requirements. Include a full comparison with the specified product, and a list of changes to other Work required to accommodate the substitution.
   2. Submit requests for product substitution in accordance with the time allotted to do so by the Scope of Work included within the Bid Solicitation.
   3. State of Oklahoma, Department of Environmental Quality will review the proposed substitution and notify bidder of its acceptance or rejection within the time allotted to do so by the Scope of Work included within the Bid Solicitation.
C. Structural Performance: Provide systems, including anchorage, capable of withstanding loads indicated for project location.
   1. Main Frame-Member Deflection: Limited to 1/175 of clear span for spans up to 13 feet 6 inches and to 1/240 of clear span plus ¼ inch for spans greater than 13 feet 6 inches or an amount that restricts edge deflection of individual glazing lites to ¾ inch, whichever is less.
   2. Structural-Testing: Systems tested according to ASTM E 330 at 150 percent of inward and outward wind-load design pressures do not evidence material failures, structural distress, deflection failures, or permanent deformation of main framing members exceeding 0.2 percent of clear span.
D. Air Infiltration: Limited to 0.06 cfm/sq. ft. (0.3 L/s per sq. m) of system surface area when tested according to ASTM E 283 at a static-air-pressure difference of 6.24 ibf./sq. ft.
E. Water Penetration: Systems do not evidence water leakage when tested according to ASTM E 331 at minimum differential pressure of 20 percent of inward acting wind load design pressure but not less than 10 ibf./sq/ ft.
F. Condensation Resistance Factor (CRF): The unit(s) shall be tested in accordance with AAMA 1502 and shall have a condensation resistance factor of no less than 48.
G. Average U-Value: Not more than 0.69 btu./sq. ft. x h x degree F when tested according to AAMA 1503.
H. Sound Transmission: Provide aluminum-framed systems with fixed glazing and framing areas having minimum STC 32 according to ATM E 413 and an OTIC 26 according to ASTM E 1332, as determined by testing according to ASTM E 90.
I. Installer Qualifications: Installer must be a third party professional window installation company that is certified and recommended by the window manufacturer of the windows being installed.
   a) Installer must have no less than five (5) years of installation experience.
   b) Installer must have experience with the removal of steel casement windows.
J. Warranty Requirements: Submit written warranties from window manufacturer for the following:
   1. Windows: Warrant against malfunctions due to defects in thermal breaks, hardware, materials and workmanship for a period of (10) ten years.
   2. Glazing: Glass shall be warranted as follows:
      a) Insulating glass units to remain sealed for (10) ten years,
      b) Laminated glass units to remain laminated for (5) five years,
      c) Polycarbonate to remain clear and ultraviolet light stabilized for (5) five years,
      d) Insulating plastic to not have more than (6) six percent decrease in light transmission and be ultraviolet light stabilized for (10) years.
   3. Finish: Warrant against chipping, peeling, cracking, and blistering for (10) ten years.
   4. Spandrel Panels: Warrant against malfunctions due to defect in finish, materials and workmanship for a period of (5) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that are considered acceptable and may be incorporated into the Work included, but not limited to, the following:
   1. Peerless
   2. Quaker
   3. Wojan
   4. Thermal Windows, Inc.

2.2 ALUMINUM WINDOWS

A. Single hung: Series 4000-4 Model 4140/4158 or approved equal.
   1. Thermal brake
   2. Screen cloth insect screens
   3. Color: Dark Bronze
B. Fixed: Series 4000-4 model 4170, or approved equal.
   1. Thermal brake
   2. Screen cloth insect screens
   3. Color: Dark Bronze
C. Glazing:
   1. All glass I.G. units shall be constructed to an overall minimum thickness of 1" with two lites of 3/16" glass specified. Exterior lite AFG 3/16" TI-AC 40 on #2 surface 5/8" Air Space / Interior lite 3/16" clear.
   2. All insulated glass units shall be tested, certified and carry the respective CBA level certification on the glass spacer.

2.3 SPANDREL PANELS

A. Spandrel Panel shall be Mapes 1" insulated panel of 5-ply, 2ld density polystyrene core.
   1. Finish: Polyester baked enamel on embossed aluminum, both sides.
   2. Color: Dark Bronze.

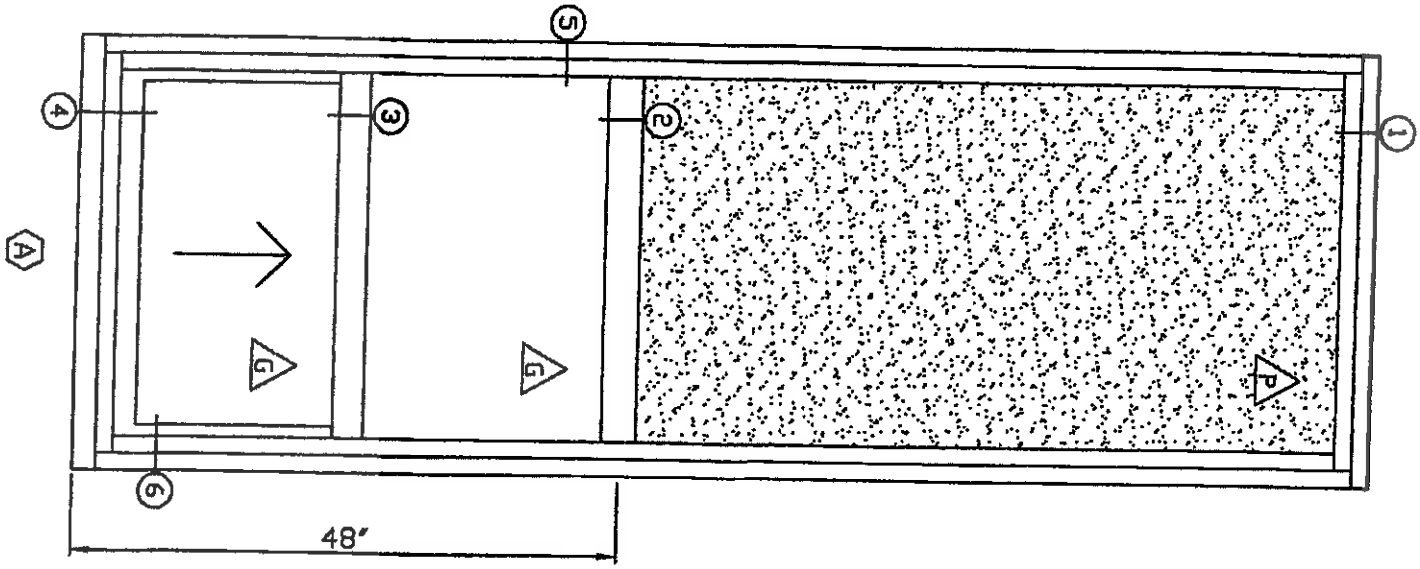
2.4 FINISH

A. Organic coating tested and certified by window manufacturer to comply with the AAMA 2605. Application must be by the window manufacturer.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Provide all hardware, operators, anchors, clips, limit devices, and other components necessary for a complete and weather tight installation per window manufacturer's specification and recommendations for installation.
B. Clean all surfaces with manufacturer approved cleaner. Remove any glazing or sealant compounds, dirt and other substances.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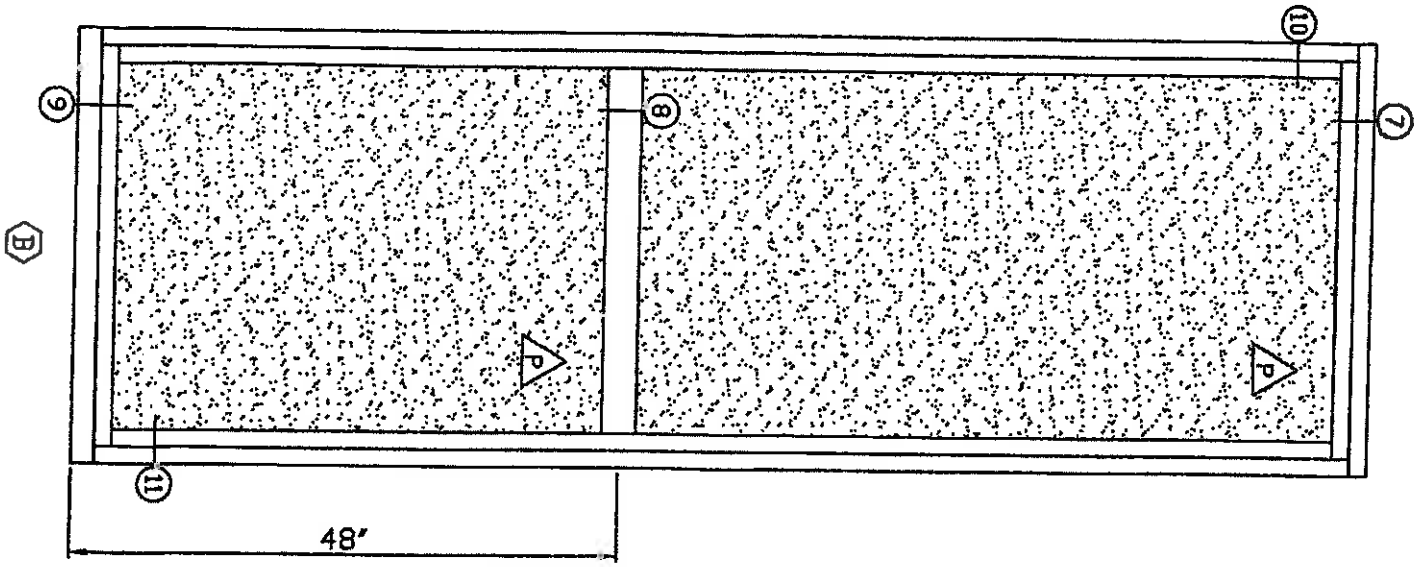
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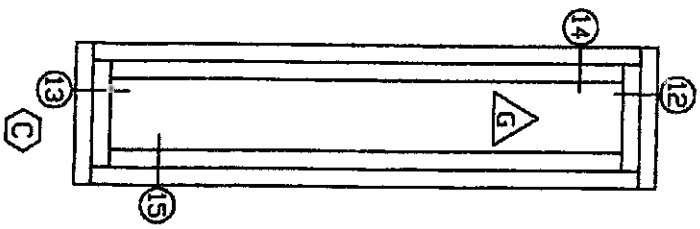
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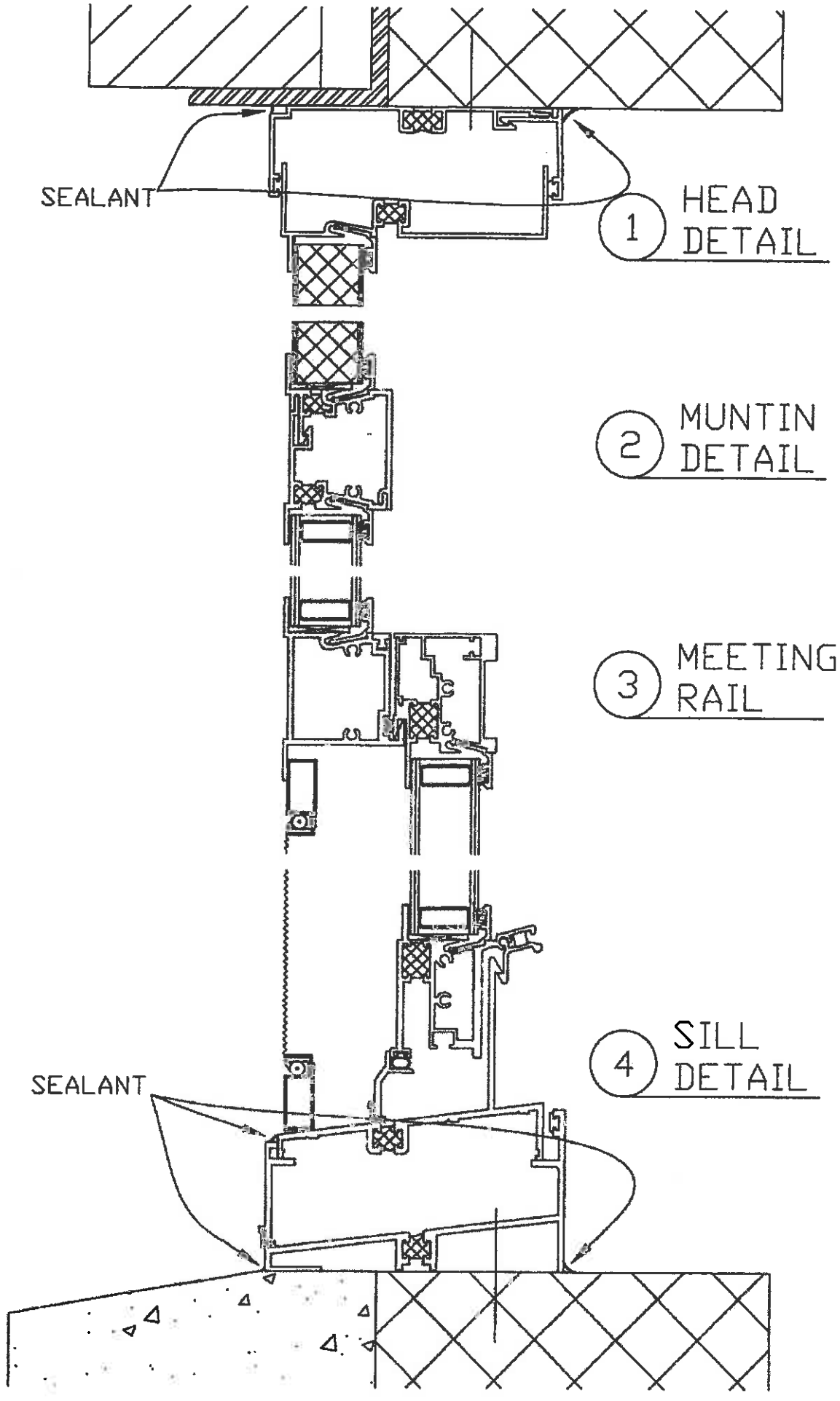
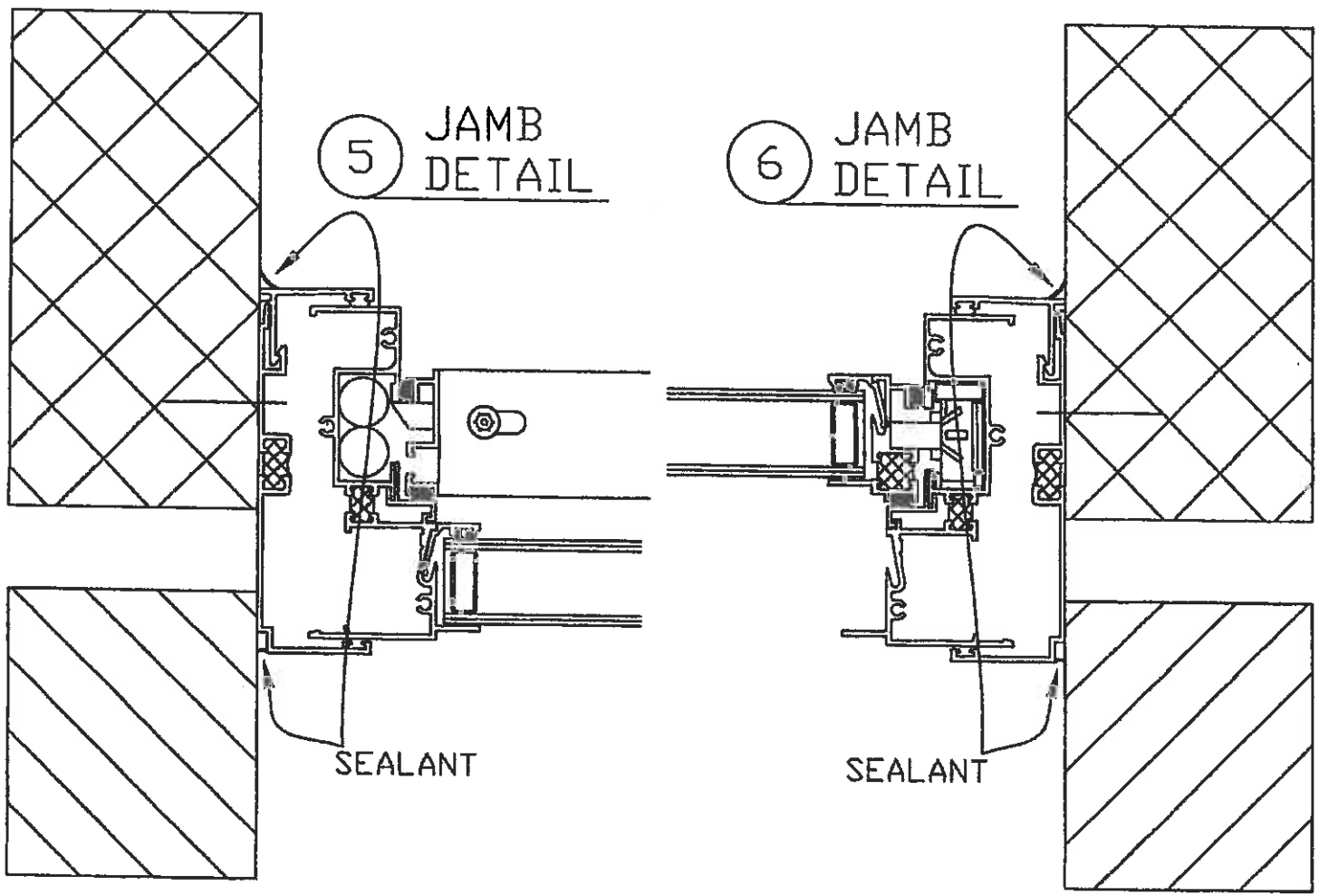

SEALANT
1 HEAD DETAIL
2 MUNTIN DETAIL
3 MEETING RAIL
4 SILL DETAIL
SEALANT


5 JAMB DETAIL
6 JAMB DETAIL
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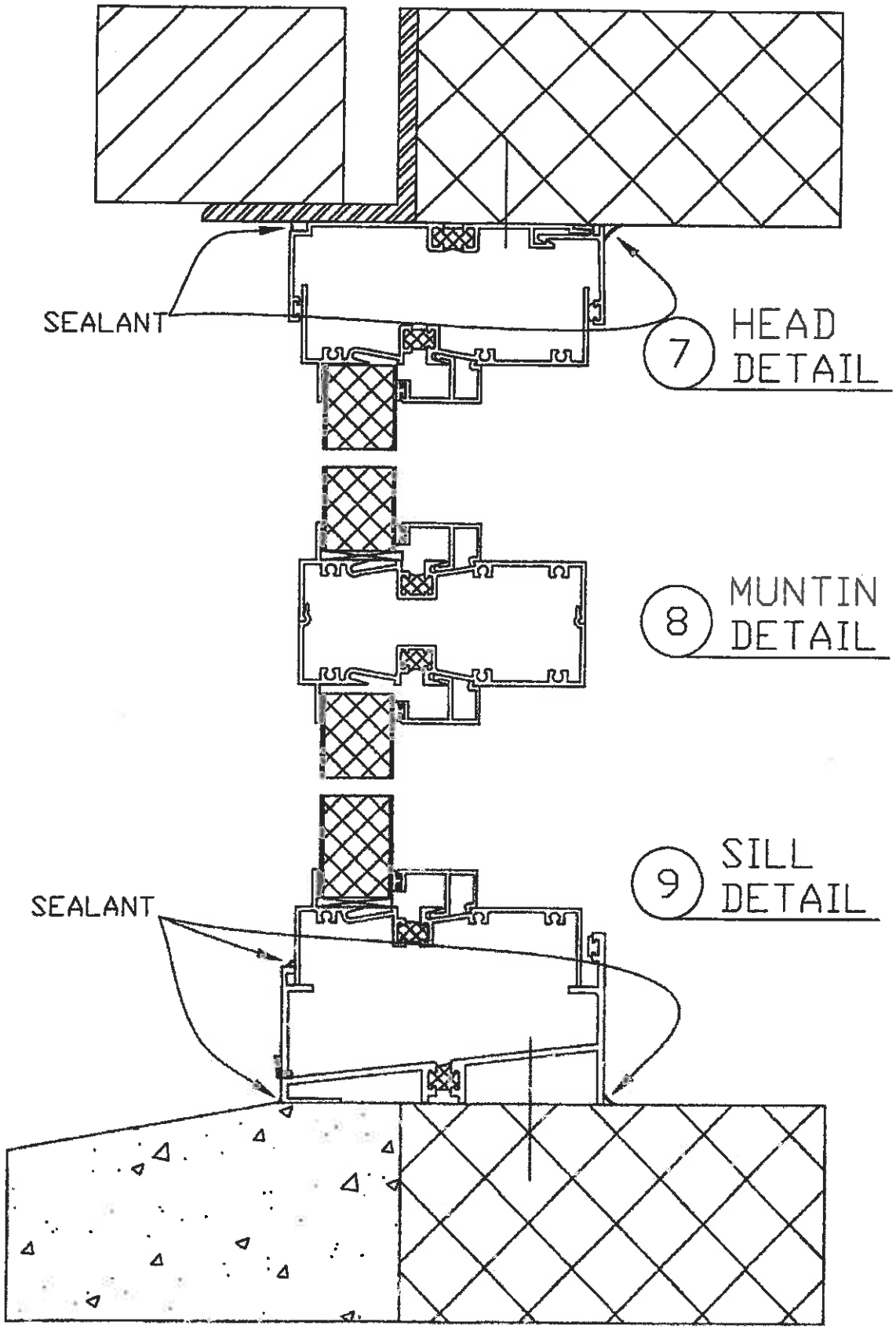
SEALANT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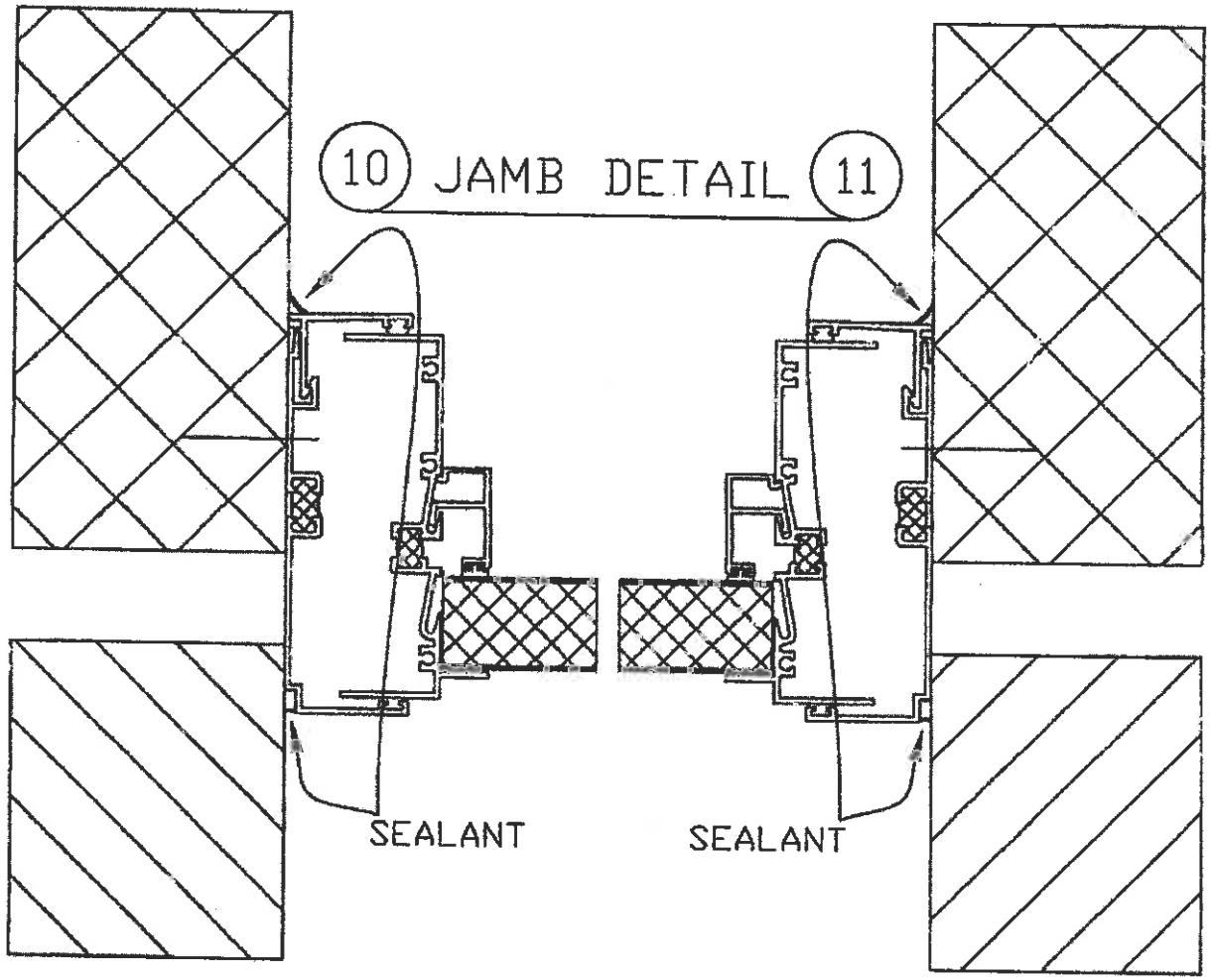
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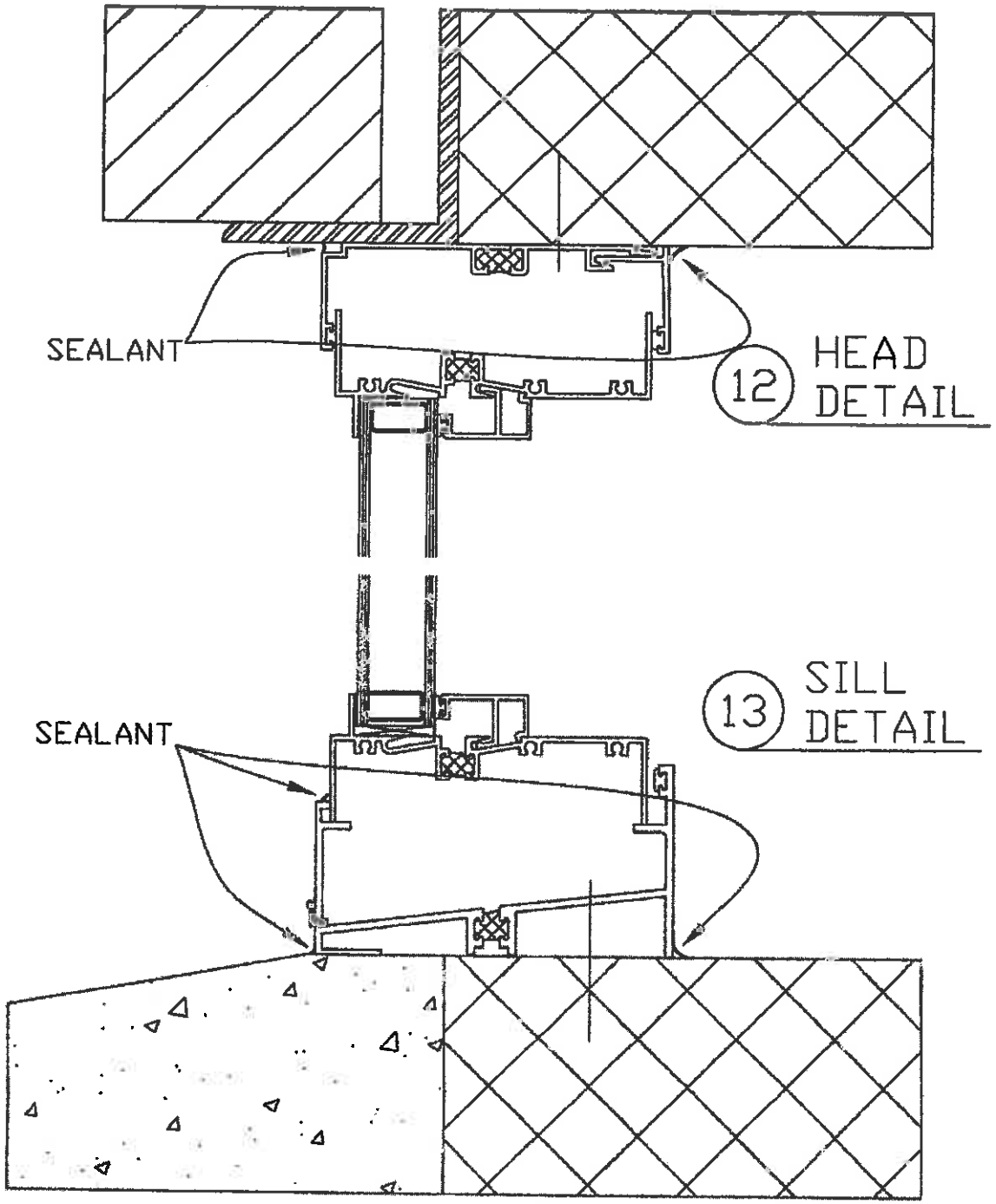
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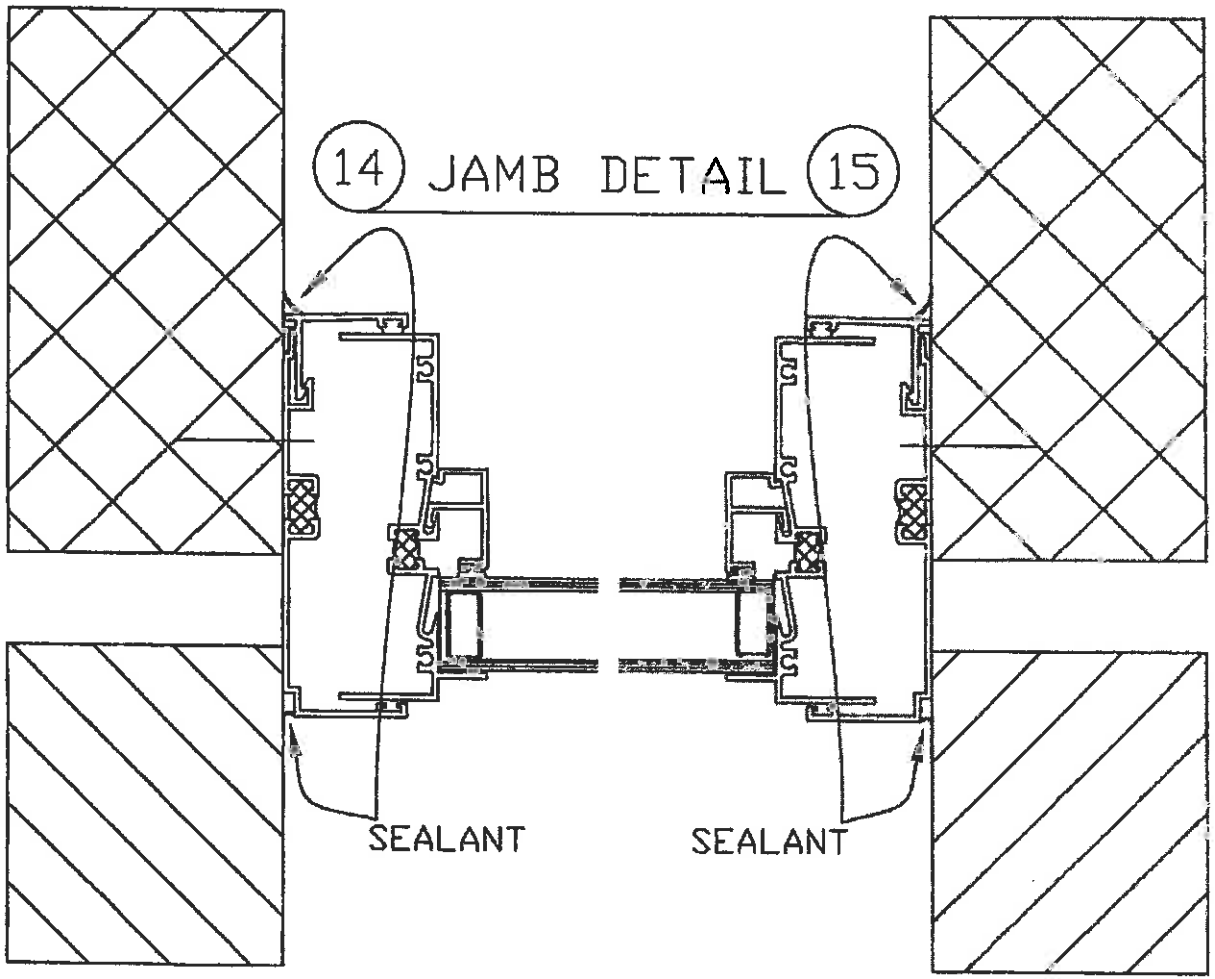
14 JAMB DETAIL 15
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ATTACHMENT 7

Lead-Based Paint Inspection and Settled Dust Sampling Report For Clinton Armory

FINAL ABATEMENT REPORTS

Clinton Armory Final Documentation

723 South 13th St. Clinton, OK 73601

ODEQ NESHAP NOTICE

ODOL PROJECT CHECKLIST

ODOL PREP & VISUAL/FINAL INSPECTION FORM

AIR ANALYSIS REPORTS

WASTE MANIFESTS, (FRIABLE and NON-FRIABLE)

Pictures (Before & After)

EPA NOTIFICATION OF DEMOLITION OR RENOVATION

OFFICE USE ONLY: DATE RECEIVED: APR 5 2013 ***JOB / PERMIT / ID NUMBER*** _____

****

I. FACILITY INFORMATION:

OWNER: City of Clinton PHONE NUMBER: (580) 323-0217

STREET ADDRESS: 415 Gary Boulevard CITY: Clinton STATE: OK ZIP: 73601

FACILITY REPRESENTATIVE: Steve Hewitt PHONE: (580) 323-0261

ASBESTOS ABATEMENT CONTRACTOR: Mirage International Inc.

STREET ADDRESS: 901 NW 80th St. CITY: Oklahoma City STATE: OK ZIP: 73114

REPRESENTATIVE: Chris Krisch PHONE: (405) 879-9788

PAGER: (____) ____N/A_____ MOBILE PHONE: (405) 496-6144

AIR MONITORING FIRM OR OTHER OPERATOR: Marshall Environmental Management Inc.

STREET ADDRESS: 1601 SW 89th, St. A-100 CITY: Oklahoma City STATE: OK_ ZIP: 73159

REPRESENTATIVE: Jamie Marshall PHONE: (405) 616-0401

II. TYPE OF NOTIFICATION: **(O** = ORIGINAL) OR **(R** = REVISED) **R**

III. TYPE OF OPERATION: (D = DEMOLITION) **(R** = RENOVATION) (**ER** = EMERGENCY RENOVATION): R

IV. IS ASBESTOS CONTAINING MATERIAL (ACM) PRESENT ? YES XX NO ____ DON'T KNOW: _____

V. FACILITY / BUILDING DESCRIPTION (BE SPECIFIC AND DETAILED AS TO NAME, # FLOORS, EXACT ACM LOCATION, ROOM NUMBERS, ETC.)

FACILITY: Former Clinton Armory ADDRESS: 723 South 13th St.

CITY: Clinton STATE: OK ZIP CODE: 73601 COUNTY: Custer

WHERE IS ACM LOCATED? Ceiling, Room 3

BUILDING SIZE:/SQ. FT.: Approx. 16,014 SF AGE: Approx. 74 YRS. # FLOORS: 1, w/basement (IFR)

PRESENT USE: Parking city vehicles. PREVIOUS USE: National Guard Armory

VI. PROCEDURES USED TO DETERMINE PRESENCE OF ACM INCLUDING ANALYTICAL METHODS :

Samples analyzed by polarized light microscopy using the McCrone method of dispersion staining analysis.

NAME OF EPA ACCREDITED INSPECTOR WHO PERFORMED INSPECTION AND SAMPLING INCLUDING AFFILIATION AND OKLAHOMA DOL LICENSE NUMBER:

Jaime Marshall, Marshall Environmental Management, Inc. ODOL License # OK-15090

EPA NOTIFICATION OF DEMOLITION OR RENOVATION CONTINUED

VII. AMOUNTS OF REGULATED ASBESTOS CONTAINING MATERIAL (RACM) TO BE REMOVED; ALSO AMOUNTS OF CATEGORY I OR II MATERIALS WHICH WILL / WILL NOT BE REMOVED (circle one):

PIPES - **LINEAR FEET:** SURFACING AREA - **SQUARE FEET: 160** ; OFF FACILITY COMPONENT -

CUBIC FEET: _____; **CATEGORY I** - SQ. FT. _____; **CATEGORY II** - SQ. / LIN. FT. _____;

VIII. SCHEDULED DATES OF ASBESTOS REMOVAL: START: 4-16-13_____ FINISH: 4-29-13

IX. SCHEDULED DATES OF DEMO / RENO: START: __N/A_____ FINISH: _N/A_____

X. DESCRIPTION OF THE PLANNED ASBESTOS REMOVAL TECHNIQUES TO BE EMPLOYED (e.g. gross removal , glove bagging, manual scrape, etc.)

Bagging of ACM utilizing adequate wetting.

XI. DESCRIPTION OF THE CONTROLS AND WORK PRACTICES TO BE USED TO PREVENT ASBESTOS FIBER EMISSIONS (e.g. full containment with negative pressure, adequate wetting):

Containment with removal utilizing adequate wetting methods.

XII. LICENSED ASBESTOS WASTE TRANSPORTER: Mirage International Inc.

ADDRESS:901 NW 80th St.____ CITY; Oklahoma City STATE:OK ZIP: 73114

REPRESENTATIVE: Chris Krisch_____ PHONE: (405) 879-9788

XIII. STATE PERMITTED ASBESTOS WASTE DISPOSAL SITE: Waste Management

ADDRESS: 3201 Mosley Rd._____ CITY: Oklahoma City STATE: OK ZIP: 73141____

REPRESENTATIVE: Kim Herring_____ PHONE: (713) 423-1775 or 405-427-1112_____

XIV. IS DEMOLITION ORDERED BY A GOVERNMENT AGENCY? YES: _____ NO: XX_

NAME OF AGENCY: _____N/A_____REPRESENTATIVE: __N/A__

DATE OF ORDER: _____N/A_____ DATE DEMOLITION IS TO START: _N/A_

XV. IS THIS RENOVATION REQUIRED DUE TO AN EMERGENCY? YES: _____ NO: ____XX

DATE OF EMERGENCY: ____N/A__ HOUR OF DAY EMERGENCY OCCURRED: ___N/A__

DESCRIPTION OF THE SUDDEN, UNEXPECTED EVENT CAUSING THE EMERGENCY: _____

_____N/A_____

EXPLANATION OF HOW THIS CAUSED 1) UNSAFE CONDITIONS; 2) SERIOUS DISRUPTION OF NORMAL BUILDING OPERATIONS; AND/OR 3) IMPOSES AN UNREASONABLE FINANCIAL BURDEN? (be specific and detailed):

_____N/A_____

EPA NOTIFICATION OF DEMOLITION OR RENOVATION CONTINUED

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS BECOMES FRIABLE (crumbled, pulverized, abraided, or reduced to powder, etc.):

In case unexpected asbestos is found, new notification will be submitted. If unexpected events occur, the area will be contained.

Verbal & written notification will be submitted to your department.

****

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR , PART 61, SUBPART M - NESHAP) WILL BE ON SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE OF HIS/HER TRAINING AND CERTIFICATION / LICENSING WILL BE AVAILABLE (OR BE POSTED) FOR INSPECTION DURING BUSINESS HOURS:

SIGNATURE OF OWNER / OPERATOR: _____ **DATE: 4-4-13**

PRINTED NAME: Christopher J. Krisch

****

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE:

SIGNATURE OF OWNER / OPERATOR: _____ **DATE: 4-4-13**

PRINTED NAME: Christopher J. Krisch

****

DEFINITION: OWNER OR OPERATOR: Any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation, or both.

****

ADDITIONAL COMMENTS:

Start Date Revised.

EPA NESHAP AUTHORITY: **OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY**
Air Quality Div., 707 N. Robinson, P.O. Box 1677
OKC, OK 73101-1677
or
Tulsa Regional Office, 3105 E. Skelly Drive, Suite 200, Tulsa, OK 74105

NOTE: Please submit your Notification to the DEQ office closest to your job site.

Oklahoma Department of Labor
Mark Costello, Commissioner
www.labor.ok.gov

Oklahoma City
3017 N Stiles, Suite 100
Oklahoma City, OK 73105
405-521-6464
888-269-5353
Fax 405-521-6025

Tulsa
440 S Houston, Suite 300
Tulsa, OK 74127
918-581-2400
Fax 918-581-2431

ASBESTOS PROJECT CHECKLIST

☐ Initial Notification ☒ Revised Notification ☐ Emergency Notification

	NAME	ADDRESS	CITY	PHONE
Job Site:	Clinton Armory	723 South 13th St.	Clinton, OK	N/A
Contractor:	Mirage International Inc.	901 NW 80th St.	Oklahoma City, OK	405-879-9788
Site Owner:	City of Clinton	415 Gary Boulevard	Clinton, OK	580-323-0217
Gen. Contractor:	N/A	N/A	N/A	N/A
Project Designer:	Marshall Environmental Mgmt., Inc.	1601 SW 89th, Suite A-100	Oklahoma City, OK	405-616-0401
Air Monitoring Firm:	Marshall Environmental Mgmt., Inc.	1601 SW 89th, Suite A-100	Oklahoma City, OK	405-616-0401
Air Monitoring Firm:				
Landfill:	Waste Management	3201 Mosley Rd.	Oklahoma City, OK	405-427-1112
Hauler:	Mirage International Inc.	901 NW 80th St.	Oklahoma City, OK	405-879-9788

MOBILIZATION DATE: 4-15-13 SCHEDULED DATE OF ASBESTOS REMOVAL: 4-16-13

PROJECT COMPLETION DATE: 4-29-13 RENOVATION: ☒ DEMOLITION: ☐ EMERGENCY: ☐

Type and percentage asbestos (attach lab reports): (Attached)

AMOUNT OF ASBESTOS TO BE ABATED: 160 S.F. bedding mud.

ABATEMENT TECHNIQUES: Removal and bagging of ACM utilizing adequate wetting methods.

SUBMITTALS NECESSARY BEFORE ABATEMENT MAY BEGIN. CHECK OFF ONLY THOSE ATTACHED TO THIS CHECKLIST OR WHICH ARE ON FILE AT THE OKLAHOMA STATE DEPARTMENT OF LABOR.

☒ NESHAPS Notification (Copy)
☐ Project specifications
☐ Bonds and/or Insurance Certificates
☒ Plans for Decontamination Facilities
☒ Respirator Program
☐ Employee Physicals
☐ Permission from owner for all rented vehicles/trailers used to haul asbestos-containing material.

Variances

____ # of Mini-containments
____ # of Glovebags
____ # of Containments
____ # of Phases

FEES
** $600.00 Per containment.*
** $200.00 Per project not part of a definite containment.*
** $200.00 Per project with multiple glovebags or mini-containments, plus $5.00 per such glovebag or mini-containment.*

Comments: Revised Start Dates

Christopher J. Kaiser
Contractor/Responsible Party Signature

4-12-13
Date

Revised: 01/10/2010

Oklahoma Department of Labor
Mark Costello, Commissioner
www.labor.ok.gov

Oklahoma City
3017 North Stiles, Suite 100
Oklahoma City, OK 73105
405-521-6464
888-269-5353
Fax 405-521-6025

Tulsa
440 South Houston, Suite 300
Tulsa, OK. 74127
918-581-2400
Fax 918-581-2431

Abatement Preparation Inspection Form

Abatement Project: Clinton Armory
Project No.:
Project Address/Location: 723 South 13th St.
Contractor: Mirage International
Project Phone No.:
Project Owner: City of Clinton

Date: 4 - 16 - 13 Time: 10 : 45
Phase: E - Ceiling removal
City: Clinton Zip:
Contact Person: Justin Creel
Contractor's Home/Office Phone No. (405) 606-1163
Owner's Rep. Steve Hewitt

A = Acceptable.
D = Denied; must be correct and re-inspected before asbestos removal is begun.
N/A = Not applicable to this project

X = Deficiencies which must be corrected before asbestos removal begins. If the only deficiencies are the "X" type, after correction, asbestos abatement may begin.
** Beginning asbestos removal before the deficiencies are correct shall constitute a Serious Violation. **

	A	D	N/A	X
(1) Work site barriers and warning signs	☒	☐	☐	☐
(2) Toilet facilities provided	☒	☐	☐	☐
(3) Worker licenses	☒	☐	☐	☐
(4) Emergency telephone #'s	☒	☐	☐	☐
(5) OSHA forms, poster (min. wage, workers comp, equal opportunity)	☒	☐	☐	☐
(6) Air mon., results from prior phases, if applicable	☐	☐	☒	☐
(7) Respirator program and project design on-site	☒	☐	☐	☐
(8) Respirator, air system and equipment manuals	☐	☐	☒	☐
(9) Compressor does not discharge oil	☐	☐	☒	☐
(10) CO monitor, high temp and low pressure alarm tested on-site	☐	☐	☒	☐
(11) Cascade system secure and certificate of air quality	☐	☐	☒	☐
(12) Automatic back-up air of proper quantity in full containers	☐	☐	☒	☐
(13) Bull hoses and respirators free of oil residue	☐	☐	☒	☐
(14) In-line pressure gauge at manifold	☐	☐	☒	☐
(15) NIOSH approved respirators, clean, parts in working order	☒	☐	☐	☐
(16) Electrical panel outside work area	☒	☐	☐	☐
(17) Temporary wiring installed by licensed electrician LIC #: 141336	☒	☐	☒	☐
(18) Temporary panel boards properly grounded	☒	☐	☒	☐
(19) Ground fault interruption provided from outside work area	☒	☐	☐	☐
(20) Live electrical requirement met	☐	☐	☒	☐
(21) Extension cords in acceptable condition	☒	☐	☐	☐
(22) Equipment properly grounded	☒	☐	☐	☐
(23) Tension relief on electric cords	☒	☐	☐	☐
(24) De-con firmly constructed, opaque, with triple flaps	☒	☐	☐	☐
(25) De-con trailers properly grounded	☐	☐	☒	☐
(26) Storage lockers for workers and ODOL inspectors' street clothes	☒	☐	☐	☐
(27) Shower with hot water supply, stable nonskid surface, lights	☒	☐	☐	☐
(28) Shower drains, filter, proper water disposal	☒	☐	☐	☐
(29) Soap from dispenser, and towels provided	☒	☐	☐	☐
(30) Hearing protection provided if required	☒	☐	☐	☐
(31) Hard hats provided, if required	☒	☐	☐	☐
(32) Appropriate footwear/safety shoes provided, if required	☒	☐	☐	☐
(33) Electrical system in abatement area locked out / tagged out	☒	☐	☐	☐
(34) Ventilation serving or passing through the abatement area deactivated	☒	☐	☐	☐
(35) Critical barriers in place	☒	☐	☐	☐
(36) Neg. air quantity and pressure drop, confirmed on-site with recording manometer	☒	☐	☐	☐
(37) Neg. air machine(s) have properly installed filters, clean pre-filters	☒	☐	☐	☐
(38) Prep. work secure with negative air on	☒	☐	☐	☐
(39) Make-up air sources provide adequate circulation and air cleaning	☒	☐	☐	☐
(40) Access controlled	☒	☐	☐	☐
(41) Scaffolding over 10' high has 42" siderails and 4" toeboards	☐	☐	☒	☐
(42) Scaffolding from 4' to10' high, but less than 42" wide, has side rails	☐	☐	☒	☐
(43) Scaffolding with people working under has mesh or solid barrier on platform	☐	☐	☒	☐
(44) Scaffolding floorboards in good condition and secured	☐	☐	☒	☐
(45) Aerial lifts have full-body harness with shock lanyards	☐	☐	☒	☐
(46) Ladders are non-conducting and stable	☒	☐	☐	☐
(47) Heat stress monitors in place	☐	☐	☒	☐
(48) HEPA vacuum is clean with filters properly installed	☒	☐	☐	☐
(49) Temporary lighting is adequate and and properly wired and grounded	☒	☐	☐	☐
(50) 10 # ABC fire extinguishers inspected	☒	☐	☐	☐
(51) Adequate escape routes are properly marked and illuminated with emergency lighting and battery back-up	☒	☐	☐	☐
(52) Acceptable amended water sprayers and chemicals provided	☒	☐	☐	☐
(53) Load-out sealed unless needed for make-up air	☒	☐	☐	☐
(54) Disposal bags and/or barrels provided and properly labeled	☒	☐	☐	☐
(55) Disposal vehicle properly lined	☒	☐	☐	☐
(56) Disposal vehicle properly tagged and marked	☒	☐	☐	☐
(57) Area monitoring locations identified	☒	☐	☐	☐

☐ # OF GLOVEBAGS ☒ 1 # OF FULL CONTAINMENTS ☐ # OF MINI CONTAINMENTS

Recommendation & Remarks:

Prep Accepted

Orders:

Inspector's Signature

Contractor's or Representative's Signature

Oklahoma Department of Labor
Mark Costello, Commissioner
www.ok.gov/odol

Oklahoma City
3017 N Stiles, Suite 100
Oklahoma City, OK. 73105
405-521-6100 / 888-269-5353
Fax 405-521-6025

Tulsa
440 South Houston, Suite 300
Tulsa, OK. 74127
918-581-2400
Fax 918-581-2431

Oklahoma Accreditation Plan (OAP) Inspection Form

Name of Facility: Clinton Armory
Facility Address: 723 South 13
City: Clinton Zip:
DOL Project Numb, if applicable:
Owner name: City of Clinton
Owner address: 415 Gary Boulevard
Owner phone: (580) 323-0261
Contact person: Steve Hewitt

Date: 4-16-13 Time: 1025
Reason for Inspection: [X] Routine [ ] Citizen Complaint [ ] Response Action [ ] Other
Contractor: Mirage International
Contractor address: 590 NW 30th
City: Oklahoma City, OK Zip:
Contractor office phone: (405) 496-6144
Contact person: Justin Creek

Abatement Project Description (size of project, type of material, methods used, etc.)

OPENING CONFERENCE

Personnel present and Interviewed:

Name	Title
Justin Creek	Supervisor

ODOL inspector accompanied by other State or Federal employee(s)
Yes [ ] No [X]

Name	Title

Credentials presented to:

Name	Title
Justin Creek	Supervisor

Notice of inspection signed and a copy provided to official?
Yes [X] No [ ]

INSPECTION

Was the building initially inspected for asbestos?
Yes [X] No [ ]
Name of inspector: Jamie Marshall
License #: 15090 Exp. Date:
Date of Inspection: 4/2012

AIR MONITORING DATA

Name of Laboratory: Marshall Environmental
Address: 1601 SW 89th, Ste A-100
City: Oklahoma City Zip: 73159
License #: 15090 Exp. Date:
On-Site air tech contract: Jamie Marshall Phone:
Type of analysis: TEM [ ] PCM [X]

ACCREDITATION OF CONTRACTORS & WORKERS

Contractors/Supervisors:

Name	Issue date	License #	Exp. Date
Justin Creek	9/17/12	369299	9/15/13

ACCREDITATION OF CONTRACTORS & WORKERS, cont.

Workers:

Name	Issue date	License #	Exp. Date
Samuel Leeser	11/19/12	400911	5/13/13
Dallas Buchanan	12/03/12	400213	11/30/13
Christian Hill	10/31/12	400708	10/12/13
Michael Walton	10/25/12	410341	10/10/13

Definition of Public and Commercial Building:

The interior space of any building, excluding residential apartment buildings of fewer than four (4) units or detached single-family homes. The term includes, but is not limited to industrial and office buildings, residential apartment buildings and condominiums of four (4) or more dwelling units, government-owned buildings, colleges, school buildings, museums, airports, hospitals, churches, preschools, stores, warehouse, and factories. Interior space includes interior hallways connecting buildings, porticos, and mechanical systems used to condition interior space.

Recommendations & Remarks

Orders

Inspector: [signature] Contractor or Representative: [signature]

Notice of Inspection

Oklahoma Department of Labor
Mark Costello, Commissioner
www.labor.ok.gov

Oklahoma City
3017 North Stiles, Suite 100
Oklahoma City, OK 73105
405-521-6464
888-269-5353
Fax 405-521-6025

Tulsa
440 South Houston, Suite 300
Tulsa, OK 74127
918-581-2400
Fax 918-581-2431

1. INVESTIGATION IDENTIFICATION			2. TIME	3. COMPANY NAME
DATE	INSPECTOR NO.	DAILY SEQ NO.		
4-16-13	19	001	1020	Mirage International

3. INSPECTOR ADDRESS	4. COMPANY ADDRESS
3017 N Stiles OKC, OK 73105	901 NW 80th St. Oklahoma City, OK

REASON FOR INSPECTION

Under the authority of Section 11 of the Toxic Substances Control Act:

☒ For the purpose of inspecting (including taking samples, photographs, statements and other inspection activities) an establishment, facility or other premises in which chemical substances or mixtures or articles containing same are manufactured, processed or stored, or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyance being used to transport chemical substances, mixtures or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls and facilities) bearing on whether the requirements of the Act applicable to the chemical substances, mixtures or articles within or associated with such premises or conveyance have been complied with.

☒ In addition, this inspection extends to (*check appropriate boxes*):

- ☐ A. Financial data
- ☐ B. Sales data
- ☐ C. Pricing data
- ☒ D. Personnel data (40 CFR Part 763 Subpart E)
- ☐ E. Research data

The nature and extent of inspection of such data specified in A through E above is as follows:

To verify licensure of asbestos workers, supervisors and air technician for the Clinton Armory asbestos abatement project

CERTIFICATION

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

INSPECTOR SIGNATURE		RECIPIENT SIGNATURE	
Clark Boswell		[signature]	
NAME		NAME	
Clark Boswell		Justin Creek	
TITLE	DATE SIGNED	TITLE	DATE SIGNED
Inspector	4-16-13	Supv	04-16-13

Oklahoma Department of Labor

Mark Costello, Commissioner

Asbestos Division

3017 North Stiles, Suite 100
Oklahoma City, OK 73105
(405-521-6464) FAX (405-521-6025)

440 South Houston, Suite 300
Tulsa, OK 74127
(918-581-2400) FAX (918-581-2431)

Visual/Final Inspection Form

DOL Project #:		4	17	13	1000
Facility:	Clinton Armory	**Month**	**Day**	**Year**	**Time**
Contractor #:		**County #:**		**FY #:**	2013
Address/Location:	223 East 13th St	**Address City:**	Clinton		
Owner/Occupant:	City of Clinton	**Contractor:**	Mirage International		
Contact Name:	Steve Hewitt	**Contractor's Rep.:**	Justin Creek		
Facility Phone #:		**Contractor's Phone #:**	605-1163		

1. **Description of Area:** Vacant former armory requiring the removal of approximately 110 SF of tape and duct work from room 103.

2. **Areas requiring further cleaning:** None

3. **Air Counts (PCM/TEM) On-Site?:** Yes. On and off times were incorrect on clearance. Marshall Environmental will send the corrected sheet to DOL. Air counts for clearances are acceptable.

4. **DOL Recommendations:** Remove all poly and tape and dispose of as ACM.

5. **Will a FINAL inspection be required?:** This is the final for this job.

6. **Notes:** Visual Accepted Final Accepted.
Job Complete.

7. **Note any violations cited:** 380:50-

8. **Contractor's Comments:**

Inspector's Signature

Contractor's Signature

1601 SW 89th St., Ste. 100-AOklahoma City, OK 73159Phone: 405.616.0401Fax: 405.681.6753marshenv@swbell.net

Marshall Environmental Management, IncorporatedCertificate of Analysis

Project		Report To		Invoice To	
Project Id. #	0222-AB-110112	**Client**	Mirage International	**Client**	Mirage International
Project Name	Clinton Armory	**Attention**	Chtris Krisch	**Attention**	Chtris Krisch
Project Address	723 South 13th Street Clinton Ok	**Address**	Po Box 21508 Oklahoma City, OK	**Address**	Po Box 21508 Oklahoma City, OK
Site Contact	Justin Creek	**Phone #**	405-496-6144	**Phone #**	405-496-6144
Phone #	606-1163	**Fax #**		**Fax #**	
Cell #		**Cell #**		**Cell #**	
email		**email**		**email**	

Laboratory Identification	Date Sampled	Field Identification	Sampling Location	Pump Number	Start Time	End Time	Total Time	Start Flow Rate	End Flow Rate	Average Flow Rate	Total Volume	Fiber Count	Fields	F/mm^2	F/cc	L.C.L.	U.C.L.	Detection Limit
0057	04/16/13	PLM-1	Inside Area	5	11:00	13:25	145.00	2.0	2.0	2.0	290.0	13.5	100	17.1975	0.0228	0.0044	0.0412	0.0169
0057	04/16/13	PLM-2	Outside Area	23	11:01	13:26	145.00	2.0	2.0	2.0	290.0	2	100	2.5478	B.D.L.	0.0007	0.0061	0.0169
0057	04/16/13	PLM-3	Negative Air	69	11:02	13:27	145.00	2.0	2.0	2.0	290.0	0.5	100	0.6369	B.D.L.	0.0002	0.0015	0.0169
0057	04/16/13	PLM-4	Load out	47	11:03	13:28	145.00	2.0	2.0	2.0	290.0	2	100	2.5478	B.D.L.	0.0007	0.0061	0.0169
0057	04/16/13	PLM-5	Load out Truck	56	11:04	13:29	145.00	2.0	2.0	2.0	290.0	6	100	7.6433	B.D.L.	0.0020	0.0183	0.0169
0057	04/16/13	PLM-6	Outside Clean Room	3	11:05	13:30	145.00	2.0	2.0	2.0	290.0	3	100	3.8217	B.D.L.	0.0010	0.0092	0.0169
0057	04/16/13	PLM-7	P1 - C. Hill 400908	21	10:59	13:24	145.00	2.0	2.0	2.0	290.0	14	100	17.8344	0.0237	0.0046	0.0428	0.0169
0057	04/16/13	PLM-8	P2 - M. Walton 279843	96	10:59	13:24	145.00	2.0	2.0	2.0	290.0	8	100	10.1911	B.D.L.	0.0026	0.0244	0.0169
0057	04/16/13	PLM-9	Blank									0	100					

Jamie Marshall		April 16, 2013
Analyst Name (Print)	Analyst Signature	Date Analyzed

Jamie Marshall
Samples Collected By (Print)

Analytical Method:	NIOSH 7400
Lab Accreditation:	AIHA PAT ID# 102334
Microscope:	Olympus BH-2
Filter Area:	385
Field Area:	0.01

B.D.L.	Below Detection Limit
L.C.L.	Lower Confidence Limit
U.C.L.	Upper Confidence Limit
F/cc	Fibers per Cubic Centimeter
F/mm^2	Fibers per Millimeter Squared

Present Activity:
Ceiling Texture

Personal Protective Equipment
Tyvek
Full Face

1601 SW 89th St., Ste. 100-AOklahoma City, OK 73159Phone: 405.616.0401Fax: 405.681.6753marshenv@swbell.net

Marshall Environmental Management, IncorporatedCertificate of Analysis

Project		Report To		Invoice To	
Project Id. #	0222-AB-110112	**Client**	Mirage International	**Client**	Mirage International
Project Name	Clinton Armory	**Attention**	Chtris Krisch	**Attention**	Chtris Krisch
Project Address	723 South 13th Street Clinton Ok	**Address**	Po Box 21508 Oklahoma City, OK	**Address**	Po Box 21508 Oklahoma City, OK
Site Contact	Justin Creek	**Phone #**	405-496-6144	**Phone #**	405-496-6144
Phone #	606-1163	**Fax #**		**Fax #**	
Cell #		**Cell #**		**Cell #**	
email		**email**		**email**	

Laboratory Identification	Date Sampled	Field Identification	Sampling Location	Pump Number	Start Time	End Time	Total Time	Start Flow Rate	End Flow Rate	Average Flow Rate	Total Volume	Fiber Count	Fields	F/mm^2	F/cc	L.C.L.	U.C.L.	Detection Limit
0057	04/16/13	PLM-10	Clearance NE	6	13:49	15:53	124.00	10.0	10.0	10.0	1240.0	2	100	2.5478	B.D.L.	0.0002	0.0014	0.0040
0057	04/16/13	PLM-11	Clearance N	2	13:49	15:53	124.00	10.0	10.0	10.0	1240.0	4	100	5.0955	B.D.L.	0.0003	0.0029	0.0040
0057	04/16/13	PLM-12	Clearance S	1	13:49	15:53	124.00	10.0	10.0	10.0	1240.0	1.5	100	1.9108	B.D.L.	0.0001	0.0011	0.0040
0057	04/16/13	PLM-13	Clearance SE	13	13:49	15:53	124.00	10.0	10.0	10.0	1240.0	6	100	7.6433	B.D.L.	0.0005	0.0043	0.0040
0057	04/16/13	PLM-14	Clearance E	4	13:49	15:53	124.00	10.0	10.0	10.0	1240.0	7	100	8.9172	B.D.L.	0.0005	0.0050	0.0040
0057	04/16/13	PLM-15	Blank									0	100					

Jamie Marshall		April 16, 2013
Analyst Name (Print)	Analyst Signature	Date Analyzed

Jamie Marshall
Samples Collected By (Print)

Analytical Method:	NIOSH 7400
Lab Accreditation:	AIHA PAT ID# 102334
Microscope:	Olympus BH-2
Filter Area:	385
Field Area:	0.01

B.D.L. –	Below Detection Limit
L.C.L.	Lower Confidence Limit
U.C.L.	Upper Confidence Limit
F/cc	Fibers per Cubic Centimeter
F/mm^2	Fibers per Millimeter Squared

Present Activity:
Ceiling Texture

Personal Protective Equipment
Tyvek
Full Face

NON HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NOT REQUIRED	1		4[illegible]13A

5. Generator's Name and Mailing Address	Generator's Site Address (If different than mailing address)
City of Clinton Army National Guard Armory 415 Gary Boulevard Clinton, OK 73601 (580) 323-0761	City of Clinton Army National Guard Armory 723 South 13th St. Clinton, OK 73601 (580) 323-0761

6. Transporter 1 Company Name	U.S. EPA ID Number

7. Transporter 2 Company Name	U.S. EPA ID Number

8. Designated Facility Name and Site Address	U.S. EPA ID Number
East Oak Landfill 3201 Mosley Rd Oklahoma City, OK 73141 Facility's Phone (800) 963-4776	N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13 Waste Codes
	Friable Asbestos 104300OK		BA	2 y3		0

14. Special Handling Instructions and Additional Information

Neshap Adminstrator Air Quality Control 405-702-1000 Oklahoma Dept of Environmental Quality 707 N Robinson, Oklahoma City, OK 73101

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicalbe international and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Date	Year
Justin Creek	Justin Creek	04	22	2013

Transporter Acknowledgement of Receipt Materials

16. Transporter 1 Printed / Typed Name	Signature	Month	Date	Year
Justin Creek	Justin Creek	04	22	2013
17. Transporter 2 Printed / Typed Name	Signature	Month	Date	Year

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partical Rejection ☐ Full Rejection

19. Management Method Codes

1	2	3	4

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed / Typed Name	Signature	Month	Date	Year
Kurta Chosa	Kurta Chosa	4	22	13

NON HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NOT REQUIRED	1		4B213B

5. Generator's Name and Mailing Address	Generator's Site Address (if different than mailing address)
City of Clinton (Former National Guard Armory) 415 Gary Boulevard Clinton OK 73601 (580) 323-0261	City of Clinton (Former National Guard Armory) 723 South 13th St. Clinton, OK 73601 (580) 323-0261

6. Transporter 1 Company Name: Mirage International Inc — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: **East Oak Landfill**, **3201 Mosley Rd Oklahoma City, OK 73141** — U.S. EPA ID Number: N/A

Facility's Phone: (800) 963-4776

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quanity	12. Unit Wt./Vol.	13 Waste Codes
	Non Friable Asbestos 104301OK		BA	1 y3		0

14. Special Handling Instructions and Additional Information

Neshap Adminstrator Air Quality Control 405-702-1000 Oklahoma Dept of Environmental Quality 707 N Robinson, Oklahoma City, OK 73101

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicalbe international and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Date	Year
Justin Creek	Justin Creek	04	22	2013

Transporter Acknowledgement of Receipf Materials

16. Transporter 1 Printed / Typed Name	Signature	Month	Date	Year
Justin Creek	Justin Creek	04	22	2013
17. Transporter 2 Printed / Typed Name	Signature	Month	Date	Year

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partical Rejection ☐ Full Rejection

19. Management Method Codes

1	2	3	4

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed / Typed Name	Signature	Month	Date	Year
Kristie Cross	Kristie Cross	4	22	13

CLINTON ARMORY PICTURES

723 S. 13TH Street

Clinton, Oklahoma

MIRAGE INTERNATIONAL, INC

901 NW 80TH STREET

Oklahoma City, Oklahoma 73114

Before (Room 1)

After (Room 1)

Before (Room 2)

After (Room 2 & 3)

Before/Ceiling (Room 3)

After/Ceiling (Room 3)

FINAL REPORT

FOR

CLINTON ARMORY

723 SOUTH 13TH STREET

CLINTON, OKLAHOMA 73601

BY

ABATEMENT SYSTEMS, INC.
P.O. BOX 773
BROKEN ARROW, OK. 74013
(918) 251-2504 / (800) 256-2096
Abatement2@aol.com

CLINTON ARMORY

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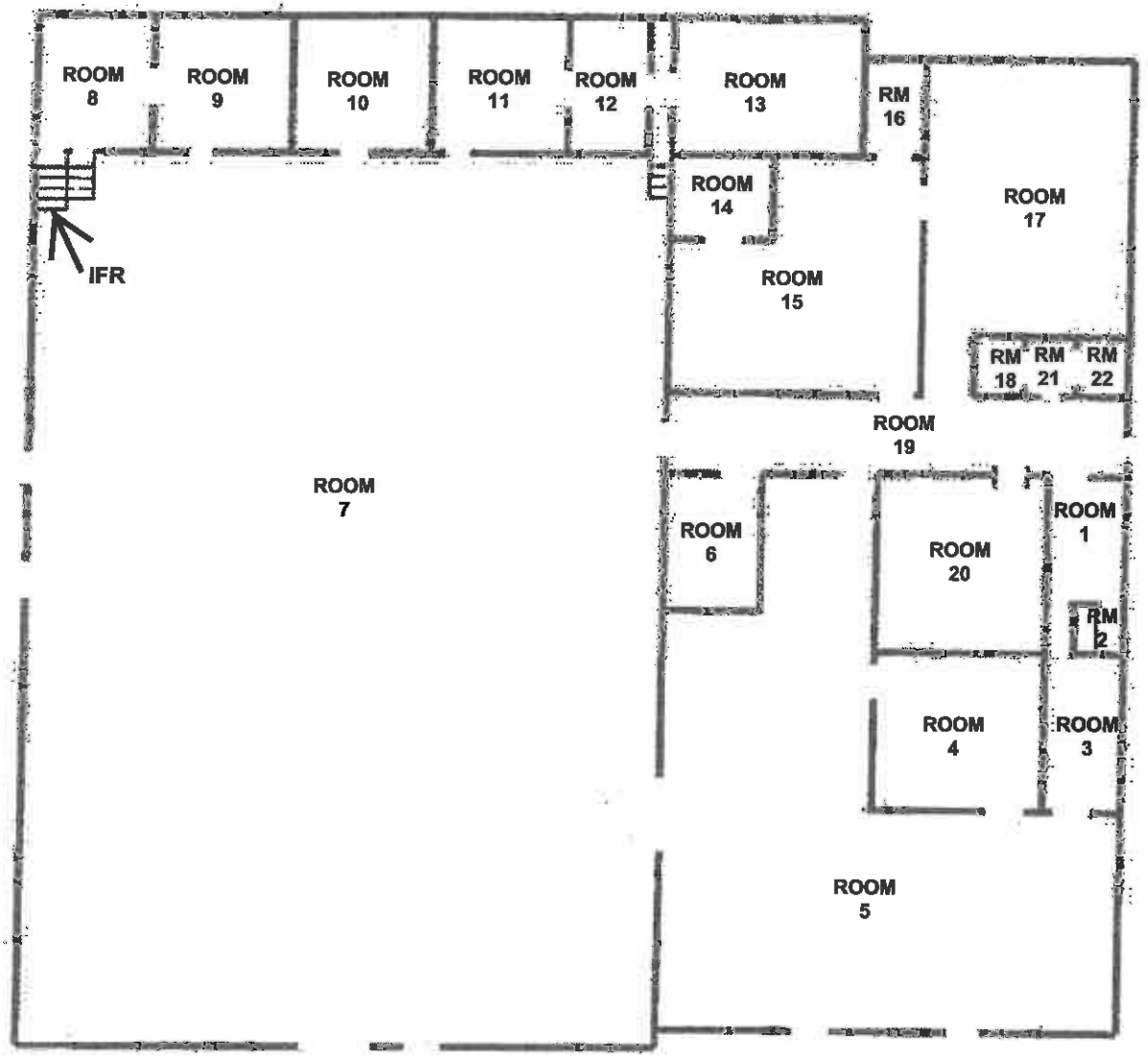
CLINTON ARMORY

FLOOR PLAN



CLINTON ARMORY

SUMMARY OF WORK

After preparing the work area(s) the Non-Friction and Non-Impact Surfaces were wet scraped, painted with an approved neutral colored primer and encapsulated with an approved elastometric encapsulant as specified per contract. All paint was removed from the drill floor hand rails and they were painted with an approved neutral colored primer. The interior window bars were removed and, along with deteriorated paint, properly disposed.

As the areas became available the Friction and Impact Surfaces were abated as follows:

> Lead based paint on the floors of rooms 16 and 13 (including a small metal pipe on the floor of room 13) along with the sides and steps of both staircases in room 7 was visibly removed. Then the floors were HEPA vacuumed, wet washed, and the floors and pipe were sealed with an approved sealant.

Windows were removed and replaced per contract. All interior and exterior window sills were HEPA vacuumed and wet washed after the windows were removed and replaced. Once the window sills were cleaned they were encapsulated with an approved lead-based paint encapsulant.

Doors and door frames were removed/replaced per contract.

All lead-based paint removed from surfaces were deemed hazardous waste and were properly disposed along with the materials, HEPA filters, and other disposable items used.

After the Indoor Firing Range (IFR) was prepped and items removed, the walls, floor, ceiling, vent fan, and other structures were HEPA vacuumed and wet washed. Construction grout was applied in the IFR impact area and an approved two part epoxy mixture. Once the IFR was remediated to 200 ug/sf the floor, ceiling, and walls were sealed with approved sealant.

In the remaining building, surfaces above the floor(s) were cleaned to avoid recontamination of the floors. The floors were then HEPA vacuumed and wet washed.

Both DEQ and Marshall Environmental were notified for their clearance inspections.

CLINTON ARMORY

SAMPLE RESULTS

Sample results to be furnished by others.

CLINTON ARMORY

WASTE MANIFESTS

Hazardous waste stored securely awaiting disposal. Waste manifest(s) will be furnished when disposal accomplished.

CLINTON ARMORY
PHOTO DOCUMENTATION

DOOR FRAME, MAIN BUILDING, STRIPPED TO METAL

DOOR FRAME, MAIN BUILDING, STRIPPED TO METAL

DOOR FRAME, MAIN BUILDING, STRIPPED TO METAL

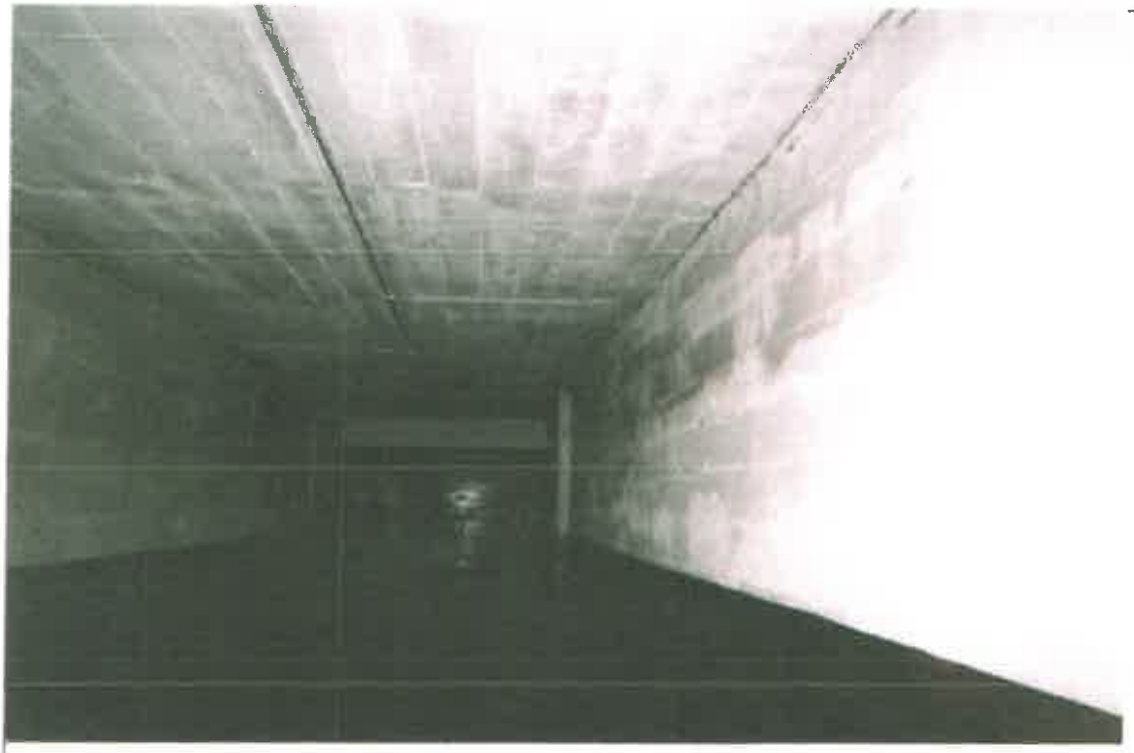
RESTROOM FLOOR LBP BEFORE ABATEMENT

CLINTON ARMORY
PHOTO DOCUMENTATION

CLINTON ARMORY
PHOTO DOCUMENTATION

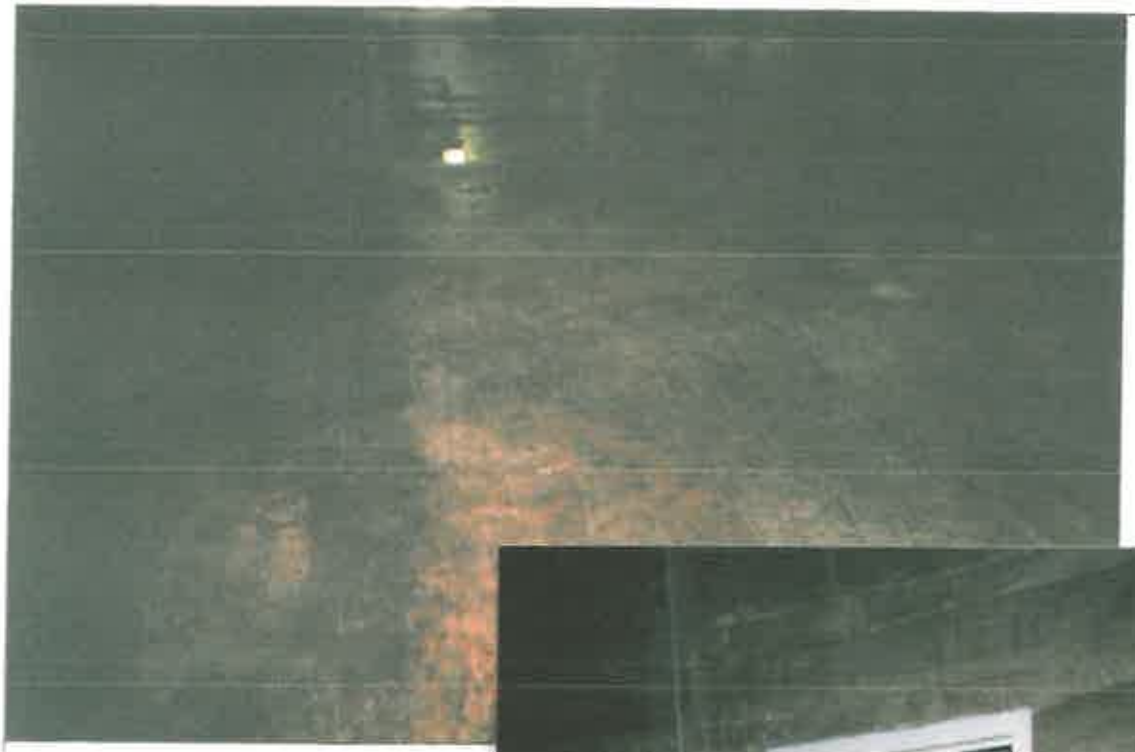
IFR IMPACT END -
BULLET FRAGMENTS

IFR CLEANING



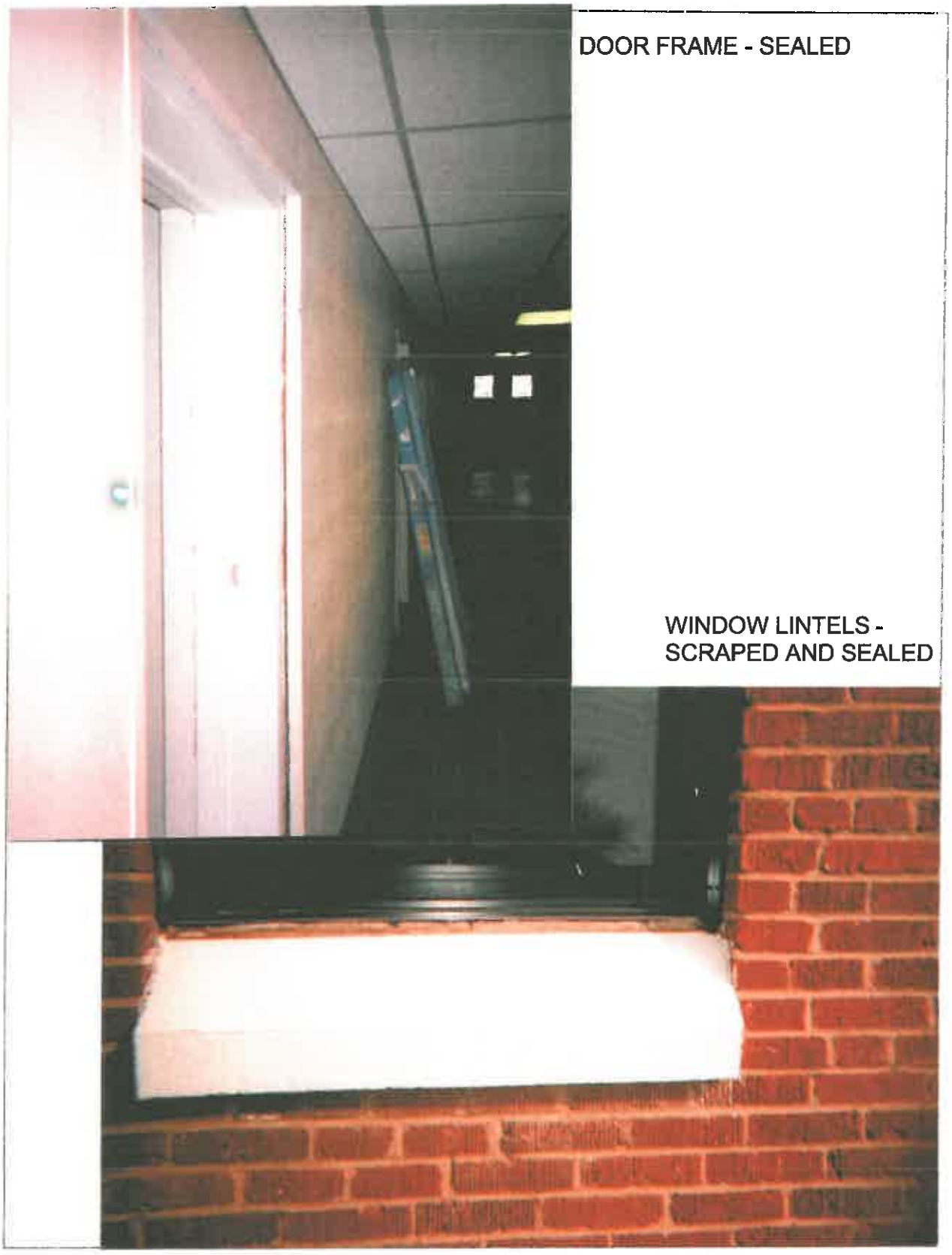
IFR CLEANING

ORDNANCE ROOM CLEANING



DRILL FLOOR CLEANING

DOOR FRAME - SEALED


DOOR FRAME - SEALED
WINDOW LINTELS -
SCRAPED AND SEALED

CLINTON ARMORY
PHOTO DOCUMENTATION

WINDOW LENTELS -
SCRAPED AND SEALED

HAND RAILS AND STEPS -
SCRAPED AND SEALED

CONFIRMATION SAMPLING

CLINTON ARMORY

723 S 13TH STREET
CLINTON, OK 73601

MAY 16, 2014 — *LEAD-CONFIRMATION SAMPLING*

CERTIFIED INDUSTRIAL HYGIENE SERVICES PROVIDED FOR:
Oklahoma Department of Environmental Quality
Land Protection Division
Care Of: Dustin Davidson, Environmental Programs Specialist
P.O. Box 1677
Oklahoma City, OK 73102
Phone: 405.702.5115
Email: dustin.davidson@deq.ok.gov

CERTIFIED INDUSTRIAL HYGIENE SERVICES PROVIDED BY:
Marshall Environmental Management, Incorporated
Attention: Jamie Marshall, Senior Industrial Hygiene Associate
1601 SW 89th Street, Suite A-100
Oklahoma City, OK 73159
Phone: 405.616.0401
Email: marshenv@swbell.net

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CLINTON ARMORY
LEAD-CONFIRMATION SAMPLING

CERTIFICATION

This is to certify that, Marshall Environmental Management, Incorporated (MEM) was contracted by the State of Oklahoma Construction and Properties Division, on behalf of the Oklahoma Department of Environmental Quality (ODEQ) Land Protection Division (LPD), to conduct Lead-Confirmation Sampling at the Clinton Armory (723 South 13th Street in Clinton, Oklahoma). The confirmation sampling was performed by Lead-Based Paint (LBP) Inspector/Risk Assessors licensed by the ODEQ and under the direction of Dr. Charles L. Marshall Certified Industrial Hygienist (CIH) and President of MEM. The analytical data resulting from these sampling events is believed to accurately, reflect the concentrations of lead in surface dust at the time sampling was accomplished.

OWNER INFORMATION

State of Oklahoma

CERTIFIED LEAD-BASED PAINT INSPECTOR/RISK ASSESSOR

May 16, 2014

Jamie Marshall, M.S., Senior Industrial Hygiene Associate — ***Report Date***
ODEQ Certification Lead-Based Paint Inspector/Risk Assessor — *OKRASR13418*

CERTIFIED LEAD-BASED PAINT INSPECTOR/RISK ASSESSOR

May 16, 2014

Rachel Woods, B.S., Industrial Hygiene Associate — ***Report Date***
ODEQ Certification Lead-Based Paint Inspector/Risk Assessor — *OKRASR13701*

CERTIFIED LEAD-BASED PAINT FIRM

Marshall Environmental Management, Incorporated
ODEQ Lead-Based Paint Firm Certification: OKFIRM11160
1601 SW 89th Street, Suite A-100 | Oklahoma City, OK 73159
Phone: 405.616.0401 | Email: marshenv@swbell.net

ACCREDITED LABORATORY

Quantem Laboratories | AIHA ID: 101352

EXECUTIVE SUMMARY

As part of the ODEQ LPD Site Cleanup Assistance Program and Armory Cleanup Program and for the purpose of verifying that adequate lead abatement (i.e. removal) measures occurred, MEM representatives performed the Lead-Confirmation Sampling at the Clinton Armory from March 6, 2014 through April 4, 2014. According to the Environmental Protection Agency (EPA)[1] and with regard to common floor surfaces, concentrations of lead in dust following remediation activities and prior to the application of a sealant, which are less than or equal to 40-micrograms per square foot (≤40-µg/ft^2) are acceptable. With regard to windowsills, the EPA states that concentrations of lead in dust post-abatement/pre-sealant that are ≤250-ug/ft^2 are acceptable. And, according to the Departments of the Army and the Air Force National Guard Bureau[2], with regard to any horizontal surface within an indoor-firing-range (IFR), concentrations of lead in dust post abatement/pre sealant that are ≤200-µg/ft^2 are acceptable (40-ug/ft^2 in the case of child exposure). Following the application of an acrylic sealant to the walls, floors and ceiling of the IFR and IFR side room, the ODEQ adheres to clearance level of 40-µg/ft^2 in the case of child exposure.

SAMPLING METHODOLOGY

The sample collection process was carried out in accordance with the regulations proposed by the EPA in 40 Code of Federal Regulations (CFR) part 745. Samples of settled dust were collected by selecting a surface area and then by placing a template of a known dimension firmly against the surface to be sampled. Next, the area within the template was wiped in a particular pattern utilizing a specific wipe. The wipe was then placed in an approved container; the container was labeled and the samples/sampling locations were recorded on the chain of custody. Lastly, samples were submitted, to an accredited laboratory, for analysis. The sampling locations and corresponding laboratory analyses are illustrated on the area diagram included in the appendix to this report.

ANALYTICAL SUMMARIES

On March 6, 2014 following lead-abatement activities (performed by Abatement Systems), 72-samples were collected (by an MEM representative) from various floor, wall and ceiling surfaces within the IFR and IFR side room as well as from various floor surfaces (outside of the IFR) within rooms 7, 8, 9, 10, 11 and 13. Of the 48-surface samples that were collected within the IFR and IFR side room, 2-sample analyses exceeded the aforementioned Army and Air Force National Guard clearance level of 200-µg/ft^2; and of the 24-samples that were collected from floor surfaces outside the IFR, 3-sample analyses exceeded the aforementioned EPA clearance level of 40-µg/ft^2. The following tables summarize the laboratory data resulting from each sampling event, and the ***bolded data*** represents lead concentrations that exceeded the appropriate clearance level.

TABLE I: 03-06-14 ANALYTICAL SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
1		**191-µg/ft.^{2}**	40-µg/ft.^{2}
2		**121-µg/ft.^{2}**	40-µg/ft.^{2}
3		**112-µg/ft.^{2}**	40-µg/ft.^{2}
4		32.4-µg/ft.^{2}	40-µg/ft.^{2}
5		38.1-µg/ft.^{2}	40-µg/ft.^{2}
6		19.2-µg/ft.^{2}	40-µg/ft.^{2}

[1] *Requirements for Lead-based Paint Activities in Target Housing and Child-occupied Facilities* (40 Code of Federal Regulations [CFR] Part 745)
[2] *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges - http://www.ngbpdc.ngb.army.mil/pubs/420/ngpam420_15.pdf*

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
7		13.6-µg/ft.^{2}	40-µg/ft.^{2}
8		21.5-µg/ft.^{2}	40-µg/ft.^{2}
9		9.83-µg/ft.^{2}	40-µg/ft.^{2}
10		11.5-µg/ft.^{2}	40-µg/ft.^{2}
11		30.8-µg/ft.^{2}	40-µg/ft.^{2}
12		19.1-µg/ft.^{2}	40-µg/ft.^{2}
13		13.0-µg/ft.^{2}	40-µg/ft.^{2}
14		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
15		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
16		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
17		13.8-µg/ft.^{2}	40-µg/ft.^{2}
18		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
19		15.3-µg/ft.^{2}	40-µg/ft.^{2}
20		26.4-µg/ft.^{2}	40-µg/ft.^{2}
21		30.7-µg/ft.^{2}	40-µg/ft.^{2}
22		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
23		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
24		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
25	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
26	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
27	IFR	173-µg/ft.^{2}	200-µg/ft.^{2}
28	IFR	44.6-µg/ft.^{2}	200-µg/ft.^{2}
29	IFR	29.1-µg/ft.^{2}	200-µg/ft.^{2}
30	IFR	**201-µg/ft.^{2}**	200-µg/ft.^{2}
31	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
32	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
33	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
34	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
35	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
36	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
37	IFR	10.8-µg/ft.^{2}	200-µg/ft.^{2}
38	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
39	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
40	IFR	**254-µg/ft.^{2}**	200-µg/ft.^{2}
41	IFR	**1,890-µg/ft.^{2}**	200-µg/ft.^{2}
42	IFR	69.5-µg/ft.^{2}	200-µg/ft.^{2}
43	IFR	22.6-µg/ft.^{2}	200-µg/ft.^{2}
44	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
45	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
46	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
47	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
48	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
49	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
50	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
51	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
52	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
53	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
54	IFR	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
55	IFR SIDE ROOM	14.2-µg/ft.^{2}	200-µg/ft.^{2}
56	IFR SIDE ROOM	66.4-µg/ft.^{2}	200-µg/ft.^{2}
57	IFR SIDE ROOM	9.97-µg/ft.^{2}	200-µg/ft.^{2}
58	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
59	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
60	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
61	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
62	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
63	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
64	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
65	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
66	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
67	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
68	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
69	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
70	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
71	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}
72	IFR SIDE ROOM	<9.00-µg/ft.^{2}	200-µg/ft.^{2}

On March 12, 2014, additional samples were collected (by an MEM representative) within the IFR and within room 7 (outside the IFR) following supplemental abatement activities. Of the 3-samples that were collected within the IFR, one of the sample analyses exceeded the appropriate clearance level of 200-µg/ft^2. Of the 3-samples that were collected outside the IFR, none of the sample analyses exceeded the appropriate clearance levels.

TABLE II: 03-12-14 ANALYTICAL SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
A1		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
A2		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
A3		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
A4	IFR	84.4-µg/ft.^{2}	200-µg/ft.^{2}
A5	IFR	**577-µg/ft.^{2}**	200-µg/ft.^{2}
A6	IFR	10.5-µg/ft.^{2}	200-µg/ft.^{2}

Supplemental lead-confirmation sampling was performed on March 20, 2014 (by an MEM representative) following supplemental abatement activities that included the application of a two-part concrete epoxy on the back and side walls within the IFR. In addition to this, an acrylic sealant was sprayed on all walls, floors and ceilings of the IFR and IFR side room. Of the 48-surface samples that were collected within the IFR and IFR side room, none of the sample analyses exceeded the Army and Air Force National Guard clearance level of 40-µg/ft^2 in the case of child exposure. Of the 42-samples that were collected from floor surfaces outside the IFR, 3-sample analyses exceeded the EPA clearance level of 40-µg/ft^2.

TABLE III: 03-20-14 ANALYTICAL SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
B1		16.1-µg/ft.^{2}	40-µg/ft.^{2}
B2		22.4-µg/ft.^{2}	40-µg/ft.^{2}
B3		37.1-µg/ft.^{2}	40-µg/ft.^{2}
B4		23.2-µg/ft.^{2}	40-µg/ft.^{2}
B5		24.1-µg/ft.^{2}	40-µg/ft.^{2}
B6		20.0-µg/ft.^{2}	40-µg/ft.^{2}
B7		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B8		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B9		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B10		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B11		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B12		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B13		16.5-µg/ft.^{2}	40-µg/ft.^{2}
B14		27.5-µg/ft.^{2}	40-µg/ft.^{2}
B15		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B16		11.5-µg/ft.^{2}	40-µg/ft.^{2}
B17		10.3-µg/ft.^{2}	40-µg/ft.^{2}
B18		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B19		18.9-µg/ft.^{2}	40-µg/ft.^{2}
B20		15.2-µg/ft.^{2}	40-µg/ft.^{2}
B21		10.6-µg/ft.^{2}	40-µg/ft.^{2}
B22		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B23		9.17-µg/ft.^{2}	40-µg/ft.^{2}
B24		20.8-µg/ft.^{2}	40-µg/ft.^{2}
B25		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B26		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B27		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B28		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B29		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B30		10.0-µg/ft.^{2}	40-µg/ft.^{2}
B31		**51.6-µg/ft.^{2}**	40-µg/ft.^{2}
B32		18.7-µg/ft.^{2}	40-µg/ft.^{2}
B33		26.5-µg/ft.^{2}	40-µg/ft.^{2}
B34		**55.6-µg/ft.^{2}**	40-µg/ft.^{2}

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
B35		16.7-µg/ft.^{2}	40-µg/ft.^{2}
B36		**113-µg/ft.^{2}**	40-µg/ft.^{2}
B37		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B38		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B39		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B40		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B41		15.7-µg/ft.^{2}	40-µg/ft.^{2}
B42		11.4-µg/ft.^{2}	40-µg/ft.^{2}
B43	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B44	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B45	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B46	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B47	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B48	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B49	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B50	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B51	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B52	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B53	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B54	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B55	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B56	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B57	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B58	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B59	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B60	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B61	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B62	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B63	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B64	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B65	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B66	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B67	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B68	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B69	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B70	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B71	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B72	IFR	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B73	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B74	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B75	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B76	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B77	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
B78	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B79	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B80	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B81	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B82	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B83	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B84	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B85	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B86	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B87	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B88	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B89	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}
B90	IFR SIDE ROOM	<9.00-µg/ft.^{2}	40-µg/ft.^{2}

Following supplemental abatement activities, additional surface samples were collected (by an MEM representative) from rooms 3 and 2 (outside the IFR). Of the 2-samples that were collected, none of the sample analyses exceeded the applicable clearance level of 40-µg/ft^2.

TABLE IV: 04-4-14 ANALYTICAL SUMMARY

SAMPLE ID	SAMPLE DESCRIPTION	ANALYTICAL RESULT	CLEARANCE LEVEL
C1		<9.00-µg/ft.^{2}	40-µg/ft.^{2}
C2		<9.00-µg/ft.^{2}	40-µg/ft.^{2}

APPENDIX

CHAIN OF CUSTODY FORMS & ANALYTICAL DATA

AREA DIAGRAMS

CERTIFICATES/LICENSURE

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www.QuanTEM.com

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(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

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For Lab Use Only
Lab No. 232694
(Accept) Reject

Report Results (☑ one box)
- [ ] QuanTEM Website
- [X] Other email
dustin.davidson@deq.ok.gov

Contact Information	
Company: Marshall Environmental	Phone: 616-0401
Contact: Rachel Woods	Cell Phone: 315-4305
Account #:	E-mail: marshenv@swbell.net

Project Information
Project Name: Clinton Armory
Project Location: Clinton, OK
Project ID:

Sampled By: Name: Rachel Woods Date: 3/6/14

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
[signature]	3/6/14		[signature]	3/6/14 2:39

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb			Units: PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
1	1	Room 7 West - NW		1 ft²	C	X						X		
2	2	Room 7 West - Center												
3	3	Room 7 West - SE												
4	4	Room 7 East - NW												
5	5	Room 7 East - Center												
6	6	Room 7 East - SE.												
7	7	Room 8 - NW												
8	8	Room 8 - Center												
9	9	Room 8 - SE												
10	10	Room 9 - NE												
11	11	Room 9 - Center												
12	12	Room 9 - SW												

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME	
	Same Day
X	24 - Hour
	3 - Day
	5 - Day

[illegible] SAMPLE DELIVERY [illegible] • Use [illegible] for Saturday Delivery only: 4720 [illegible] Santa Fe Ave, Oklahoma City, OK [illegible] • Mark Package "Hold for Saturday Pickup"

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Lab No. 232674
Accept Reject

Project Information

Company: Marshall Environmental | Project Name: Clinton Armory | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Analysis:	Analysis:	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	13	Room 10 - NW		1ft2	C	X						X		
14	14	Room 10 - Center												
15	15	Room 10 - SE												
16	16	Room 11 - NE												
17	17	Room 11 - Center												
18	18	Room 11 - SW												
19	19	Room 12 - NE												
20	20	Room 12 - Center												
21	21	Room 12 - SW												
22	22	Room 13 - N.												
23	23	Room 13 - SE												
24	24	Room 13 - SW.												
25	25	Room 23 N Floor - NE												
26	26	Room 23 N. Floor - Center												
27	27	Room 23 N. Floor - SW												
28	28	Room 23 S. Floor - NE												
29	29	Room 23 S. Floor - Center												
30	30	Room 23 S. Floor - SW		↓	↓	↓						↓		

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

SATURDAY [illegible] BY CALLING SCHEDULE ... Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73118-8517 ... Mark Package "Hold for Saturday Pickup"

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Lab No. 232694
Accept Reject

Project Information
Company: Marshall Environmental
Project Name: Clinton Armory
Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (See matrix code box)	Analysis: Pb			Units: PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	31	Rm23 N Wall-Bottom		1ft2	C	X						X		
14	32	Rm 23 N Wall-Middle		↓	↓	↓						↓		
15	33	Rm 23 N Wall-Top												
16	34	Rm 23 NE Wall-Bottom												
17	35	Rm 23 NE Wall-Middle												
18	36	Rm 23 NE Wall-Top												
19	37	Rm 23 SE Wall-Bottom												
20	38	Rm 23 SE Wall-Middle												
21	39	Rm 23 SE Wall-Top												
22	40	Rm 23 S.Wall-Bottom												
23	41	Rm 23 S.Wall-Middle												
24	42	Rm 23 S.Wall-Top												
25	43	Rm 23 SW.Wall-Bottom												
26	44	Rm 23 S.W.Wall-Middle												
27	45	Rm 23 S.W.Wall-Top												
28	46	Rm 23 NW.Wall-Bottom												
29	47	Rm 23 N.W.Wall-Middle												
30	48	Rm 23 N.W.Wall-Top		↓	↓	↓						↓		

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

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For Lab Use Only
Lab No. 232694
Accept (circled) Reject

Project Information

Company: Marshall Environmental | Project Name: Clinton Armory | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Analysis	Analysis	Units: PPM	Units: Wt %	Units: mg / l	Units: µg / ft²	Units: µg / m³	Units: mg / cm²
13	49	Rm 23 N. Ceiling-		1 ft2	C	X						X		
14	50	Rm 23 W. Ceiling-												
15	51	Rm 23 W. Ceiling-												
16	52	Rm 23 S. Ceiling-												
17	53	Rm 23 S. Ceiling-												
18	54	Rm 23 S. Ceiling-												
19	55	Room 24 - NW												
20	56	Room 24 - Center												
21	57	Rm 24 - SE												
22	58	Rm 24 N Wall - Bottom												
23	59	Rm 24 N. Wall - Middle												
24	60	Rm 24 N. Wall - Top												
25	61	Rm 24 E. Wall - Bottom												
26	62	Rm 24 E. Wall Middle												
27	63	Rm 24 E Wall Top												
28	64	Rm 24 S. Wall Bottom												
29	65	Rm 24 S. Wall Middle												
30	66	Rm 24 S. Wall Top												

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

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Lab No. 232674
Accept (circled) Reject

Project Information

Company: Marshall Environmental | Project Name: Clinton Armory | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Analysis	Analysis	Units: PPM	Units: Wt %	Units: mg / l	Units: µg / ft²	Units: µg / m³	Units: mg / cm²
13	67	Rm 24 W. Wall -- Bottom		1 ft2	C	X						X		
14	68	Rm 24 W. Wall - Middle												
15	69	Rm 24 W. Wall - Top												
16	70	Rm 24 Ceiling - NW												
17	71	Rm 24 Ceiling - Center												
18	72	Rm 24 Ceiling - SE.												
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

[illegible] CALL TO CONFIRM [illegible] • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave, Oklahoma City, OK [illegible] • Mark Package [illegible] for Saturday Pickup [illegible]

QUANTEM® LABORATORIES

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 232694
Date Received: 03/06/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory
Location: Clinton, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	191	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
002	2	Wipe	Lead	121	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
003	3	Wipe	Lead	112	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
004	4	Wipe	Lead	32.4	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
005	5	Wipe	Lead	38.4	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
006	6	Wipe	Lead	19.2	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
007	7	Wipe	Lead	13.6	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
008	8	Wipe	Lead	21.5	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
009	9	Wipe	Lead	9.83	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
010	10	Wipe	Lead	11.5	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
011	11	Wipe	Lead	30.8	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
012	12	Wipe	Lead	19.1	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
013	13	Wipe	Lead	15.0	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
014	14	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
015	15	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
016	16	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
017	17	Wipe	Lead	13.8	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified
EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 232694
Date Received: 03/06/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory
Location: Clinton, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	18	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
019	19	Wipe	Lead	15.3	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
020	20	Wipe	Lead	26.4	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
021	21	Wipe	Lead	30.7	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
022	22	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
023	23	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
024	24	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
025	25	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
026	26	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
027	27	Wipe	Lead	173	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
028	28	Wipe	Lead	44.6	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
029	29	Wipe	Lead	29.1	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
030	30	Wipe	Lead	201	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
031	31	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
032	32	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
033	33	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
034	34	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

This report applies only to the standards or procedures indicated and to the specific samples tested. It is not indicative of the qualities of apparently identical or similar products or procedures, nor does it represent an ongoing assurance program unless so noted. These reports are for the exclusive use of the client and are not to be reproduced without specific written permission. QuanTEM is not responsible for user-supplied data used in calculations.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

QUANTEM® LABORATORIES

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 232694
Date Received: 03/06/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory
Location: Clinton, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
035	35	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
036	36	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
037	37	Wipe	Lead	10.8	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
038	38	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
039	39	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
040	40	Wipe	Lead	254	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
041	41	Wipe	Lead	1,890	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
042	42	Wipe	Lead	69.5	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
043	43	Wipe	Lead	22.6	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
044	44	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
045	45	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
046	46	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
047	47	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
048	48	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
049	49	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
050	50	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
051	51	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Environmental Chemistry Analysis Report

QuanTEM Set ID: 232694
Date Received: 03/06/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory
Location: Clinton, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	52	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
053	53	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
054	54	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
055	55	Wipe	Lead	14.2	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
056	56	Wipe	Lead	66.4	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
057	57	Wipe	Lead	9.97	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
058	58	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
059	59	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
060	60	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
061	61	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
062	62	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
063	63	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
064	64	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
065	65	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
066	66	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
067	67	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
068	68	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 232694
Date Received: 03/06/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory
Location: Clinton, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
069	69	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
070	70	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
071	71	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100
072	72	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/07/14 11:00	W NIOSH 9100

Authorized Signature: _____
Benton Miller, Analyst

Note: Sample results have not been corrected for blank values.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

Supplemental Report
QAQC Results

QA ID: 11837
Test: Lead
Date: 3/7/2014
Matrix: Wipe
Lab Number: 232694
Approved By: Benton Miller
Date Approved: 3/7/2014

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.3	5.5
FCV	4.5	5.3	5.5
ICV	0.9	0.98	1.1
RLVS	0.144	0.186	0.216

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W4	0.000	5.010	5.194	103.7	4.941	98.6	5.0

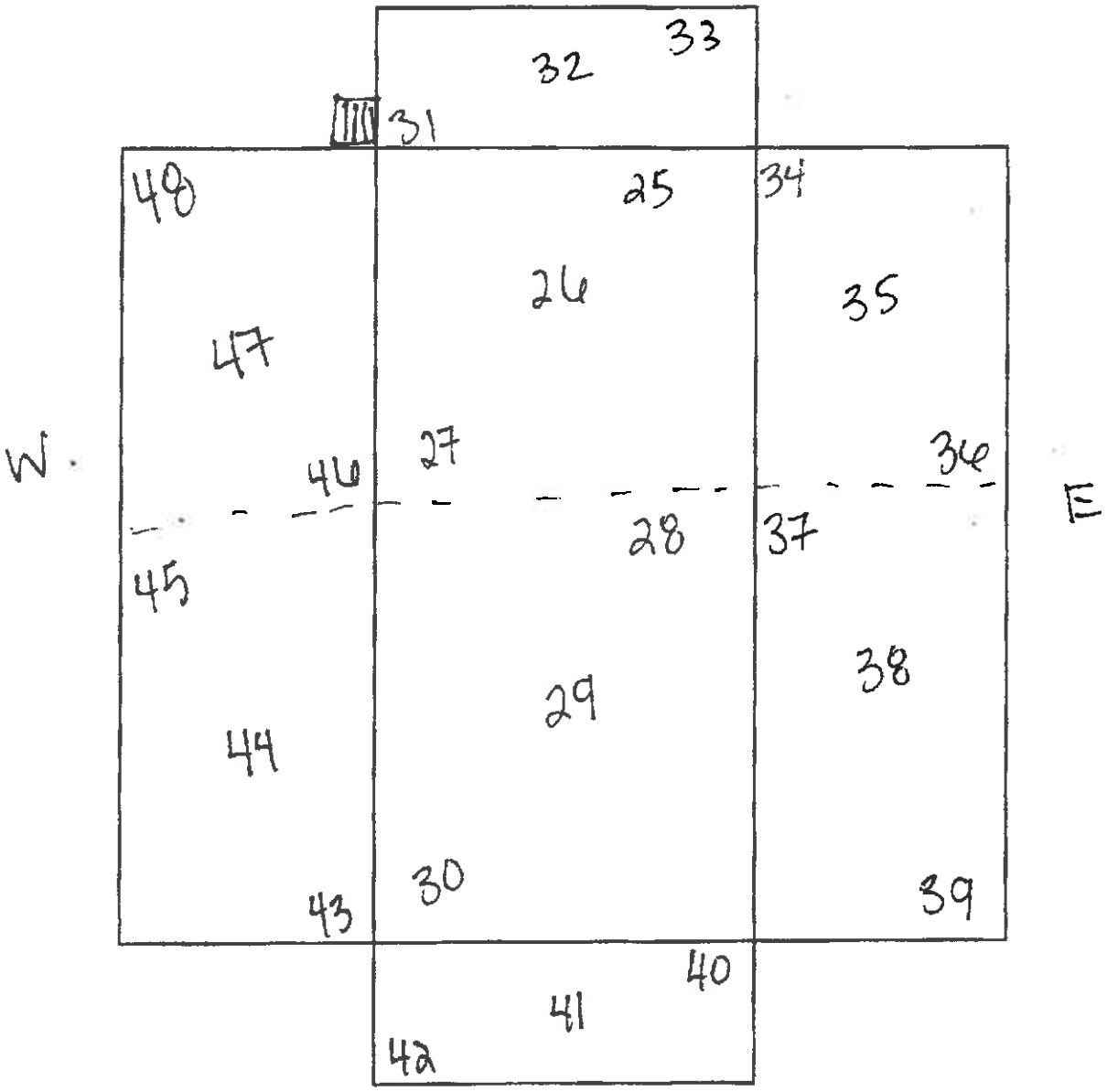
Authorized Signature: _____

Benton Miller, Analyst

Room 23

N

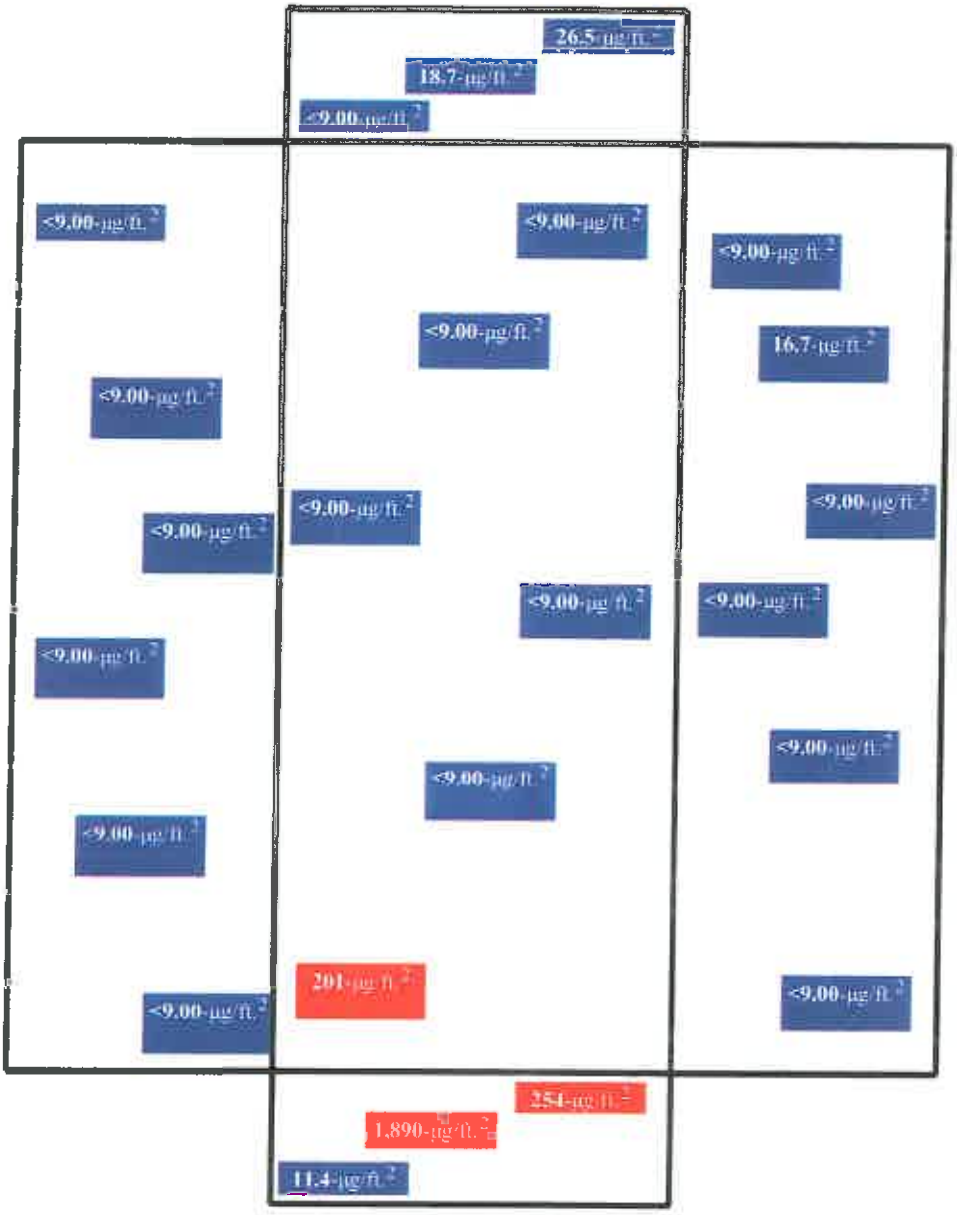
Clinton Armory
Firing Range Floor & Walls



Clinton Armory

Firing Range Floor & Walls

03-06-14

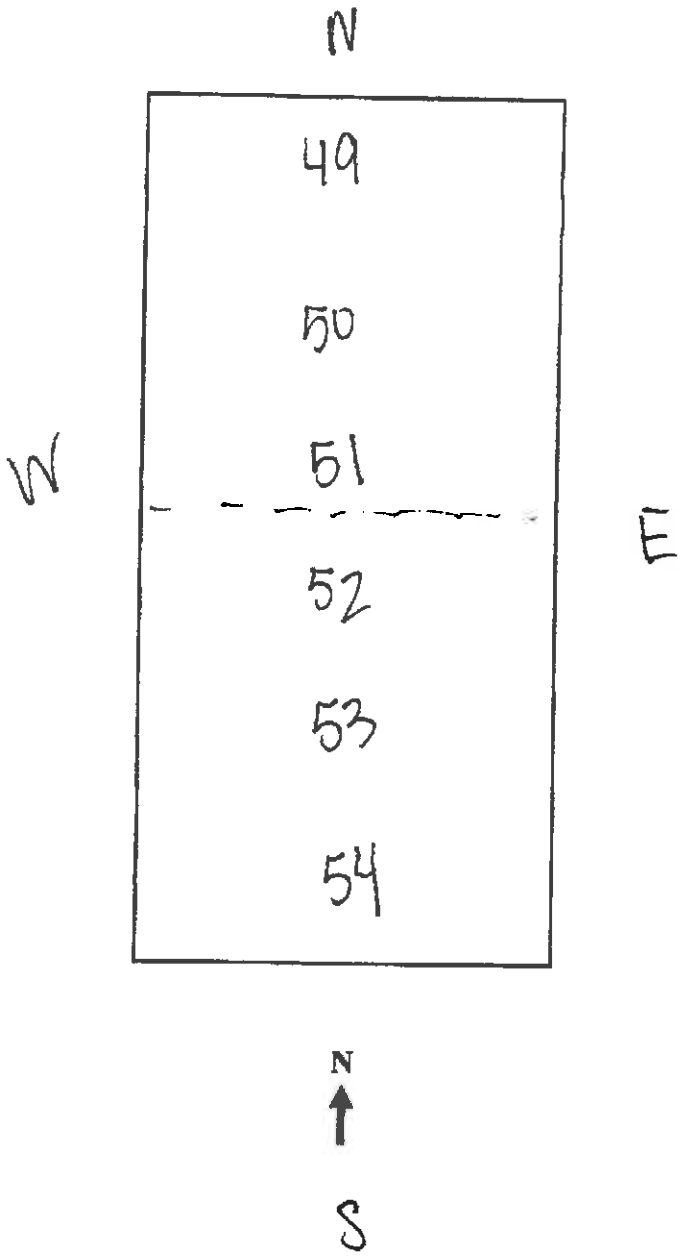


N

Room 23

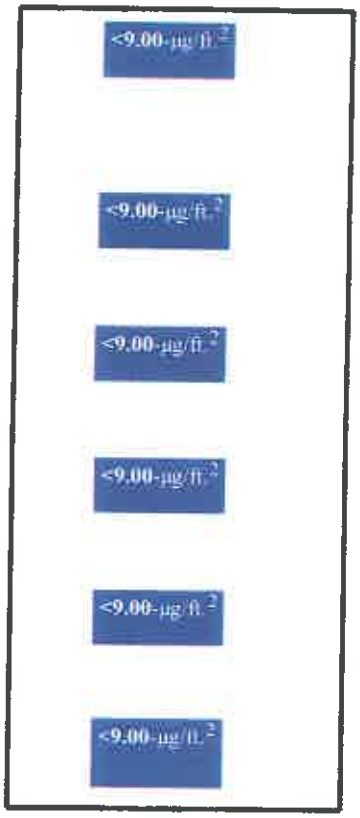
232694

Clinton Armory
Firing Range Ceiling



Clinton Armory

Firing Range Ceiling
03-06-14



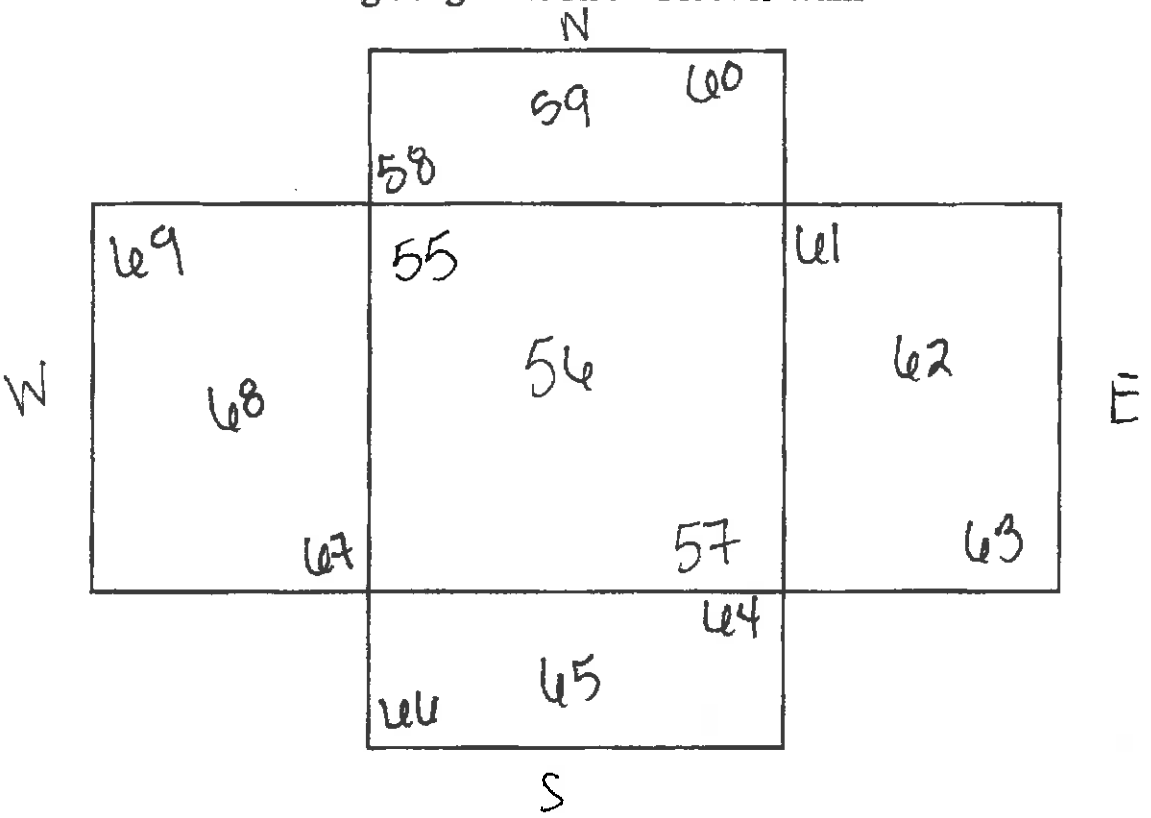
N

Room 24

232694

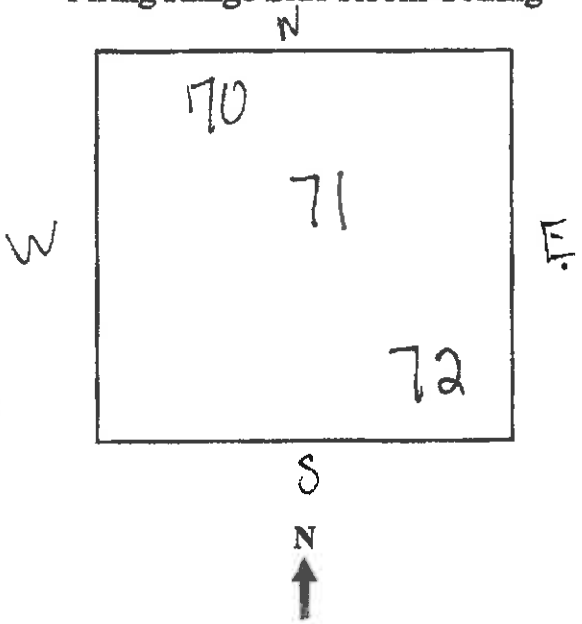
Clinton Armory

Firing Range Side Room Floor & Walls



Clinton Armory

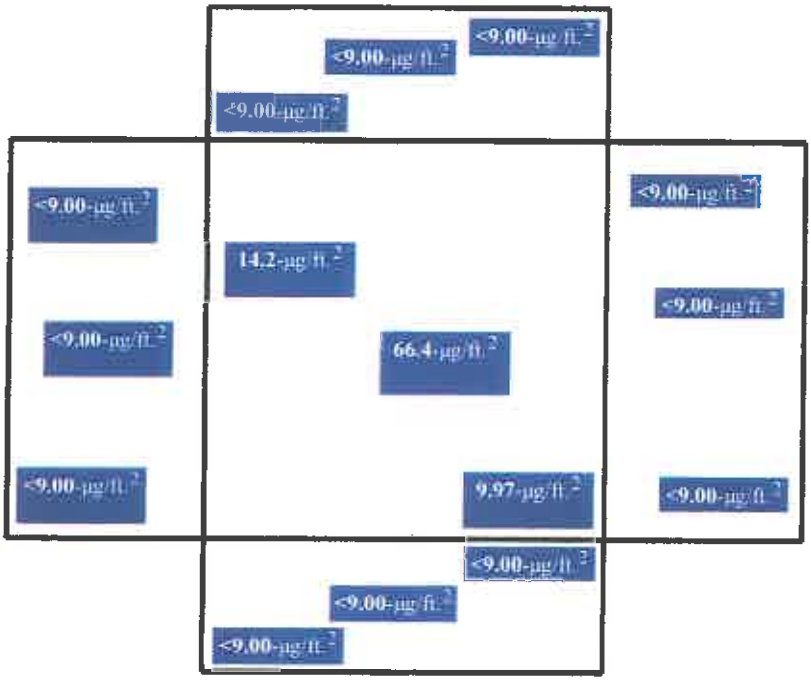
Firing Range Side Room Ceiling



Clinton Armory

Firing Range Side Room Floor & Walls

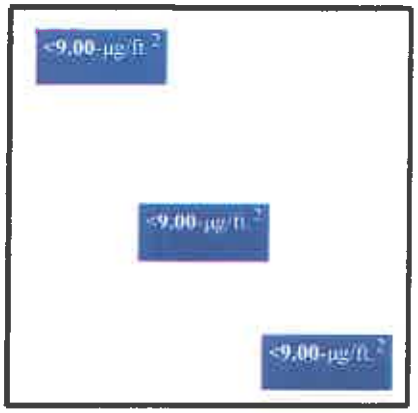
03-06-14



Clinton Armory

Firing Range Side Room Ceiling

03-06-14



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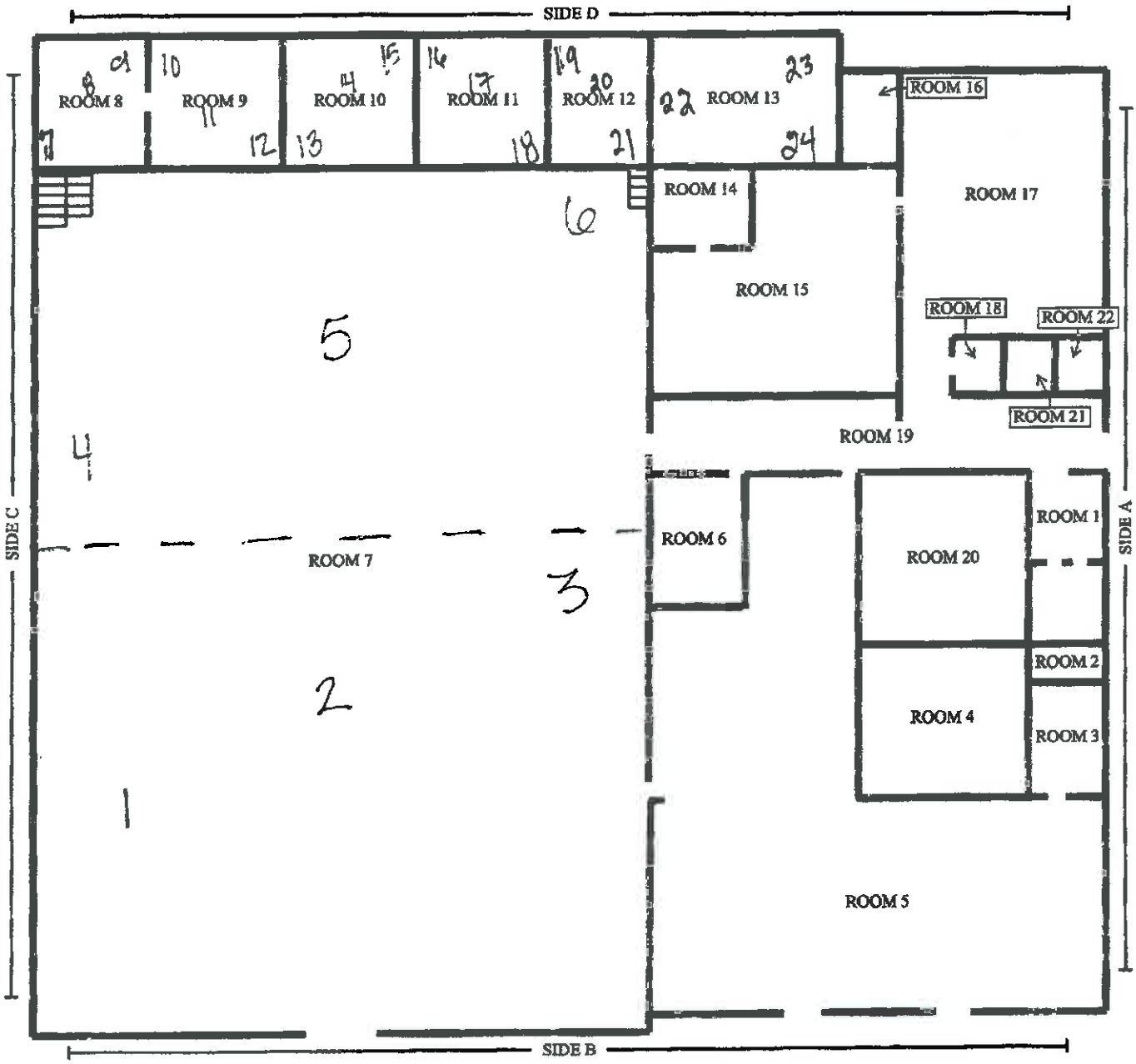
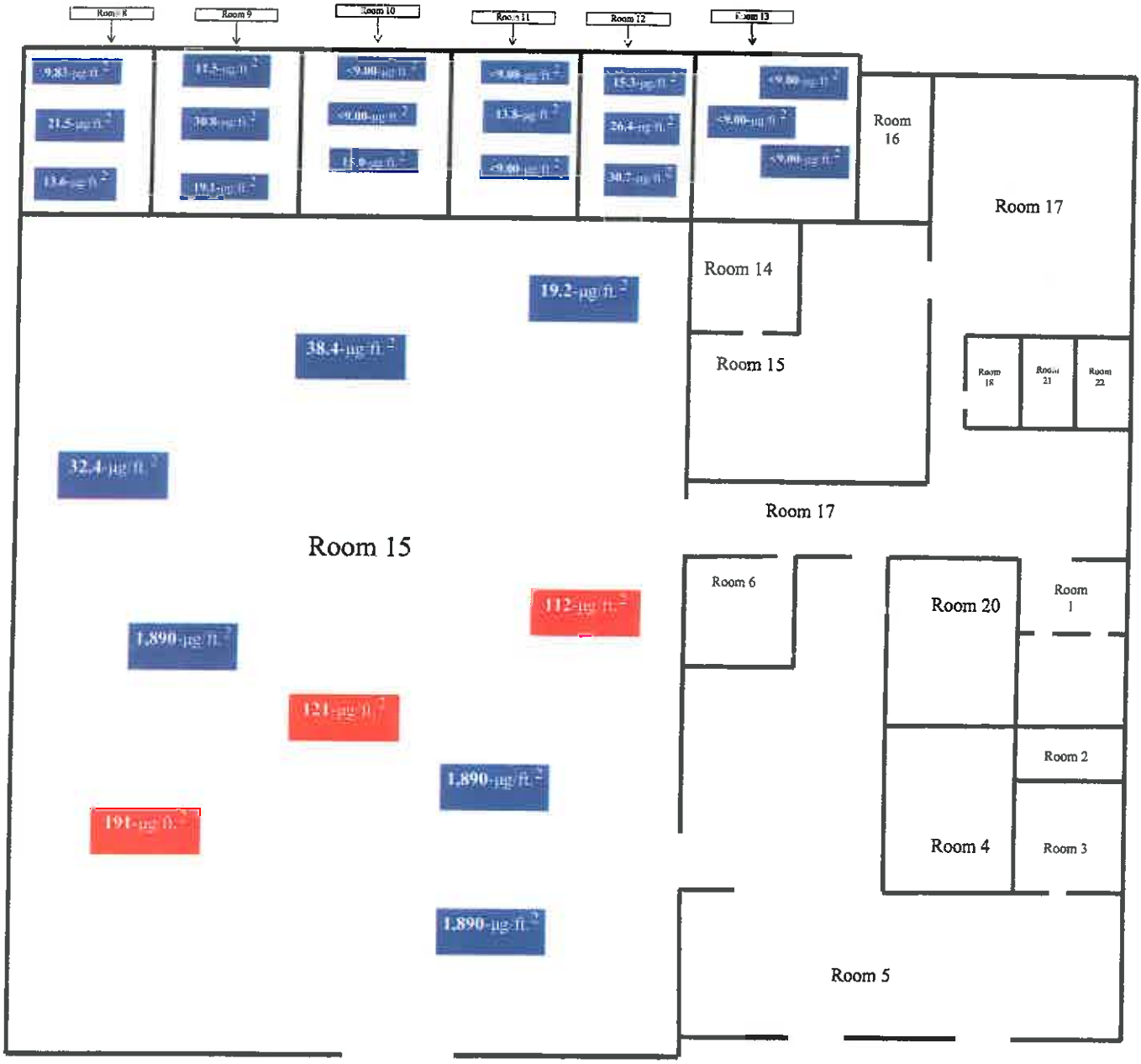
CLINTON ARMORY



N

Clinton Armory

Indoor Firing Range
03-06-14



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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No.	232895
Accept	Reject

Contact Information		Project Information	
Company: Marshall Environmental	Phone: 6116-0401	Project Name: Clinton Armory (03-12-14)	
Contact: Rachel Woods	Cell Phone: N/A	Project Location: Clinton, OK	
Account #:	E-mail: marshenv@sbcglobal.net	Project ID: 0052-LBP-030614	

Report Results (☑ one box)
- ☐ QuanTEM Website
- ☐ Other _____

dustin.davidson@deq.ok.gov

Sampled By:	Name: Rachel Woods	Date: 3/12/14

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
RWoods	3/12/14		RAC	2:55p 3/12/14

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg / ft²	µg / m³	mg / cm²
1	A1	Room 7		1A2	C	X				X		
2	A2	↓		↓	↓	↓				↓		
3	A3	↓		↓	↓	↓				↓		
4	A4	1FR Room 23		↓	↓	↓				↓		
5	A5	↓		↓	↓	↓				↓		
6	A6	↓		↓	↓	↓				↓		
7												
8												
9												
10												
11												
12												

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME	
	Same Day
X	24 - Hour
	3 - Day
	5 - Day

SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup"

QUANTEM® LABORATORIES

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 232895
Date Received: 03/12/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/13/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-12-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	A1	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100
002	A2	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100
003	A3	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100
004	A4	Wipe	Lead	84.4	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100
005	A5	Wipe	Lead	577	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100
006	A6	Wipe	Lead	10.5	9	ug/sq. Ft.	03/13/14 10:20	W NIOSH 9100

Authorized Signature: _____
Benton Miller, Analyst

Note: Sample results have not been corrected for blank values.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified
EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

Supplemental Report
QAQC Results

QA ID: 11855
Test: Lead

Date: 3/13/2014
Matrix: Wipe

Lab Number: 232895
Approved By: Benton Miller
Date Approved: 3/13/2014

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.3	5.5
FCV	4.5	5.3	5.5
ICV	0.9	1	1.1
RLVS	0.144	0.154	0.216

Duplicate Data:

Recovery Data:

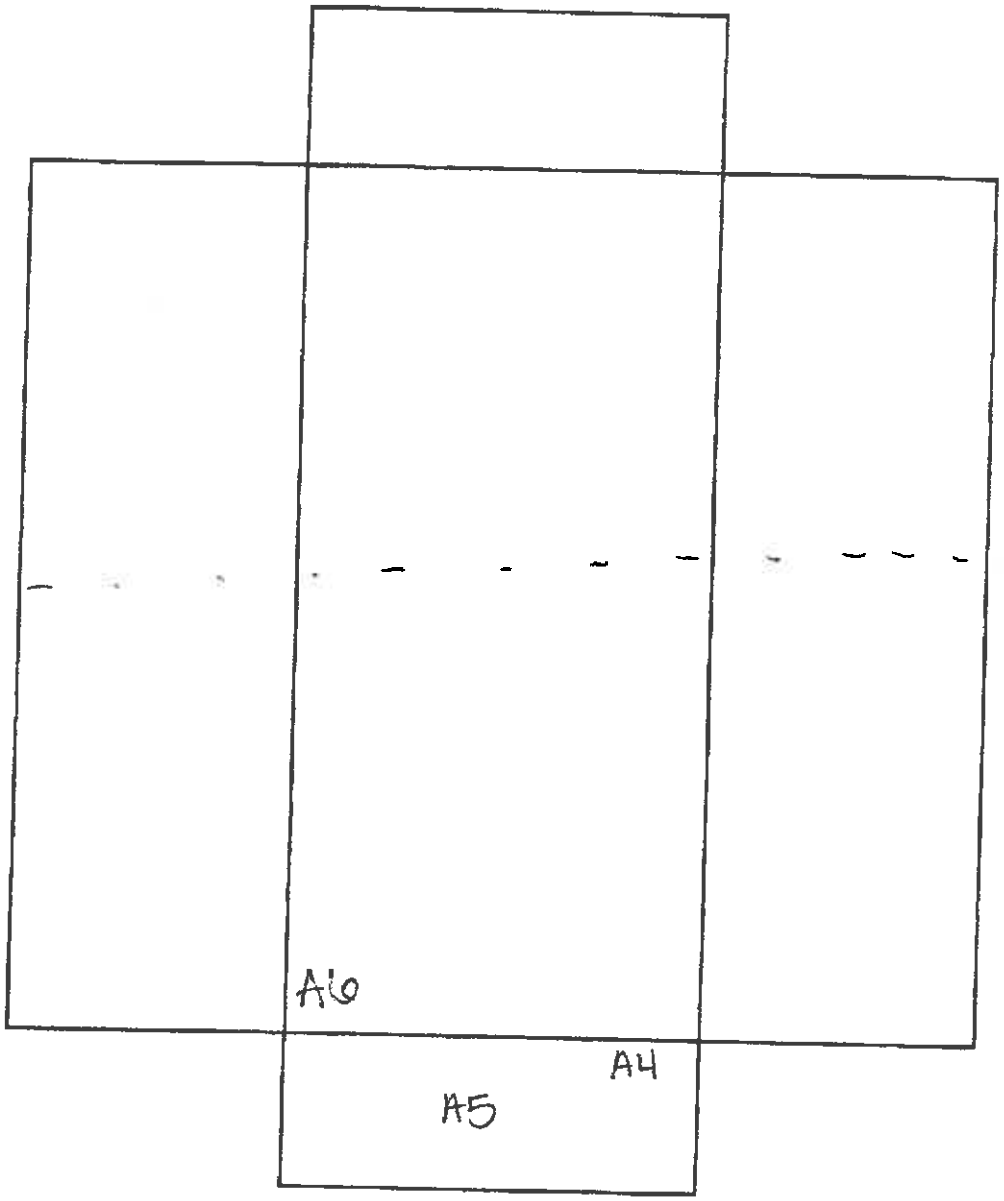
Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W3	0.000	5.010	5.499	109.8	5.700	113.8	3.6

Authorized Signature: _____

Benton Miller, Analyst

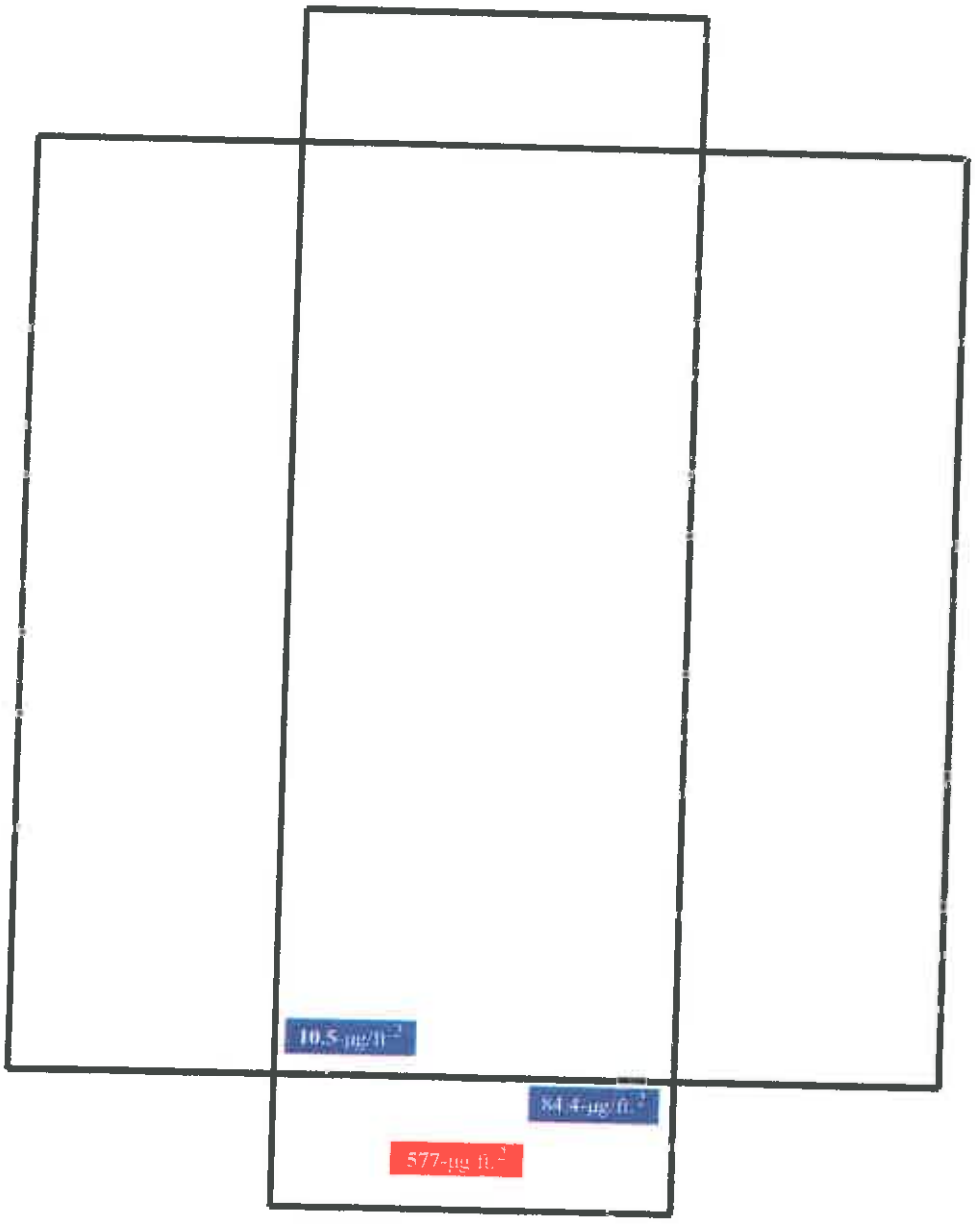
03-12-14
Q#232895

Clinton Armory
Firing Range Floor & Walls



Clinton Armory

Firing Range Floor & Walls
03-12-14

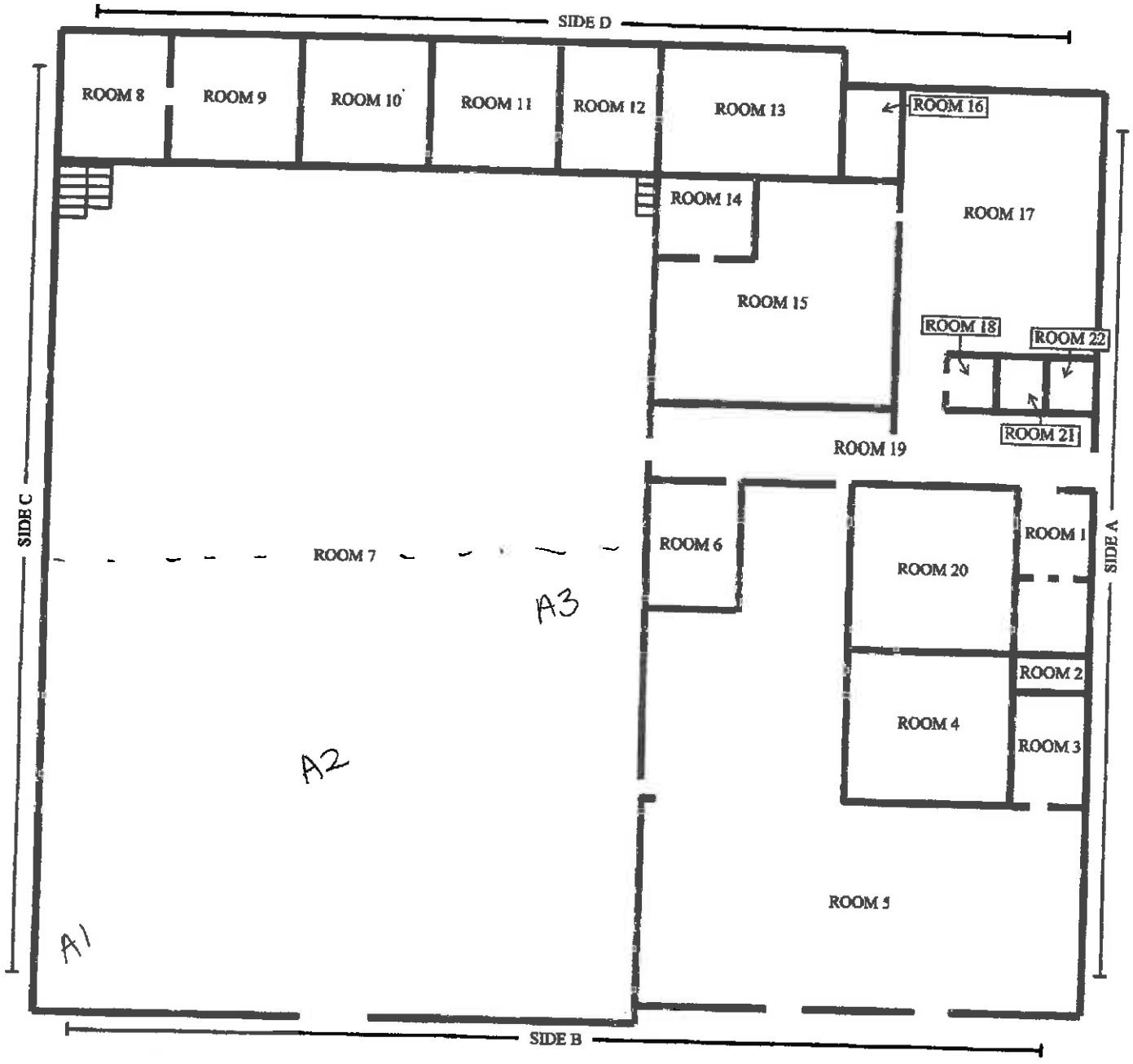


N

03-12-14

Q#232895

CLINTON ARMORY

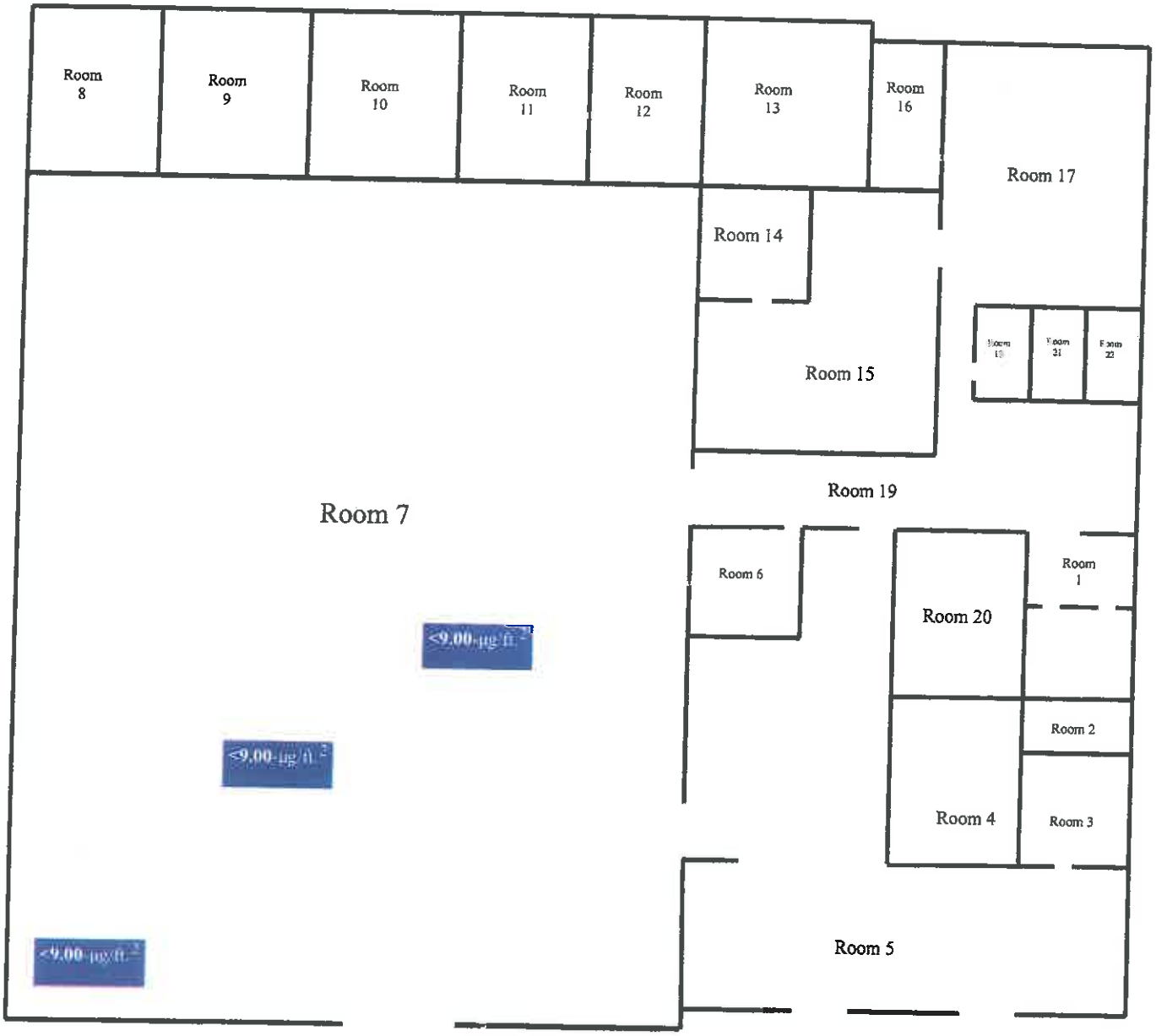


N
↑

N

Clinton Armory

Indoor Firing Range
03-12-14



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Lab No.	233188
	(Accept) Reject

Report Results (☑ one box)	
	QuanTEM Website
X	Other

dustin.davidson@deq.ok.gov

Contact Information		Project Information	
Company: Marshall Environmental	Phone: 1616-0401	Project Name: Clinton Armory (03-20-14)	
Contact: Rachel Woods	Cell Phone: 315-4305	Project Location: Clinton OK	
Account #:	E-mail: marshenvestubell.net	Project ID: 0552-LBP-030614	

Sampled By: Name: Rachel Woods Date: 3/20/14

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
	3/20/14			3-20-14 2:24

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
1	B1	Room 14		1ft2	C	X				X		
2	B2	↓										
3	B3	↓										
4	B4	Room 15										
5	B5	↓										
6	B6	↓										
7	B7	Room 16										
8	B8	↓										
9	B9	↓										
10	B10	Room 17										
11	B11	↓										
12	B12	↓										

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME	
	Same Day
X	24 - Hour
	3 - Day
	5 - Day

SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup"

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No.	233188
Accept	Reject

Project Information

Company: Marshall Env. | Project Name: Clinton Armory (03-20-14) | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	B13	Rm 18		1ft2	C	X				X		
14	B14	↓		↓	↓	↓				↓		
15	B15	↓		↓	↓	↓				↓		
16	B16	Rm 22		↓	↓	↓				↓		
17	B17	↓		↓	↓	↓				↓		
18	B18	↓		↓	↓	↓				↓		
19	B19	Rm 19		↓	↓	↓				↓		
20	B20	↓		↓	↓	↓				↓		
21	B21	↓		↓	↓	↓				↓		
22	B22	Rm 16		↓	↓	↓				↓		
23	B23	↓		↓	↓	↓				↓		
24	B24	↓		↓	↓	↓				↓		
25	B25	Rm 20		↓	↓	↓				↓		
26	B26	↓		↓	↓	↓				↓		
27	B27	↓		↓	↓	↓				↓		
28	B28	Rm 1		↓	↓	↓				↓		
29	B29	↓		↓	↓	↓				↓		
30	B30	↓		↓	↓	↓				↓		

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup"

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No.	233188
Accept	Reject

Project Information

Company: MEM | Project Name: Clinton Armory (03-20-14) | Project Location: Clinton OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

	No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
31	13	B31	Rm 2		1FT2	C	X				X		
32	14	B32	↓										
33	15	B33											
34	16	B34	Rm 3										
35	17	B35	↓										
36	18	B36											
37	19	B37	Rm 4										
38	20	B38	↓										
39	21	B39											
40	22	B40	Rm 5										
41	23	B41	↓										
42	24	B42											
43	25	B43	IFR- North Floor										
44	26	B44	↓										
45	27	B45											
46	28	B46	IFR South Floor										
47	29	B47	↓										
48	30	B48											

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

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For Lab Use Only
Lab No. 23388
(Accept) Reject

Project Information

Company: MEM | Project Name: Clinton Armory (3-20-14) | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	B49	IFR N. Wall		1ft2	C	X				X		
14	B50	↓										
15	B51											
16	B52	IFR NE Wall										
17	B53	↓										
18	B54											
19	~~B55~~ B54	IFR SE Wall										
20	B56	↓										
21	B57											
22	B58	IFR S. Wall										
23	B59	↓										
24	B60											
25	B61	IFR SW Wall										
26	B62	↓										
27	B63											
28	B64	IFR NW Wall										
29	B65	↓										
30	B66											

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

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Lab No. 233188
(Accept) Reject

Project Information

Company: MEM | Project Name: Clinton Fremont (32074) | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	B67	IFR N. Ceiling		IFR	C	X				X		
14	B68	↓										
15	B69											
16	B70	IFR S. Ceiling										
17	B71	↓										
18	B72											
19	B73	Rm 24 Floor										
20	B74	↓										
21	B75											
22	B76	Rm 24 N. Wall										
23	B77	↓										
24	B78											
25	B79	Rm 24 E. Wall										
26	B80	↓										
27	B81											
28	B82	Rm 24 S. Wall										
29	B83	↓										
30	B84											

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

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Lab No. 233188
Accept Reject

Project Information

Company: MEM | Project Name: Clinton Armory (3-20-14) | Project Location: Clinton, OK

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
13	B85	Rm 24 W. Wall		1ft2	C	X				X		
14	B86	↓										
15	B87	↓										
16	B88	Rm 24 Ceiling										
17	B89	↓										
18	B90	↓										
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

Sample Matrix Codes

A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

QUANTEM® LABORATORIES

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/21/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	B1	Wipe	Lead	16.1	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
002	B2	Wipe	Lead	22.4	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
003	B3	Wipe	Lead	37.1	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
004	B4	Wipe	Lead	23.2	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
005	B5	Wipe	Lead	24.1	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
006	B6	Wipe	Lead	20.0	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
007	B7	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
008	B8	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
009	B9	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
010	B10	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
011	B11	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
012	B12	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
013	B13	Wipe	Lead	10.5	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
014	B14	Wipe	Lead	27.5	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
015	B15	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
016	B16	Wipe	Lead	11.5	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
017	B17	Wipe	Lead	10.3	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified
EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/21/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	B18	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
019	B19	Wipe	Lead	18.9	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
020	B20	Wipe	Lead	15.2	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
021	B21	Wipe	Lead	10.6	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
022	B22	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
023	B23	Wipe	Lead	9.17	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
024	B24	Wipe	Lead	20.8	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
025	B25	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
026	B26	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
027	B27	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
028	B28	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
029	B29	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
030	B30	Wipe	Lead	10.0	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
031	B31	Wipe	Lead	51.6	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
032	B32	Wipe	Lead	18.7	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
033	B33	Wipe	Lead	26.5	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
034	B34	Wipe	Lead	55.6	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

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Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

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EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/21/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
035	B35	Wipe	Lead	16.7	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
036	B36	Wipe	Lead	113	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
037	B37	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
038	B38	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
039	B39	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
040	B40	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
041	B41	Wipe	Lead	15.7	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
042	B42	Wipe	Lead	11.4	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
043	B43	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
044	B44	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
045	B45	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
046	B46	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
047	B47	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
048	B48	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
049	B49	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
050	B50	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
051	B51	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

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EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/21/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	B52	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
053	B53	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
054	B54	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
055	B55	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
056	B56	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
057	B57	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
058	B58	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
059	B59	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
060	B60	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
061	B61	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
062	B62	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
063	B63	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
064	B64	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
065	B65	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
066	B66	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
067	B67	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
068	B68	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

Note: Sample results have not been corrected for blank values.

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Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
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1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
069	B69	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
070	B70	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
071	B71	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
072	B72	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
073	B73	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
074	B74	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
075	B75	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
076	B76	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
077	B77	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
078	B78	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
079	B79	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
080	B80	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
081	B81	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
082	B82	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
083	B83	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
084	B84	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
085	B85	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

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EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

QUANTEM® LABORATORIES

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Environmental Chemistry Analysis Report

QuanTEM Set ID: 233188
Date Received: 03/20/14
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Date Sampled:
Time Sampled:
Analyst: CC
Date of Report: 3/21/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (03-20-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
086	B86	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
087	B87	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
088	B88	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
089	B89	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100
090	B90	Wipe	Lead	<9.00	9	ug/sq. Ft.	03/21/14 10:30	W NIOSH 9100

Authorized Signature: _____
Carter Cox, Lab Tech

Note: Sample results have not been corrected for blank values.

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Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified
EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

Supplemental Report
QAQC Results

QA ID: 11881
Test: Lead

Date: 3/21/2014
Matrix: Wipe

Lab Number: 233188
Approved By: Carter Cox
Date Approved: 3/21/2014

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.1	5.5
FCV	4.5	5.1	5.5
ICV	0.9	1.06	1.1
RLVS	0.144	0.2	0.216

Duplicate Data:

Recovery Data:

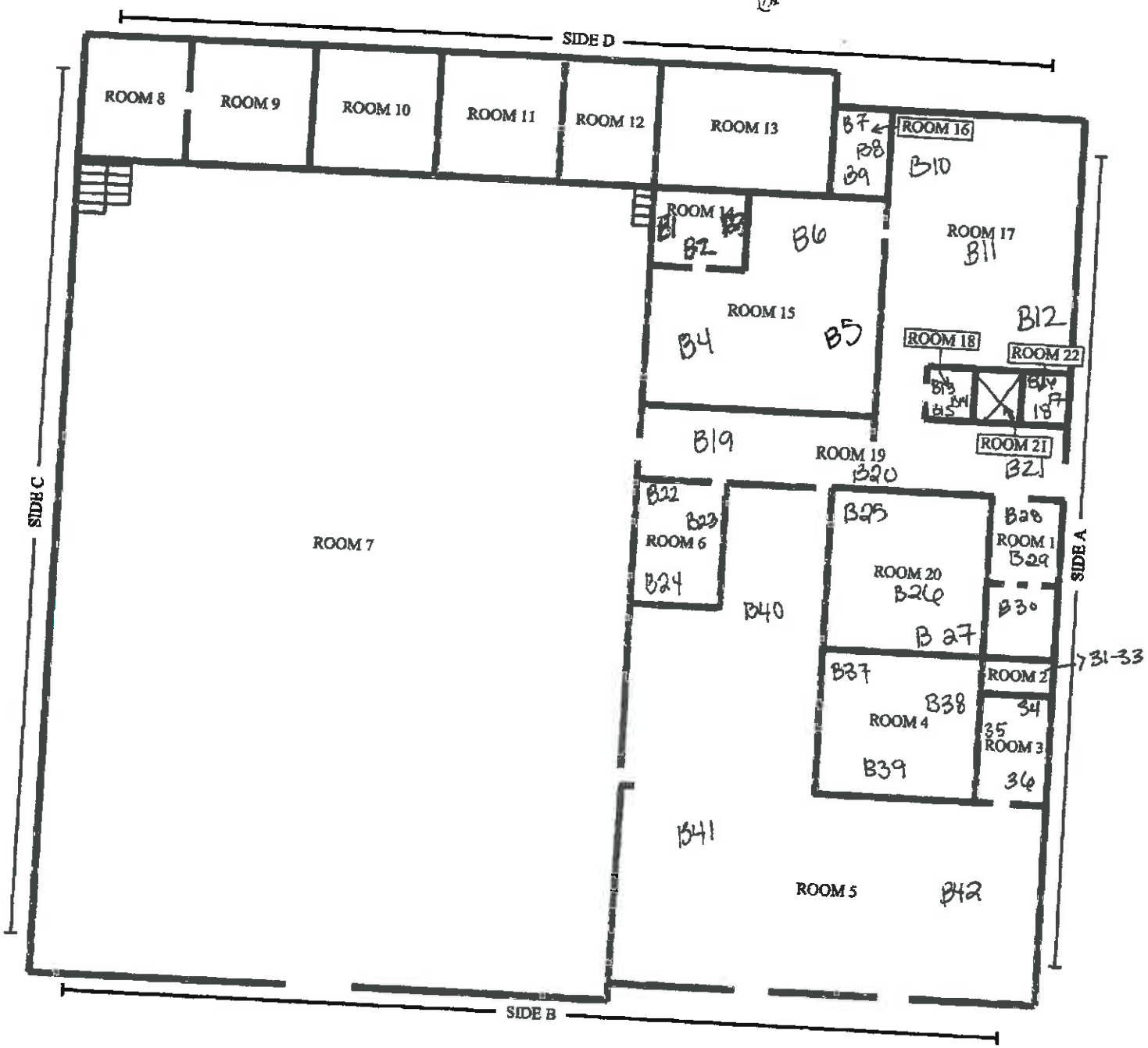
Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W2	0.000	5.020	5.055	100.7	4.912	97.9	2.9

Authorized Signature: Carter Cox

Carter Cox, Lab Tech

CLINTON ARMORY

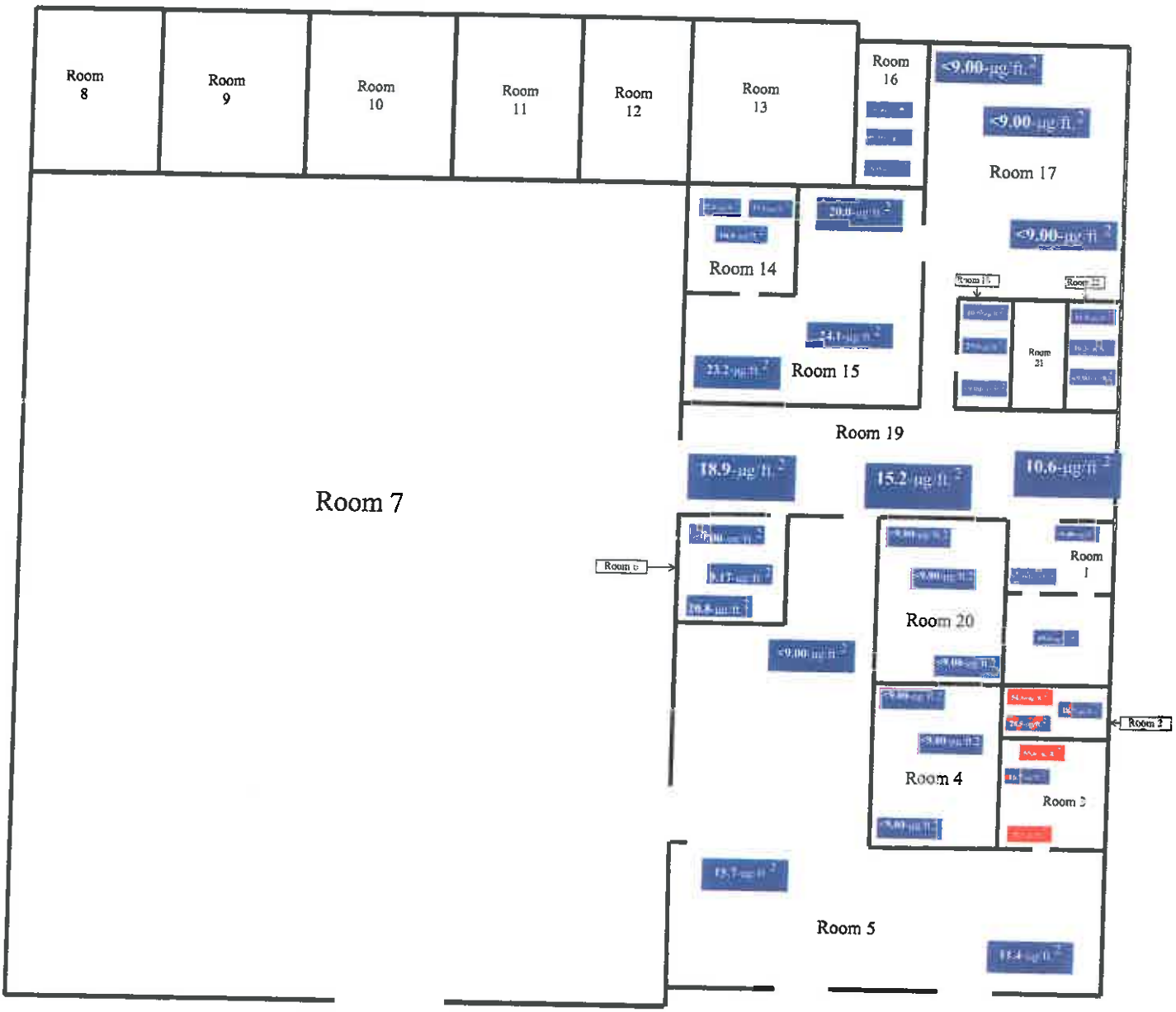
233188



N

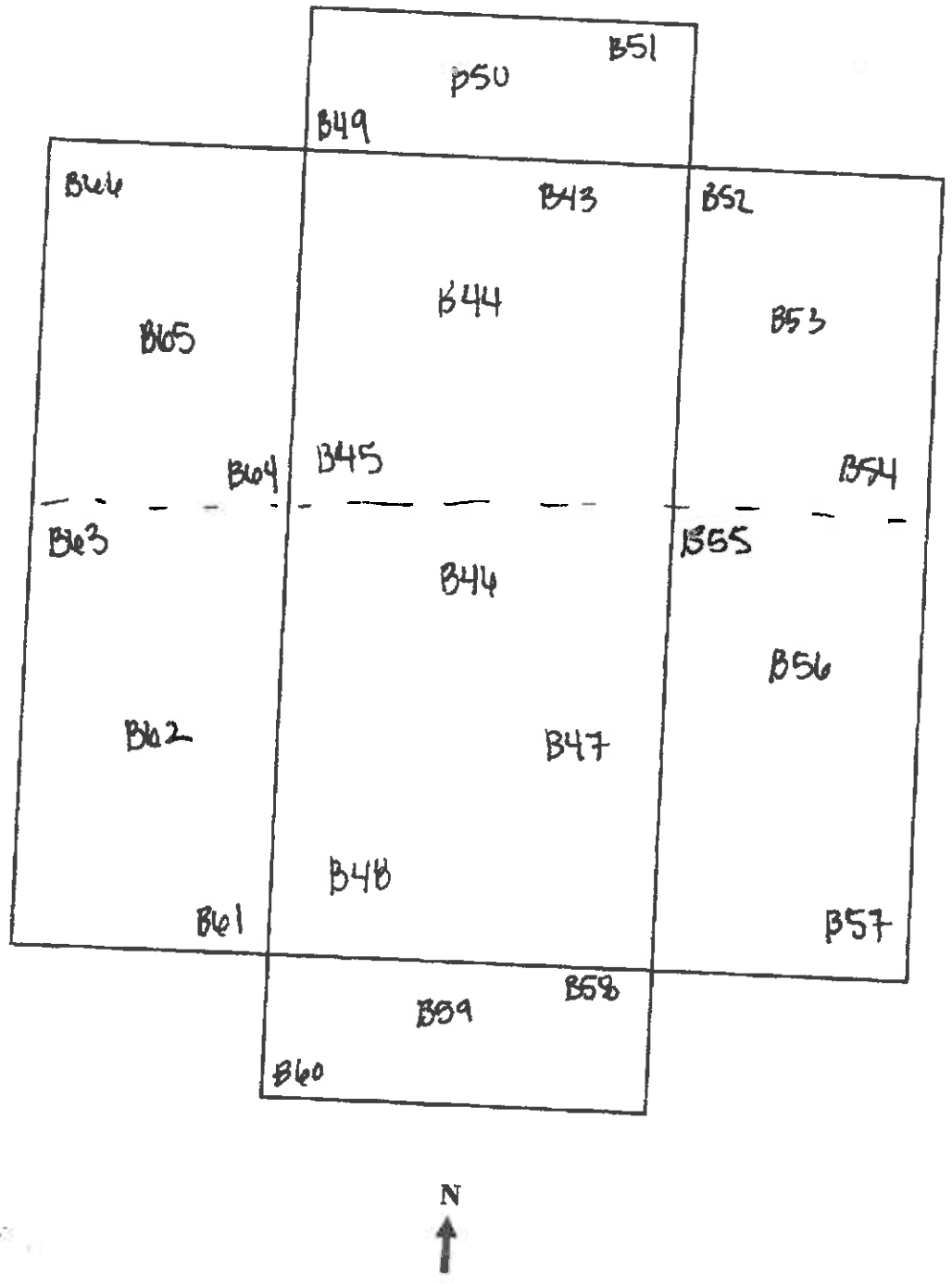
Clinton Armory

Indoor Firing Range
03-20-14



233188

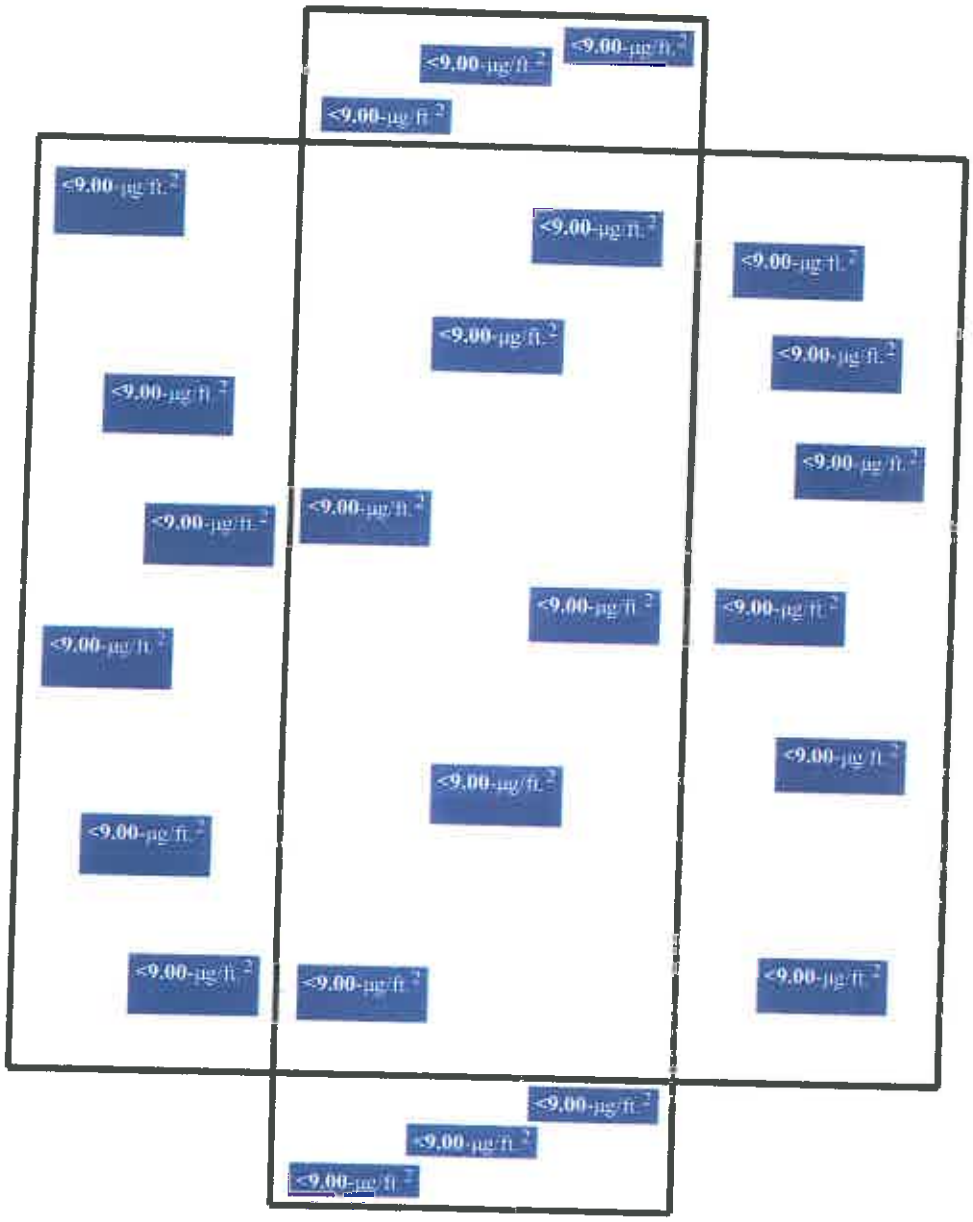
Clinton Armory
Firing Range Floor & Walls



Clinton Armory

Firing Range Floor & Walls

03-20-14



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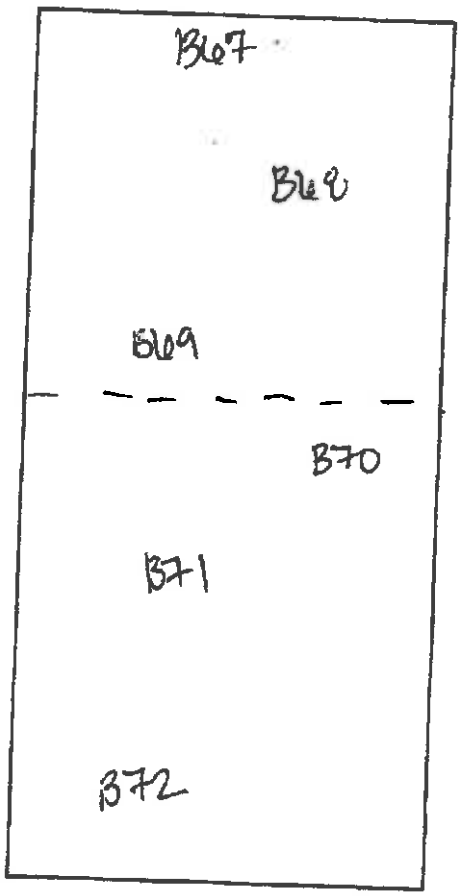
233188

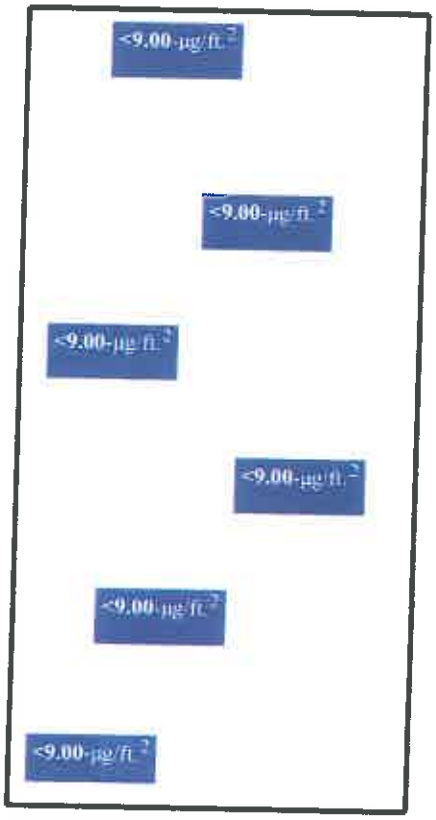
Clinton Armory
Firing Range Ceiling



Clinton Armory

Firing Range Ceiling

03-20-14



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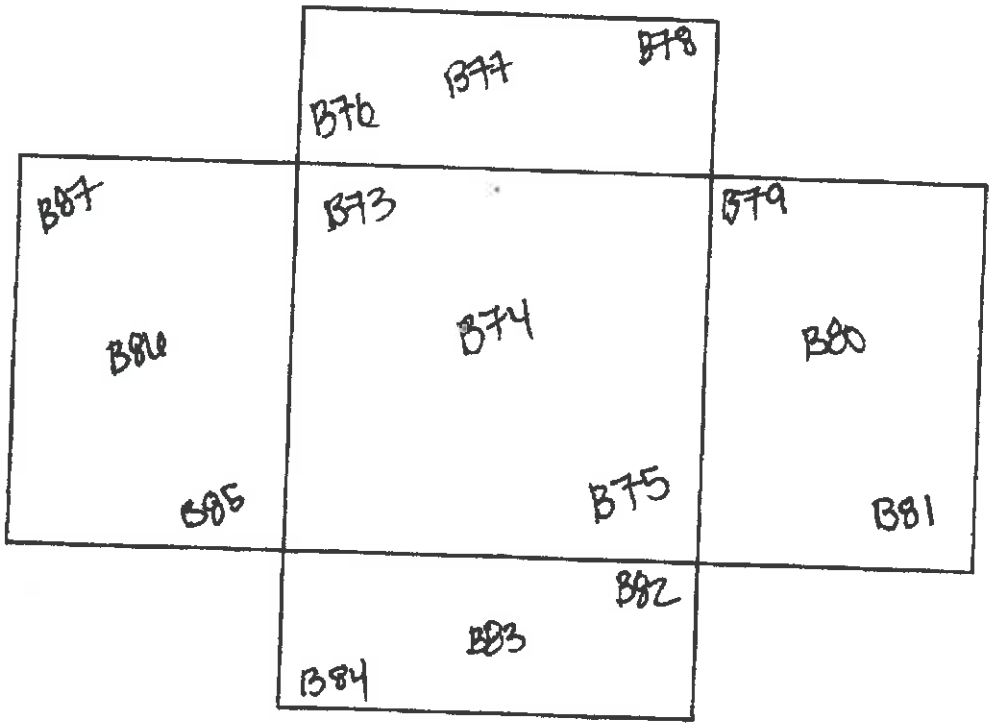
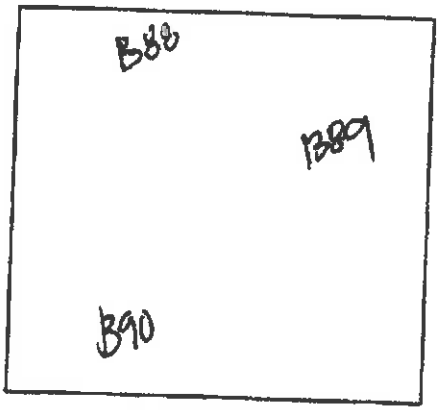
233188

Clinton Armory
Firing Range Side Room Floor & Walls



Clinton Armory
Firing Range Side Room Ceiling



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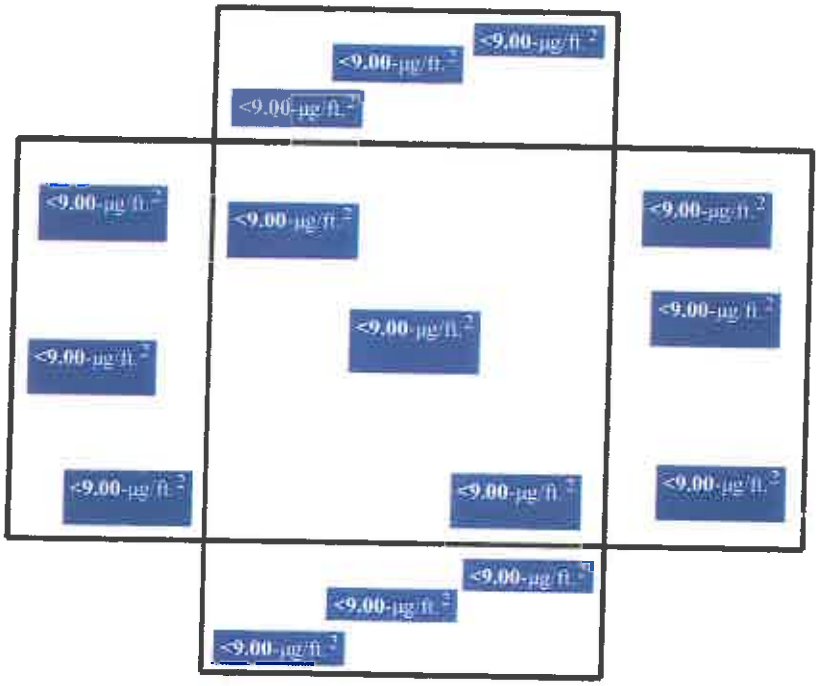
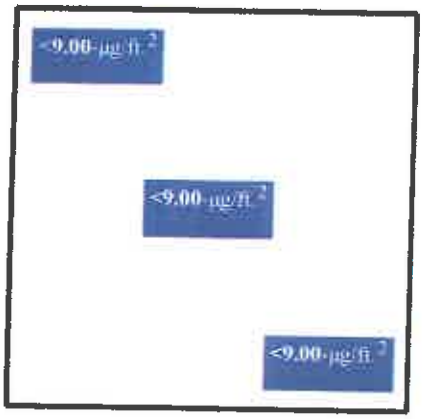
Clinton Armory

Firing Range Side Room Floor & Walls
03-20-14



Clinton Armory

Firing Range Side Room Ceiling
03-20-14



N

LEAD CHAIN OF CUSTODY

QUANTEM LABORATORIES
www.QuanTEM.com
2033 Heritage Park Drive, Oklahoma City, OK 73120-7502
(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No.	233825
	Accept / Reject

Contact Information		Project Information		Report Results (☑ one box)	
Company: Marshall Environmental	Phone: 405-364-0401	Project Name: Clinton Armory (04-4-14)			QuanTEM Website
Contact: Rachel Woods	Cell Phone: 405-315-4305	Project Location: Clinton, OK		Y	Other _____
Account #:	E-mail: marshenv@sbcglobal.net	Project ID: 0052-LBP-030614		dustin.davidson@deq.ok.gov	

Sampled By:	Name: Rachel Woods	Date: 4/4/14

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
[signature]	4/4/14 14:40		[signature]	4/4/14 2:45

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb			Units (☑ ONE box only): PPM	Wt %	mg / l	µg / ft²	µg / m³	mg / cm²
1	C1	Room 3 - Floor		1ft2	C	X						X		
2	C2	Room 2 - Floor		1ft2	C	X						X		
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME	
	Same Day
X	24 - Hour
	3 - Day
	5 - Day

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Environmental Chemistry Analysis Report

QuanTEM Set ID: 233825
Date Received: 04/04/14
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/7/2014

AIHA ID: 101352

Client: Marshall Environmental Management, Inc.
1601 SW 89th Street, Ste. A-100
Oklahoma City, OK 73159

Acct. No.: A331

Project: Clinton Armory (04-4-14)
Location: Clinton, OK
Project No.: 0052-LBP-030614

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	C1	Wipe	Lead	<9.00	9	ug/sq. Ft.	04/07/14 10:00	W NIOSH 9100
002	C2	Wipe	Lead	<9.00	9	ug/sq. Ft.	04/07/14 10:00	W NIOSH 9100

Authorized Signature: _____
Benton Miller, Analyst

Note: Sample results have not been corrected for blank values.

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Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified, EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

Supplemental Report
QAQC Results

QA ID: 11937
Test: Lead

Date: 4/7/2014
Matrix: Wipe

Lab Number: 233825
Approved By: Benton Miller
Date Approved: 4/7/2014

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.4	5.5
FCV	4.5	5.3	5.5
ICV	0.9	0.96	1.1
RLVS	0.144	0.195	0.216

Duplicate Data:

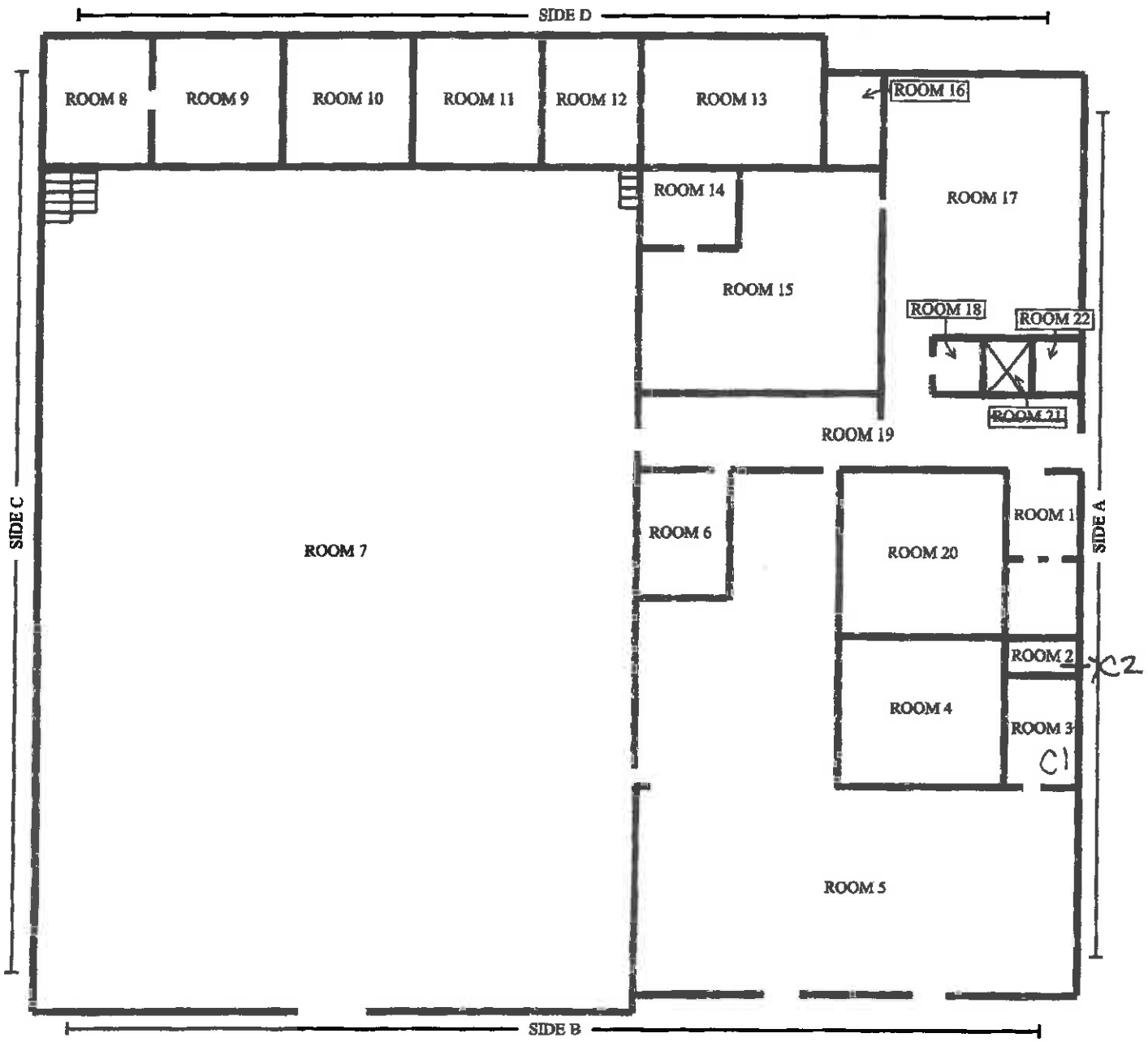
Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W3	0.000	5.000	5.438	108.8	5.527	110.5	1.6
MS-W2	0.000	5.010	5.103	101.9	5.104	101.9	0.0
MS-W1	0.000	5.422	5.112	94.3	5.683	104.8	10.6

Authorized Signature: _____

Benton Miller, Analyst

CLINTON ARMORY



N

N

Clinton Armory

Indoor Firing Range
04-04-14


OKLAHOMA
Lead-Based Paint
Certification
Rachel Woods
OKRASR13701
spector/Risk Assessor
DEQ

Department of Environmental Quality

This is to Certify That

CHARLES MARSHALL

has met the specifications of the Oklahoma Lead-Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13418

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 4/1/2014 Expires on: 3/31/2015

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

RACHEL WOODS

has met the specifications of the Oklahoma Lead Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13701

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: **4/1/2014** Expires on: **3/31/2015**

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

RACHEL WOODS

has met the specifications of the Oklahoma Lead Based Paint Management Act
and is certified as a Lead Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13701

This certificate is valid from the date of issuance and expires as prescribed by law

Issued on: 4/1/2013 Expires on: 3/31/2014

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

RACHEL WOODS

has met the specifications of the Oklahoma Lead Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13701

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 2/7/2013 Expires on: 3/31/2013

Division Director
Air Quality Division

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

CHARLES MARSHALL

has met the specifications of the California Lead-Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13418

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 8/10/2012 Expires on: 3/31/2013

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

CHARLES MARSHALL

has met the qualifications of the Oklahoma Lead-Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13418

This certificate is valid from the date of issuance and expires as provided by law

Issued on: 4/1/2013 Expires on: 3/31/2014

Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

JACOB JONES

has met the specifications of the Oklahoma Lead-Based Paint Management Act
and is certified as a Lead-Based Paint

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13-457

This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 4/1/2012 Expires on: 3/31/2013

Division Director
Air Quality Division

DEQ OKLAHOMA

Environmental Programs Manager
Air Quality Division


OKLAHOMA
Lead-Based Paint
Certification
Charles Marshall
OKRASR13418
Inspector/Risk Assessor
Expires March 31, 2015
DEQ