Former National Guard Armory
Muskogee, 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 Muskgoee with the Final Remediation Report for the former Muskogee 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 Muskogee 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 fire door insulation and floor tile mastic.
- Asbestos Abatement, including:
  - Removal and replacement of fire doors.
  - Removal of floor tile and mastic.

TARGETED BROWNFIELD ASSESSMENT

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

LEAD REMEDIATION

DEQ and its contractors completed the following activities:

- Lead-based paint (LBP) inspection
- Lead dust wipe sampling
- Soil sampling outside of firing range vent fan
- LBP abatement, including:
  - Removal of metal wall and trim in indoor firing range
- 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
- Proper disposal of associated waste

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

OKLA MILITARY DEPT
3501 MILITARY AVE N.E.
OKLA CITY, OKLA 73111

593079

State of Oklahoma, Muskogee County,
I hereby certify that this instrument
was filed for Record in my Office,
AT 11:15 A.M.
AUG 16 1976
and Recorded in Book 429 Page 331
By [illegible] Deputy

LEASE

This Lease, made and entered into this 1st day of August, 1976, by and between the City of Muskogee, Muskogee County, Oklahoma, a Municipal Corporation, hereinafter sometimes referred to as "Lessor", and the Oklahoma Military Department, a Department of the State of Oklahoma, hereinafter sometimes referred to as "Lessee",

W I T N E S S E T H:

WHEREAS, the City of Muskogee, by Resolution duly adopted in regular session of the City Council thereof on the 12 day of July, 1976, did authorize the making of the lease and the execution and delivery thereof by the proper Municipal officers:

NOW, THEREFORE, the Lessor, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration, receipt of which is hereby acknowledged, and in consideration of the conditions and covenants herein contained, does hereby demise and lease unto the Lessee all of that certain tract of land in Muskogee County, Oklahoma, particularly described as follows:

> A ten (10) acre tract of land situated at the Muskogee Davis Field Airport and being described as follows: Beginning at the Northeast corner of Section 26, Township 14 North, Range 18 East; thence, West and parallel to the South right-of-way line of the section line road for a distance of 1330 feet; thence, South 40 feet to the point of beginning; thence, South a distance of 538 feet; thence, West a distance of 809.7 feet; thence, North a distance of 538 feet; thence, East a distance of 809.7 feet to the point of beginning.

To have and to hold the above described premises, together

pare the surface of the premises, enclose the same, erect structures thereon, place fisctures thereon and use the same for military purposes. All such structures and fixtures placed thereon shall remain the property of the Lessee, and Lessee shall have the right to remove the same at any time prior to termination of this Lease; provided however, if such structures and fixtures are not removed by Lessee prior to termination of this Lease the same shall become the property of the Lessor.

3. The Lessee agrees to comply with all notice and airspace requirements of FAR Part 77.

4. The Lessee agrees not to engage in any activity or to permit ar allow others to engage in any activity on the leased premises that will interfere with or be a hazard to the flight or aircraft over or around the leased premises or to and from Davis Field Airport.

5. The Lessee agrees not to engage in any activity or allow or permit others to engage in any activity on the leased premises that will interfere with air navigation and communication facilities serving Davis Field Airport.

6. The Lessee agrees not to engage in any activity or to allow others to engage in any activity that will violate the zoning laws of the City of Muskogee with respect to Davis Field Airport.

7. The Lessee agrees not to erect or to allow others to erect structures or growth of natural objects that will constitute an obstruction to air navigation on the leased premises or in the area of Davis Field Airport.

8. The Lessee agrees not to erect or allow others to erect any structure on the leased premises above an elevation of 685 feet mean

or operation on Davis Field Airport.

10. It is underatood and agreed that this conveyance is granted to the Lessee by the Lessor for the purpose of constructing a National Guard facility, and further that said conveyance is conditioned and contingent upon the Lessee's construction of said National Guard facility within three (3) years of the execution hereof. That in the event the Lessee fails to commence said construction within three (3) years of the execution hereof that the Lessor shall have the immediate right of re-entry and possession of the leased premises.

IN WITNESS WHEREOF the Lessor has caused its Corporate name to be hereunto subscribed by its Mayor, its Corporate Seal to be affixed hereunto and attested, and the Lessee has caused its name to be subscribed by its chief executive officer, as of the day and year first above written.

CITY OF MUSKOGEE, OKLAHOMA

By _____
ROBERT COLLINS, MAYOR

ATTEST:

_____
MARY ROBERTS, CITY CLERK

(SEAL)

STATE OF OKLAHOMA)
) ss.
COUNTY OF MUSKOGEE)

Before me, the undersigned, a Notary Public in and for said

BOOK 1428 PAGE 338

THE OKLAHOMA MILITARY DEPARTMENT

By _____
MAJOR GENERAL JOHN COFFEY, JR.
ADJUTANT GENERAL OF OKLAHOMA

STATE OF OKLAHOMA)
) ss.
COUNTY OF OKLAHOMA)

Before me, the undersigned, a Notary Public in and for said County and State on this 5th day of August, 1976, personally appeared Major General John Coffey, Jr., Adjutant General of Oklahoma, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed, for the use and purpose therein set forth.

_____
NOTARY PUBLIC

My commission expires:

16 August 1979
(SEAL)

Approved and accepted by the Governor of the State of Oklahoma this 9th day of August, 1976.

_____
DAVID BOREN, GOVERNOR OF OKLAHOMA

ATTEST:

MUSKOGEE ARMORY

1/4" = 1'0"

5/1/77

W1
7118

I-2014-017360 Book 4416 Pg: 381
10/29/201412:17 pm Pg 0381-0383
Fee: $ 17.00 Doc: $ 0.00
Dianna Cope - Muskogee County Clerk
State of Oklahoma

CORRECTED LEGAL DESCRIPTION FOR BOOK 4321, PAGES 322-324
NOTICE OF REMEDIATION
FORMER MUSKOGEE ARMORY
MUSKOGEE, OKLAHOMA

LEGAL BASIS FOR NOTICE: The Oklahoma Department of Environmental Quality (DEQ) hereby files this Notice of Remediation pursuant to Oklahoma Statutes, 27A § 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.

The 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, Maintenance of said Engineering Controls herein described.

The Land Use Restrictions, Engineering Controls and Continuing Operation, 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 the 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.

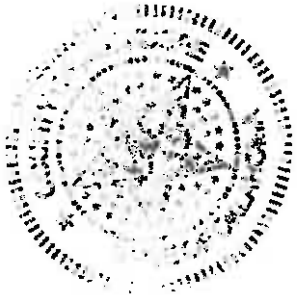
REASON FOR NOTICE: The below described Affected Property was contaminated with materials that required remediation pursuant to state and federal environmental laws and regulations. Sampling performed by DEQ contractors, conducted on October 25, 2011, indicated that there was asbestos, lead-based paint, and lead dust in the building.

AFFECTED PROPERTY: The Affected Property is the former Muskogee Armory located at 661 E. Davis Field Road, Muskogee, Muskogee County, Oklahoma, 74401.

The legal description is as follows:

A ten (10) acre tract of land situated at the Muskogee Davis Field Airport and being described as follows: Beginning at the Northeast corner of section 26, Township 14 North, Range 18 East; thence, West and parallel to the South right-of-way line of the section line road for a distance of 1330 feet; thence, South 40 feet to the point of beginning; thence, South a distance of 538 feet; thence, West a distance of 809.7 feet; thence North a distance of 538 feet; thence, East a distance of 809.7 feet to the point of beginning.

REMEDY: Remediation activities (Remedy) at the Affected Property included abatement of asbestos, lead-based paint and dust. The remedy was completed on October 23, 2012.



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

I-2014-017360 Book 4416 Pg: 382
10/29/201412:17 pm Pg 0381-0383
Fee: $ 17.00 Doc: $ 0.00
Dianna Cope - Muskogee County Clerk
State of Oklahoma

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.

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

a. No residential use of the property 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 a day in excess of 30 days per year.
b. The IFR should not be used as a child occupied facility. Child-occupied facilities include, but are not limited to, day-care centers, preschools, and kindergarten classrooms where a child 6 or under spends at least 6 hours per week.

These land use restrictions apply to the entirety of the Affected Property described herein above.

CHANGING LAND USE RESTRICTIONS: Changes to land use restrictions must be approved by the DEQ or its successor agency. The person requesting the change in land use must demonstrate to the 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.

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10/29/201412:17 pm Pg 0381-0383
Fee: $ 17.00 Doc: $ 0.00
Dianna Cope - Muskogee County Clerk
State of Oklahoma

The 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.

The 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, the DEQ will file a recordable notice of remediation pursuant to state law in the land records 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

8-6-14
Date

ACKNOWLEDGMENT

STATE OF OKLAHOMA
COUNTY OF OKLAHOMA

Before me, a Notary Public, in and for said County and State, on this 6th day of August, 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 10, 2017

Deborah Ray
Notary Public

MAINTENANCE PLAN

MAINTENANCE PLAN
FORMER MUSKOGEE ARMORY
MUSKOGEE, OKLAHOMA

The Armory located at 661 East Davis Field Road, Muskogee, 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 October 25, 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 October 23, 2012. 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:

- Firing Range – The walls and ceiling of the indoor firing range was cleaned and sealed with DEQ approved lead-based paint encapsulant. In addition, the floor was cleaned and sealed with acrylic sealant. This was done to remediate these surfaces below 40µg/SF for lead. These surfaces need to be resealed if encapsulant or sealant shows signs of deterioration, damage, or flaking.
- All overhead door frames 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 Muskogee 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:

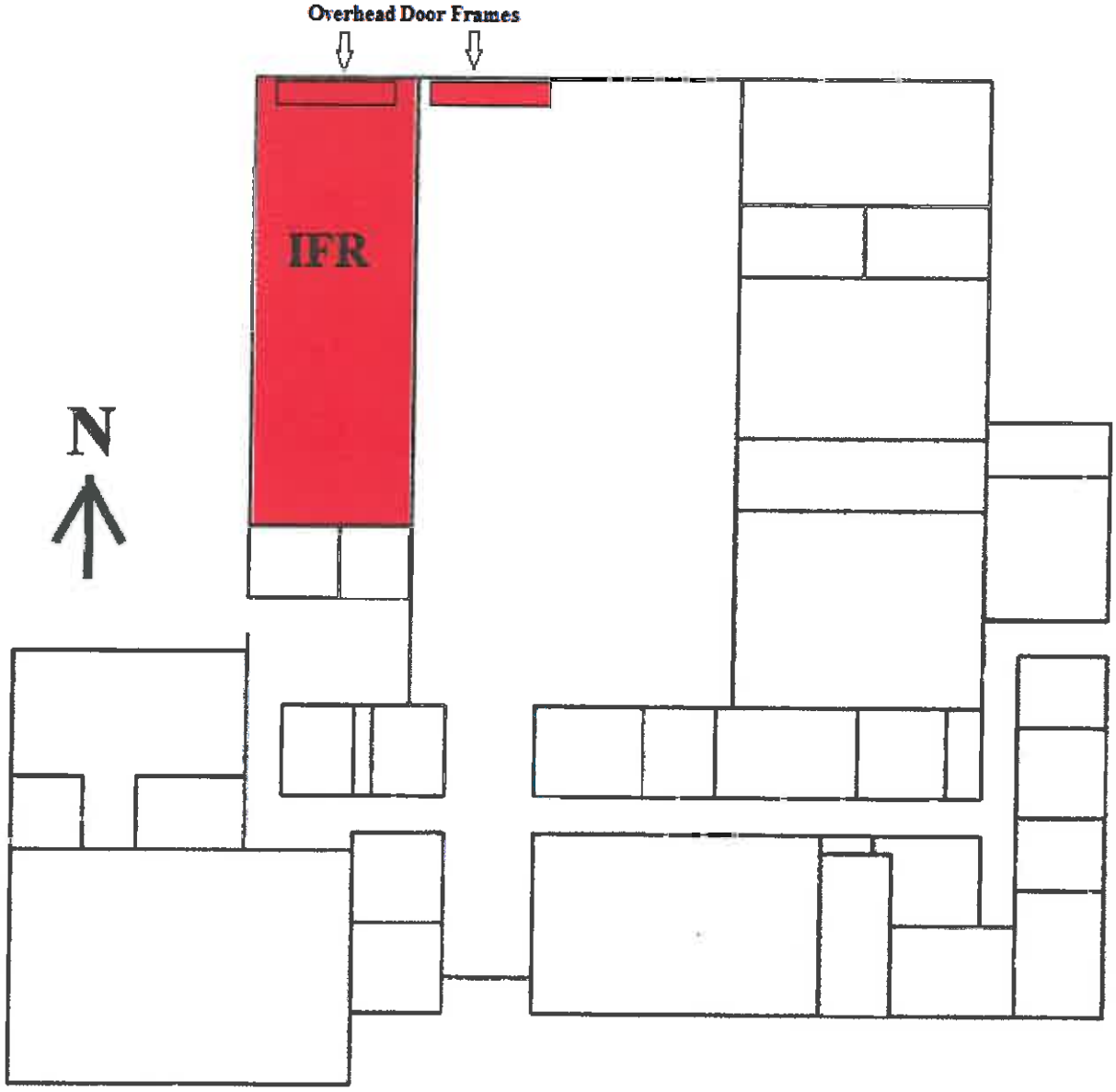
a. No residential, daily care, preK-12 schools, or edible agriculture uses of the Indoor Firing Range.

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

MUSKOGEE ARMORY

661 East Davis Field Road
Muskogee, Oklahoma 74403

December 15, 2011

Asbestos Inspection
Department of Central Services Contract Number: 12070-4

Services Provided For:
Oklahoma Department of Environmental Quality
Land Protection Division
Care Of: Dustin Davidson, Environmental Programs Specialist
Post Office Box: 1677
Oklahoma City, Oklahoma 73102
Phone: 405.702.5115
Email: dustindavidson@deq.ok.gov

Services Provided By:
Marshall Environmental Management, Incorporated
Attention: Jamie Marshall, Industrial Hygiene Associate
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 October 25, 2011 Marshall Environmental Management, Incorporated was contracted by the State of Oklahoma, Department of Central Services to conduct an Asbestos Inspection of the Muskogee Armory, located at Davis Field Airport in Muskogee, 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.

12/14/11

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/Management Planner*	*#703240*
	Project Designer	*#600556*
ODOL License	*Management Planner*	*#OK-MP130246*
	Project Designer	*#OK-PD140028*

12/14/11

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

EPA AHERA Certifications	*Asbestos Inspector/Management Planner*	*#703330*
	Project Designer	*#600539*
ODOL License	*Management Planner*	*#OK-MP400477*
	Project Designer	*#OK-PD400478*

LABORATORY ANALYSIS PERFORMED BY

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

MUSKOGEE ARMORY
ASBESTOS INSPECTION

EXECUTIVE SUMMARY

On October 25, 2011, Marshall Environmental Management, Incorporated (MEM) completed an Asbestos Inspection of the Muskogee Armory as part of the Oklahoma Department of Environmental Quality (ODEQ), Land Protection Division (LPD) Site Cleanup Assistance Program and Armory Cleanup Program. This Asbestos Inspection was accomplished so that 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 identified the presence of asbestos containing floor-tile mastic in rooms 21, 22 and 34 in addition to an asbestos containing fire door in room 34. 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.

The asbestos concentrations identified in the floor-tile mastic were greater than one percent (>1%). Furthermore, the floor-tile mastic is considered non-friable that which **cannot** be rendered to a powder via hand pressure. As a result, the asbestos containing floor-tile mastic is 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 ACM remains in good condition and undisturbed. If the floor-tile mastic remains in place, 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 the asbestos containing mastic. However, the asbestos containing mastic must be abated should any activities render or have the potential to render the material friable. To make certain that Occupational Safety and Health Administration (OSHA) and EPA compliant methods are utilized, an Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos containing mastic even though the abatement of Category I Non-Friable ACM is not regulated by the ODOL. Additionally, a National Emission Standard for Hazardous Air Pollutants (NESHAP) notification must be submitted to the Oklahoma Department of Environmental Quality (ODEQ) 10-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 feet or 35-cubic feet ($ft.^3$).

Moreover, the asbestos concentrations detected in the fire-door insulation are >1% and because this material is considered friable, that which **can** be rendered to a powder via hand pressure, the asbestos containing insulation is classified as a "Regulated" ACM. Although asbestos containing fire doors exist within the Amory, no abatement action is required provided the doors are repaired and remain undisturbed and in good condition. If the asbestos containing fire doors remain in place an Asbestos Management Plan should be written by a licensed, ODOL, Asbestos Management Planner for the purpose of preventing or assisting with activities that could disturb this ACM. The asbestos containing fire doors must be abated should any activities have the potential to render this ACM friable. Since the asbestos containing insulation is enclosed within the fire doors, an Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos containing fire doors to ensure that OSHA and EPA compliant methods are utilized even though the removal is not regulated by the ODOL. Although the abatement of the doors is considered non-regulated by the ODOL, which is treated as "Class II" work under OSHA, the fire doors must be disposed of in a hazardous waste landfill.

The remainder of this Report is comprised of the Sampling Strategy and Methodology, the Observations and Findings, Asbestos Response Actions, the Regulatory Review, Limitations of the Survey and the Appendix that includes the correlating chain of custody forms and the laboratory analyses.

SAMPLING STRATEGY AND METHODOLOGY

Each accessible area throughout the Armory was systematically inspected in order to collect samples of materials suspected of containing asbestos. The sample collection process includes thoroughly documenting 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 area 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

- 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 NESHAP Rules.

OBSERVATIONS AND FINDINGS

The Muskogee Armory is a one-story structure with a basement that was previously utilized as an Indoor Firing Range (IFR). The Armory was constructed circa 1977 with a brick façade and a flat roof on a concrete slab foundation. 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. Table II reflects the homogenous locations and quantities of the respective ACM.

TABLE I: ASBESTOS CONTAINING MATERIALS

SAMPLE	SAMPLE LOCATION	SAMPLE DESCRIPTION	ASBESTOS TYPE	%	MATERIAL TYPE	CONDITION
0158-34	ROOM 34	FLOOR-TILE MASTIC	CHRYSOTILE	5%	MISCELLANEOUS	GOOD
0158-36	ROOM 21	FLOOR-TILE MASTIC	CHRYSOTILE	5%	MISCELLANEOUS	GOOD
0158-38	ROOM 22	FLOOR-TILE MASTIC	CHRYSOTILE	5%	MISCELLANEOUS	GOOD
0158-40	ROOM 34	FIRE DOOR	CHRYSOTILE	15%	MISCELLANEOUS	SIGNIFICANTLY DAMAGED

TABLE II: ASBESTOS CONTAINING HOMOGENOUS LOCATIONS & QUANTITIES

SAMPLE LOCATION	SAMPLE DESCRIPTION	QUANTITIES	
ROOM 21	BLACK FLOOR-TILE MASTIC	132-ft^2	2546-ft^2
ROOM 34	BLACK FLOOR-TILE MASTIC	2150-ft^2	
ROOM 22	BLACK FLOOR-TILE MASTIC	264-ft^2	
ROOM 34	FIRE DOOR INSULATION	2-DOORS	

ASBESTOS RESPONSE ACTIONS

FLOOR-TILE MASTIC

- As long as the asbestos containing floor-tile mastic remains in good condition and undisturbed no action is required.
- An Asbestos Management Plan should be written if the floor-tile mastic remains in place.
- The asbestos containing floor-tile mastic must be abated should any activities render or have the potential to render the material friable.
- An Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos containing floor-tile mastic.
- A NESHAP notification must be submitted to the ODEQ 10-business days preceding the initiation of renovation and/or demolition activities where ACM are present in quantities that meet or exceed 160-ft.^{2}, 260-linear feet or 35-ft.^{3}.

FIRE DOOR INSULATION

- The abatement of the asbestos containing fire doors is not required given that the doors are repaired and remain undisturbed and in good condition.
- An Asbestos Management plan should be written if the fire doors remain in place.
- The fire doors must be abated should any activities have the potential to render the fire-door insulation friable.
- An Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos containing fire doors to ensure that OSHA and EPA compliant methods are utilized even though the removal is not regulated by the ODOL.
- The fire doors must be disposed of in a hazardous waste landfill.

REGULATORY REVIEW

Prior to 1980 asbestos was commonly utilized during construction in addition to being found in various building materials. In 1994, 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 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 Kindergarten 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-ft^2, 260-linear ft or 35-ft^3. 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 within the building constructions. 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 these Inspections are valid as of the date the Asbestos Inspections were 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 these Asbestos Inspections.

APPENDIX

CHAIN OF CUSTODY

ANALYTICAL RESULTS

LICENSURE

FLOOR PLAN DIAGRAM

DIGITAL PHOTOGRAPHS

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

Marshall Environmental Management, Inc.
Chain Of Custody

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0158-AB-102511	Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division	Client/Company	OK Department of Environmental Quality Land Protection Division
Project Name	Muskogee Armory Asbestos Inspection	Attention Title	Jason Doss Administrative Programs Officer II	Attention Title	Dustin Davidson Environmental Programs Specialist
Project Address	661 E. Davis Field Rd Muskogee, OK 74403	Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Site Contact	Garry Lynn, Airport Manager	Phone Number	405-522-4804	Phone Number	405-702-5115
Phone Number	918-577-8966	Fax Number	405-522-0051	Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email	glynn@datzfast.com	E-mail Address	jason_doss@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 Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0099	10/25/2011	PLM-1	Ceiling Tile	Room 1	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-2	Ceiling Tile	Room 2	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-3	Ceiling Tile	Room 19	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-4	Plaster Lath Ceiling	Room 6	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-5	Plaster Lath Ceiling	Room 7	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-6	Plaster Lath Ceiling	Room 8	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-7	Hard Pack	Room 3	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-8	Wall Material	Room 11 West	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-9	Wall Material	Room 11 East	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-10	Wall Material	Room 11 South	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos

Collected By	[signature]	(print)	Date	10/25/2011	Relinquished By	N/A	(print)	Date	N/A	Matrix	Media
		(signature)	Time	17:00			(signature)	Time		Air	MV / MP / ST / SW / TL
Received By		(print)	Date		Relinquished By		(print)	Date		Aqueous	Micro-Vacuum / Mold Plate / Spore Trap / Swab / Tape-Lift
		(signature)	Time				(signature)	Time		Bulk	
										Sludge	
										Soil	
										Solid/Bulk	

Turn-Around-Time			Condition Upon Receipt	Acceptable	Method of Shipment	J. Marshall	Page	1 of 5
X	Standard	5-7 Business Days						
	Rush	Next Day	Sample Notes	In Folder				
	Immediate	Same Day						

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Site Contact	Garry Lynn, Airport Manager	Phone Number	405-522-4804	Phone Number	405-702-5115
Phone Number	918-577-8966	Fax Number	405-522-0051	Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email	glynn@datzfast.com	E-mail Address	jason_doss@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 Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0099	10/25/2011	PLM-11	Ceiling Tile	Room 20-South	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-12	Ceiling Tile	Room 20-North	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-13	Ceiling Tile	Room 20-East	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-14	Bed Mud	Room 30-Southwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-15	Drywall	Room 30-Southwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-16	Bed Tape	Room 30-Southwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-17	Bed Mud	Room 30-Northwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-18	Drywall	Room 30-Northwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-19	Bed Tape	Room 30-Northwest	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-20	Bed Mud	Room 30-N Center	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos

Collected By	[signature]	(print)	Date	10/25/2011	Relinquished By	N/A	(print)	Date	N/A	Matrix	Media
		(signature)	Time	17:00			(signature)	Time		Air	MV / MP / ST / SW / TL
Received By		(print)	Date		Relinquished By		(print)	Date		Aqueous	
		(signature)	Time				(signature)	Time		Bulk	
										Sludge	
										Soil	
										Solid/Bulk	
										Page	2 of 5

Turn-Around-Time			Condition Upon Receipt	Acceptable	Method of Shipment	J. Marshall
X	Standard	5-7 Business Days				
	Rush	Next Day	Sample Notes	In Folder		
	Immediate	Same Day				

Micro-Vacuum | Mold Plate | Spore Trap | Swab | Tape-Lift

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Project Name	Muskogee Armory Asbestos Inspection	Attention Title	Jason Doss Administrative Programs Officer II	Attention Title	Dustin Davidson Environmental Programs Specialist
Project Address	661 E. Davis Field Rd Muskogee, OK 74403	Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Site Contact	Garry Lynn, Airport Manager	Phone Number	405-522-4804	Phone Number	405-702-5115
Phone Number	918-577-8966	Fax Number	405-522-0051	Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email	glynn@datzfast.com	E-mail Address	jason_doss@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 Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0099	10/25/2011	PLM-21	Drywall	Room 30-N Center	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-22	Bed Tape	Room 30-N Center	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-23	Cove base	Room 20-South	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-24	Cove base Mastic	Room 20-South	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-25	Cove base	Room 20-North	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-26	Cove base Mastic	Room 20-North	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-27	Cove base	Room 20-East	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-28	Cove base Mastic	Room 20-East	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-29	Hard Pack TSI	Room 29	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-30	Surfacing Material Wall & Ceiling	Room 30-North	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos

Collected By	[signature]	(print)	Date	10/25/2011	Relinquished By	N/A	(print)	Date	N/A	Matrix	Media
		(signature)	Time	17:00			(signature)	Time		Air	MV MP ST SW TL
Received By		(print)	Date		Relinquished By		(print)	Date		Aqueous	
		(signature)	Time				(signature)	Time		Bulk	
										Sludge	
										Soil	
										Solid/Bulk	
										Page	3 of 5

Turn-Around-Time			Condition Upon Receipt	Acceptable	Method of Shipment	J. Marshall
X	Standard	5-7 Business Days				
	Rush	Next Day	Sample Notes	In Folder		
	Immediate	Same Day				

Micro-Vacuum | Mold Plate | Spore Trap | Swab | Tape-Lift

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Project Identification	0158-AB-102511	Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division	Client/Company	OK Department of Environmental Quality Land Protection Division
Project Name	Muskogee Armory Asbestos Inspection	Attention Title	Jason Doss Administrative Programs Officer II	Attention Title	Dustin Davidson Environmental Programs Specialist
Project Address	661 E. Davis Field Rd Muskogee, OK 74403	Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Site Contact	Garry Lynn, Airport Manager	Phone Number	405-522-4804	Phone Number	405-702-5115
Phone Number	918-577-8966	Fax Number	405-522-0051	Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email	glynn@datzfast.com	E-mail Address	jason_doss@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 Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0099	10/25/2011	PLM-31	Surfacing Material Wall & Ceiling	Room 30-East	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-32	Surfacing Material Wall & Ceiling	Room 30-South	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-33	Beige Floor Tile	Room 34	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-34	Black Mastic	Room 34	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-35	Beige Floor Tile	Room 21	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-36	Black Mastic	Room 21	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-37	Beige Floor Tile	Room 22	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-38	Black Mastic	Room 22	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-39	Hard Pack	Center By Front Door	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-40	Fire Door	Room 34-East Bottom	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos

Collected By	[signature]	(print)	Date	10/25/2011	Relinquished By	N/A	(print)	Date	N/A	Matrix	Media
		(signature)	Time	17:00			(signature)	Time		Air	MV MP ST SW TL
Received By		(print)	Date		Relinquished By		(print)	Date		Aqueous	
		(signature)	Time				(signature)	Time		Bulk	
Turn-Around-Time										Sludge	
X	Standard	5-7 Business Days								Soil	
	Rush	Next Day								Solid/Bulk	
	Immediate	Same Day								Page	4 of 5

Micro-Vacuum | Mold Plate | Spore Trap | Swab | Tape-Lift

Condition Upon Receipt	Acceptable
Method of Shipment	J. Marshall
Sample Notes	In Folder

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0158-AB-102511	Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division	Client/Company	OK Department of Environmental Quality Land Protection Division
Project Name	Muskogee Armory Asbestos Inspection	Attention Title	Jason Doss Administrative Programs Officer II	Attention Title	Dustin Davidson Environmental Programs Specialist
Project Address	661 E. Davis Field Rd Muskogee, OK 74403	Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Site Contact	Garry Lynn, Airport Manager	Phone Number	405-522-4804	Phone Number	405-702-5115
Phone Number	918-577-8966	Fax Number	405-522-0051	Fax Number	
Mobile Number		Mobile Number		Mobile Number	
email	glynn@datzfast.com	E-mail Address	jason_doss@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 Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0099	10/25/2011	PLM-41	Fire Door	Room 34-East Top	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos
0099	10/25/2011	PLM-42	Fire Door	Room 34-East Center	Good	Bulk	N/A	N/A	N/A	PLM-Bulk Asbestos

Collected By	(signature)	(print) / (signature)	Date / Time	10/25/2011 / 17:00	Relinquished By	N/A	(print) / (signature)	Date / Time	N/A
Received By		(print) / (signature)	Date / Time		Relinquished By		(print) / (signature)	Date / Time	

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

Condition Upon Receipt: Acceptable

Method of Shipment: J. Marshall

Sample Notes: In Folder

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

Page 5 of 5

Bulk Asbestos Analysis

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PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0158-AB-102511	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Muskogee Armory Asbestos Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	661 East Davis Field Road Muskogee, OK 74403	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Gary Lynn, Airport Manager	Phone	405-522-4804	Phone	405-702-5115
Phone	918-577-8966	Fax	405-522-0051	Fax	
Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0099-102511-PLM-1	October 25, 2011	Ceiling Tile	COLOR	White		100%	Foam
		Room 1	CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0099-102511-PLM-2	October 25, 2011	Ceiling Tile	COLOR	White		100%	Foam
		Room 2	CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0099-102511-PLM-3	October 25, 2011	Ceiling Tile	COLOR	White		100%	Foam
		Room 19	CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0099-102511-PLM-4	October 25, 2011	Plaster Lath Ceiling	COLOR	Grey		50%	Calcareous Material
		Room 6	CONDITION	Good		50%	Aggregate
			TYPE	Miscellaneous			
			NOTE				
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED		
0099-102511-PLM-5	October 25, 2011	Plaster Lath Ceiling	COLOR	Grey		50%	Calcareous Material
		Room 7	CONDITION	Good		50%	Aggregate
			TYPE	Miscellaneous			
			NOTE				

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter 1, 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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PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0158-AB-102511	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Muskogee Armory Asbestos Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	661 East Davis Field Road Muskogee, OK 74403	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Gary Lynn, Airport Manager	Phone	405-522-4804	Phone	405-702-5115
Phone	918-577-8966	Fax	405-522-0051	Fax	
Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	0099-102511-PLM-6	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Plaster Lath Ceiling		COLOR	Grey
Plaster Layer		CONDITION	Good
Room 8		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
50%	Calcareous Material		
50%	Aggregate		

LAB LOG NUMBER	0099-102511-PLM-7	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Hard Pack		COLOR	Beige
Room 3		CONDITION	Good
		TYPE	Thermal System Insulation
		NOTE	
NO ASBESTOS DETECTED			
8%	Cellulose		
10%	Fibrous Glass		
82%	Calcareous Material		

LAB LOG NUMBER	0099-102511-PLM-8	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Wall Material		COLOR	White
Room 11 - West		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
90%	Cellulose		
10%	Calcareous Material		

LAB LOG NUMBER	0099-102511-PLM-9	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Wall Material		COLOR	White
Room 11 - East		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
90%	Cellulose		
10%	Calcareous Material		

LAB LOG NUMBER	0099-102511-PLM-10	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Wall Material		COLOR	White
Room 11 - South		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
90%	Cellulose		
10%	Calcareous Material		

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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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Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0158-AB-102511	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Muskogee Armory Asbestos Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	661 East Davis Field Road Muskogee, OK 74403	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact	Gary Lynn, Airport Manager	Phone	405-522-4804	Phone	405-702-5115
Phone	918-577-8966	Fax	405-522-0051	Fax	
Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-11	October 25, 2011	Ceiling Tile	COLOR	White	10%	Perlite
		Room 20 - South	CONDITION	Good	15%	Cellulose
			TYPE	Miscellaneous	20%	Fibrous Glass
			NOTE		55%	Calcareous Material
0099-102511-PLM-12	October 25, 2011	Ceiling Tile	COLOR	White	10%	Perlite
		Room 20 - North	CONDITION	Good	15%	Cellulose
			TYPE	Miscellaneous	20%	Fibrous Glass
			NOTE		55%	Calcareous Material
0099-102511-PLM-13	October 25, 2011	Ceiling Tile	COLOR	White	10%	Perlite
		Room 20 - East	CONDITION	Good	15%	Cellulose
			TYPE	Miscellaneous	20%	Fibrous Glass
			NOTE		55%	Calcareous Material
0099-102511-PLM-14	October 25, 2011	Bed Mud	COLOR	Beige	100%	Calcareous Material
		Room 30 - Southwest	CONDITION	Good		
			TYPE	Surfacing		
			NOTE			
0099-102511-PLM-15	October 25, 2011	Drywall	COLOR	White	5%	Cellulose
		Room 30 - Southwest	CONDITION	Good	95%	Calcareous Material
			TYPE	Miscellaneous		
			NOTE			

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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 89th Street, Suite A-100
Oklahoma City, OK 73159
Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

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Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	0099-102511-PLM-16	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bed Tape		COLOR	Beige
Room 30 - Southwest		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
100%	Cellulose		

LAB LOG NUMBER	0099-102511-PLM-17	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bed Mud		COLOR	Beige
Room 30 - Northwest		CONDITION	Good
		TYPE	Surfacing
		NOTE	
NO ASBESTOS DETECTED			
100%	Calcareous Material		

LAB LOG NUMBER	0099-102511-PLM-18	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Drywall		COLOR	White
Room 30 - Northwest		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
5%	Cellulose		
95%	Calcareous Material		

LAB LOG NUMBER	0099-102511-PLM-19	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bed Tape		COLOR	Beige
Room 30 - Northwest		CONDITION	Good
		TYPE	Miscellaneous
		NOTE	
NO ASBESTOS DETECTED			
100%	Cellulose		

LAB LOG NUMBER	0099-102511-PLM-20	DATE OF SAMPLING	October 25, 2011
SAMPLE DESCRIPTION/LOCATION		SAMPLE COMPOSITION	
Bed Mud		COLOR	Beige
Room 30 - N Center		CONDITION	Good
		TYPE	Surfacing
		NOTE	
NO ASBESTOS DETECTED			
100%	Calcareous Material		

Jaimie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 2011
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

Polarized Light Microscopy Asbestos Analysis Test Method:
40 CFR Chapter 1, 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 89th Street, Suite A-100
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Phone: (405) 616-0401 Fax: (405) 681-6753
marshenv@swbell.net

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Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-21	October 25, 2011	Drywall	COLOR	White	5%	Cellulose
		Room 30 - N Center	CONDITION	Good	95%	Calcareous Material
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-22	October 25, 2011	Bed Tape	COLOR	Beige	100%	Cellulose
		Room 30 - N Center	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-23	October 25, 2011	Cove base	COLOR	Black	100%	Rubber
		Room 20 - South	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-24	October 25, 2011	Cove base Mastic	COLOR	Brown	100%	Adhesive
		Room 20 - South	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-25	October 25, 2011	Cove base	COLOR	Black	100%	Rubber
		Room 20 - North	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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

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Phone	918-577-8966	Fax	405-522-0051	Fax	
Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-26	October 25, 2011	Cove base Mastic	COLOR	Brown	100%	Adhesive
		Room 20 - North	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-27	October 25, 2011	Cove base	COLOR	Black	100%	Rubber
		Room 20 - East	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-28	October 25, 2011	Cove base Mastic	COLOR	Brown	100%	Adhesive
		Room 20 - East	CONDITION	Good		
			TYPE	Miscellaneous		
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-29	October 25, 2011	Hard Pack	COLOR	Beige	8%	Cellulose
		Room 29	CONDITION	Good	10%	Fibrous Glass
			TYPE	Thermal System Insulation	82%	Calcareous Material
			NOTE			
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0099-102511-PLM-30	October 25, 2011	Surfacing Material	COLOR	White	100%	Calcareous Material
		Wall & Ceiling	CONDITION	Good		
		Room 30 - North	TYPE	Surfacing		
			NOTE			

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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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AIHA PAT ID# 102334

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Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION				
0099-102511-PLM-31	October 25, 2011	Surfacing Material	COLOR	White	NO ASBESTOS DETECTED		
		Wall & Ceiling	CONDITION	Good		100%	Calcareous Material
		Room 30 - East	TYPE	Surfacing			
			NOTE				

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION				
0099-102511-PLM-32	October 25, 2011	Surfacing Material	COLOR	White	NO ASBESTOS DETECTED		
		Wall & Ceiling	CONDITION	Good		100%	Calcareous Material
		Room 30 - South	TYPE	Surfacing			
			NOTE				

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION				
0099-102511-PLM-33	October 25, 2011	Floor Tile	COLOR	Beige	NO ASBESTOS DETECTED		
		Room 34	CONDITION	Good		100%	Vinyl Aggregate
			TYPE	Miscellaneous			
			NOTE				

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION					
0099-102511-PLM-34	October 25, 2011	Mastic under Floor Tile	COLOR	Black	5%	Chrysotile	95%	ASBESTOS DETECTED
		Room 34	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION				
0099-102511-PLM-35	October 25, 2011	Floor Tile	COLOR	Beige	NO ASBESTOS DETECTED		
		Room 21	CONDITION	Good		100%	Vinyl Aggregate
			TYPE	Miscellaneous			
			NOTE				

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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

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Cell		Other		Other	
email	glynn@datzfast.com	email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		ASBESTOS DETECTED
0099-102511-PLM-36	October 25, 2011	Mastic under Floor Tile	COLOR	Black	5% Chrysotile, 95% Tar
		Room 21	CONDITION	Good	
			TYPE	Miscellaneous	
			NOTE		
0099-102511-PLM-37	October 25, 2011	Floor Tile	COLOR	Beige	NO ASBESTOS DETECTED 100% Vinyl Aggregate
		Room 22	CONDITION	Good	
			TYPE	Miscellaneous	
			NOTE		
0099-102511-PLM-38	October 25, 2011	Mastic under Floor Tile	COLOR	Black	5% Chrysotile, 95% Tar
		Room 22	CONDITION	Good	
			TYPE	Miscellaneous	
			NOTE		
0099-102511-PLM-39	October 25, 2011	Hard Pack	COLOR	Beige	NO ASBESTOS DETECTED 8% Cellulose
		Center by Front Door	CONDITION	Good	10% Fibrous Glass
			TYPE	Thermal System Insulation	82% Calcareous Material
			NOTE		
0099-102511-PLM-40	October 25, 2011	Fire Door	COLOR	White	15% Amosite, 5% Fibrous Glass
		Room 34 - East Bottom	CONDITION	Significantly Damaged	80% Calcareous Material
			TYPE	Miscellaneous	
			NOTE		

Jaime Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 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	
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LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		15% ASBESTOS DETECTED			
0099-102511-PLM-41	October 25, 2011	Fire Door	COLOR	White	15%	Amosite	5%	Fibrous Glass
		Room 34 - East Top	CONDITION	Significantly Damaged			80%	Calcareous Material
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		15% ASBESTOS DETECTED			
0099-102511-PLM-42	October 25, 2011	Fire Door	COLOR	White	15%	Amosite	5%	Fibrous Glass
		Room 34 - East Center	CONDITION	Significantly Damaged			80%	Calcareous Material
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION	
			COLOR	
			CONDITION	
			TYPE	
			NOTE	

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION	
			COLOR	
			CONDITION	
			TYPE	
			NOTE	

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION	
			COLOR	
			CONDITION	
			TYPE	
			NOTE	

ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED
Jaime Marshall	[signature] Jamie Marshall, B.S., Industrial Hygiene Associate	November 2, 2011

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: $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: $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

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.**

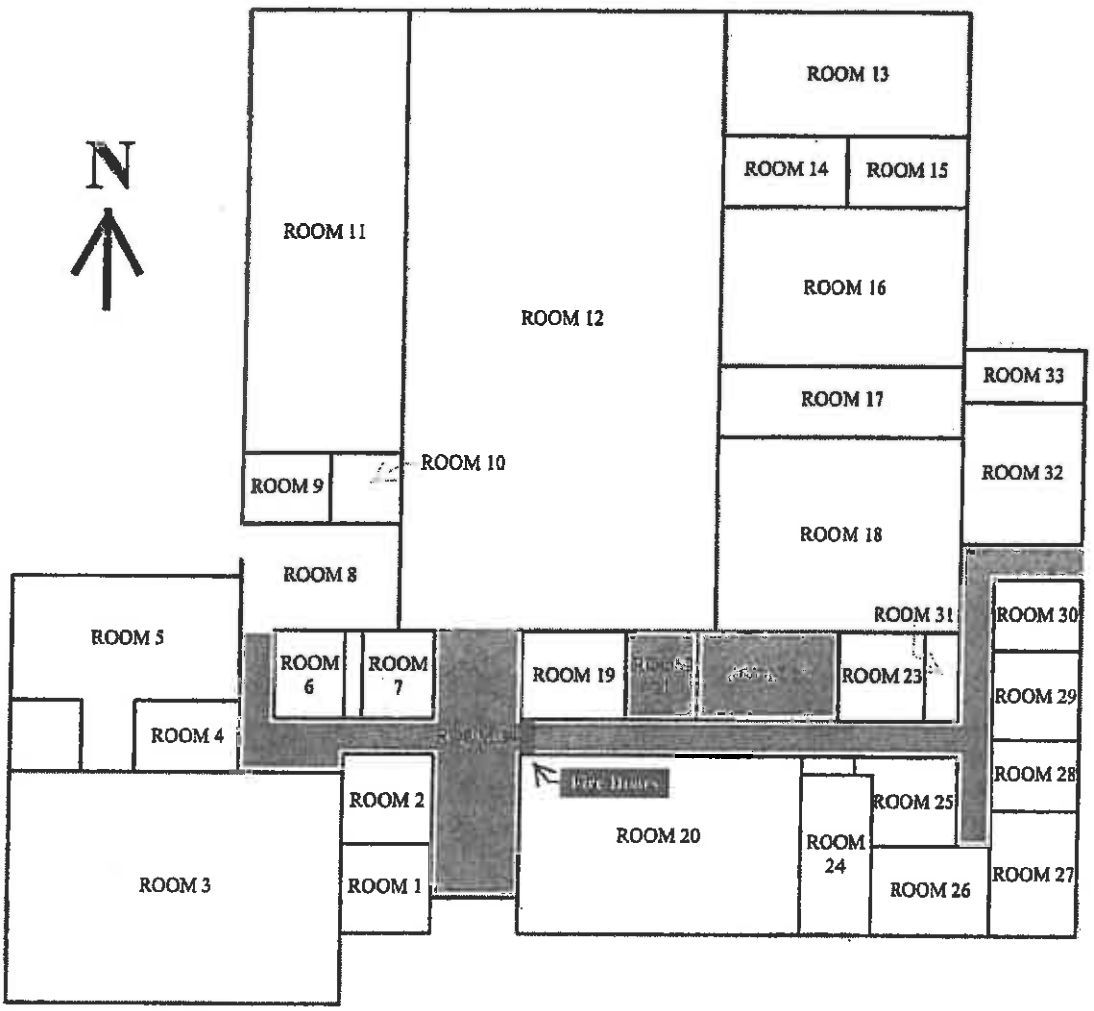
Mark Costello

MARK COSTELLO
Commissioner of Labor

June 01, 2011
Date of Issuance

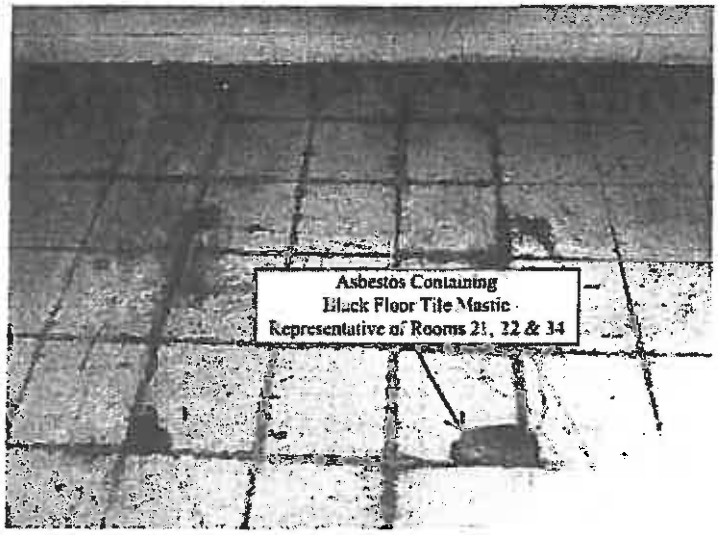
EXPIRES: June 01, 2012

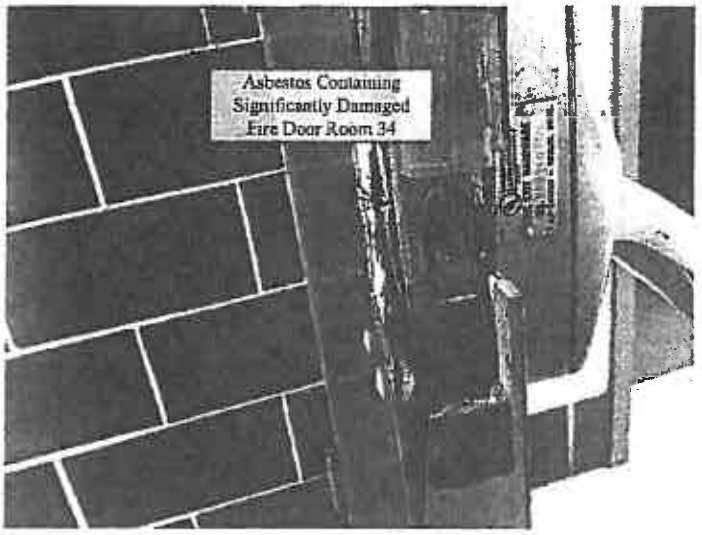
Muskogee Armory
Asbestos Containing Materials



Asbestos Containing Floor-Tile Mastic

Asbestos Containing Fire Door


Asbestos Containing
Black Floor Tile Mastic
Representative of Rooms 21, 22 & 34


Asbestos Containing
Significantly Damaged
Fire Door Room 34


Asbestos Containing
Fire Doors Room 34

MUSKOGEE ARMORY

661 East Davis Field Road
Muskogee, Oklahoma 74403

Lead-Based Paint Inspection & Settled Dust Sampling
Department of Central Services Contract Number: 12070-4

Services Provided For:
Oklahoma Department of Environmental Quality
Land Protection Division
Care Of: Dustin Davidson, Environmental Programs Specialist
Post Office Box: 1677
Oklahoma City, Oklahoma 73102
Phone: 405.702.5115
Email: dustindavidson@deq.ok.gov

Services Provided By:
Marshall Environmental Management, Incorporated
Attention: Jacob Jones, Industrial Hygiene Associate
1601 Southwest 89th Street, Suite A-100
Oklahoma City, Oklahoma 73159
Phone: 405.616.0401
Email: marshenv@swbell.net

TABLE OF CONTENTS

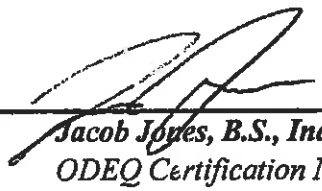
CERTIFICATION

This is to certify that, Marshall Environmental Management, Incorporated was contracted by the State of Oklahoma, Department of Central Services to conduct a Lead-Based Paint Inspection as well as collect samples of settled dust within the Muskogee Armory, located at 661 East Davis Field Road in Muskogee, Oklahoma, for the State of Oklahoma Department of Environmental Quality, Land Protection Division. All services performed on October 25, 2011 were conducted by a Certified, Oklahoma Department of Environmental Quality, Lead-Based Paint Inspector/Risk Assessor Jacob Jones, representative of Marshall Environmental Management, Incorporated, under the direction of Dr. Charles L. Marshall Certified Industrial Hygienist and President of Marshall Environmental Management, Incorporated. 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 Muskogee

CERTIFIED LEAD-BASED PAINT INSPECTOR/RISK ASSESSOR



12/12/11

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

MUSKOGEE ARMORY

LEAD-BASED PAINT INSPECTION & SETTLED DUST SAMPLING

EXECUTIVE SUMMARY

On October 25, 2011 Marshall Environmental Management, Incorporated (MEM) performed a Lead-Based Paint (LBP) Inspection in addition to collecting samples of settled dust as part of the Oklahoma Department of Environmental Quality (ODEQ), Land Protection Division (LPD) Site Cleanup Assistance Program and Armory Cleanup Program. This inspection and settled dust sampling were accomplished for the purpose of establishing the presence of LBP or lead-leaden dust so, if necessary, a strategy may be prepared for abatement activities. As such, the analytical data did identify LBP and lead-leaden dust on various surfaces throughout the Muskogee Armory (see Analytical Findings below). It should be noted that all of the windows throughout the Muskogee Armory had a factory finish and therefore not tested for LBP. Furthermore, all of the doors and doorjambs throughout the Armory were either negative for LBP or had a factory finish and were therefore not tested. 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 Housing and Urban Development (HUD) guidelines, "*Guidelines for the Evaluation of Lead-Based Paint Hazards in Housing,*" and 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 diagrams that illustrate 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 the HUD/EPA, "Lead-Based Paint" is characterized as paint that contains concentrations of lead greater than or equal to 1-milligram per square centimeter (≥1-mg/cm^2). The following table lists and categorizes the miscellaneous painted surfaces in which the lead concentrations exceeded 1-mg/cm^2 thus characterizing the paint as lead-based.

TABLE I: LEAD-BASE PAINTED MISCELLANEOUS SURFACES

LOCATION	SIDE	COMPONENT	SUBSTRATE	COLOR
EXTERIOR	C	OVERHEAD DOOR FRAME #1	METAL	PINK
EXTERIOR	C	OVERHEAD DOOR FRAME #2	METAL	YELLOW
INDOOR FIRING RANGE	A	FIRING WALL	METAL	WHITE
INDOOR FIRING RANGE	B	TRIM	METAL	WHITE

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 Indoor Firing Range (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. As such, the table below reflects the concentrations of lead in settled dust that were established throughout the Armory, the "Bolded" data represents lead concentrations which exceeded the respective action levels.

TABLE II: SURFACE WIPE ANALYSIS

SAMPLE ID	LOCATION	CONCENTRATION	CLEARANCE LEVEL
1	ROOM 1	<21.3	40-µg/ft^2
2	ROOM 2	<21.3	40-µg/ft^2
3	ROOM 3	27.8	40-µg/ft^2
4	ROOM 4	23.6	40-µg/ft^2
5	[redacted]	61.1	40-µg/ft^2
6	ROOM 6	<21.3	40-µg/ft^2
8	ROOM 8	<21.3	40-µg/ft^2
9	ROOM 9	<21.3	40-µg/ft^2
10	ROOM 10	28.0	40-µg/ft^2
11	[redacted]	239	200-µg/ft^2
12	IFR - CENTER	170	200-µg/ft^2

SAMPLE ID	LOCATION	CONCENTRATION	CLEARANCE LEVEL
13	IFR - NORTH	157	200-µg/ft²
14	[redacted]	56.9	40-µg/ft²
15	ROOM 12 – SOUTH	36.1	40-µg/ft²
16	ROOM 12 - CENTER	21.6	40-µg/ft²
17	ROOM 12 - NORTH	<16.0	40-µg/ft²
18	[redacted]	87.8	40-µg/ft²
19	[redacted]	104	40-µg/ft²
20	[redacted]	55.9	40-µg/ft²
21	[redacted]	72.2	40-µg/ft²
22	[redacted]	50.3	40-µg/ft²
23	ROOM 18	32.1	40-µg/ft²
24	ROOM 19	<21.3	40-µg/ft²
25	ROOM 20	21.3	40-µg/ft²
26	ROOM 21	<21.3	40-µg/ft²
27	ROOM 22	<21.3	40-µg/ft²
28	ROOM 23	<21.3	40-µg/ft²
29	ROOM 24	21.3	40-µg/ft²
30	ROOM 25	29.9	40-µg/ft²
31	ROOM 26	<21.3	40-µg/ft²
32	ROOM 27	<21.3	40-µg/ft²
33	ROOM 28	<21.3	40-µg/ft
34	ROOM 29	<21.3	40-µg/ft²
35	ROOM 30	<21.3	40-µg/ft²
36	[redacted]	[redacted]	40-µg/ft²
37	[redacted]	62.5	40-µg/ft²
38	[redacted]	[redacted]	40-µg/ft²
39	ROOM 34	26.1	40-µg/ft²

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 Muskogee Armory.

DISCLAIMER AND STANDARD OF CARE

The Muskogee Armory is a one-story structure with a brick façade and a flat roof that was constructed on a concrete slab circa 1977. 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 two 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

LEAD CONCENTRATIONS IN SURFACE DUST

CERTIFICATIONS

DIGITAL PHOTOGRAPHS

Muskogee Armory
661 East Davis Field Road
Muskogee, OK 74403

XRF Analytical Data

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

Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	Pbk
2	2011-10-25 14:11	mg / cm ^2			CALIBRATE		Positive	1.00	1.10 ± 0.10	0.70 ± 0.30
3	2011-10-25 14:11	mg / cm ^2			CALIBRATE		Positive	1.00	1.00 ± 0.10	0.90 ± 0.30
4	2011-10-25 14:12	mg / cm ^2			CALIBRATE		Positive	1.00	1.10 ± 0.10	0.70 ± 0.30
5	2011-10-25 14:20	mg / cm ^2	DOOR FRAME	METAL	B	PINK	Negative	1.00	< LOD : 0.04	< LOD : 3.30
6	2011-10-25 14:21	mg / cm ^2	TRANSFORMER	METAL	B	GREEN	Negative	1.00	< LOD : 0.15	< LOD : 3.30
7	2011-10-25 14:22	mg / cm ^2	OVERHEAD DOOR	METAL	C	PINK	Negative	1.00	< LOD : 0.05	< LOD : 2.71
8	2011-10-25 14:23	mg / cm ^2	OVERHEAD DOOR FRAME	METAL	C	PINK	Positive	1.00	< LOD : 7.35	< LOD : 14.25
9	2011-10-25 14:30	mg / cm ^2	DOOR GUARD	METAL	C	PINK	Negative	1.00	< LOD : 0.03	< LOD : 3.23
10	2011-10-25 14:30	mg / cm ^2	DOOR GUARD	METAL	C	YELLOW	Negative	1.00	< LOD : 0.06	< LOD : 3.37
11	2011-10-25 14:31	mg / cm ^2	OVERHEAD DOOR FRAME 2	METAL	C	YELLOW	Positive	1.00	< LOD : 12.30	< LOD : 9.90
12	2011-10-25 14:32	mg / cm ^2	OVERHEAD DOOR 2	METAL	C	YELLOW	Negative	1.00	< LOD : 0.39	< LOD : 2.48
13	2011-10-25 14:33	mg / cm ^2	TRIM	WOOD	C	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 1.51
14	2011-10-25 14:35	mg / cm ^2	DOOR	METAL	D	PINK	Negative	1.00	< LOD : 0.03	< LOD : 2.62
15	2011-10-25 14:36	mg / cm ^2	DOOR FRAME	METAL	D	PINK	Negative	1.00	< LOD : 0.14	< LOD : 2.70
16	2011-10-25 14:47	mg / cm ^2	FIRING WALL	METAL	RM 11 A	WHITE	Positive	1.00	< LOD : 8.10	< LOD : 13.35
17	2011-10-25 14:51	mg / cm ^2	WALL	METAL	RM 11 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
19	2011-10-25 14:51	mg / cm ^2	WALL	METAL	RM 11 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.80
20	2011-10-25 14:54	mg / cm ^2	TRIM	METAL	RM 11 B	WHITE	Positive	1.00	3.00 ± 1.70	< LOD : 6.90
21	2011-10-25 14:56	mg / cm ^2	DOOR TRACK	METAL	RM 11 C	BROWN	Negative	1.00	< LOD : 0.04	< LOD : 3.10
22	2011-10-25 14:56	mg / cm ^2	WALL	METAL	RM 11 D	BROWN	Negative	1.00	< LOD : 0.10	< LOD : 1.05
23	2011-10-25 14:58	mg / cm ^2	WALL	CONCRETE	RM 1 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
24	2011-10-25 14:59	mg / cm ^2	WALL	CONCRETE	RM 1 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
25	2011-10-25 14:59	mg / cm ^2	WALL	CONCRETE	RM 1 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
26	2011-10-25 14:59	mg / cm ^2	WALL	CONCRETE	RM 1 D	WHITE	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
27	2011-10-25 15:01	mg / cm ^2	WALL	METAL	RM 1 D	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.09
28	2011-10-25 15:01	mg / cm ^2	WALL	METAL	RM 2 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.84
29	2011-10-25 15:02	mg / cm ^2	WALL	CONCRETE	RM 2 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
30	2011-10-25 15:02	mg / cm ^2	WALL	CONCRETE	RM 2 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
31	2011-10-25 15:02	mg / cm ^2	WALL	CONCRETE	RM 2 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
32	2011-10-25 15:04	mg / cm ^2	WALL	CONCRETE	RM 3 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
33	2011-10-25 15:05	mg / cm ^2	WALL	CONCRETE	RM 3 B	RED	Negative	1.00	< LOD : 0.04	< LOD : 1.20
34	2011-10-25 15:05	mg / cm ^2	WALL	CONCRETE	RM 3 B	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.20
35	2011-10-25 15:05	mg / cm ^2	WALL	CONCRETE	RM 3 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
36	2011-10-25 15:06	mg / cm ^2	WALL	CONCRETE	RM 3 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
37	2011-10-25 15:06	mg / cm ^2	WALL	CONCRETE	RM 3 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.12
38	2011-10-25 15:10	mg / cm ^2	CEILING	METAL	RM 3 D	WHITE	Negative	1.00	< LOD : 0.20	< LOD : 2.91
39	2011-10-25 15:11	mg / cm ^2	WALL	CONCRETE	RM 4 A	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.65
40	2011-10-25 15:11	mg / cm ^2	WALL	CONCRETE	RM 4 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
41	2011-10-25 15:11	mg / cm ^2	WALL	CONCRETE	RM 4 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
42	2011-10-25 15:12	mg / cm ^2	WALL	CONCRETE	RM 4 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20

Muskogee Armory
661 East Davis Field Road
Muskogee, OK 74403

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

Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbL
43	2011-10-25 15:12	mg / cm ^2	CEILING	CONCRETE	RM 4	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
44	2011-10-25 15:12	mg / cm ^2	STALL	METAL	RM 4 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 2.44
45	2011-10-25 15:14	mg / cm ^2	WALL	CONCRETE	RM 5 A	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 2.29
46	2011-10-25 15:14	mg / cm ^2	WALL	CONCRETE	RM 5 B	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
47	2011-10-25 15:14	mg / cm ^2	WALL	CONCRETE	RM 5 C	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
48	2011-10-25 15:15	mg / cm ^2	WALL	CONCRETE	RM 5D	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
49	2011-10-25 15:15	mg / cm ^2	CEILING	METAL	RM 5	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
50	2011-10-25 15:16	mg / cm ^2	WALL	CONCRETE	RM 6 A	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
51	2011-10-25 15:16	mg / cm ^2	WALL	CONCRETE	RM 6 B	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.05
52	2011-10-25 15:17	mg / cm ^2	WALL	CONCRETE	RM 6 C	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
53	2011-10-25 15:17	mg / cm ^2	WALL	CONCRETE	RM 6 D	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 2.13
54	2011-10-25 15:17	mg / cm ^2	CEILING	CONCRETE	RM 6	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
55	2011-10-25 15:20	mg / cm ^2	WALL	CONCRETE	RM 7 A	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.05
56	2011-10-25 15:21	mg / cm ^2	WALL	CONCRETE	RM 7 B	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.05
57	2011-10-25 15:21	mg / cm ^2	WALL	CONCRETE	RM 7 C	YELLOW	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
58	2011-10-25 15:22	mg / cm ^2	WALL	CONCRETE	RM 7 B	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.65
59	2011-10-25 15:22	mg / cm ^2	WALL	CONCRETE	RM 7 C	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.95
60	2011-10-25 15:22	mg / cm ^2	WALL	CONCRETE	RM 7 D	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.05
61	2011-10-25 15:23	mg / cm ^2	WALL	CONCRETE	RM 8 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
62	2011-10-25 15:23	mg / cm ^2	WALL	CONCRETE	RM 8 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.65
63	2011-10-25 15:24	mg / cm ^2	WALL	CONCRETE	RM 8 C	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
64	2011-10-25 15:24	mg / cm ^2	WALL	CONCRETE	RM 8 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
65	2011-10-25 15:24	mg / cm ^2	PIPE	METAL	RM 8 A	BEIGE	Negative	1.00	< LOD : 0.79	< LOD : 2.82
67	2011-10-25 15:26	mg / cm ^2	PIPE	METAL	RM 9 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 2.27
68	2011-10-25 15:26	mg / cm ^2	PIPE	METAL	RM 9 B	BEIGE	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
69	2011-10-25 15:27	mg / cm ^2	PIPE	METAL	RM 9 C	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
70	2011-10-25 15:27	mg / cm ^2	PIPE	METAL	RM 9 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
72	2011-10-25 15:28	mg / cm ^2	CEILING	CONCRETE	RM 9	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
73	2011-10-25 15:28	mg / cm ^2	CEILING	CONCRETE	RM 10	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
74	2011-10-25 15:29	mg / cm ^2	CEILING	CONCRETE	RM 10 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
76	2011-10-25 15:29	mg / cm ^2	CEILING	CONCRETE	RM 10 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.90
77	2011-10-25 15:29	mg / cm ^2	CEILING	CONCRETE	RM 10 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.05
78	2011-10-25 15:30	mg / cm ^2	CEILING	CONCRETE	RM 10 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
80	2011-10-25 15:31	mg / cm ^2	WALL	CONCRETE	RM 12 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
81	2011-10-25 15:31	mg / cm ^2	WALL	CONCRETE	RM 12 B	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.20
82	2011-10-25 15:32	mg / cm ^2	WALL	CONCRETE	RM 12 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
83	2011-10-25 15:32	mg / cm ^2	CONDUIT	METAL	RM 12 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.12
84	2011-10-25 15:32	mg / cm ^2	WALL	CONCRETE	RM 12 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
85	2011-10-25 15:33	mg / cm ^2	WALL	CONCRETE	RM 12 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
86	2011-10-25 15:35	mg / cm ^2	WALL	CONCRETE	RM 13 A	BEIGE	Negative	1.00	< LOD : 0.03	1.10 ± 0.60

Muskogee Armory
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Muskogee, OK 74403

Marshall Environmental Management, Inc.
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Index	Date	Units	Component	Substrate	Side	Color	Results	Action Level	Pb%	Pb%
87	2011-10-25 15:25	mg / cm ^2	WALL	CONCRETE	RM 13 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
88	2011-10-25 15:35	mg / cm ^2	WALL	CONCRETE	RM 13 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
89	2011-10-25 15:36	mg / cm ^2	WALL	CONCRETE	RM 13 D	BEIGE	Negative	1.00	< LOD . 0.03	< LOD : 1.05
90	2011-10-25 15:37	mg / cm ^2	WALL	CONCRETE	RM 14 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
91	2011-10-25 15:37	mg / cm ^2	WALL	CONCRETE	RM 14 B	BEIGE	Negative	1.00	< LOD . 0 03	< LOD : 1.20
92	2011-10-25 15:37	mg / cm ^2	WALL	CONCRETE	RM 14 C	BEIGE	Negative	1.00	< LOD : 0.03	1.10 ± 0.60
94	2011-10-25 15.38	mg / cm ^2	WALL	CONCRETE	RM 14 D	BEIGE	Negative	1.00	< LOD : 0 03	< LOD : 1.05
95	2011-10-25 15:39	mg / cm ^2	CEILING	CONCRETE	RM 14	WHITE	Negative	1.00	< LOD : 0.03	1.20 ± 0.40
96	2011-10-25 15:40	mg / cm ^2	WALL	CONCRETE	RM 15 A	BEIGE	Negative	1.00	< LOD : 0 03	< LOD : 1.05
97	2011-10-25 15:40	mg / cm ^2	WALL	CONCRETE	RM 15 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
98	2011-10-25 15:41	mg / cm ^2	WALL	CONCRETE	RM 15 C	BEIGE	Negative	1.00	< LOD : 0.03	1.10 ± 0.60
99	2011-10-25 15:41	mg / cm ^2	WALL	CONCRETE	RM 15 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
101	2011-10-25 15:41	mg / cm ^2	CEILING	CONCRETE	RM 15	WHITE	Negative	1.00	< LOD . 0.03	< LOD : 1.05
102	2011-10-25 15:42	mg / cm ^2	VAULT DOOR	METAL	RM 15 A	BLUE	Negative	1.00	0.30 ± 0.18	< LOD : 3.60
103	2011-10-25 15:43	mg / cm ^2	VAULT DOOR FRAME	METAL	RM 15 A	BLUE	Negative	1.00	0.40 ± 0.20	< LOD : 3.60
104	2011-10-25 15:43	mg / cm ^2	WALL	CONCRETE	RM 16 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
105	2011-10-25 15:44	mg / cm ^2	WALL	CONCRETE	RM 16 B	WHITE	Negative	1.00	< LOD . 0.03	< LOD : 1.20
106	2011-10-25 15:44	mg / cm ^2	WALL	CONCRETE	RM 16 C	WHITE	Negative	1.00	< LOD : 0.03	1.00 ± 0.60
107	2011-10-25 15 44	mg / cm ^2	WALL	CONCRETE	RM 16 D	WHITE	Negative	1.00	< LOD . 0.03	1.00 ± 0.60
108	2011-10-25 15:46	mg / cm ^2	WALL	CONCRETE	RM 17 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
109	2011-10-25 15 46	mg / cm ^2	WALL	CONCRETE	RM 17 B	WHITE	Negative	1 00	< LOD : 0 03	1.20 ± 0 50
110	2011-10-25 15:47	mg / cm ^2	WALL	CONCRETE	RM 17 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
111	2011-10-25 15:47	mg / cm ^2	WALL	CONCRETE	RM 17 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
112	2011-10-25 15:47	mg / cm ^2	CEILING	CONCRETE	RM 17 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
113	2011-10-25 15:48	mg / cm ^2	CABINET	METAL	RM 17 B	GREY	Negative	1.00	< LOD : 0.20	< LOD . 3 46
114	2011-10-25 15:49	mg / cm ^2	VAULT DOOR	METAL	RM 17 S	GREY	Negative	1.00	0.50 ± 0.30	< LOD : 3.45
115	2011-10-25 15 50	mg / cm ^2	VAULT DOOR FRAME	METAL	RM 17 S	GREY	Negative	1.00	0.60 ± 0.30	< LOD : 3.75
116	2011-10-25 15:50	mg / cm ^2	WALL	CONCRETE	RM 18 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
117	2011-10-25 15:51	mg / cm ^2	WALL	CONCRETE	RM 18 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
118	2011-10-25 15:51	mg / cm ^2	WALL	CONCRETE	RM 18 C	WHITE	Negative	1.00	< LOD . 0.03	< LOD : 1.20
119	2011-10-25 15:51	mg / cm ^2	WALL	CONCRETE	RM 18 D	WHITE	Negative	1.00	< LOD . 0.08	< LOD : 1.05
120	2011-10-25 15:51	mg / cm ^2	CEILING	METAL	RM 18 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
121	2011-10-25 15:53	mg / cm ^2	WALL	CONCRETE	RM 19 A	WHITE	Negative	1.00	< LOD . 0 03	< LOD : 1.80
122	2011-10-25 15.53	mg / cm ^2	WALL	CONCRETE	RM 19 B	WHITE	Negative	1.00	< LOD : 0 03	< LOD . 1.05
123	2011-10-25 15 53	mg / cm ^2	WALL	CONCRETE	RM 19 C	RED	Negative	1.00	0.30 ± 0.14	< LOD . 1.20
124	2011-10-25 15:54	mg / cm ^2	WALL	CONCRETE	RM 19 D	RED	Negative	1.00	< LOD : 0 03	1 00 ± 0.60
125	2011-10-25 15:55	mg / cm ^2	WALL	CONCRETE	RM 20 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
126	2011-10-25 15:55	mg / cm ^2	WALL	CONCRETE	RM 20 B	WHITE	Negative	1.00	< LOD : 0.06	< LOD : 1.05
127	2011-10-25 15:55	mg / cm ^2	WALL	CONCRETE	RM 20 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
128	2011-10-25 15:55	mg / cm ^2	WALL	CONCRETE	RM 20 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05

Muskogee Armory
661 East Davis Field Road
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Marshall Environmental Management, Inc.
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Index	Time	Units	Component	Substrate	Site	Color	Results	Action Level	Pb	Pb%
129	2011-10-25 15:56	mg / cm ^2	WALL	CONCRETE	RM 21 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.20
130	2011-10-25 15:57	mg / cm ^2	WALL	CONCRETE	RM 21 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
131	2011-10-25 15:57	mg / cm ^2	WALL	CONCRETE	RM 21 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.20
132	2011-10-25 15:57	mg / cm ^2	WALL	CONCRETE	RM 21 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.90
133	2011-10-25 15:59	mg / cm ^2	WALL	CONCRETE	RM 22 A	BEIGE	Negative	1.00	< LOD : 0.03	1.10 ± 0.60
134	2011-10-25 15:59	mg / cm ^2	WALL	CONCRETE	RM 22 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
135	2011-10-25 15:59	mg / cm ^2	WALL	CONCRETE	RM 22 C	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
136	2011-10-25 16:00	mg / cm ^2	WALL	DRYWALL	RM 22 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
137	2011-10-25 16:01	mg / cm ^2	WALL	CONCRETE	RM 23 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
138	2011-10-25 16:02	mg / cm ^2	WALL	DRYWALL	RM 23 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 2.08
139	2011-10-25 16:02	mg / cm ^2	WALL	CONCRETE	RM 23 C	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
140	2011-10-25 16:03	mg / cm ^2	WALL	CONCRETE	RM 23 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
141	2011-10-25 16:05	mg / cm ^2	WALL	CONCRETE	RM 24 A	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
142	2011-10-25 16:05	mg / cm ^2	WALL	CONCRETE	RM 24 B	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
143	2011-10-25 16:06	mg / cm ^2	WALL	CONCRETE	RM 24 C	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.85
144	2011-10-25 16:06	mg / cm ^2	WALL	CONCRETE	RM 24 D	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
145	2011-10-25 16:07	mg / cm ^2	WALL	CONCRETE	RM 25 A	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.95
146	2011-10-25 16:07	mg / cm ^2	WALL	CONCRETE	RM 25 B	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 2.12
147	2011-10-25 16:07	mg / cm ^2	WALL	CONCRETE	RM 25 C	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.20
148	2011-10-25 16:07	mg / cm ^2	WALL	CONCRETE	RM 25 D	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 2.14
149	2011-10-25 16:08	mg / cm ^2	WALL	CONCRETE	RM 26 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
150	2011-10-25 16:09	mg / cm ^2	WALL	CONCRETE	RM 26 B	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.05
151	2011-10-25 16:09	mg / cm ^2	WALL	CONCRETE	RM 26 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
152	2011-10-25 16:09	mg / cm ^2	WALL	CONCRETE	RM 26 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
153	2011-10-25 16:10	mg / cm ^2	WALL	CONCRETE	RM 27 A	YELLOW	Negative	1.00	< LOD : 0.04	< LOD : 2.22
154	2011-10-25 16:10	mg / cm ^2	WALL	CONCRETE	RM 27 A	BLUE	Negative	1.00	< LOD : 0.03	< LOD : 1.85
155	2011-10-25 16:11	mg / cm ^2	WALL	CONCRETE	RM 27 C	BLUE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
156	2011-10-25 16:11	mg / cm ^2	WALL	CONCRETE	RM 27 D	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.80
157	2011-10-25 16:12	mg / cm ^2	WINDOW	WOOD	RM 27 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
158	2011-10-25 16:12	mg / cm ^2	WINDOW	WOOD	RM 27 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.95
159	2011-10-25 16:13	mg / cm ^2	WALL	CONCRETE	RM 28 A	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.85
160	2011-10-25 16:13	mg / cm ^2	WALL	CONCRETE	RM 28 B	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
161	2011-10-25 16:13	mg / cm ^2	CABINET	WOOD	RM 28 B	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.62
162	2011-10-25 16:13	mg / cm ^2	WALL	CONCRETE	RM 28 C	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
163	2011-10-25 16:14	mg / cm ^2	WALL	CONCRETE	RM 28 D	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.20
164	2011-10-25 16:14	mg / cm ^2	WALL	CONCRETE	RM 29 A	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.80
165	2011-10-25 16:15	mg / cm ^2	WALL	CONCRETE	RM 29 B	YELLOW	Negative	1.00	< LOD : 0.08	< LOD : 1.84
166	2011-10-25 16:15	mg / cm ^2	WALL	CONCRETE	RM 29 B	BLACK	Negative	1.00	0.50 ± 0.10	< LOD : 1.20
167	2011-10-25 16:15	mg / cm ^2	WALL	CONCRETE	RM 29 C	YELLOW	Negative	1.00	< LOD : 0.04	< LOD : 1.20
168	2011-10-25 16:16	mg / cm ^2	WALL	CONCRETE	RM 29 D	YELLOW	Negative	1.00	0.10 ± 0.05	< LOD : 1.20

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Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	Pb	Pb/K
169	2011-10-25 16:16	mg / cm ^2	WALL	CONCRETE	RM 30 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.20
170	2011-10-25 16:17	mg / cm ^2	WALL	CONCRETE	RM 30 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
171	2011-10-25 16:17	mg / cm ^2	WALL	CONCRETE	RM 30 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
172	2011-10-25 16:17	mg / cm ^2	WALL	CONCRETE	RM 30 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
173	2011-10-25 16:17	mg / cm ^2	SHELF	WOOD	RM 30 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.95
174	2011-10-25 16:20	mg / cm ^2	FLOOR	CONCRETE	RM 31	BROWN	Negative	1.00	< LOD : 0.04	< LOD : 1.35
175	2011-10-25 16:20	mg / cm ^2	WALL	CONCRETE	RM 31 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.95
176	2011-10-25 16:20	mg / cm ^2	WALL	CONCRETE	RM 31 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
177	2011-10-25 16:21	mg / cm ^2	WALL	CONCRETE	RM 31 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 1.20
178	2011-10-25 16:21	mg / cm ^2	WALL	CONCRETE	RM 31 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.80
179	2011-10-25 16:22	mg / cm ^2	PIPE	METAL	RM 32	RED	Negative	1.00	< LOD : 0.03	< LOD : 3.65
180	2011-10-25 16:23	mg / cm ^2	CABINET	WOOD	RM 32 C	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 1.51
181	2011-10-25 16:25	mg / cm ^2	WALL	CONCRETE	RM 34 D	ORANGE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
182	2011-10-25 16:25	mg / cm ^2	WALL	CONCRETE	RM 34 A	ORANGE	Negative	1.00	< LOD : 0.03	< LOD : 1.20
184	2011-10-25 16:26	mg / cm ^2	WALL	CONCRETE	RM 34 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 1.05
186	2011-10-25 16:27	mg / cm ^2	WALL	CONCRETE	RM 34 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
187	2011-10-25 16:28	mg / cm ^2	WALL	CONCRETE	RM 34 C	BLUE	Negative	1.00	< LOD : 0.03	< LOD : 2.29
188	2011-10-25 16:28	mg / cm ^2	WALL	CONCRETE	RM 34 C	GOLD	Negative	1.00	< LOD : 0.03	< LOD : 2.61
189	2011-10-25 16:29	mg / cm ^2	WALL	CONCRETE	RM 34 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.65
190	2011-10-25 16:32	mg / cm ^2	FLOOR	CONCRETE	RM 34 A	RED	Negative	1.00	< LOD : 0.03	< LOD : 1.05
191	2011-10-25 16:33	mg / cm ^2	FLOOR	CONCRETE	RM 34 A	YELLOW	Negative	1.00	< LOD : 0.03	< LOD : 1.20
192	2011-10-25 16:50	mg / cm ^2	DOOR JAMB	METAL	1	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.14
193	2011-10-25 16:50	mg / cm ^2	DOOR JAMB	METAL	2	GREY	Negative	1.00	< LOD : 0.03	< LOD : 2.96
194	2011-10-25 16:50	mg / cm ^2	DOOR JAMB	METAL	3	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.15
195	2011-10-25 16:51	mg / cm ^2	DOOR JAMB	METAL	4	GREY	Negative	1.00	< LOD : 0.10	< LOD : 3.15
197	2011-10-25 16:51	mg / cm ^2	DOOR JAMB	METAL	5	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.18
198	2011-10-25 16:52	mg / cm ^2	DOOR JAMB	METAL	6	GREY	Negative	1.00	< LOD : 0.08	< LOD : 3.31
199	2011-10-25 16:53	mg / cm ^2	DOOR JAMB	METAL	7	BEIGE	Negative	1.00	< LOD : 0.20	< LOD : 3.15
200	2011-10-25 16:53	mg / cm ^2	DOOR JAMB	METAL	8	BEIGE	Negative	1.00	< LOD : 0.10	< LOD : 3.15
201	2011-10-25 16:54	mg / cm ^2	DOOR JAMB	METAL	9	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.19
202	2011-10-25 16:54	mg / cm ^2	DOOR JAMB	METAL	10	BLUE	Negative	1.00	< LOD : 0.03	< LOD : 2.88
203	2011-10-25 16:55	mg / cm ^2	DOOR JAMB	METAL	11	GREY	Negative	1.00	< LOD : 0.04	< LOD : 2.79
204	2011-10-25 16:56	mg / cm ^2	DOOR JAMB	METAL	12	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.04
205	2011-10-25 16:57	mg / cm ^2	DOOR JAMB	METAL	13	BEIGE	Negative	1.00	< LOD : 0.08	< LOD : 3.15
206	2011-10-25 16:57	mg / cm ^2	DOOR	METAL	13	BEIGE	Negative	1.00	< LOD : 0.06	< LOD : 2.89
207	2011-10-25 16:57	mg / cm ^2	DOOR	METAL	14	BEIGE	Negative	1.00	< LOD : 0.11	< LOD : 2.85
208	2011-10-25 16:58	mg / cm ^2	DOOR JAMB	METAL	14	BEIGE	Negative	1.00	< LOD : 0.05	< LOD : 2.87
209	2011-10-25 16:58	mg / cm ^2	DOOR JAMB	METAL	41	BEIGE	Negative	1.00	< LOD : 0.08	< LOD : 3.30
211	2011-10-25 17:00	mg / cm ^2	DOOR JAMB	METAL	15	BEIGE	Negative	1.00	< LOD : 0.21	< LOD : 3.23
212	2011-10-25 17:00	mg / cm ^2	DOOR	METAL	15	BEIGE	Negative	1.00	< LOD : 0.03	< LOD : 3.02

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Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	Pb/A
213	2011-10-25 17:01	mg / cm ^2	DOOR	METAL	16	GREEN	Negative	1.00	< LOD : 0.04	< LOD : 2.95
214	2011-10-25 17:01	mg / cm ^2	DOOR	METAL	16	BROWN	Negative	1.00	< LOD : 0.26	< LOD : 3.16
215	2011-10-25 17:01	mg / cm ^2	DOOR JAMB	METAL	16	GREEN	Negative	1.00	< LOD : 0.04	< LOD : 3.15
216	2011-10-25 17:03	mg / cm ^2	DOOR	CONCRETE	17	RED	Negative	1.00	< LOD : 0.03	< LOD : 2.99
217	2011-10-25 17:04	mg / cm ^2	DOOR	METAL	17	GREY	Negative	1.00	< LOD : 0.03	< LOD : 2.74
218	2011-10-25 17:04	mg / cm ^2	DOOR	METAL	18	GREY	Negative	1.00	< LOD : 0.22	< LOD : 3.26
219	2011-10-25 17:05	mg / cm ^2	DOOR JAMB,	METAL	18	GREY	Negative	1.00	< LOD : 0.27	< LOD : 3.20
220	2011-10-25 17:06	mg / cm ^2	DOOR JAMB,	METAL	20	RED	Negative	1.00	< LOD : 0.04	< LOD : 3.05
221	2011-10-25 17:06	mg / cm ^2	DOOR	METAL	20	RED	Negative	1.00	< LOD : 0.04	< LOD : 2.92
222	2011-10-25 17:08	mg / cm ^2	DOOR	METAL	21	GREEN	Negative	1.00	< LOD : 0.11	< LOD : 3.45
223	2011-10-25 17:08	mg / cm ^2	DOOR JAMB	METAL	21	GREEN	Negative	1.00	< LOD : 0.28	< LOD : 3.30
224	2011-10-25 17:11	mg / cm ^2	DOOR JAMB	METAL	23	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.07
225	2011-10-25 17:11	mg / cm ^2	DOOR JAMB	METAL	24	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.15
226	2011-10-25 17:11	mg / cm ^2	DOOR JAMB	METAL	25	WHITE	Negative	1.00	< LOD : 0.40	< LOD : 2.68
227	2011-10-25 17:12	mg / cm ^2	DOOR JAMB	METAL	26	WHITE	Negative	1.00	0.70 ± 0.30	< LOD : 3.15
228	2011-10-25 17:12	mg / cm ^2	DOOR JAMB	METAL	27	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 3.14
229	2011-10-25 17:12	mg / cm ^2	DOOR JAMB	METAL	29	GREY	Negative	1.00	< LOD : 0.08	< LOD : 3.11
230	2011-10-25 17:13	mg / cm ^2	DOOR JAMB	METAL	31	GREY	Negative	1.00	< LOD : 0.03	< LOD : 2.89
231	2011-10-25 17:13	mg / cm ^2	DOOR JAMB	METAL	30	GREY	Negative	1.00	< LOD : 0.03	< LOD : 2.82
232	2011-10-25 17:14	mg / cm ^2	DOOR JAMB	METAL	32	GREY	Negative	1.00	< LOD : 0.05	< LOD : 3.00
233	2011-10-25 17:14	mg / cm ^2	DOOR JAMB	METAL	33	GREY	Negative	1.00	< LOD : 0.05	< LOD : 3.00
234	2011-10-25 17:15	mg / cm ^2	DOOR JAMB	METAL	33	GREY	Negative	1.00	< LOD : 0.03	< LOD : 3.26
235	2011-10-25 17:15	mg / cm ^2	DOOR JAMB	METAL	34	BLACK	Negative	1.00	< LOD : 0.23	< LOD : 3.15
236	2011-10-25 17:16	mg / cm ^2	DOOR JAMB	METAL	35	BLACK	Negative	1.00	< LOD : 0.17	< LOD : 3.15
237	2011-10-25 17:16	mg / cm ^2	DOOR JAMB	METAL	35	BLACK	Negative	1.00	< LOD : 0.24	< LOD : 2.94
238	2011-10-25 17:16	mg / cm ^2	DOOR JAMB	METAL	36	BLACK	Negative	1.00	< LOD : 0.05	< LOD : 3.15
239	2011-10-25 17:17	mg / cm ^2	DOOR JAMB	METAL	37	BLACK	Negative	1.00	< LOD : 0.03	< LOD : 3.00
240	2011-10-25 17:17	mg / cm ^2	DOOR JAMB	METAL	38	BLACK	Negative	1.00	< LOD : 0.04	< LOD : 3.30
241	2011-10-25 17:18	mg / cm ^2	DOOR JAMB	METAL	39	BLACK	Negative	1.00	< LOD : 0.03	< LOD : 3.31
242	2011-10-25 17:18	mg / cm ^2	DOOR JAMB	METAL	42	BLACK	Negative	1.00	< LOD : 0.04	< LOD : 3.15
243	2011-10-25 17:21	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	0.90 ± 0.40
244	2011-10-25 17:22	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	0.70 ± 0.40
245	2011-10-25 17:23	mg / cm ^2			CALIBRATE		Positive	1.00	1.00 ± 0.10	0.60 ± 0.30

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Chain Of Custody

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PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0159-LBP-102511	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	10/25/11	1	Room 1	Composite		Dust	Wipe	108 in^2	NA	Total Pb
2	10/25/11	2	Room 2	Composite		Dust	Wipe	108 in^2	NA	Total Pb
3	10/25/11	3	Room 3	Composite		Dust	Wipe	108 in^2	NA	Total Pb
4	10/25/11	4	Room 4	Composite		Dust	Wipe	108 in^2	NA	Total Pb
5	10/25/11	5	Room 5	Composite		Dust	Wipe	108 in^2	NA	Total Pb
6	10/25/11	6	Room 6	Composite		Dust	Wipe	108 in^2	NA	Total Pb
*7	10/25/11	7	VOIDED	NA		Dust	Wipe	NA	NA	Total Pb
8	10/25/11	8	Room 8	Composite		Dust	Wipe	108 in^2	NA	Total Pb
9	10/25/11	9	Room 9	Composite		Dust	Wipe	108 in^2	NA	Total Pb
10	10/25/11	10	Room 10	Composite		Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	10/25/2011	Relinquished By	Jacob Jones	(print)	Date	10/26/2011	Matrix	Media
		(signature)	Time	16:00			(signature)	Time	12:00	Air	MV / MP / ST / SW / TL
Received By		(print)	Date	10/26/11	Relinquished By		(print)	Date		Aqueous	
		(signature)	Time	12:00			(signature)	Time		Bulk	
Turn-Around-Time					Condition Upon Receipt		Method of Shipment	Hand Delivery		Sludge	
X	Standard	5-7 Business Days								Soil	
	Rush	Next Day			Sample Notes					Solid/Bulk	
	Immediate	Same Day								Page	1 of

Micro-Vacuum | Mold Plate | Spore Trap | Swab | Tape-Lift

* No Sample received #7 SM

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

Marshall Environmental Management, Inc.
Chain Of Custody

Phone: (405) 681-6752
Fax: (405) 681-6753
marshenv@swbell.net

201178 2 of 4

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0159-LBP-102511	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	10/25/11	IFR-1	IFR Rear	South		Dust	Wipe	1 ft^2	NA	Total Pb
12	10/25/11	IFR-2	IFR Center	Center		Dust	Wipe	1 ft^2	NA	Total Pb
13	10/25/11	IFR-3	IFR Front	North		Dust	Wipe	1 ft^2	NA	Total Pb
14	10/25/11	12	Room 12	Composite		Dust	Wipe	108 in^2	NA	Total Pb
15	10/25/11	12S	Room 12	South		Dust	Wipe	1 ft^2	NA	Total Pb
16	10/25/11	12C	Room 12	Center		Dust	Wipe	1 ft^2	NA	Total Pb
17	10/25/11	12N	Room 12	North		Dust	Wipe	1 ft^2	NA	Total Pb
18	10/25/11	13	Room 13	Composite		Dust	Wipe	108 in^2	NA	Total Pb
19	10/25/11	14	Room 14	Composite		Dust	Wipe	108 in^2	NA	Total Pb
20	10/25/11	15	Room 15	Composite		Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	10/25/2011	Relinquished By	Jacob Jones	(print)	Date	10/26/2011	Matrix
		(signature)	Time	16 00			(signature)	Time	12:00	Air
Received By	S Lightwich	(print)	Date	10/26/11	Relinquished By		(print)	Date		Aqueous
		(signature)	Time	12:00			(signature)	Time		Bulk

Turn-Around-Time			Condition Upon Receipt		Method of Shipment	Hand Delivery	Sludge
X	Standard	5-7 Business Days					Soil
	Rush	Next Day	Sample Notes				Solid/Bulk
	Immediate	Same Day					Page 2 of 4

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

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

20178 3 of 4

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0159-LBP-102511	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	10/25/11	16	Room 16	Composite		Dust	Wipe	108 in^2	X	Total Pb
22	10/25/11	17	Room 17	Composite		Dust	Wipe	108 in^2	NA	Total Pb
23	10/25/11	18	Room 18	Composite		Dust	Wipe	108 in^2	NA	Total Pb
24	10/25/11	19	Room 19	Composite		Dust	Wipe	108 in^2	NA	Total Pb
25	10/25/11	20	Room 20	Composite		Dust	Wipe	108 in^2	NA	Total Pb
26	10/25/11	21	Room 21	Composite		Dust	Wipe	108 in^2	NA	Total Pb
27	10/25/11	22	Room 22	Composite		Dust	Wipe	108 in^2	NA	Total Pb
28	10/25/11	23	Room 23	Composite		Dust	Wipe	108 in^2	NA	Total Pb
29	10/25/11	24	Room 24	Composite		Dust	Wipe	108 in^2	NA	Total Pb
30	10/25/11	25	Room 25	Composite		Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	10/25/2011	Relinquished By	Jacob Jones	(print)	Date	10/26/2011	Matrix	Media
		(signature)	Time	16:00			(signature)	Time	12:00	Air	MV MP ST SW TL
Received By		(print)	Date	10/26/11	Relinquished By		(print)	Date		Aqueous	
		(signature)	Time	10:05			(signature)	Time		Bulk	
Turn-Around-Time										Sludge	
X	Standard	5-7 Business Days								Soil	
	Rush	Next Day								Solid/Bulk	
	Immediate	Same Day								Page	3 of 4

Micro-Vacuum | Mold Plate | Spore Trap | Swab | Tape-Lift

Condition Upon Receipt		Method of Shipment	Hand Delivery
Sample Notes			

16… … 89th … A-1…
Oklahoma City, OK 73159

Marshall Environmental Management, Inc.
Chain Of Custody

Pho… (…25) 61…
Fax: (405) 681-6753
marshenv@swbell.net

201178 4 of 4

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0159-LBP-102511	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
31	10/25/11	26	Room 26	Composite		Dust	Wipe	108 in^2	NA	Total Pb
32	10/25/11	27	Room 27	Composite		Dust	Wipe	108 in^2	NA	Total Pb
33	10/25/11	28	Room 28	Composite		Dust	Wipe	108 in^2	NA	Total Pb
34	10/25/11	29	Room 29	Composite		Dust	Wipe	108 in^2	NA	Total Pb
35	10/25/11	30	Room 30	Composite		Dust	Wipe	108 in^2	NA	Total Pb
36	10/25/11	31	Room 31	Composite		Dust	Wipe	108 in^2	NA	Total Pb
37	10/25/11	32	Room 32	Composite		Dust	Wipe	108 in^2	NA	Total Pb
38	10/25/11	33	Room 33	Composite		Dust	Wipe	108 in^2	NA	Total Pb
39	10/25/11	34	Room 34	Composite		Dust	Wipe	108 in^2	NA	Total Pb

Collected By	Jacob Jones (print)	Date	10/25/2011	Relinquished By	Jacob Jones (print)	Date	10/26/2011	Matrix	Air	
	[signature] (signature)	Time	16:00		[signature] (signature)	Time	12:00		Aqueous	
Received By	(print)	Date	10/26/11	Relinquished By	(print)	Date			Bulk	
	[signature] (signature)	Time	10:00		(signature)	Time			Sludge	
Turn-Around-Time		Condition Upon Receipt		Method of Shipment	Hand Delivery				Soil	
X	Standard	5-7 Business Days							Solid/Bulk	
	Rush	Next Day	Sample Notes							
	Immediate	Same Day								

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

Page 4 of 4

QUANTEM® LABORATORIES

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 201178
Date Received: 10/26/11
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 11/1/2011

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.: 0159-LBP-102511

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.	10/31/11 14:00	W EPA 7420 (1)
002	2	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
003	3	Wipe	Lead	27.8	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
004	4	Wipe	Lead	23.6	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
005	5	Wipe	Lead	61.1	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
006	6	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
008	8	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
009	9	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
010	10	Wipe	Lead	28.0	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
011	IFR-1	Wipe	Lead	239	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
012	IFR-2	Wipe	Lead	170	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
013	IFR-3	Wipe	Lead	157	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
014	12	Wipe	Lead	56.9	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
015	12S	Wipe	Lead	36.1	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
016	12C	Wipe	Lead	21.6	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
017	12N	Wipe	Lead	<16.0	16	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
018	13	Wipe	Lead	87.8	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)

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 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: 201178
Date Received: 10/26/11
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 11/1/2011

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.: 0159-LBP-102511

AHA ID: 101352

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
019	14	Wipe	Lead	104	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
020	15	Wipe	Lead	55.9	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
021	16	Wipe	Lead	72.2	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
022	17	Wipe	Lead	50.3	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
023	18	Wipe	Lead	32.1	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
024	19	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	11/01/11 13:30	W EPA 7420 (1)
025	20	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
026	21	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
027	22	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
028	23	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
029	24	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
030	25	Wipe	Lead	29.9	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
031	26	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
032	27	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
033	28	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
034	29	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
035	30	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	10/31/11 14:00	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: 201178
Date Received: 10/26/11
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 11/1/2011

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.: 0159-LBP-102511

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
036	31	Wipe	Lead	60.4	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
037	32	Wipe	Lead	62.5	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
038	33	Wipe	Lead	80.6	21.3	ug/sq. Ft.	10/31/11 14:00	W EPA 7420 (1)
039	34	Wipe	Lead	26.1	21.3	ug/sq. Ft.	11/01/11 13:30	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: 9330
Test: Lead

Date: 10/31/2011
Matrix: Wipe

Lab Number: 201178
Approved By: Benton Miller
Date Approved: 10/31/2011

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	5	5.5
FCV	4.5	5.4	5.5
ICV	0.8	1.1	1.2
RLVS	0.256	0.376	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W2	0.000	5.318	6.150	115.7	6.093	114.6	0.9
MS-W1	0.000	5.449	5.799	106.4	5.672	104.1	2.2

Supplemental Report
QAQC Results

QA ID: 9334
Test: Lead
Date: 11/1/2011
Matrix: Wipe
Lab Number: 201178
Approved By: Rebecca Sparks
Date Approved: 11/1/2011

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	4.8	5.5
FCV	4.5	4.6	5.5
ICV	0.8	1.2	1.2
RLVS	0.256	0.379	0.384

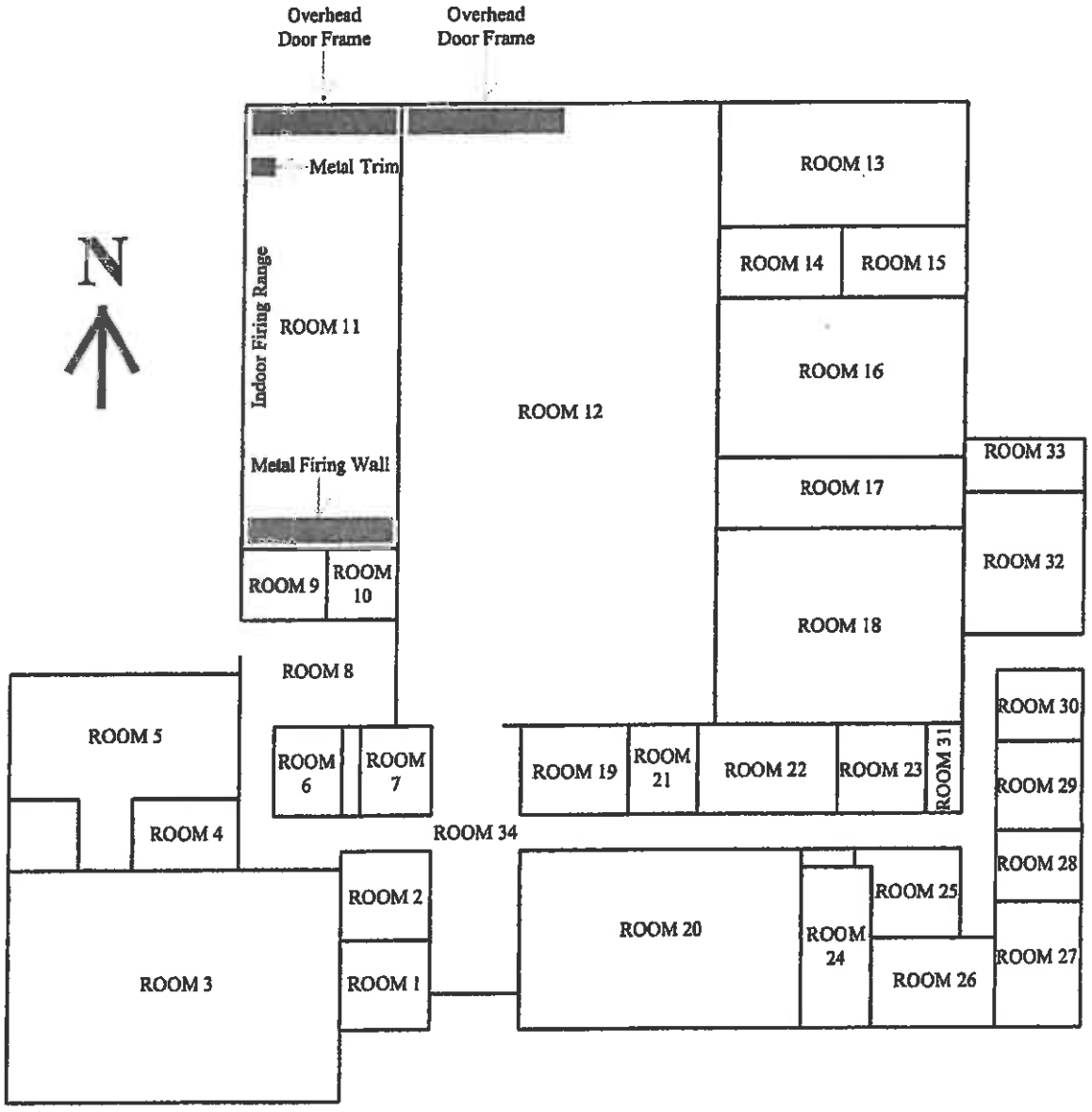
Duplicate Data:

Recovery Data:

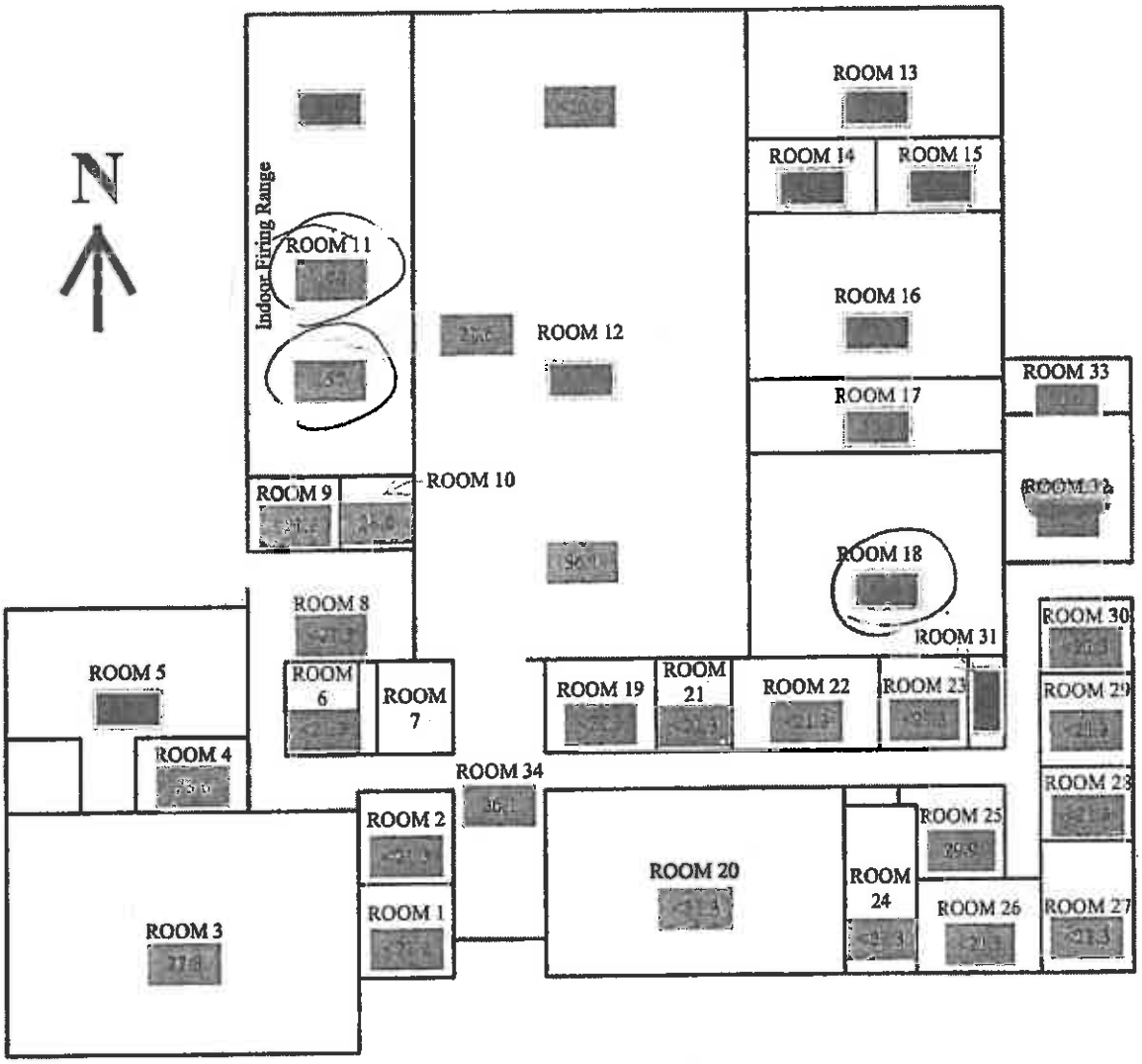
Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W2	0.000	5.449	5.870	107.7	5.445	99.9	7.5
MS-W1	0.000	5.286	5.413	102.4	5.523	104.5	2.0

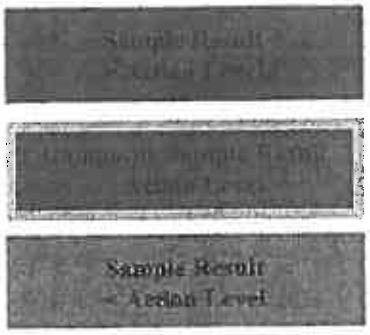
Authorized Signature: Rebecca Sparks
Rebecca Sparks, Analyst

Muskogee Armory
Miscellaneous Lead-Base Painted Surfaces



Muskogee Armory
Lead-Laden Settled Dust





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 #: OKFIRM11160

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

Randall F. Ward
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

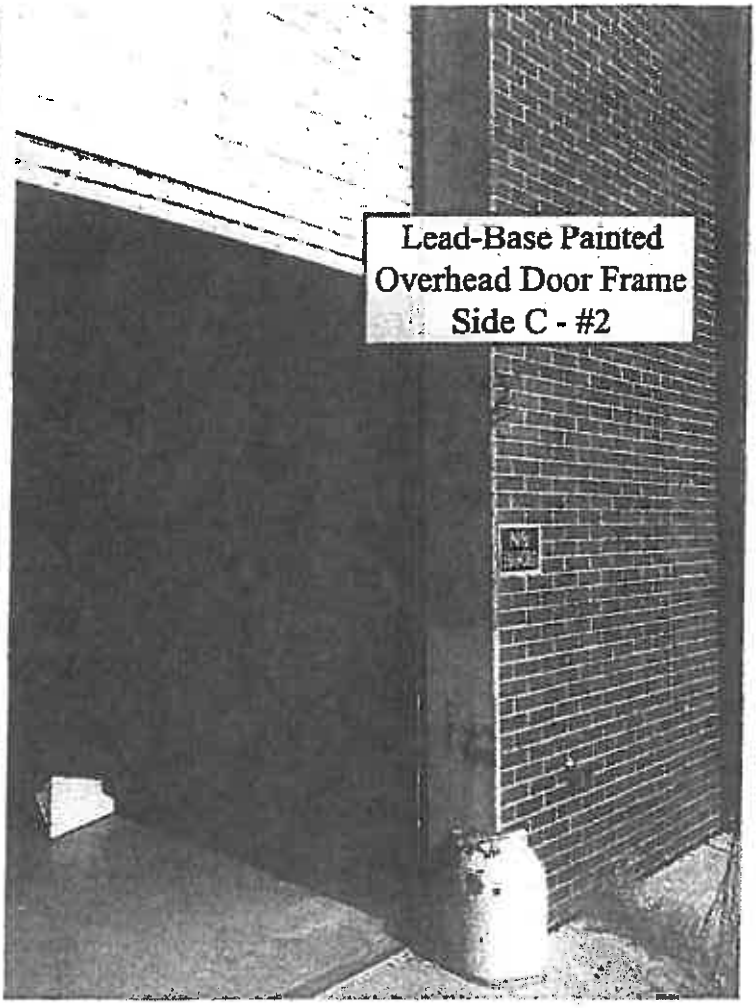
This certificate is valid from the date of issuance and expires as prescribed by law.

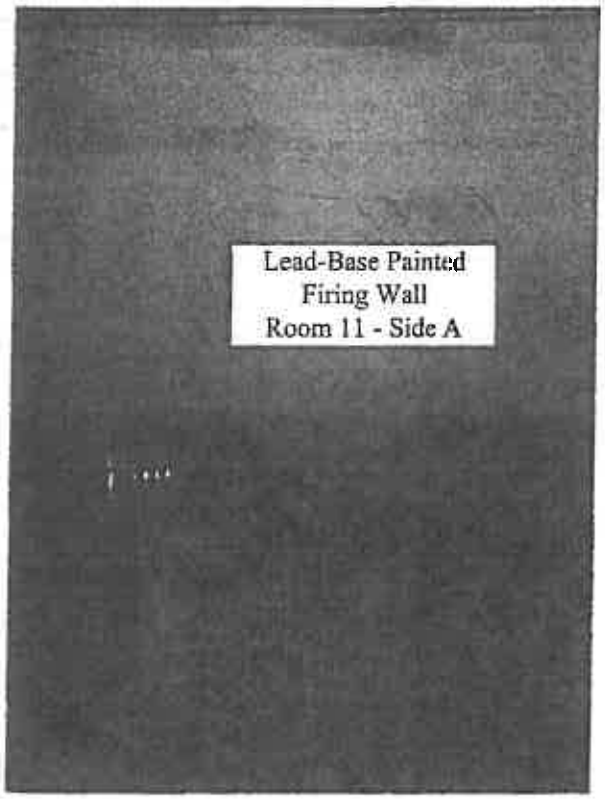
Issued on: 4/1/2011 **Expires on: 3/31/2012**

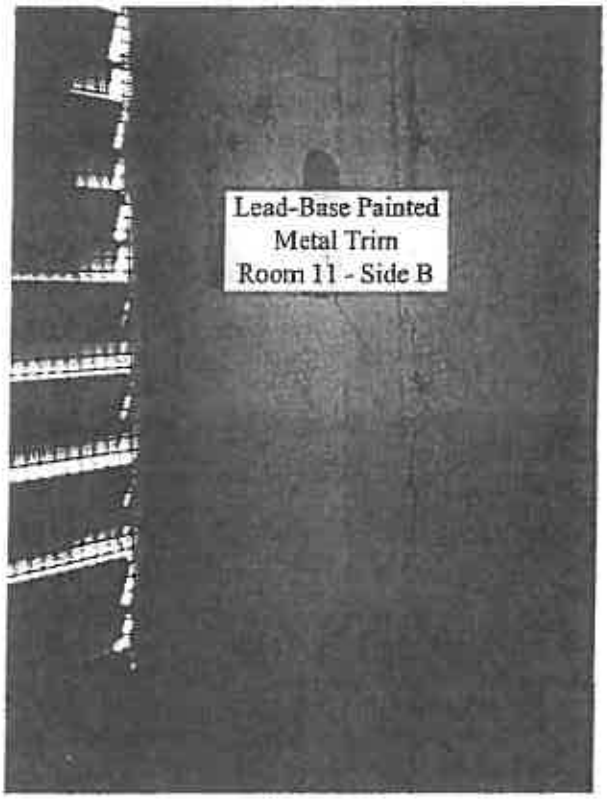
Division Director
Air Quality Division

Environmental Programs Manager
Air Quality Division


Lead-Base Painted
Overhead Door Jamb
Side C - #1


Lead-Base Painted
Overhead Door Frame
Side C - #2


Lead-Base Painted
Firing Wall
Room 11 - Side A


Lead-Base Painted
Metal Trim
Room 11 - Side B

SCOPES OF WORK

STATEMENT OF WORK
For
Remediation of Lead and Asbestos Contamination at the Muskogee 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 Muskogee, Oklahoma. This statement of work (SOW) describes the abatement of lead-based paint located on surfaces throughout the building, remediation of lead contaminated dust, and removal and proper disposal of asbestos containing material. 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 Muskogee Armory is attached for review (**Attachment 1**).

The building is located at 661 East Davis Field Road, Muskogee, Oklahoma 74403. The building **does not** have available water and electricity to use during remediation.

SPECIAL PROVISIONS:

1. Work Schedule: The Contractor shall schedule all work to be complete within thirty (30) calendar 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;
- Posses a current lead-based paint firm license and have a certified lead-based paint supervisor in order to perform lead-based paint abatement;
- Posses a current Oklahoma Department of Labor (ODOL) Asbestos Abatement Contractor License or have a licensed sub-contractor in order to perform asbestos abatement;
- Follow all appropriate OSHA requirements;
- Read Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges, November 3, 2006, Departments of the Army and Air Force, National Guard Bureau (**Attachment 6**), and refer to this document as a reference and guideline for remediating IFR lead contamination.

- 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;

Submit With Bid:

- Copy of lead-based paint firm license;
- Copy of lead-based paint supervisor license;
- 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;

SEQUENCE OF EVENTS

The remediation of the building shall be as follows:

1. First – The asbestos and lead-based paint abatement shall be completed.
2. Second – Marshall Environmental shall be contacted to confirm all asbestos has been appropriately removed and DEQ shall be contacted to confirm lead-based paint abatement has been appropriately performed.
3. Third – The indoor firing range (IFR) and all floors of the entire building shall be cleaned.
4. Fourth – DEQ shall be contacted to perform third party confirmation sampling to confirm (IFR) and all floors have been appropriately remediated.

ASBESTOS ABATEMENT INSTRUCTIONS

- Non-friable and/or non-regulated ACM shall be removed as described in the instructions listed below.

- For more details see the attached Muskogee Armory Asbestos Inspection Report with floor plan map showing locations of ACM (**Attachment 2**).

- Once Asbestos Abatement is complete, Marshall Environmental shall be contacted to confirm abatement has been appropriately performed and all asbestos has been removed.

    - **Floor Tile and Mastic**

        - **Remove** floor tile and mastic from room 21. The quantity of floor tile and floor mastic is approximately 132 ft^2 in room 21.

        - **Remove** floor tile and mastic from room 34. The quantity of floor tile and floor mastic is approximately 2150 ft^2 in room 34.

- **Remove** floor tile and mastic from room 22. The quantity of floor tile and floor mastic is approximately 264 ft^2 in room 22.

- **There is a total of 2,546 ft^2 of floor tile and mastic that shall be removed from the building. See attached floor plan map in Asbestos Inspection Report for locations of asbestos containing floor tile mastic.**

- **Fire Doors**

  - **Remove and Replace** two fire doors located in room 34. **(See Attachment 7 for door Scope of Work and Door Replacement Specifications)**

  - Any damage to outside of fire doors must be sealed with duct tape prior to removal. Doors shall be removed and wrapped in poly sheeting prior to disposal.

  - Doors must be disposed at a hazardous waste land fill (See Asbestos Inspection Report for Details).

LEAD-BASED PAINT ABATEMENT INSTRUCTIONS

See Lead-Based Paint Inspection and Settled Dust Sampling Report for details **(Attachment 5)**

1. **Overhead Door Frames**

   - The two overhead door frames located on the North side of the building 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 5)**;

2. **Indoor Firing Range Metal Wall and Trim**

   - Remove metal wall and trim, wrap in 6 mil poly sheeting, and properly dispose.
     - If wall and trim cannot be removed, wall and trim 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.

3. **Clearance Inspection**

   - Once lead-based paint has been wet scraped and encapsulated, DEQ will perform a visual inspection to confirm lead-based paint has been sealed appropriately.

4. **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

See Lead-Based Paint Inspection and Settled Dust Sampling Report for details (**Attachment 5**)

1. Indoor Firing Range (IFR)

The IFR is a long narrow room where the Oklahoma Military Department would target practice with weapons. The IFR is to be cleaned by removal of all lead contaminated materials, including removal of all removable acoustical tiles 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 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.

- **Pre-remediation Removal**
    - Decontaminate all items to be removed from the IFR, wrap in poly sheeting, and properly dispose.
        - Items such as acoustical tiles or other porous materials shall be HEPA vacuumed, washed, and sampled for TCLP. Acoustical tile 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;
    - If acoustical tile cannot be removed from the ceiling, tiles shall be HEPA vacuumed, wet washed, and then sealed with DEQ approved lead-based paint encapsulant (**Attachment 4**);
    - 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 DEQ. The Contractor shall provide DEQ a minimum of five (5) calendar days prior notice to perform sampling. See Section C (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;
  - BASF Acryl 60 or DEQ approved equivalent shall be applied to surfaces according to manufacturer's specifications. Specifications are attached (Attachment 4);
  - BASF Construction Grout or DEQ approved equivalent shall be applied (sprayed or troweled) to surfaces according to manufacturer's specifications. 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 DEQ 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 DEQ. Contractor shall provide DEQ 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 5)

- 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 DEQ to perform 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 C (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 samples taken by DEQ.
- DEQ will be responsible for taking all post remediation samples.
- DEQ shall be notified five (5) days prior to each sampling event.
- Contact Information: DEQ
  Contact: Dustin Davidson
  Phone: (405) 702-5115
- <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

5. FINAL REPORT

- Write final report and submit to DEQ;

- Final report shall include:
  - A detailed summary of work including any warranties and data;
  - copy of post remediation sampling report;
  - waste manifests (if any); and
  - photo documentation of work;
    - Photo documentation of work will have color digital photos with captions describing photo;

- Final report will be submitted in a bound hard copy and electronically on disc.

OWNER REPRESTATIVE

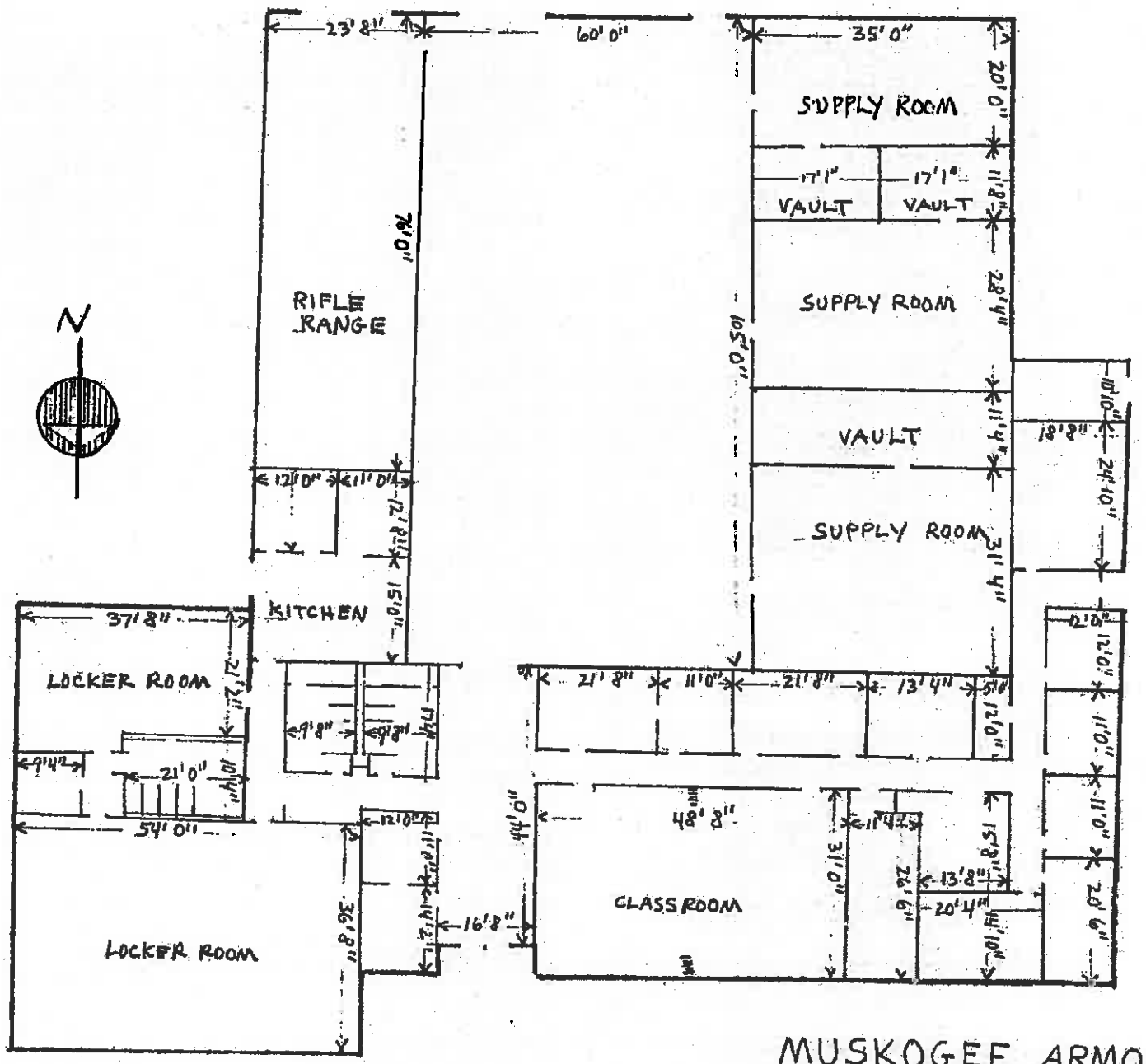
Owner's Representative:

Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102

Phone Numbers:
(405) 702-5115 (Office)
(405) 702-5101 (Fax)
E-Mail: Dustin.Davidson@deq.ok.gov

ATTACHMENT 1

Muskogee Armory Floor Plan Map



MUSKOGEE ARMORY

1/24" = 1'0" 5/4/77

ATTACHMENT 2

Muskogee Armory Asbestos Inspection Report

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 4**).

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

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

ATTACHMENT 4

DEQ Approved Lead-Based Paint Encapsulants List

Sealant and Encapsulant Specifications

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

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.

BASF

The Chemical Company

PRODUCT DATA

03 01 00 Maintenance of Concrete

ACRYL 60®

Water-based acrylic bonding and modifying admixture

Description

Acryl 60® is an acrylic-polymer emulsion mixed with Portland cement mortars, plasters, stucco, and concrete mixes to enhance their physical properties, adhesion to substrates, and durability.

Packaging

1 quart (0.9 L) bottles
1 gallon (3.8 L) bottles
5-gallon (18.9 L) pails
30 gallon (113.5 L) drums
55 gallon (208 L) drums

Color

Milky-white

Shelf Life

1 year when properly stored

Storage

Transport and store in unopened containers between 40 and 100° F (4 and 38° C). Protect from freezing.

Features	Benefits
• Acrylic polymers	Significantly improves adhesion, cohesion, tensile, compressive, and flexural strengths of cement-based materials
• Excellent chemical and UV resistance	Promotes long-lasting repairs
• Improves freeze/thaw stability of Portland cement-based materials	Suitable for cold climate applications
• Stable	Will not re-emulsify when exposed to water

Where to Use

APPLICATION

- Cement-based mixes to improve their adhesion, and durability
- As gauging liquid for Thoro® waterproofing and repair products, such as Thoroseal® and Thoro®
- Walkways
- Ramps and structural beams

LOCATION

- Interior or exterior
- Above or below grade

SUBSTRATE

- Columns

How to Apply

Surface Preparation

1. The methods required for preparation will vary depending on the end product to be applied and the site and substrate conditions.

2. In all cases the surface must be clean and sound. Remove all loose and disintegrated material. Remove any and all traces of oil, grease, dirt, dust, efflorescence, biological, mold or mildew, and release or curing agents.

3. Vacuum, sweep, or blow out the areas to be patched with clean, oil-free air.

CONCRETE/CMU/MASONRY SURFACES

Predampen the area to be patched or coated with potable water to a saturated-surface-dry (SSD) condition. Do not leave standing water on surface. Proper surface preparation and cleanliness are extremely important.

OTHER SURFACES

For other surface preparation guidelines, refer to the specific Thoro® product data guide for information.

Mixing

1. The normal ratio of Acryl 60® to clean potable water is 1 part Acryl 60® to 3 parts water (1 to 3). Where increased physical and chemical resistance are required, increase the Acryl 60® content in the mixing liquid to a 1 to 2 or 1 to 1 Acryl 60® to water ratio (see chart above).

2. Always mechanically mix. Do not overmix or stir at a high speed.

Thoro

Technical Data

Composition

Acryl 60® is an acrylic-polymer emulsion.

Typical Properties

PROPERTY	VALUE
Density, lbs/gal (kg/L), Lab Method	8.85 (1.04)
Solids content, by volume, %, Lab Method	28
Maximum water dilution, Parts Acryl 60® to H_2O, Lab Method	1:3

Test Data

The following properties are for sand/cement mortar samples:

PROPERTY	RESULTS		TEST METHODS
	With Water	With 1 to 1 Acryl 60® and Water	
Compressive strength, psi (MPa) 28 days	3,600 (25.2)	4,500 (31)	ASTM C 109
Tensile strength, psi (MPa) 28 days	225 (1.5)	350 (2.4)	ASTM C 190
Flexural strength, psi (MPa) 28 days	1,000 (6.9)	1,800 (12.4)	ASTM C 348
Freeze/thaw durability	11 at 96 cycles	102 at 300 cycles	Method A

Test results are physical data obtained under laboratory conditions at 70° F (21° C) and 50% rh. Reasonable variations can be expected.

Mixing Ratios

APPLICATION	RATIO
For scrub coats applied before patching or overlays	Use straight Acryl 60®
To improve the adhesion properties of painting mortars and to reduce cracking in cement plaster	Use 1 part Acryl 60® to 3 parts water
For large overlays or topping	Use 2 parts Acryl 60® to 1 part water
For bonding cement plaster no thicker than 1/4 – 3/8" (6 – 10 mm)	Use 1 part Acryl 60® to 3 parts water

NOTE: The above ratios are for normal conditions. Where bonding is more critical, increase the Acryl 60® content of the mixing liquid. A TEST PATCH IS ALWAYS RECOMMENDED.

For detailed application instructions for Thoro® products, see specific product data sheet.

Application

SAND/CEMENT MORTAR

1. Thoroughly mix all cement and sand first. The sand must be clean, free of clay, and dry.
2. Make up mixing liquid from a 1 to 3 or 1 to 2 Acryl 60® water ratio depending upon requirements.
3. Slowly add the mixing liquid to the cement/sand mixture and mix with a slow-speed mixer for 1 – 2 minutes to avoid entrapping air. After preparing, cleaning, and predampening the surface, brush apply a scrub coat (not diluted) of the Acryl 60®-modified cement/sand. Scrub vigorously into the surface to displace any air pockets.
4. Place the mix into the scrub-coated repair area while the scrub coat is still wet or tacky. Place the mix and avoid overtroweling. The trowel should be cleaned frequently, kept wet, and used with minimal pressure.
5. Maximum time for placement should not exceed 20 minutes. Higher air and surface temperatures will decrease working and placement time.

Curing

1. When rapid drying is expected due to high temperatures, rapid air movement, or wind, it is recommended that the surface be covered with wet burlap to retain moisture.
2. For normal use, allow a 24-hour curing period.
3. For heavy wheeled traffic, allow a 4-day curing period.

Clean Up

Clean all tools and equipment immediately with water. Cured material may be removed by mechanical means only.

For Best Performance

- Do not use Acryl 60® modified mixes when the ambient air or surface temperature is below 40° F (4° C) or when the temperature is expected to fall below 40° F (4° C) within 24 hours. High relative humidity, excessive moisture, and low temperatures will retard the curing of Acryl 60® modified mixes.
- Do not use with air-entrained cement mixes or with air-entraining admixtures.
- Do not overmix or aerate mixes.
- Use with proper ventilation.
- Do not use Acryl 60® as a surface-applied external bonding agent or as a primer.
- Do not expose cement-based mixes modified with Acryl 60® to water immersion service for a minimum of 24 hours at 73° F (23° C).
- Not recommended for exposure to soft water or immersion where contact with water-treatment chemicals is present without a protective top coat.
- Caution should be used when a highly solvent material is being used over a base system that contains Acryl 60®.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

ACRYL 60®

Caution

Acryl 60® contains no hazardous ingredients as defined by 29 CFR 1910.1200 WHMIS.

Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation.

Precautions

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Proposition 65

This product contains material listed by the state of California as known as to cause cancer, birth defects, or other reproductive harm.

VOC Content

1 g/L or 0.01 lbs/gal less water and exempt solvents.

For medical emergencies only, call ChemTrec (1-800-424-9300).

BASF Construction Chemicals, LLC – Building Systems

889 Valley Park Drive
Shakopee, MN, 55379

www.BuildingSystems.BASF.com

Customer Service 800-433-9517
Technical Service 800-243-6739

BASF

The Chemical Company

PRODUCT DATA

CRD C621 Non-Metallic Non-Shrink Grouting

CONSTRUCTION GROUT

General construction, mineral-aggregate nonshrink grout

Description

Construction Grout is a noncatalyzed, multi-purpose construction grout containing mineral aggregate.

Yield

One 50 lb (22.7 kg) bag of Construction Grout mixed with 7.15 gallons (4.35 L) of water (flowable mix) provides approximately 0.45 ft³ (0.013 m³) of mixed grout.

Packaging

50 lb (22.7 kg) multi-wall paper bags

Color

Concrete gray when cured

Shelf Life

1 year when properly stored

Storage

Store in unopened bags under clean, dry conditions.

Features	Benefits
• Concrete gray color (after curing)	• Blends in with surrounding concrete
• No organic accelerators, including chlorides or other salts	Will not corrode reinforcing steel
• Can be extended with clean, well-graded coarse aggregate	• Fills large voids without additional heat generation
• Hardens free of bleeding when properly placed	Provides high effective bearing area for proper support and load transfer

Where to Use

APPLICATION

- Normal loads for columns and baseplates
- Bedding grout for precast panels
- Repairing of cavities resulting from ineffective concrete consolidation
- Caulking concrete pipe
- Backfilling, underpinning foundations, and pressure grouting of slabs needing alignment
- General construction applications
- Damp-pack applications

LOCATION

- Interior or exterior

How to Apply

Application

For aggregate expansion guidelines refer to Appendix MB-10: Guide to Cementitious Grouting.

Mixing

By using the minimum amount of water to provide the desired workability, maximum strength will be achieved. Whenever possible, mix the grout with a mechanical mixer. Either a mortar mixer or an electric drill with a paddle device is acceptable. Put the measured amount of water into the mixer, add grout, then mix till a uniform consistency is attained. Do not use water in an amount or a temperature that will cause bleeding or segregation.

Curing

Cure all exposed grout shoulders by wet curing for 24 hours and by applying a recommended curing compound compliant with ASTM C 309 or preferably ASTM C 1315.

For Best Performance

- Contact your local representative for a pre-job conference to plan the installation.
- Construction Grout is designed for the 50 to 90° F (10 to 32° C) application temperature range. Consult your BASF representative when applying outside this range. Use cold and hot weather concreting practices (ACI 306 and ACI 305) when grouting within 10° F (6° C) of these minimum and maximum temperature ranges.
- To ensure optimum performance of Construction Grout, place at a plastic or flowable consistency and at ambient temperatures of 50° F (10° C) and above.
- For best results, allow a minimum of 1" (25 mm) vertical clearance under baseplates when placing Construction Grout.
- Do not use Construction Grout where it will come in contact with steel designed for stresses above 80,000 psi (552 MPa). Use Masterflow® 818, Masterflow® 1205, or Masterflow® 1341 post-tensioning cable grouts.

Technical Data

Composition

Construction Grout is a noncatalyzed hydraulic cement-based grout containing mineral aggregate.

Compliances

- CRD C 621 and ASTM C 1107, Grade C, at flowable or plastic consistency
- City of Los Angeles Research Report Number RR 23137

Typical Properties

Mixed Grout Data* (Flowable Mix)

PROPERTY	VALUE
Approximate Water, gal (L)	1.15 (4.35)
Initial set, hrs, at 70° F (21° C)	6
Final set, hrs, at 70° F (21° C)	8

*At a constant percent of water, consistency will vary with temperature. Final set takes place at approximately 6 hours at a flowable consistency and 70° F (21° C).

Test Data

PROPERTY	RESULTS	TEST METHODS
Flow, %, 5 drops	125 – 145	ASTM C230
Volume change, %; flowable consistency; after 28 days	0.08	ASTM C 1090

Compressive strength, psi (MPa) — ASTM C 942, according to ASTM C 1107

	Consistency		
	Flowable[1]	Plastic[2]	Stiff[3] (damp pack)
1 day	1,500 (10)	—	—
3 days	5,000 (34.5)	6,000 (41.4)	8,000 (55.2)
7 days	6,000 (41.3)	7,000 (48.3)	9,500 (65.5)
28 days	7,000 (48.0)	8,500 (58.6)	10,000 (69.0)

[1] 140% flow on flow table, ASTM C 230, 5 drops in 3 seconds
[2] 100% flow on flow table, ASTM C 230, 5 drops in 3 seconds
[3] 40% flow on flow table, ASTM C 230, 5 drops in 3 seconds
Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

- Do not add plasticizers, accelerators, retarders, or other additives unless advised in writing by BASF Technical Services.
- The surface to be grouted should be clean, strong, and roughened to CSP 5 – 9 according to ICRI Guideline 03732 to permit proper bond. For freshly placed concrete, consider using Liquid Surface Etchant (see Form No. 1020185).
- Do not place Construction Grout in lifts greater than 6" (152 mm) unless the product is extended with aggregate to dissipate hydration heat.
- Where precision alignment and severe service, such as heavy loading, rolling, or impact resistance are required, use metallic-reinforced, noncatalyzed Embeco® 885 grout. If the amount of impact resistance needed is not great enough to require metallic reinforcement, use natural-aggregate, Masterflow® 928.
- The water requirement may vary with mixing efficiency, temperature, and other variables.
- The concrete surfaces should be saturated (ponded) with clean water for 24 hours before grouting. Remove water immediately before application.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety:

CONSTRUCTION GROUT

WARNING!

Construction Grout contains silica, crystalline quartz, portland cement; limestone; calcium oxide; gypsum; silica, amorphous.

Risks

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains small amount of free respirable quartz which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

Avoid contact with skin, eyes and clothing. Prevent inhalation of dust. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Waste Disposal Method

This product when discarded or disposed of is not listed as a hazardous waste in federal regulations. Dispose of in a landfill in accordance with local regulations. For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone numbers given below.

Proposition 65

This product contains material listed by the State of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

0 g/L, or 0 lbs/gal less water and exempt solvents.

For medical emergencies only, call ChemTrec (1-800-424-9300).

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ATTACHMENT 5

Lead-Based Paint Inspection and Settled Dust Sampling Report For Muskogee Armory

ATTACHMENT 6

Guidelines 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

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.

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.

Section III
Special Abbreviations and Terms

This section contains no entries

ATTACHMENT 7

Door Scope of Work Including Measurements and Specifications

Muskogee Armory Door Scope of Work
And
Measurements

- Doors will be replaced with pre-hung Steelcraft Commercial Replacement Door Units (Specifications Attached) or equivalent;
- 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;
- Installation must be performed in accordance to requirements and instructions in attached specifications;

a. Exterior Doors

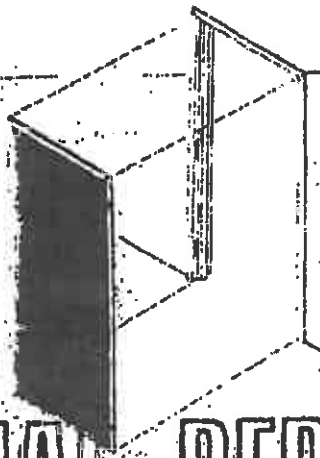
- Exterior doors will be replaced with galvannealed, 16 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing - Standard Weight 1279 NRP, 4 ½ X 4 ½ (Specifications Attached);
- Threshold: As manufactured by National Guard Products or approved equal – 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

- Interior doors will be replaced with non-galvannealed, 18 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing – Standard Weight 1279, 4 ½ X 4 ½ (Specification 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.

- **Door measurements are listed as approximate Width X Height; Contractor to field verify.**
- **All removed doors will be properly disposed.**
- **Specifications for replacement doors are attached.**

1. Remove doors. Replace door with pre-hung door unit. If visible damage occurs to painted finish of door frame during installation, door frame will be painted with a neutral colored primer.
   Door Measurements – 6' X 7'

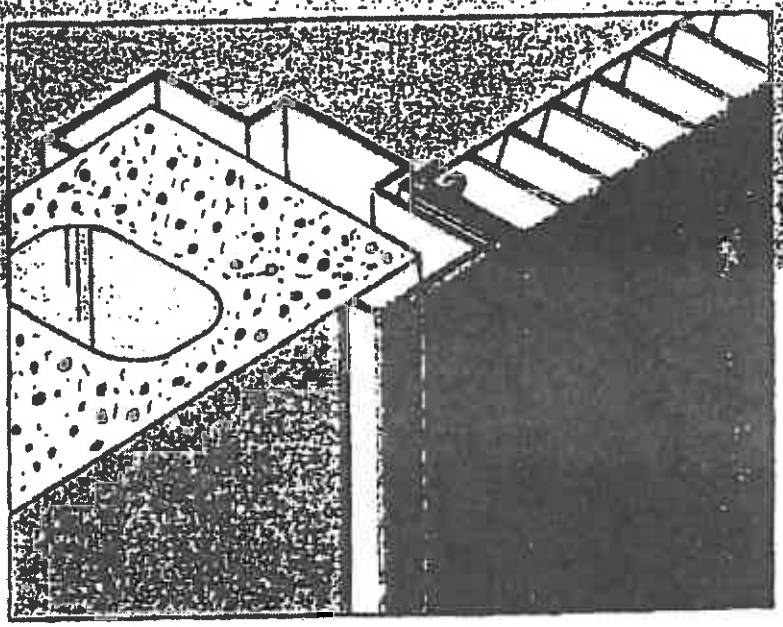


UL LISTED
1½ HR (B) LABEL
can be used in existing non-listed or listed steel frame.

Install a pre-hung

Steelcraft

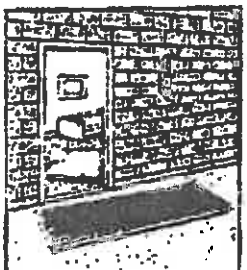
COMMERCIAL REPLACEMENT DOOR UNIT



New beauty and security for worn out doors.

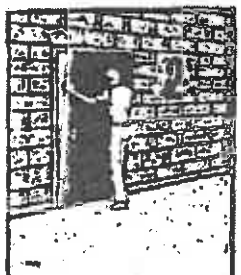
The Steelcraft Commercial Replacement Unit is the only product of its kind specifically designed for the rehab market. Fits these nominal sizes: 2868, 3068, 3668, 3868, 4068, 2870, 3070, 3670, 3870, 4070 single, and 5468, 5068, 5470 and 6070 double doors.

- 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.



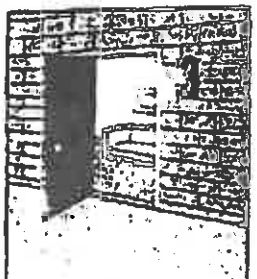
QUICK

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



'N EASY

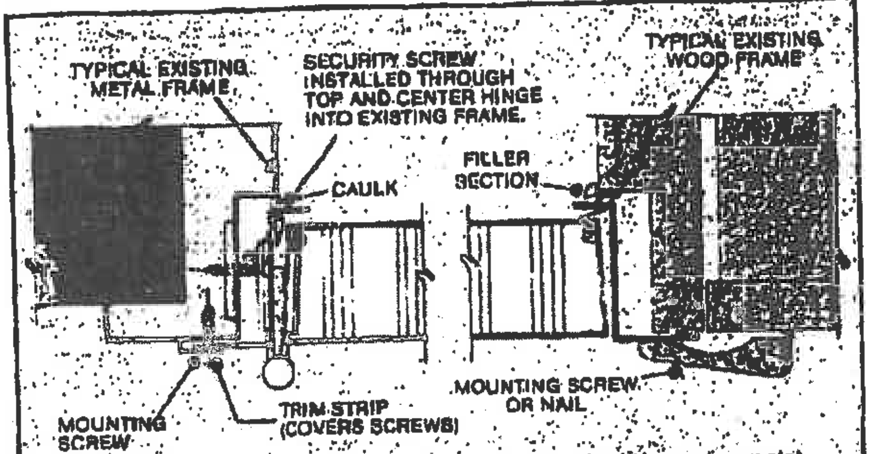
2. Set pre-hung unit into frame opening. Install mounting screws through face, cut banding and install security screws.



INSTALLATION

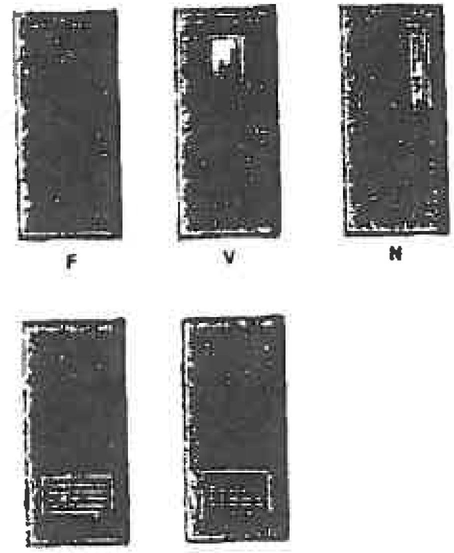
3. Mount hardware as required. Paint.

TYPCIAL SECTION

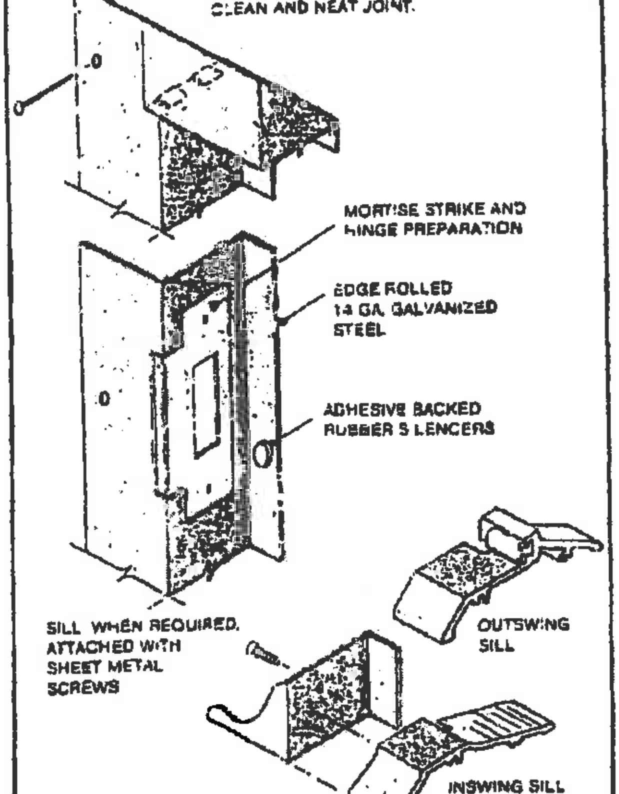


The RF-14 steel replacement frame fits into existing wood or metal frames without removing the old frame.
Trim strip and filler section are optional items.

DESIGNS AND FINISHES AVA



FRAME DETAIL



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:

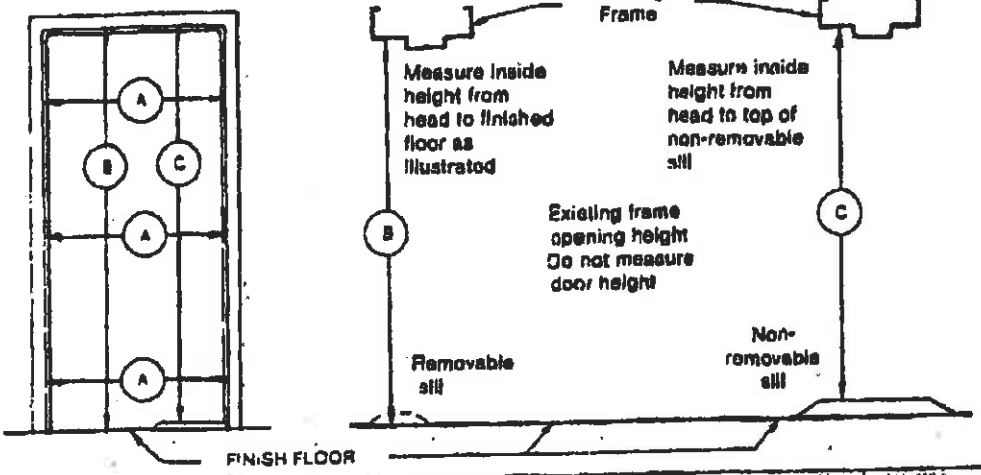
- Doors shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RL-18 (1¾" 18 ga. steel).
- Doors shall be fabricated from cold rolled steel.
- Doors shall have ⅛" bevel in 2" on hinge and lock edges.
- Doors shall have vertical mechanical interlocking seams on hinge and lock edges with visible edge seam.
- Doors shall be provided with top and bottom inverted steel channels spotwelded 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"
5'4" x 6'8"	63⅛"	64⅛"	79½"	80½"
6'0" x 6'8"	71⅛"	72⅛"	79½"	80½"
5'4" x 7'0"	63⅛"	64⅛"	83½"	84½"
6'0" x 7'0"	71⅛"	72⅛"	83½"	84½"

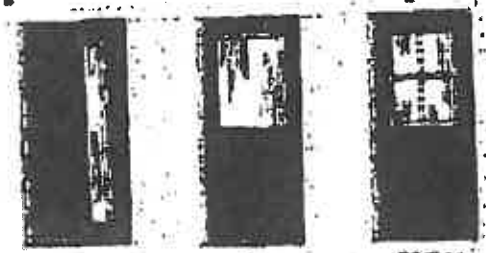
*MAX. OPENING HEIGHT MAY BE EXCEEDED BY BLOCKING DOWN EXISTING OPENING.

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

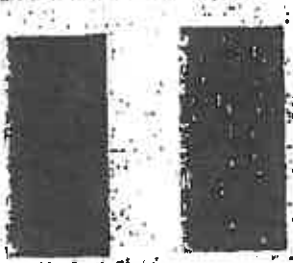
TO HAND A DOOR — FACE IT FROM THE OUTSIDE OR KEYSIDE

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



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.

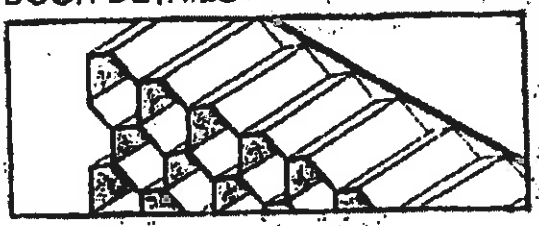
Consult distributor for other hardware preparations.

	NOMINAL SIZE	FRAME SIZE (FINISHED OPENING) WIDTH	FRAME SIZE (FINISHED OPENING) HEIGHT	NET DOOR SIZE* WIDTH	NET DOOR SIZE* HEIGHT
SINGLE	2868	31"	79½"	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"	83¾"	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"	79½"	30-13/16" & 31-13/16"	78¼"
	6068	71"		34-13/16" & 35-13/16"	
	5470	63"	83¾"	30-13/16" & 31-13/16"	82¼"
	6070	71"		34-13/16" & 35-13/16"	

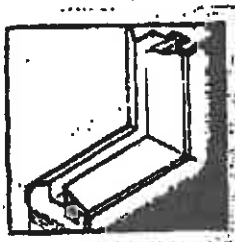
*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF

CONSULT DISTRIBUTOR FOR OTHER SIZES.

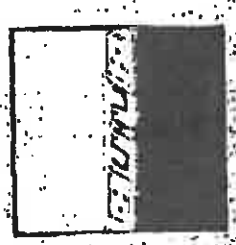
DOOR DETAILS



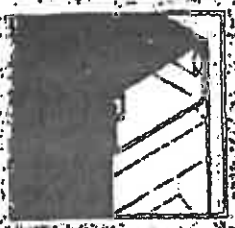
Full honeycomb core of phenolic resin-impregnated kraft paper reinforces the door every 1 inch, proving superlative resistance to impact and assuring a flat surface.



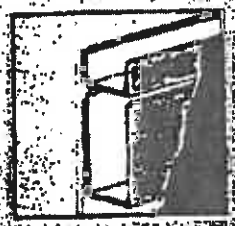
Aluminum glass trim (snap-in).



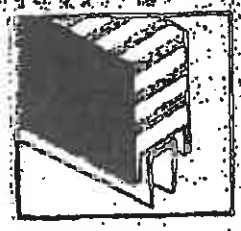
8-gage thick hinge reinforcement.



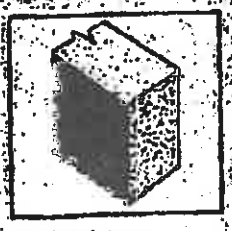
Snap-in steel top caps for exterior openings.



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.

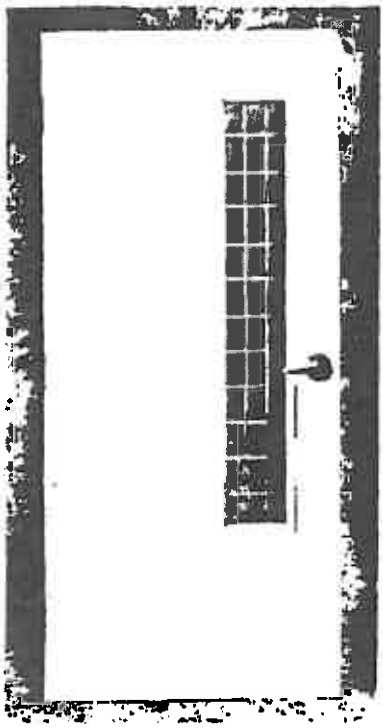
Pairs of doors consist of two leaves and a 14 ga. steel "Z" astragal field mounted to inactive leaf of pair. Inactive leaf may be secured with flush bolts or surface bolts.

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

STEELCRAFT.

L18 AND L16-SERIES HONEYCOMB DOORS

HD X-HD



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 Dezigner™ 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.

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.

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:

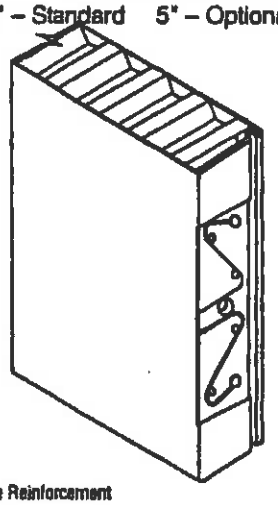
Depending on environmental conditions, exterior doors are generally galvannealed and interior doors non galvanneal. All doors are supplied with a factory applied baked on primer for field applied finish paints.

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

IR Security & Safety

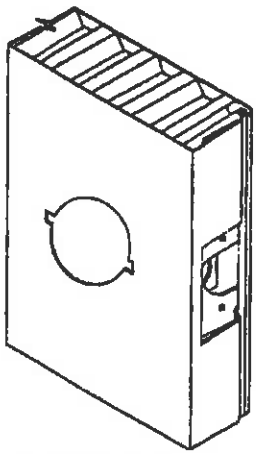
Details are subject to change without prior notice.

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



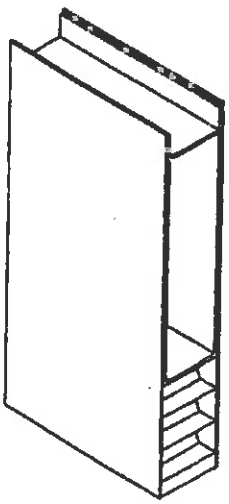
7 Gage Hinge Reinforcement

Lock Prep

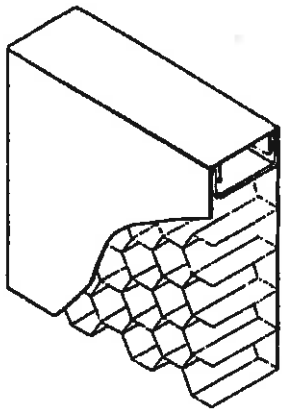


161 Cylindrical Lock shown

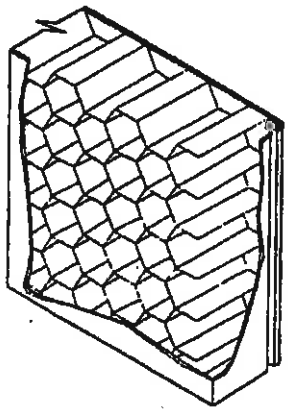
Optional 14 Gage Closer Reinforcement



Optional Snap-in Top Cap



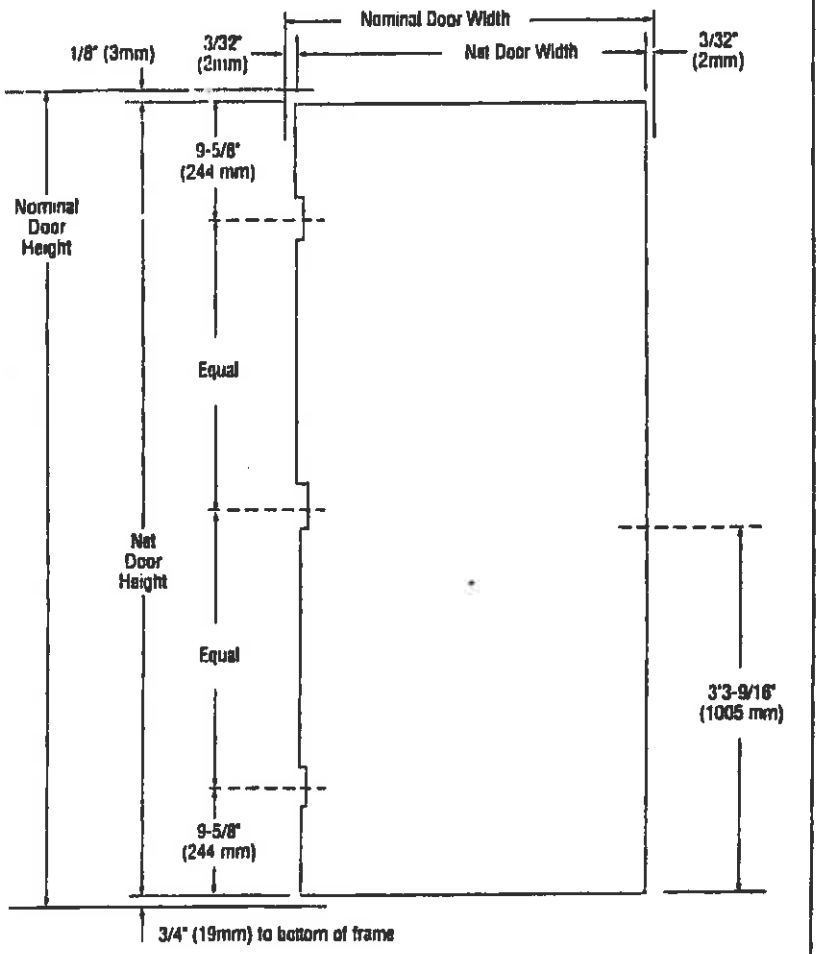
Rigid Honeycomb Core



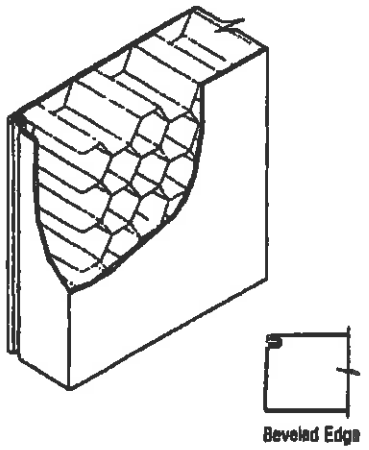
GENERAL NOTES:

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.

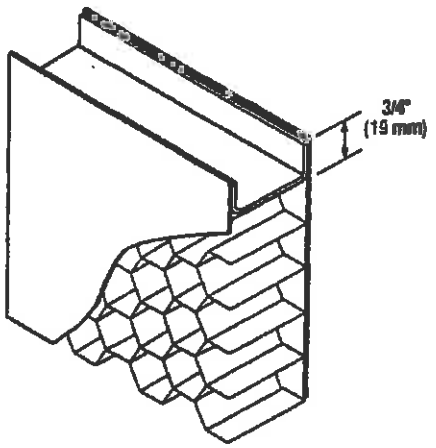
Single Door Elevation



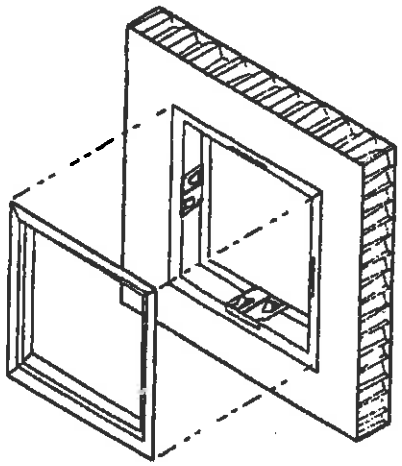
Beveled Edge with Full Height Mechanical Interlock



Inverted Top & Bottom Channels 14 Gage



Dezigner 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.*

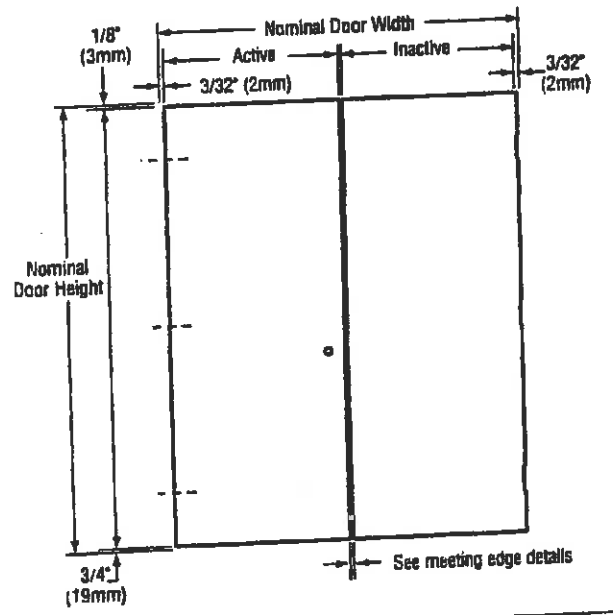
Series	Level	Model	Description	Edge Construction
L18	2	1	Full Flush	Full height, visible mechanical interlocked edge
LF18	2	2	Seamless	L-Series with epoxy filled edge seams
LW18	2	2	Seamless	L-Series with welded edge seams
L16	3	1	Full Flush	Full height, visible mechanical interlocked edge
LF16	3	2	Seamless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

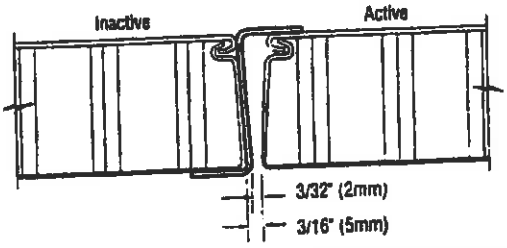
- **Standard operating clearances** *(installed in frame)*:
  - Head = 1/8" (3mm) to bottom of head or transom panel
  - Hinge side = 3/32" (2mm) to rabbet on jamb
  - Meeting edges = 3/32" (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
  - Bottom = 3/4" (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

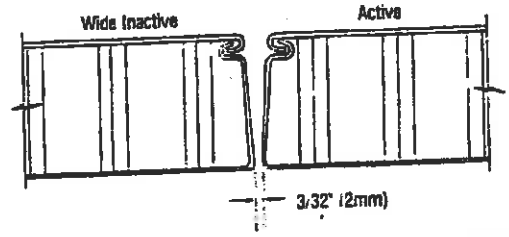


MEETING EDGE DETAILS:

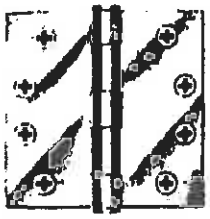
Typical Astragal 14 Gage



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

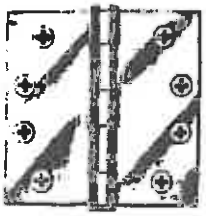
For use on medium weight doors or doors requiring low frequency service

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

Saddle Thresholds

All thresholds this page

MATERIALS & FINISHES

- Aluminum mill finish
- DKB - Aluminum dark bronze finish

Slip Resistant SIA Finish

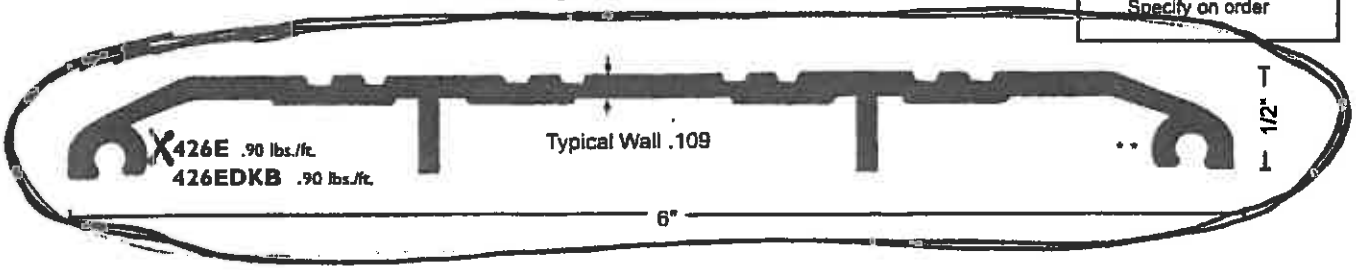
All thresholds are available with our slip resistant, non-skid finish for better traction. Suffix "SIA".

424E .60 lbs./ft.
424EDKB .60 lbs./ft.

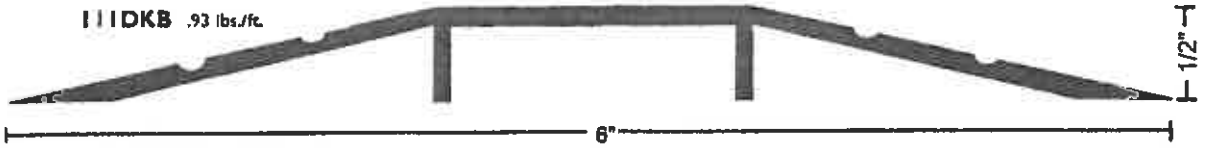
425E .80 lbs./ft.
425EDKB .80 lbs./ft.

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

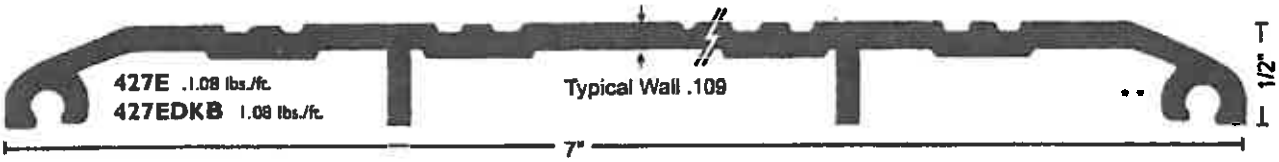
426E .90 lbs./ft.
426EDKB .90 lbs./ft.



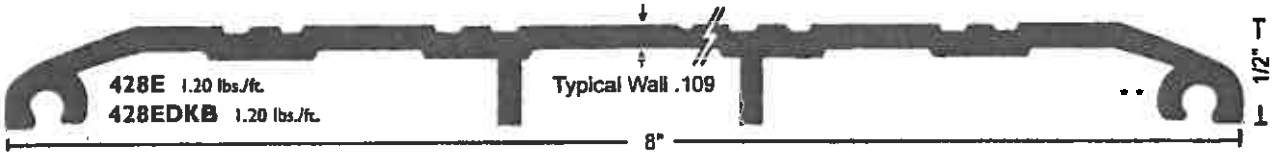
111 93 lbs./ft.
111DKB .93 lbs./ft.



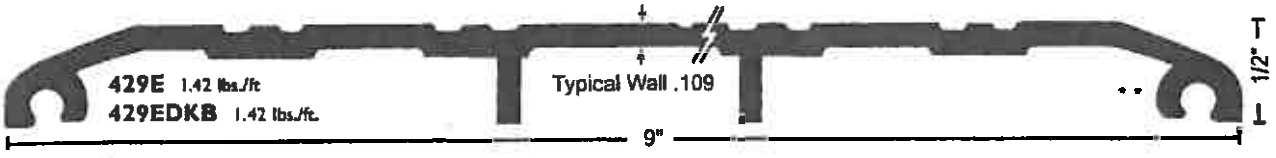
427E 1.08 lbs./ft.
427EDKB 1.08 lbs./ft.



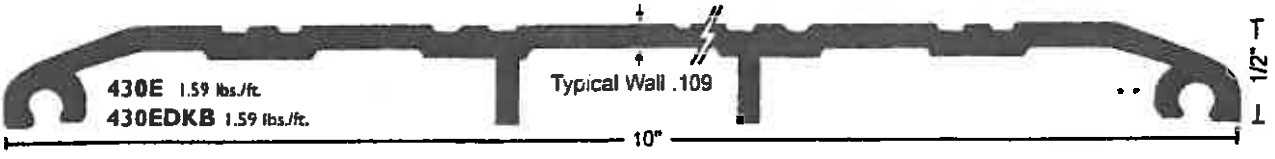
428E 1.20 lbs./ft.
428EDKB 1.20 lbs./ft.



429E 1.42 lbs./ft
429EDKB 1.42 lbs./ft.



430E 1.59 lbs./ft.
430EDKB 1.59 lbs./ft.



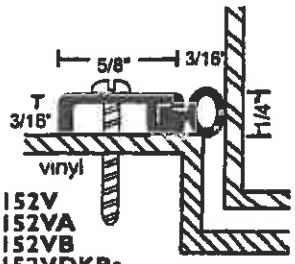
Vinyl Seals

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

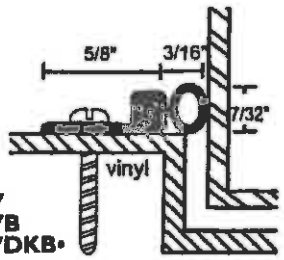
#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

All vinyl seals this section

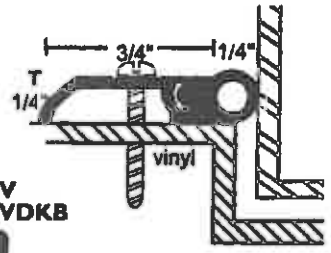
A - clear
B - gold
DKB - dark bronze
no suffix - mill
Vinyl is gray
(exception: •vinyl is black)



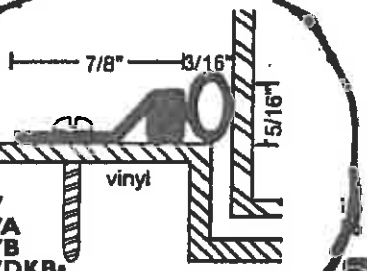
152V
152VA
152VB
152VDKB•



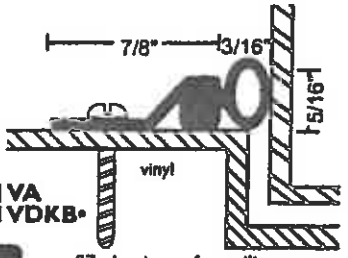
155V
155VB
155VDKB•



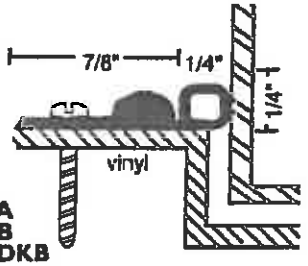
156V
156VDKB



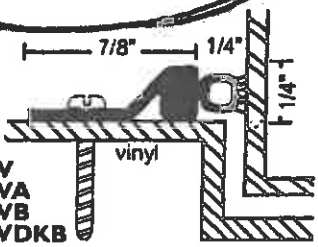
160V
160VA
160VB
160VDKB•



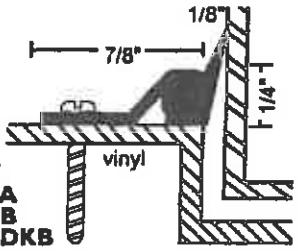
1VA
1VDKB•
.07 aluminum for military specs



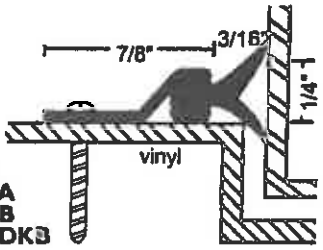
162V
162VA
162VB
162VDKB



164V
164VA
164VB
164VDKB

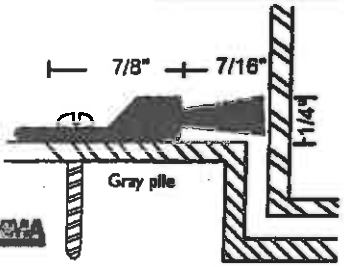


188V
188VA
188VB
188VDKB

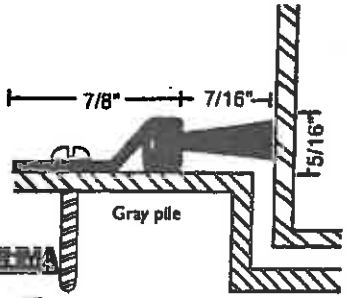


190V
190VA
190VB
190VDKB

Pile Seals



185P
185PA
185PB
185PDKB



161PA
161PDKB
.07 aluminum for military specs

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" (70 mm) standard. 2⅜", 3¾" and 5" (60 mm, 95 mm, 127 mm) 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" (19 mm) throw anti-friction latch available for pairs of fire doors.

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

Strikes:
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.

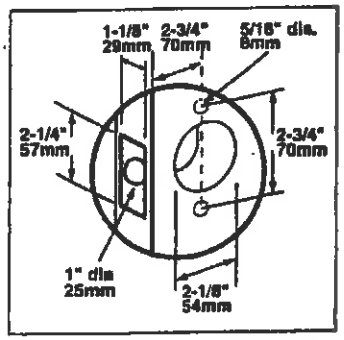
Cylinder & Keys:
6-pin Everest C123 keyway standard with two patented nickel silver keys per lock.

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.

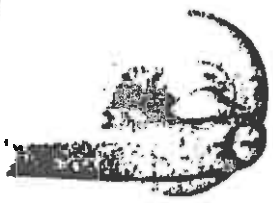
California State Reference Code
(Formerly Title 19, California State Fire Marshal Standard)
All levers with returns comply; levers return to within ½" of door face.

UL / cUL:
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.

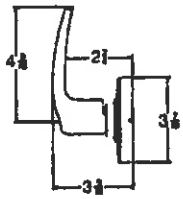
Lever Designs & Finishes

ATHENS

Symbol: ATH
Material: Pressure cast zinc lever; wrought brass rose
Finishes:
605, 606, 612, 613, 619, 625, 626



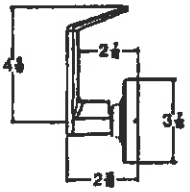
606



RHODES

Symbol: RHO (06)
Material: Pressure cast zinc lever; wrought brass rose
Finishes:
605, 606, 612, 613, 619, 625, 626

612

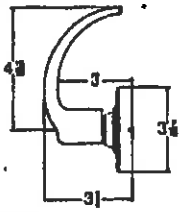


Lever Designs & Finishes

SPARTA

Symbol: SPA (17)
Material: Pressure cast zinc lever; wrought brass rose
Finishes:
605, 606, 612, 613, 619, 625, 626

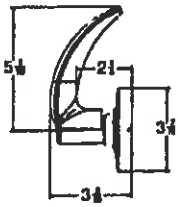
626



OMEGA

Symbol: OME
Material: Pressure cast zinc lever; wrought brass rose
Finishes:
605, 606, 612, 613, 619, 625, 626

619



605
Bright Brass

606
Satin Brass

612
Satin Bronze

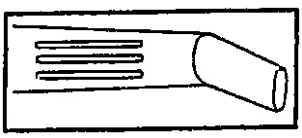
613
Oil Rubbed Bronze

619
Satin Nickel

625
Bright Chromium Plated

626
Satin Chromium Plated

Keyed functions available with interchangeable core options. Levers are available for full size and small format interchangeable cores.



TACTILE WARNING (KNURLING)

Change symbol designation as follows:
8AT for Athens
8RO for Rhodes
8SP for Sparta

Only outside lever is knurled unless otherwise specified.

Not available with Omega trim

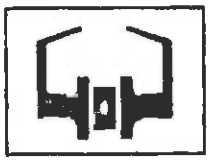
Finishes
605 Bright Brass
606 Satin Brass
612 Satin Bronze
613 Oil Rubbed Bronze
619 Satin Nickel
625 Bright Chromium Plated
626 Satin Chromium Plated

Functions

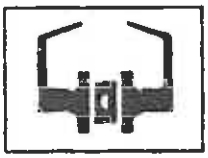
Non-Keyed Locks

SCHLAGE ANSI

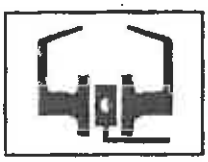
ND10S F75 — **Passage Latch**
Both levers always unlocked.



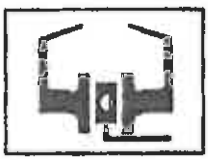
ND12D F89 — **Exit Lock**
Outside lever always fixed. Inside lever always unlocked.



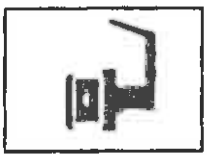
ND12DEL — **Electrically Locked (Fail Safe)**
Outside lever continuously locked electrically. Unlocked by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.



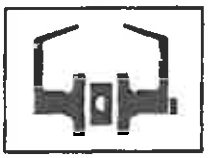
ND12DEU — **Electrically Unlocked (Fail Secure)**
Outside lever continuously locked until unlocked by electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.



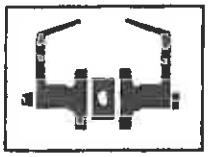
ND25D — **Exit Lock**
Blank plate outside. Inside lever always unlocked.



ND40S F76 — **Bath/Bedroom Privacy Lock**
Push-button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button.



ND44S — **Hospital Privacy Lock**
Push-button locking. Unlocked from outside by turning emergency turn-button. Turning inside lever or closing door releases button.

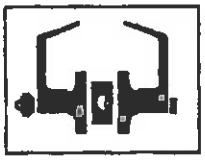


ND170 — **Single Dummy Trim**
Dummy trim for one side of door. Used for door pull or as matching inactive trim.

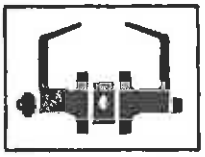
Keyed Locks

SCHLAGE ANSI

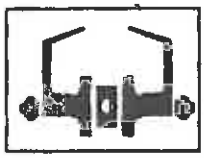
ND50PD F82 — **Entrance/Office Lock***
Push-button locking. Push-button locks outside lever until unlocked with key or by turning inside lever.



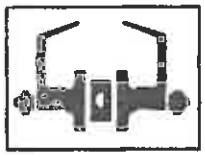
ND53PD F109 — **Entrance Lock***
Turn/push-button locking; pushing and turning button locks outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button locks outside lever until unlocked by key or by turning inside lever.



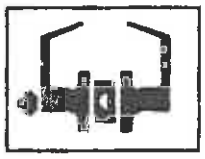
ND60PD F88 — **Vestibule/Classroom Security Lock***
Latch retracted by key from outside when outside lever is locked by key in inside lever. Inside lever is always unlocked.



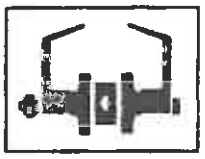
ND66PD F91 — **Store Lock*†**
Key in either lever locks or unlocks both levers.



ND70PD F84 — **Classroom Lock***
Outside lever locked and unlocked by key. Inside lever always unlocked.



ND73PD F90 — **Corridor Lock***
Outside lever locked by key outside or push-button inside. Push-button released by rotating inside lever or closing door. When outside lever is locked by key, key must be used to unlock it. Inside lever is always unlocked.



* *Available functions for small format interchangeable core.*

† *Caution: Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.*

Specifications

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

Door Thickness:
1⅛" 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 2¾" 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.

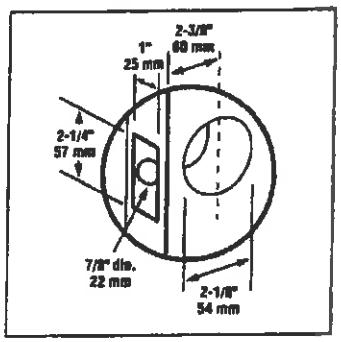
Strike:
T-strike 1⅛" x 2¾" (29 mm x 70 mm) x 1⅛" (29 mm) lip to center with box standard. Optional strikes, lip lengths and ANSI strike box available. See page 7.

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



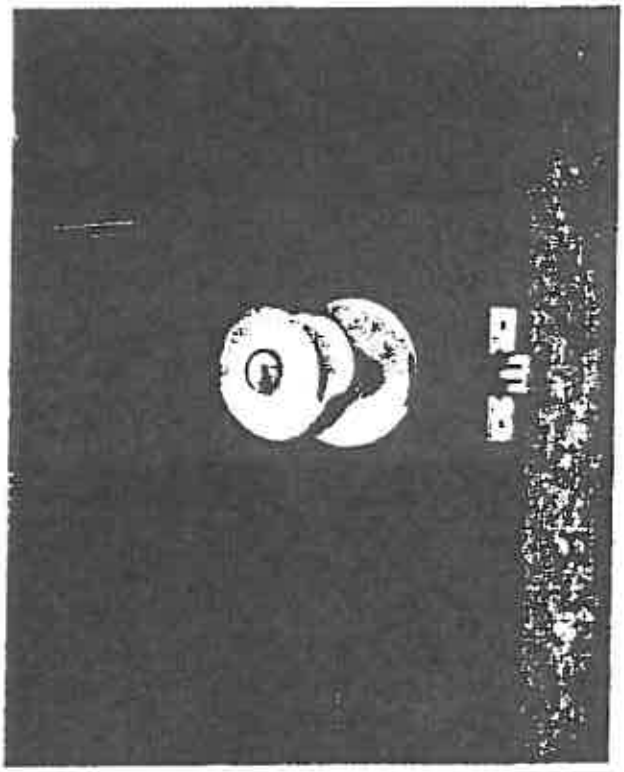
Certifications

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

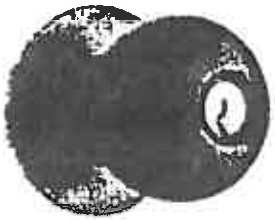
GEORGIAN

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

609

ORBIT

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



613

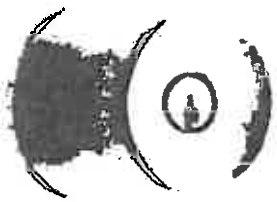
PLYMOUTH

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

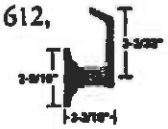


626

LEVON

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

605



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

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

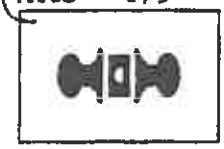
Functions

ANSI A156.2 Series 4000 Grade 2

Non-Keyed Functions

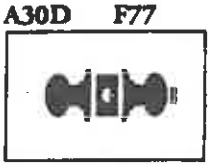
SCHLAGE ANSI

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



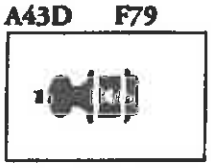
A25D — **Exit Lock**
Blank plate outside. Inside knob always unlocked. Specify door thickness, 1⅜" or 1¾".

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

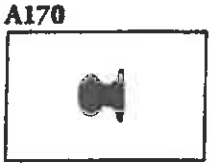


A40S F76 — **Bath/Bedroom Privacy Lock**
Push-button locking. Can be opened from outside with small screwdriver. Turning inside knob or closing door releases button.

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.

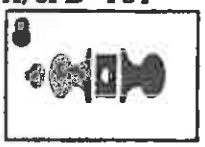


Keyed Functions

SCHLAGE ANSI

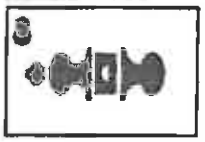
A53PD F109 — **Entrance Lock**
Turn/push-button locking: pushing and turning button locks outside knob requiring use of key until button is manually unlocked. Push-button locking: pushing button locks outside knob until unlocked by key or by turning inside knob.

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.

8 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.

1. Acceptable Ratios:	Minimum	Maximum
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

FINAL ABATEMENT REPORTS

LEAD BASED PAINT REMEDIATION REPORT

FOR

MUSKOGEE ARMORY

MUSKOGEE, MUSKOGEE COUNTY, OKLAHOMA

Prepared for

Oklahoma Department of Environmental Quality
Land Protection Division
Dustin Davidson
707 North Robinson
Oklahoma City, Oklahoma 73102

Basin Work Order No. ES-12-053
DCS Project No. 11171
Site Contact: Dustin Davidson
Field Team Lead: Rick Williams

Prepared by

Basin Environmental and Safety Technologies
325 N Portland Ave
Oklahoma City, OK 73107
(405) 232-5737

16 August 2012

EXECUTIVE SUMMARY

This is the final report describing the Muskogee Armory Lead Based Paint, Lead Dust Remediation door replacement performed for the Oklahoma Department of Environmental Quality (ODEQ) at the Muskogee Armory located in Muskogee, Muskogee County, Oklahoma. Basin Environmental and Safety Technologies (Basin) was contracted by the Land Protection Division of the Oklahoma Department of Environmental Quality (ODEQ) to conduct lead-based paint abatement door replacement at the former National Guard Armory in Muskogee, Oklahoma. This work was performed to provide unrestricted, safe re-use of the storage areas, classrooms and offices at this facility. Abatement activities included extensive wet scraping techniques and lead based paint encapsulation of non-friction and non-impact surfaces as well as Lead Based Paint removal and primer paint on all Friction / Impact surfaces. Critical barriers and drop cloths were installed. High Efficiency Particulate Air (HEPA) vacuuming, wet wiping and wet mopping were preformed at the end of each day, and as needed to supplement the engineering controls. Abatement activities took place from April 2012 to July 2012. All remediation processes were performed under the guidance of the ODEQ and in accordance with the Occupational Safety and Health Administration's (OSHA), 29 CFR 1926.62, "Lead in Construction Interim Final Standard".

The doors were replaced and installed by MMD Site Services. This installation company is certified and recommended by the manufacturers. All work was performed in a manner consistent with accepted practices of the profession undertaken in similar projects for the Oklahoma Department of Environmental Quality Land Protection Division.

Included in this closure report are a detailed summary of work, waste manifests, chemistry reports, site photos and floor plan.

This final report was prepared by Basin under Verbal Tasking from Dustin Davidson. The ODEQ Site Contact was Dustin Davidson, and the Basin Team Leader was Rick Williams.

[X] The ODEQ did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Basin Environmental and Safety Technologies has submitted this report absent ODEQ's approval.

[ ] ODEQ has provided final approval of this report. Therefore, Basin Environmental and Safety Technologies has submitted this report with ODEQ approval.

TABLE OF CONTENTS

Section **Page**

ATTACHMENTS

1. INTRODUCTION

Basin Environmental and Safety Technologies (Basin) was contracted by ODEQ to provide Lead Based Paint abatement as well as door replacement services at the Muskogee Armory located 661 East Davis field road Muskogee, Oklahoma. Abatement activity was initiated by ODEQ as part of the Site Cleanup Assistance Program (SCAP) and the Armory Cleanup Program.

All workers were trained, fit tested, and medically cleared to wear respirators in accordance with the 29 CFR 1910.134. Medical exams are performed annually under the supervision of a licensed physician.

Throughout the duration of the project, every change in work procedure was preceded by a tailgate safety meeting. Level C PPE (Tyvek coveralls, Scott or 3M half-face respirator masks with appropriate P100 HEPA filters, and nitrile chemical resistant gloves) and Level D PPE were utilized throughout the project dependant upon the hazards assessment conducted on each process.

Wet wiping was conducted using tri-sodium phosphate (TSP), and Swiffer wet mops.

Throughout the remediation process the following engineering and administrative controls and waste stream management practices were followed:

- Poly sheeting was used as a critical barrier on floors and entry ways to minimize cross contamination.
- Booties were worn by all personnel and changed upon entering and exiting clean areas.
- Project areas were delineated as dirty or clean dependant upon the processes and hazards present.
- Media collected from abatement procedures, HEPA vacuums and appropriate cleaning materials were double bagged in 6 mil poly drum liners, labeled and stored in the un-occupied section of the drill floor on site until accepted final visual inspection. Upon accepted visual inspection these products were manifested and transported for appropriate disposal.

1.1 REPORT FORMAT

This report has been organized as follows:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Abatement Activities

2. SITE BACKGROUND

Information regarding the site location, description, and history is included in this section.

2.1 SITE LOCATION AND DESCRIPTION

The Muskogee Armory site is located at 661 East Davis Field Road Muskogee, Oklahoma. The armory is a brick and concrete constructed single story building with a concrete slab foundation and metal-domed roof. The building consists of thirty four (34) interior room equivalents. Several types of rooms are present within the building including offices, restrooms, meeting rooms, and the IFR. The flooring of the facility is concrete. The facility was not being ventilated at the time of the abatement activity. (See Attachment D for facility photos and Attachment E for a floor plan).

2.2 BACKGROUND INFORMATION

This project is part of ODEQ's SCAP & Armory Cleanup Program to abate Lead-Based Paint (LBP) and replace windows and doors containing LBP. The Statement of Work (SOW) describes the cleanup procedures of LBP located on surfaces throughout the building.

3. ABATEMENT ACTIVITIES

On April 30, 2012, Basin mobilized to the armory with a Lead Abatement Supervisor and three (3) abatement personnel. Each employee was trained, made familiar with the statement of work and Environmental, Health, & Safety (EH&S) aspects of the project with emphasis on engineering controls, administrative controls, and personal protective equipment (PPE) to minimize employee exposure and cross-contamination. Basin workers began work in level D PPE, installing a triple flap airlock poly door to the doorway connecting the IFR from the drill floor.(rooms 11 & 12).

The following table details Basin's abatement activities at the Muskogee Armory:

PPE	ABATEMENT ACTION
Initial Level D	Safety Tool Box, Engineering Controls, installing a triple flap airlock poly door system to room 11 & 12
Level C/ 1/2 face respirators with P-100/OV Cartridges	Using wet method gross removal methods the crew began removing non-asbestos floor tile and ACM floor mastic in rooms 21,22 and 34
Level C/ 1/2 face respirators with P-100/OV Cartridges	Double Fire doors was removed & wrapped in 10 mil re-enforced polyurethane sheeting and placed in the hazardous waste roll off staged on the south side of the armory outside room 12
3M ½ face with P100/OV cartridges	Crew Began removing the chicken wire and wood framed wall separating parts of room # 11 (IFR), then removing all the general debris stored in the IFR and disposing of it in the Hazardous Waste roll off.
3M ½ face with P100/OV cartridges	Cut out and removed 3 section bullet refraction wall in the IFR, disposed as hazardous waste.
Level C/ 1/2 face respirators with P-100/OV Cartridges	Double bagged all the sand in the IFR catch pit and stored in the hazardous waste roll off.
Level C/ 1/2 face respirators with P-100/OV Cartridges	Applied amended water, removed, and cut up all the acoustical tiles pourus materials in the IFR then stored in the hazardous waste roll off for profiling and disposal at a hazardous waste landfill.
Level C/ 1/2 face respirators with P-100/OV Cartridges	Wet scraped the overhead door frames and door guards, primered and painted with LBC (20 mil thick)
Level D PPE	Hepa Vac, Swiffer, Hepa Vac Rooms 5,12,13,14,15,16,31,33 that was positive >40ug.
Level D PPE	Stored cleaning debris in drum liners and stored in hazardous waste landfills.
	ODEQ performed Lead Swipe Samples.
Level C/ 1/2 face respirators with P-100/OV Cartridges	Primered and locked down with LBC, ceilings, walls and floor of the IFR.

ATTACHMENT A

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

WASTE CONNECTIONS INC.

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 2266

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: Oklahoma Dept of Environmental Quality

b. Generating Location: Old Muskogee Armory

c. Address: 707 N. Robinson
OKC, OK 73101

d. Address: 661 East Davis Field Rd
Muskogee, OK

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

i. WCA WASTE CODE

j. Description of Waste: Construction Debris
Box # R25 & 67 Rt

k. Quantity: 25 | Units: Y | Containers No.: 01 | TYPE: CM

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
B - BAG
BA - 6 MIL. PLASTIC BAG or WRAP
T - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
M³ - CUBIC METERS
Y³ - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, If the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Sherra Moyer for DEQ — 07/13/12

Generator Authorized Agent Name / Signature / Shipment Date

Section II — TRANSPORTER (Generator completes a-f. Transporter I completes a-g) (Transporter II completes h-n)

TRANSPORTER I

a. Name: Basin Environmental

b. Address: 3120 S. Meridian
Oklahoma City, OK 73119

c. Driver Name/Title:

d. Phone No.: (405) 232-5737

e. Truck No.:

f. Vehicle License No./State:

Acknowledgment of Receipt of Materials

g. Doug Bennett — 07/13/12

Driver Signature / Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials

n. Driver Signature / Shipment Date

Section III — DESTINATION (Generator completes a-d; destination site completes e-f.)

a. Site Name: Oklahoma City Landfill

b. Physical Address: 7600 SW 15th Street
Oklahoma City, OK 73128

c. Phone No.: (405) 745-3002

d. Mailing Address: Oklahoma City Landfill
7600 SW 15th Street
Oklahoma City, OK 73128

e. Discrepancy Indication Space:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Inger Mattis — Name of Authorized Agent / Signature

07/13/12 — Receipt Date

Section IV — ASBESTOS (Generator completes a-d, f, g. Shipper* completes e.)

a. Shipper's* Name:

b. Shipper's* Phone No.:

c. Shipper's* Address:

d. Shipper's* Special Handling Instructions and additional information:

CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

e. Shipper's* Name & Title:

b. Shipper's* Phone No.:

Date

f. Name and Address of Responsible Agency:

g. ☐ Friable; ☐ Non-friable; ☐ Both _____% friable _____% nonfriable

*Shipper refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation, or both.

WC1000 (Rev 11/11)

White - Destination Retain Green - Return to Generator Canary - Return to Operator Pink - Transporter Retain Goldenrod - Generator Retain

ATTACHMENT B

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	1		001877458 GBF

GENERATOR

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

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

Facility's Phone:

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
	1.		CM	90	Y	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

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 applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name — Signature — Month — Day — Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month — Day — Year

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

ATTACHMENT C

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
007	7	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
010	10	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
013	13	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
014	14	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
016	16	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100

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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	18	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
019	19	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
020	20	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
021	21	Wipe	Lead	16.3	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
022	22	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
023	23	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
024	24	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
025	25	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
026	26	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
027	27	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
028	28	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
029	29	Wipe	Lead	16.1	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
030	30	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
031	31	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
032	32	Wipe	Lead	18.5	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
033	33	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
034	34	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
035	35	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
036	36	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
037	37	Wipe	Lead	159	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
038	38	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
039	39	Wipe	Lead	171	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
040	40	Wipe	Lead	29.9	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
041	41	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
042	42	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
043	43	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
044	44	Wipe	Lead	22.2	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
045	45	Wipe	Lead	20.5	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
046	46	Wipe	Lead	36.1	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
047	47	Wipe	Lead	17.7	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
048	48	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
049	49	Wipe	Lead	29.9	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
050	50	Wipe	Lead	20.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
051	51	Wipe	Lead	45.3	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100

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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
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AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	52	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
053	53	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
054	54	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
055	55	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100

Authorized Signature: _____
Benton Miller, Analyst

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

Supplemental Report
QAQC Results

QA ID: 9987
Test: Lead

Date: 5/16/2012
Matrix: Wipe

Lab Number: 207840
Approved By: Benton Miller
Date Approved: 5/16/2012

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	5.2	5.5
FCV	4.5	5.3	5.5
ICV	0.9	1	1.1
RLVS	0.256	0.371	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	5.219	5.589	107.1	5.476	104.9	2.0
MS-W2	0.000	5.178	4.959	95.8	4.916	94.9	0.9
MS-W1	0.000	5.178	4.799	92.7	5.335	103.0	10.6

Authorized Signature: _____

Benton Miller, Analyst

LEAD CHAIN OF CUSTODY

QUANTEM LABORATORIES

2033 Heritage Park Drive, Oklahoma City, OK 73120-7502
(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

www.QuanTEM.com

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

Page 1 of 85

For Lab Use Only
Lab No. 207840
Accept / Reject

Report Results (☑ one box):
- ☐ QuanTEM Website
- ☐ Other _____

Contact Information

Company: DEQ
Contact: Dustin Davidson
Account #:
Phone: 405-702-5115
Cell Phone: 317-4292
E-mail: dustin.davidson@deq.ok.gov

Project Information

Project Name: Muskogee Armory
Project Location: Muskogee Oklahoma
Project ID:

Sampled By: Name: Dustin Davidson
Date: 5/15/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55p		SLeftwich	5/15/12 3:55

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	1			12"X12"	C	X				X		
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	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"

LEAD CHAIN OF CUSTODY

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(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only
Lab No. 207840
Accept Reject

Report Results (☑ one box)
☐ QuanTEM Website
☐ Other

Contact Information		Project Information	
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317 4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/15/2012

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55		S Pfautsch	5/15/12 3:55

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	13			12" x 12"	C					X		
2	14											
3	15											
4	16											
5	17											
6	18											
7	19											
8	20											
9	21											
10	22											
11	23											
12	24											

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

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Lab No. 20784Q
Accept Reject

Report Results (☑ one box)
- ☐ QuanTEM Website
- ☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/15/2012

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55pm		SRuftwich	5/15/12 3:55

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	25			12"x12"	C	X				X		
2	26											
3	27											
4	28											
5	29											
6	30											
7	31											
8	32											
9	33											
10	34											
11	35											
12	36											

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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For Lab Use Only
Lab No. 207840
Accept Reject

Report Results (☑ one box)
☐ QuanTEM Website
☐ Other _____

Contact Information
Company: DEQ
Contact: Dustin Davidson
Account #:
Phone: 702-5115
Cell Phone: 317-4292
E-mail: dustin.davidson@deq.org

Project Information
Project Name: Muskogee Armory
Project Location: Muskogee, OK
Project ID:

Sampled By: Name: Dustin Davidson Date: 5/15/2012

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/16/12 3:55pm		SLaftwich	5/15/12 3:55

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 codes box)	Analysis: Pb	Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
1	37			12"x12"	C					X		
2	38											
3	39											
4	40											
5	41											
6	42											
7	43											
8	44											
9	45											
10	46											
11	47											
12	48											

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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Lab No. 207840
Accept / Reject

Report Results (☑ one box)
- ☐ QuanTEM Website
- ☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/15/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55pm		Shaftwick	5/15/12 3:55

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	49			12"X12"	C	X				X		
2	50											
3	51											
4	52											
5	53											
6	54											
7	55											
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"

Supplemental Report
QAQC Results

QA ID: 10020
Test: Lead

Date: 5/25/2012
Matrix: Wipe

Lab Number: 208235
Approved By: Benton Miller
Date Approved: 5/25/2012

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	5.3	5.5
FCV	4.5	5.4	5.5
ICV	0.9	1.1	1.1
RLVS	0.256	0.348	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-WI	0.000	5.219	5.947	113.9	5.844	112.0	1.7

Authorized Signature: _____

Benton Miller, Analyst

LEAD CHAIN OF CUSTODY

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Lab No. 208235
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Report Results (☑ one box)
☐ QuanTEM Website
☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 405-317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/24/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson Dst Dsn	5/24/12 3:32pm	Drop off	S Liftwich	5/24/12 3:30

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	1			12"X12"	C	X				X		
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											

Sample Matrix Codes

A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME

☐	Same Day
☒	24 - Hour
☐	3 - Day
☐	5 - Day

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LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only
Lab No. 268235
(Accept) Reject

Report Results (☑ one box)
- QuanTEM Website
- Other ______

Contact Information			
Company:	DEQ	Phone:	702-5115
Contact:	Dustin Davidson	Cell Phone:	317-4292
Account #:		E-mail:	Dustin.Davidson@deq.ok.gov

Project Information	
Project Name:	Muskogee Armory
Project Location:	Muskogee, OK
Project ID:	

Sampled By: Name: Dustin Davidson Date:

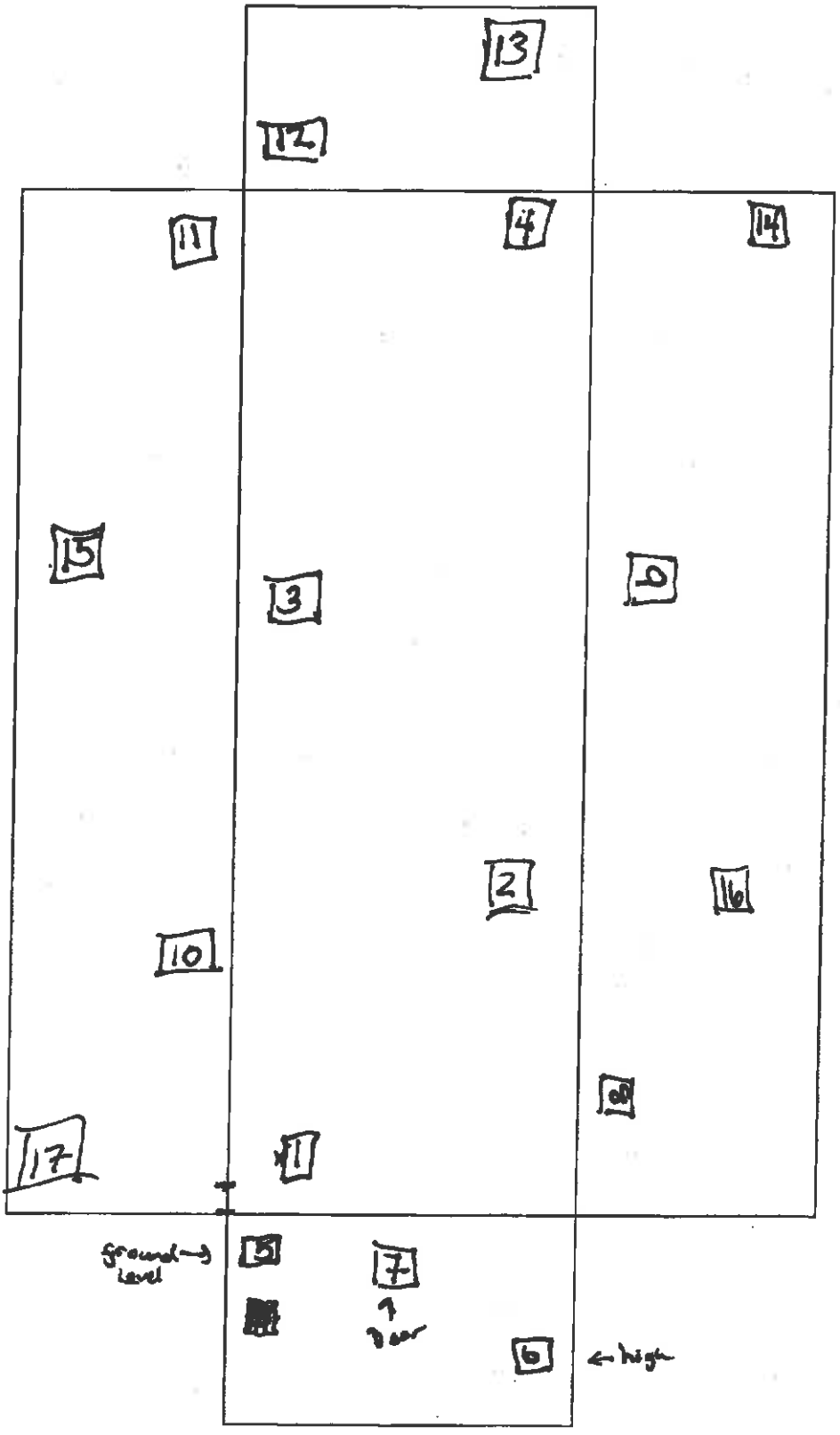
RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson [signature]	5/24/12 3:32	Drop off	[signature]	5/24/12 3:30

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	13			12" x 12"	C	X						X		
2	14			↓	↓	↓						↓		
3	15			↓	↓	↓						↓		
4	16			↓	↓	↓						↓		
5	17			↓	↓	↓						↓		
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

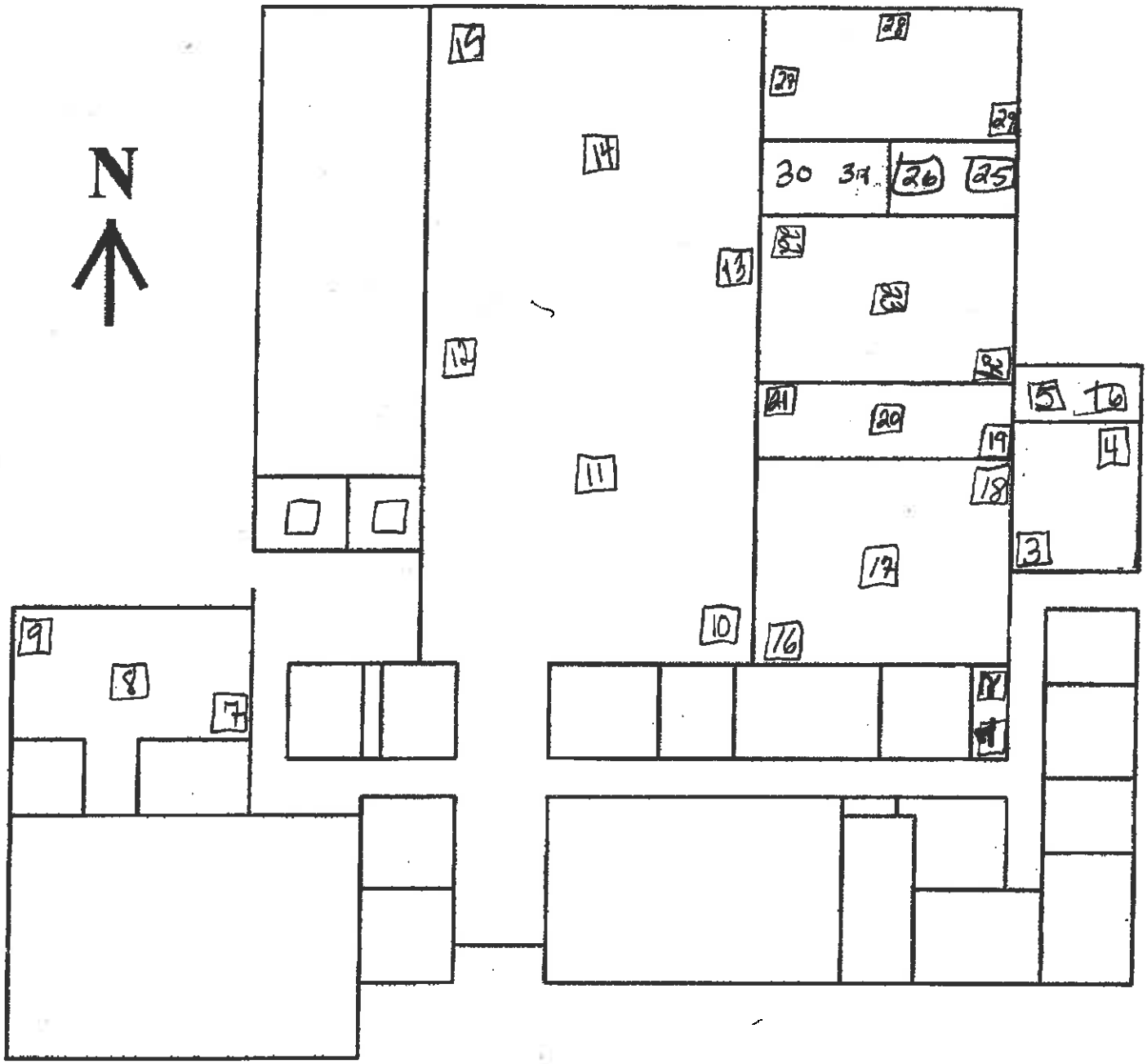

13
12
11
4
14
15
3
9
2
16
10
8
17
1
ground level
5
7
6
high

207840

Muskogee Armory Wipe Samples

Date 5/15/12

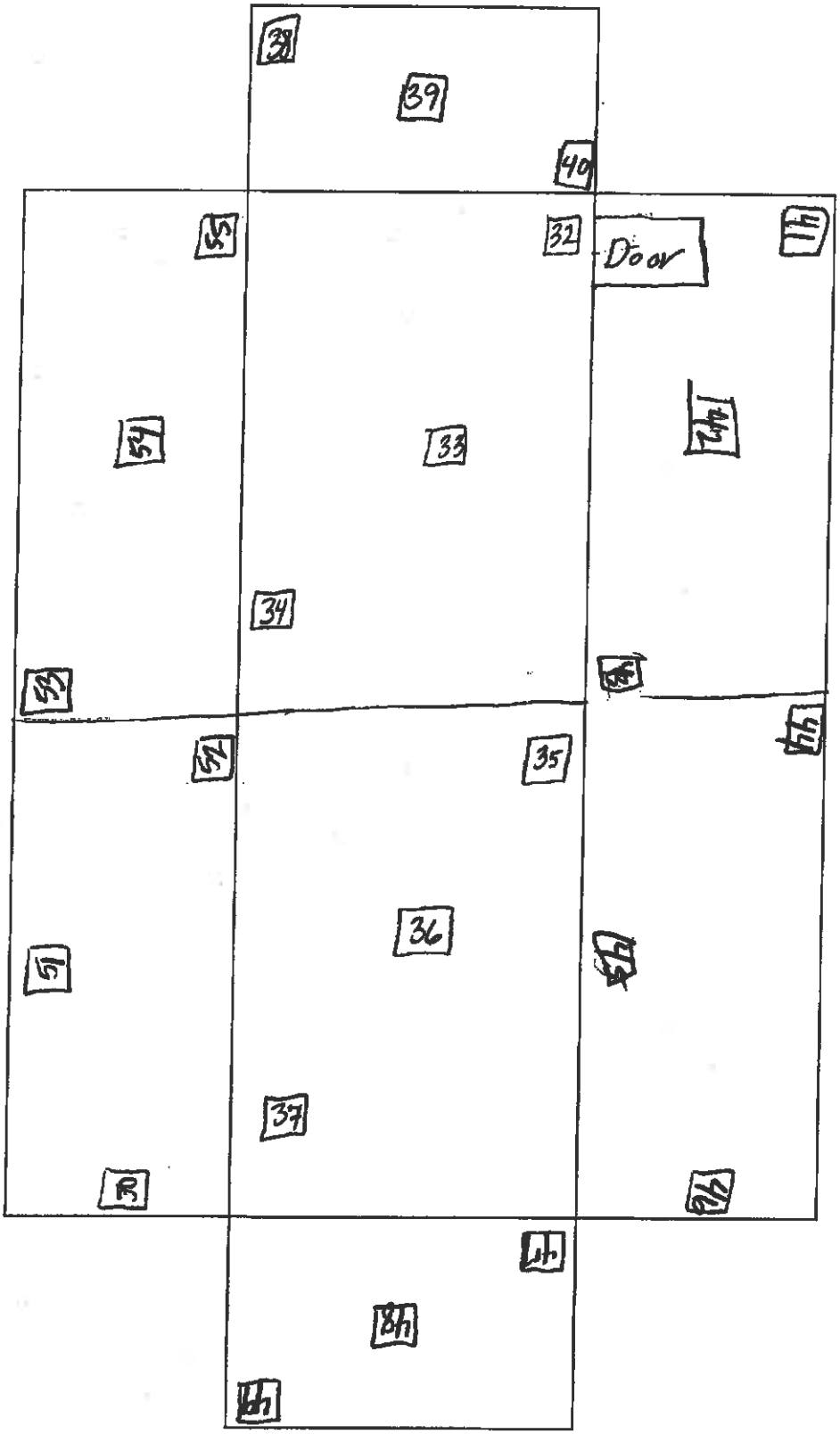
Sampled by DD + BM



Date 5/15/12 20784

Sampled by DD + BM

N?



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Environmental Chemistry Analysis Report

QuanTEM Set ID: 208235
Date Received: 05/24/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/25/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Ok
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	46.08	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
007	7	Wipe	Lead	194	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
010	10	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
013	13	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
014	14	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
016	16	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	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:	208235
Date Received:	05/24/12
Received By:	Sherrie Leftwich
Date Sampled:	
Time Sampled:	
Analyst:	BM
Date of Report:	5/25/2012

AIHA ID: 101352

Client:	State of Oklahoma DEQ Land Protection Attn: Dustin Davidson 707 N. Robinson Oklahoma City, OK 73102
Acct. No.:	B486
Project:	Muskogee Armory
Location:	Muskogee, Ok
Project No.:	N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method

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 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: 208815
Date Received: 06/08/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 6/11/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	W NIOSH 9100

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 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: 10068
Test: Lead

Date: 6/11/2012
Matrix: Wipe

Lab Number: 208815
Approved By: Benton Miller
Date Approved: 6/11/2012

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	4.8	5.5
FCV	4.5	5.2	5.5
ICV	0.9	1.1	1.1
RLVS	0.256	0.36	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W1	0.000	5.209	5.981	114.8	6.095	117.0	1.9

Authorized Signature: _____

Benton Miller, Analyst

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Lab No. 208815
Accept / Reject

Report Results (☑ one box)
- ☐ QuanTEM Website
- ☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-317-4292	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 405-702-5115	Project Location: Muskogee, OK	
Account #:	E-mail: Dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 6/8/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	6/8/12 2:25pm		[signature]	6/8/12 2:25

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	1			12" x 12"	C	X						X		
2	2			↓	↓	↓						↓		
3	3			↓	↓	↓						↓		
4														
5														
6														
7														
8														
9														
10														
11														
12														

Sample Matrix Codes

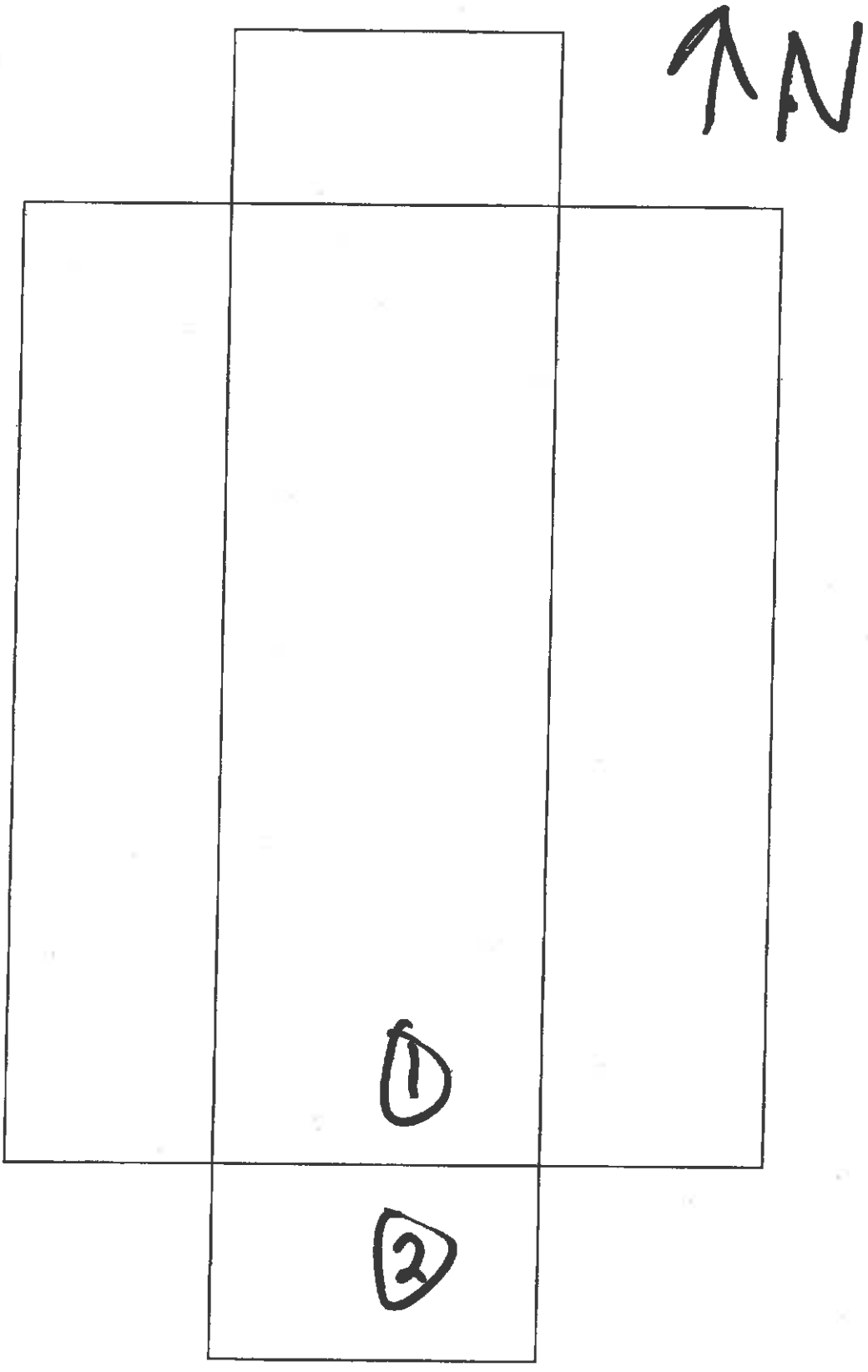
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME

☐	Same Day
X	24 - Hour
☐	3 - Day
☐	5 - Day

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"

208815



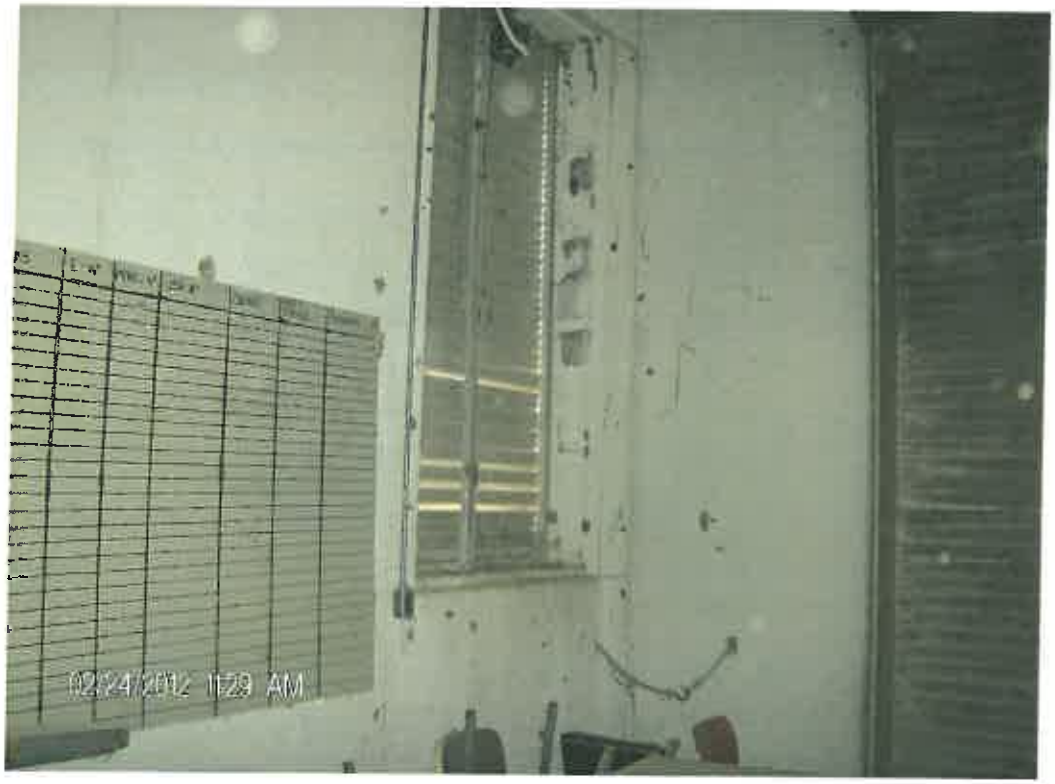
ATTACHMENT D


02/24/2012 11:19 AM


02/24/2012 11:20 AM


02/24/2012 1120 AM


02/24/2012 1121 AM


02/24/2012 11:29 AM

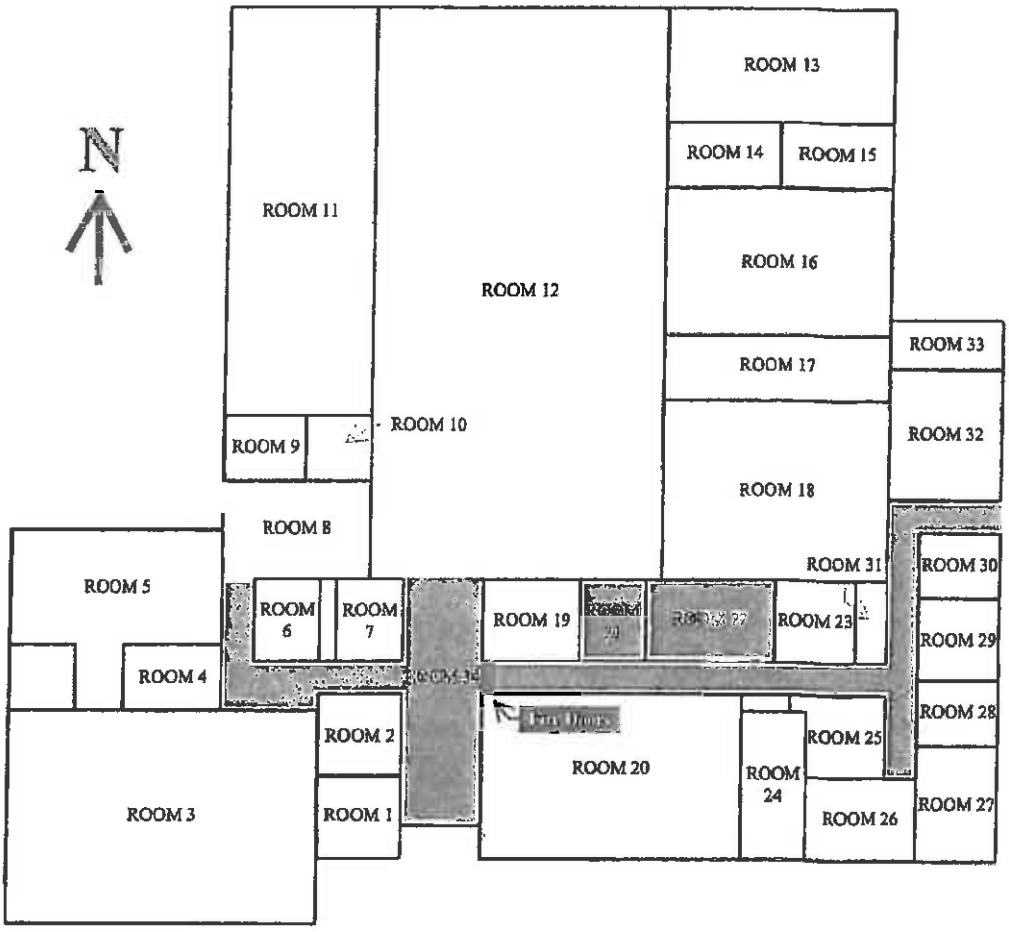

02/24/2012 11:31 AM


02/24/2012 11:29 AM


Bobcat

ATTACHMENT E

Muskogee Armory
Asbestos Containing Materials



CONFIRMATION SAMPLING

CONFIRMATION SAMPLING RESULTS

Muskogee Armory

The Department of Environmental Quality (DEQ) personnel sampled the Muskogee Armory for lead dust to confirm room floors were below the Housing and Urban Development (HUD) standard of 40 micrograms per square foot ($\mu g/ft^2$) for child occupied facilities and to confirm walls and floor of the indoor firing range (IFR) were below 200 $\mu g/ft^2$ after all lead-based paint and lead dust abatement was complete. Once all IFR samples were below 200 $\mu g/ft^2$ the walls, ceiling, and floor were sealed with a sealant. After sealant was applied, the walls and floor of the IFR were sampled for lead dust to confirm these areas were below the HUD standard of 40 $\mu g/ft^2$. Below is a summary of the sample events and results.

On May 15, 2012, DEQ personnel sampled the floors of the building, where lead dust was elevated before abatement was performed and areas where there was a potential for lead dust to be tracked from elevated areas, to confirm these areas were below the HUD standard of 40 $\mu g/ft^2$. DEQ personnel also sampled the walls and floor of the IFR to confirm these areas were below 200$\mu g/ft^2$. Below is a summary of the results. Sample results are attached **(Attachment 1).**

- All samples taken on the floors of the building outside the IFR were below 40 $\mu g/ft^2$.
- All samples taken on the walls and floor of the IFR were below 200$\mu g/ft^2$.

On May 24, 2012, DEQ personnel sampled the walls and floor of the IFR for lead dust to confirm these surfaces were below the HUD standard of 40 $\mu g/ft^2$ after DEQ contractors had encapsulated walls and ceiling of the IFR with lead-based paint encapsulant and encapsulated floor of the IFR with concrete epoxy. Below is a summary of the results. Sample results are attached **(Attachment 2).**

- Two samples in the IFR came back above 40 $\mu g/ft^2$.
  - Sample #1 – Result = 46.08 $\mu g/ft^2$
  - Sample #7 – Result = 194 $\mu g/ft^2$

On June 8, 2012, DEQ personnel sampled the two locations in the IFR for lead dust where the previous samples had failed to confirm these areas were below the HUD standard of 40 $\mu g/ft^2$. These samples were taken after contractors had re-cleaned these areas.

- The two samples were below 40 $\mu g/ft^2$.

ATTACHMENT 1

MAY 15, 2012 SAMPLE RESULTS

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
007	7	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
010	10	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
013	13	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
014	14	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
016	16	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100

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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	18	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
019	19	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
020	20	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
021	21	Wipe	Lead	16.3	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
022	22	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
023	23	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
024	24	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
025	25	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
026	26	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
027	27	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
028	28	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
029	29	Wipe	Lead	16.1	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
030	30	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
031	31	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
032	32	Wipe	Lead	18.5	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
033	33	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
034	34	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	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: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
035	35	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
036	36	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
037	37	Wipe	Lead	159	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
038	38	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
039	39	Wipe	Lead	171	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
040	40	Wipe	Lead	29.9	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
041	41	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
042	42	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
043	43	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
044	44	Wipe	Lead	22.2	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
045	45	Wipe	Lead	20.5	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
046	46	Wipe	Lead	36.1	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
047	47	Wipe	Lead	17.7	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
048	48	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
049	49	Wipe	Lead	29.9	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
050	50	Wipe	Lead	20.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
051	51	Wipe	Lead	45.3	16	ug/sq. Ft.	05/16/12 15:45	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: 207840
Date Received: 05/15/12
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/16/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Oklahoma
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	52	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
053	53	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
054	54	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100
055	55	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/16/12 15:45	W NIOSH 9100

Authorized Signature: _____

Benton Miller, Analyst

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

Supplemental Report
QAQC Results

QA ID: 9987
Test: Lead
Date: 5/16/2012
Matrix: Wipe
Lab Number: 207840
Approved By: Benton Miller
Date Approved: 5/16/2012

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	5.2	5.5
FCV	4.5	5.3	5.5
ICV	0.9	1	1.1
RLVS	0.256	0.371	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	5.219	5.589	107.1	5.476	104.9	2.0
MS-W2	0.000	5.178	4.959	95.8	4.916	94.9	0.9
MS-W1	0.000	5.178	4.799	92.7	5.335	103.0	10.6

Authorized Signature: 

Benton Miller, Analyst

LEAD CHAIN OF CUSTODY

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2033 Heritage Park Drive, Oklahoma City, OK 73120-7502
(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

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For Lab Use Only
Lab No. 207840
Accept / Reject

Report Results (☑ one box)
- ☐ QuanTEM Website
- ☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee Oklahoma	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/15/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55pm		SRoftwich	5/15/12 3:55

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	1			12"X12"	C	X				X		
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	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 73105-9517 • Mark Package "Hold for Saturday Pickup"

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For Lab Use Only
Lab No. 207840
(Accept) Reject

Report Results (☑ one box)
- QuanTEM Website
- Other ____

Contact Information		Project Information
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:

Sampled By: Name: Dustin Davidson Date: 5/15/2012

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/15/12 3:55		S Loftwick	5/15/12 3:55

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	13			12"x12"	C							X		
2	14			↓	↓							↓		
3	15													
4	16													
5	17													
6	18													
7	19													
8	20													
9	21													
10	22													
11	23													
12	24			↓	↓							↓		

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

LEAD CHAIN OF CUSTODY

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Lab No. 207840
Accept Reject

Report Results (☑ one box)
☐ QuanTEM Website
☐ Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	
Sampled By: Name: Dustin Davidson		Date: 5/15/2012	

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dust Dav	5/15/12 3:55pm		SRuftwich	5/15/12 3:55

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	25			12"x12"	C	X				X		
2	26											
3	27											
4	28											
5	29											
6	30											
7	31											
8	32											
9	33											
10	34											
11	35											
12	36											

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. 207840
Accept Reject

Contact Information		Project Information	
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson @deq.ok.gov	Project ID:	
Sampled By: Name: Dustin Davidson		Date: 5/15/2012	

Report Results (☑ one box)
☐ QuanTEM Website
☐ Other _____

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dusti Dash	5/15/12 3:55p		SLuftwick	5/15/12 3:55

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
1	37			12"x12"	C							X		
2	38													
3	39													
4	40													
5	41													
6	42													
7	43													
8	44													
9	45													
10	46													
11	47													
12	48													

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

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LEAD CHAIN OF CUSTODY

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Page 5 of 5

For Lab Use Only	
Lab No.	307840
	Accept / Reject

Report Results (☑ one box)	
	QuanTEM Website
	Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/15/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dusti Davis	5/15/12 3:55pm		Skeptwick	5/15/12 3:55

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
1	49			12" X 12"	C	X						X		
2	50													
3	51													
4	52													
5	53													
6	54													
7	55													
8														
9														
10														
11														
12														

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

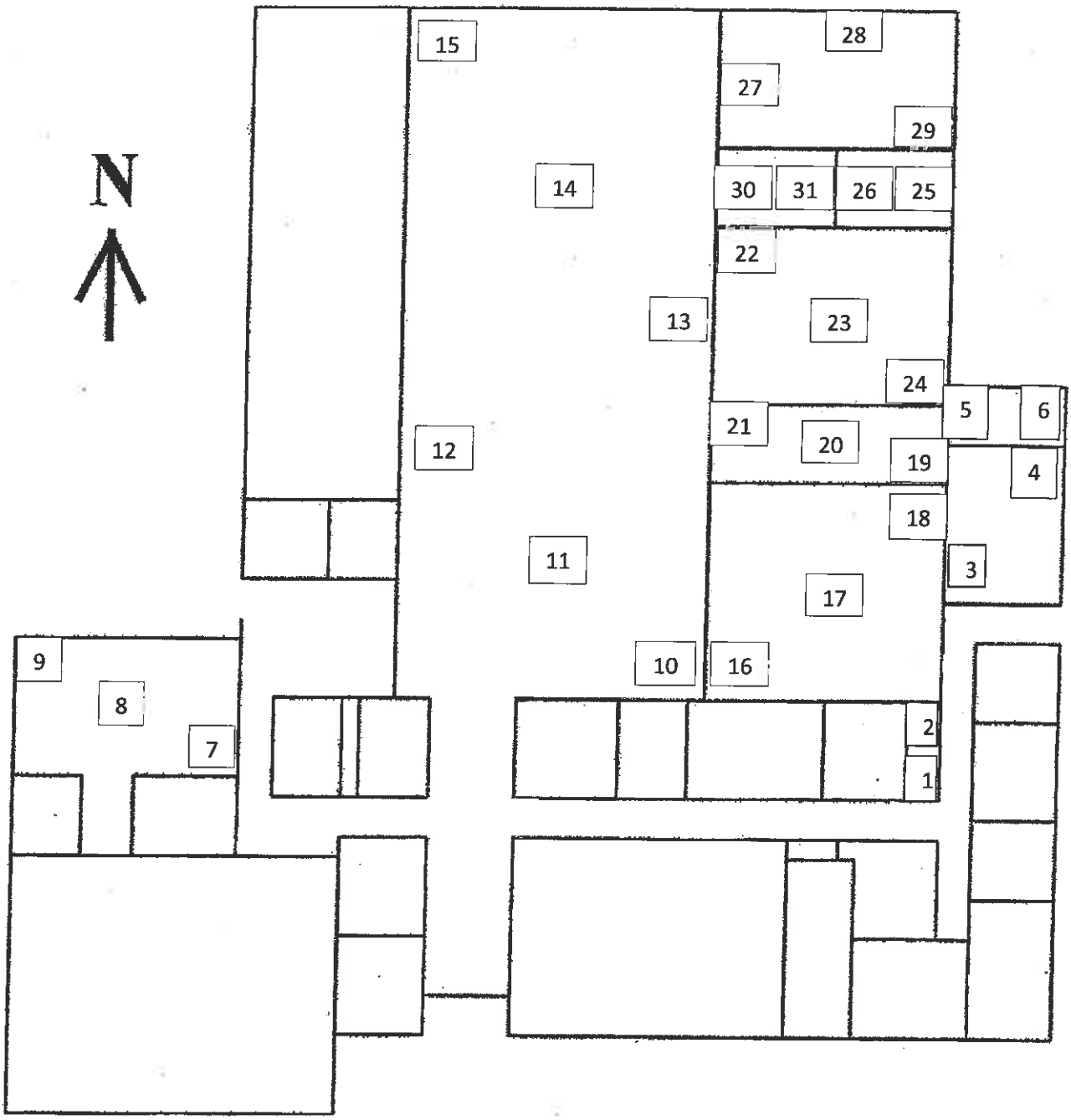
TURNAROUND TIME	
	Same Day
X	24 - Hour
	3 - Day
	5 - Day

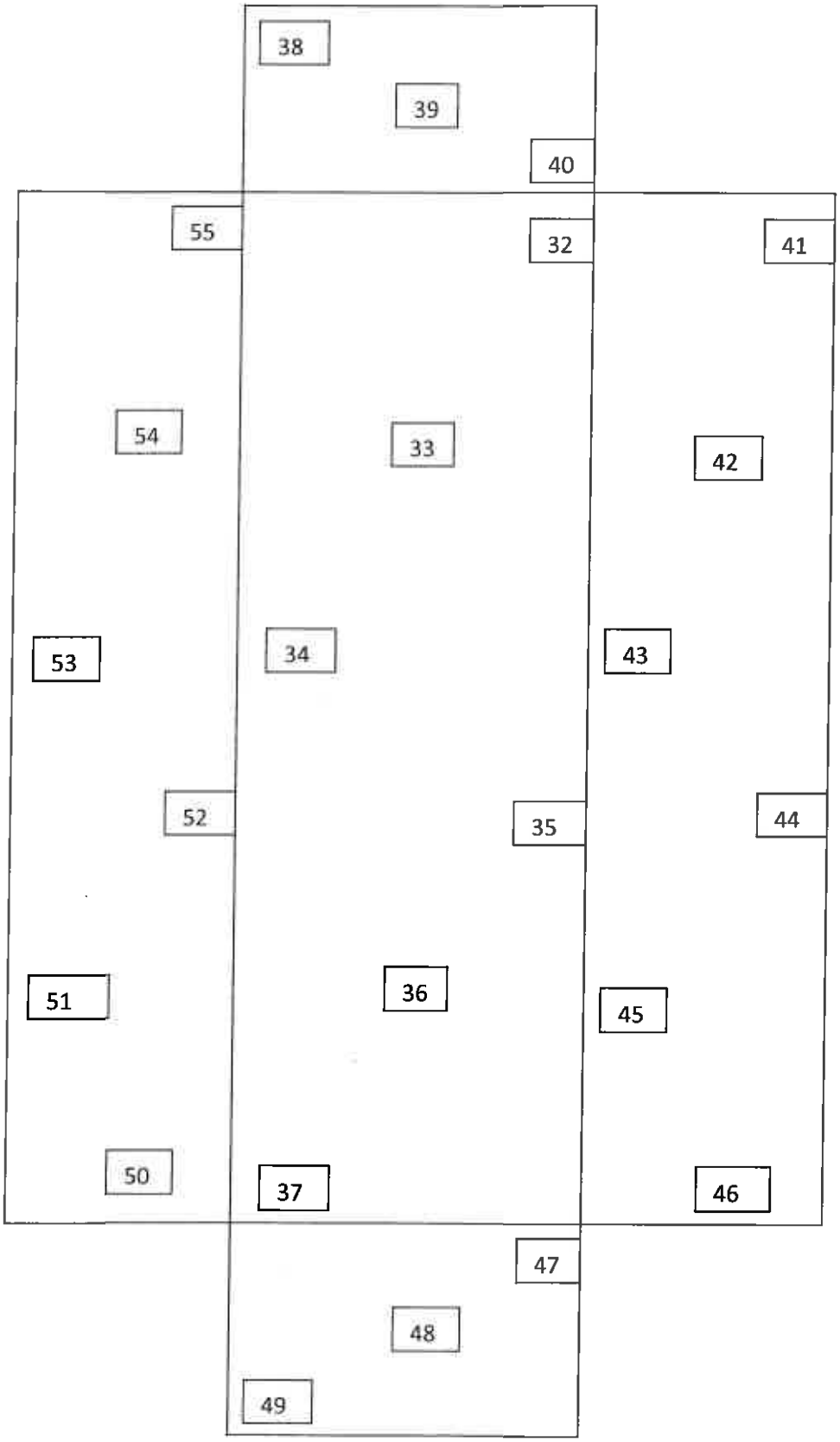
SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup"

Muskogee Armory Wipe Samples

Date May 15, 2012

Sampled by Dustin Davidson




38
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ATTACHMENT 2

MAY 24, 2012 SAMPLE RESULTS

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 208235
Date Received: 05/24/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 5/25/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, Ok
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	46.08	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16.0	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
007	7	Wipe	Lead	194	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
010	10	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
013	13	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
014	14	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
016	16	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	05/25/12 10:20	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.

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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID:	208235
Date Received:	05/24/12
Received By:	Sherrie Leftwich
Date Sampled:	
Time Sampled:	
Analyst:	BM
Date of Report:	5/25/2012

AIHA ID: 101352

Client:	State of Oklahoma DEQ Land Protection Attn: Dustin Davidson 707 N. Robinson Oklahoma City, OK 73102
Acct. No.:	B486
Project:	Muskogee Armory
Location:	Muskogee, Ok
Project No.:	N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method

Authorized Signature: _____

Benton Miller, Analyst

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

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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: 10020
Test: Lead
Date: 5/25/2012
Matrix: Wipe
Lab Number: 208235
Approved By: Benton Miller
Date Approved: 5/25/2012

Notes:

Blank Data:

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

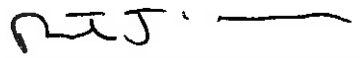
Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.3	5.5
FCV	4.5	5.4	5.5
ICV	0.9	1.1	1.1
RLVS	0.256	0.348	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W1	0.000	5.219	5.947	113.9	5.844	112.0	1.7

Authorized Signature: 

Benton Miller, Analyst

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.	208235
	Accept / Reject

Report Results (☑ one box)	
☐	QuanTEM Website
☐	Other _____

Contact Information		Project Information	
Company: DEQ	Phone: 405-702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 405-317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: dustin.davidson@deq.OK.gov	Project ID:	

Sampled By: Name: Dustin Davidson Date: 5/24/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	5/24/12 3:32pm	Drop off	S Liftwich	5/24/12 3:30

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	1			12"X12"	C	X				X		
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											

Sample Matrix Codes	
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME	
☐	Same Day
☒	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 73105-3517 • Mark Package "Hold for Saturday Pickup"

LEAD CHAIN OF CUSTODY

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(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only	
Lab No.	268235
Accept / Reject	Accept

Contact Information		Project Information	
Company: DEQ	Phone: 702-5115	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 317-4292	Project Location: Muskogee, OK	
Account #:	E-mail: Dustin.Davidson@deq.ok.gov	Project ID:	

Report Results (☑ one box): ☐ QuanTEM Website ☐ Other _____

Sampled By: Name: Dustin Davidson Date:

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson DEQ Pool	5/24/12 3:32	Drop off	Shiftwick	5/24/12 3:30

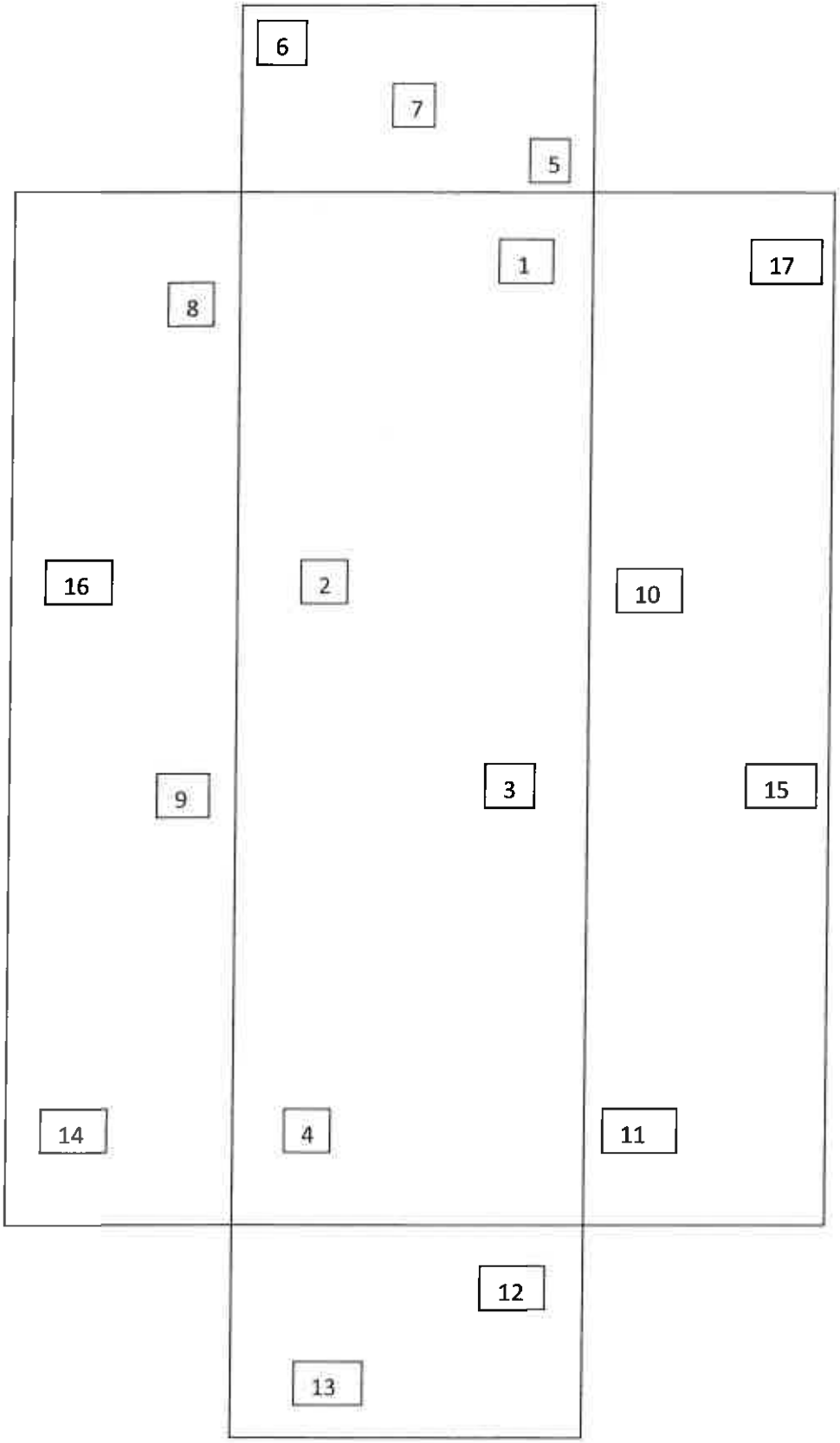
REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

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	13			12" x 12"	C	X				X		
2	14											
3	15											
4	16											
5	17											
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

SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-5517 • Mark Package "Hold for Saturday Pickup"


6
7
5
1
17
8
16
2
10
9
3
15
14
4
11
12
13

ATTACHMENT 3

JUNE 8,2012 SAMPLE RESULTS

QUANTEM® LABORATORIES

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 208815
Date Received: 06/08/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 6/11/2012

AIHA ID: 101352

Client: State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102
Acct. No.: B486

Project: Muskogee Armory
Location: Muskogee, OK
Project No.: N/A

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16	ug/sq. Ft.	06/11/12 15:15	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: 10068
Test: Lead

Date: 6/11/2012
Matrix: Wipe

Lab Number: 208815
Approved By: Benton Miller
Date Approved: 6/11/2012

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	4.8	5.5
FCV	4.5	5.2	5.5
ICV	0.9	1.1	1.1
RLVS	0.256	0.36	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W1	0.000	5.209	5.981	114.8	6.095	117.0	1.9

Authorized Signature: 

Benton Miller, Analyst

LEAD CHAIN OF CUSTODY

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www.QuanTEM.com
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(800) 822-1650 • (405) 755-7272 • Fax: (405) 755-2058

LEGAL DOCUMENT - PLEASE PRINT LEGIBLY

For Lab Use Only
Lab No. 208815
Accept Reject

Contact Information		Project Information	
Company: DEQ	Phone: 405-317-4292	Project Name: Muskogee Armory	
Contact: Dustin Davidson	Cell Phone: 405-702-5115	Project Location: Muskogee, Ok	
Account #:	E-mail: dustin.davidson@deq.ok.gov	Project ID:	

Report Results (☑ one box)
☐ QuanTEM Website
☐ Other _____

Sampled By Name: Dustin Davidson Date: 6/8/12

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dust. Davidson	6/8/12 2:25pm		[signature]	6/8/12 2:25

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	1			12" x 12"	C	X				X		
2	2			↓	↓	↓				↓		
3	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

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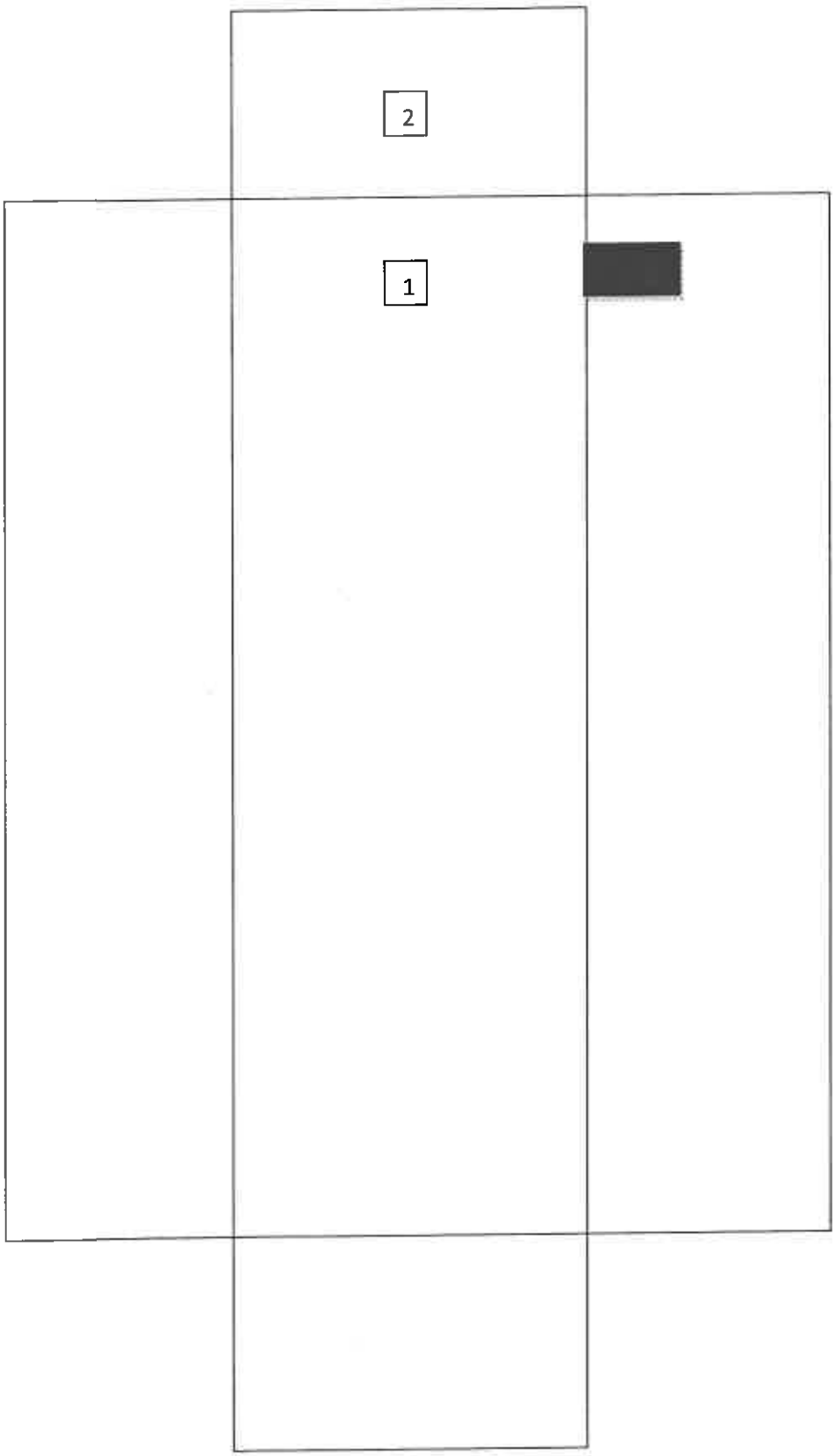
2
1