Former National Guard Armory
Duncan, 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 Duncan with the Final Remediation Report for the former Duncan 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 Duncan 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 vibration dampers and floor tile and mastic.
- Asbestos Abatement, including:
  - Removal of floor tile, mastic, and vibration dampers.

TARGETED BROWNFIELD ASSESSMENT

In July 31, 2012, DEQ provided a Phase I Targeted Brownfield Assessment to the City of Duncan. A copy of this report is available at http://www.deq.state.ok.us/lpdnew/scapIndex.htm

LEAD REMEDIATION

DEQ and its contractors completed the following activities:

- Lead-based paint (LBP) and lead dust inspection
- Lead dust abatement, including:
  - 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

83-7927 000247

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS:

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

A tract or parcel of land lying in the West one-half (W/2) of Section Seventeen (17), Township One (1) South, Range Seven (7) West, I.M., and described as follows:

Beginning at a point on the Section Line, 550 feet S 0° 08' W of the SW corner of the NW/4 of said Section 17; thence S 89° 52' E a distance of 132.32 feet; thence N 38° 00' E a distance of 468.66 feet; thence N 0° 08' E and parallel to the Section Line 285.79 feet; thence N 49° 00' W a distance of 220.43 feet; thence N 89° 52' W a distance of 253.30 feet; thence S 0° 08' W along the section line a distance of 800.0 feet to the point of beginning and containing 6.22 acres, more or less;

together with the improvements thereon and appurtenances thereunto belonging.

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

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

Signed and delivered this 15 day of June 2011.

STATE OF OKLAHOMA

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

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

000248

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) ss
COUNTY OF OKLAHOMA)

Before me, Jennifer Mayo in and for this state, on this 15 day of June, 2011, personally appeared Major General Myles L. Deering, as Adjutant General of the State of Oklahoma, to me known to be the identical person who executed the within and foregoing Quitclaim Deed, and acknowledged to me that he executed the same as free and voluntary act and deed for the uses and purposes therein set forth.

Jennifer Mayo
Notary Public

NOTARY PUBLIC STATE OF OKLAHOMA

My Commission Expires:
6/3/13

My Commission Number:
04006785

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

000070

I-2013-880137 Book 4587 Pg: 70
08/02/2013 1:46 pm Pg 0070-0072
Fee: $ 17.00 Doc: $ 0.00
Cindy Kaiser - Stephens County Clerk
State of Oklahoma

NOTICE OF REMEDIATION
FORMER DUNCAN ARMORY
DUNCAN, 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 January 19, 2012, indicated that there was asbestos and lead dust in the building.

AFFECTED PROPERTY: The Affected Property is the former Duncan Armory located at 3000 South 13th Street, City of Duncan, Stephens County, Oklahoma, 73533.

The legal description is as follows:

A tract or parcel of land lying in the West one-half (W/2) of Section Seventeen (17), Township One (1) South, Range Seven (7) West, I.M., and described as follows:

Beginning at a point on the Section Line, 550 feet S 0° 08' W of the SW corner of the NW/4 of said Section 17; thence S 89° 52' E a distance of 132.32 feet; thence N 38° 00' E a distance of 468.66 feet; thence N 0° 08' E and parallel to the Section Line 285.79 feet; thence N 49° 00' W a distance of 220.43 feet; thence N 89° 52' W a distance of 253.30 feet; thence S 0° 08' W along the section line a distance of 800.0 feet to the point of beginning and containing 6.22 acres, more or less;

REMEDY: Remediation activities (Remedy) at the Affected Property included abatement of asbestos and lead dust. The remedy was completed on April 19, 2013.

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

Oklahoma Department of Environmental Quality
Central Records

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

Physical Address
707 N Robinson
Oklahoma City, OK 73102

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

DISCLAIMER

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

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

CONTINUING OPERATION, MAINTENANCE AND MONITORING

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

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

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.

a. 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.

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 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.

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

June 24, 2013
Date

ACKNOWLEDGMENT

STATE OF OKLAHOMA
COUNTY OF OKLAHOMA

Before me, a Notary Public, in and for said County and State, on this 24th day of June, 2013, personally appeared Steven A. Thompson to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that executed the same as free and voluntary act and deed for the uses and purposed therein set forth. In Testimony Whereof, I have hereunto set my hand and official seal the day and year above written.

My Commission expires:
January 17, 2016

Notary Public

TERESA MCPHERSON
Notary Public
State of Oklahoma
Commission # 08000751 Expires 01/17/16

MAINTENANCE PLAN

MAINTENANCE PLAN
FORMER DUNCAN ARMORY
DUNCAN, OKLAHOMA

The Armory located at 3000 South 13th Street, Duncan, 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 January 19, 2012, indicated that there was asbestos and lead dust in the building. Remediation activities at the Affected Property included abatement of asbestos and lead dust. The remedy was completed on April 22, 2013. The following maintenance plan is to be completed by the owner of the Former Duncan Armory. 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 – Walls, floor and ceiling of indoor firing range were cleaned and sealed with acrylic sealant to remediate surfaces below 40µg/SF for lead. These surfaces need to be resealed if acrylic sealant shows signs of deterioration, damage, or flaking. See Attachment 2 for map of the Duncan Armory.

Room 20 (Hallway) – Per the request of the City of Duncan, the green ceramic tile and associated asbestos-containing black mastic located underneath the tile in Room 20 (Hallway) were not removed during the remediation and were therefore left in place (Attachment 2). Please see Attachment 4 for correspondence between the City of Duncan and DEQ regarding this room.

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 R. 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 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.

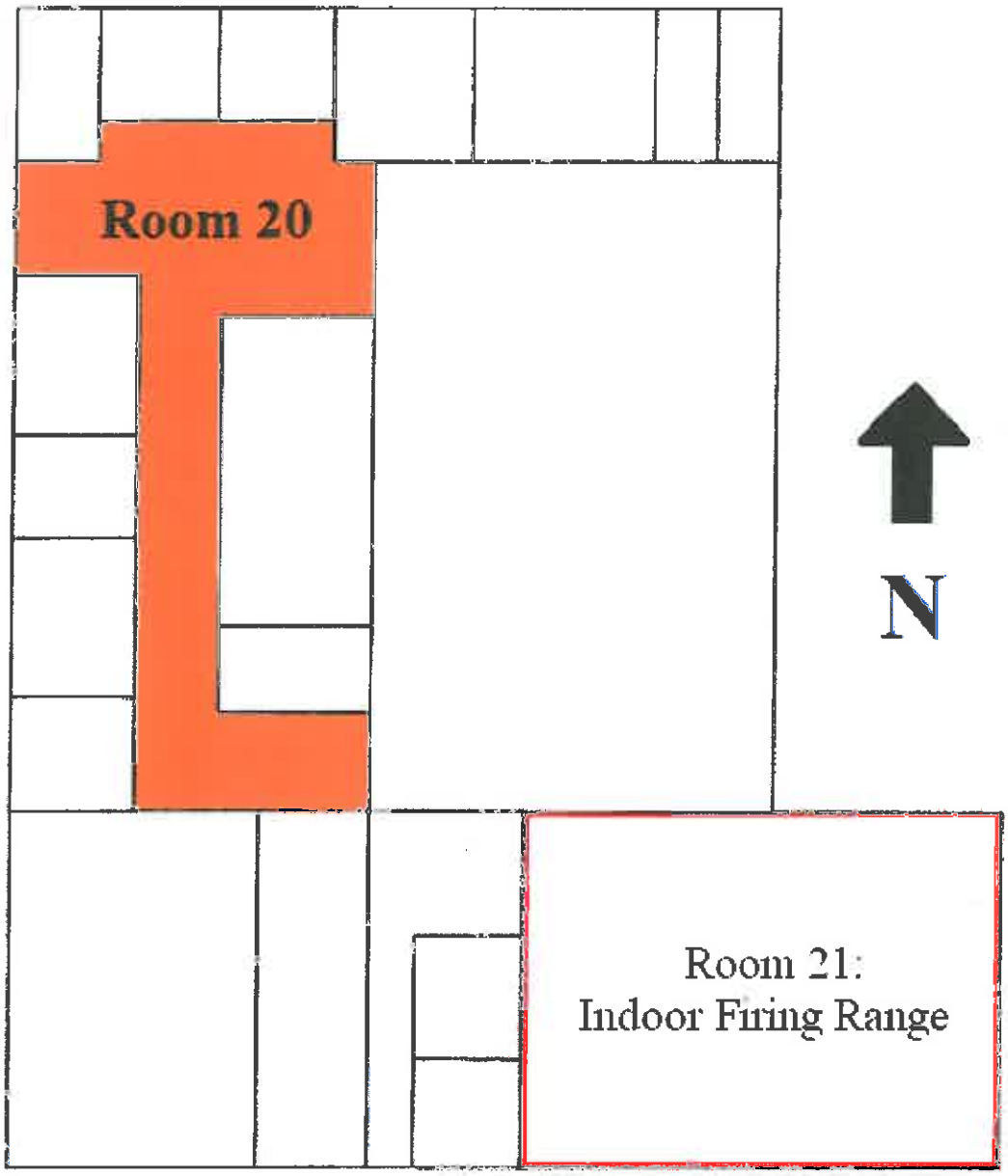
b. The indoor firing range should not be used as a child occupied facility. Child-occupied facilities include, but are not limited to, day-care centers, preschools, and kindergarten classrooms where a child 6 or under spends at least 6 hours per week.

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

ATTACHMENT 2

Duncan Armory Floor Plan Map

Labeled areas represent walls and floors with encapsulant and/or sealant or had asbestos-containing material left in place.



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

ATTACHMENT 4

Correspondence Letters between the City of Duncan and the Oklahoma Department of Environmental Quality

DUNCAN POLICE DEPARTMENT

Office of the Chief of Police
18 S. 7th Street
Duncan, Oklahoma 73533
Phone: (580) 470-2092
Fax: (580) 252-4861

February 4, 2013

Oklahoma Department of Environmental Quality
707 N Robinson
Oklahoma City, OK 73102

Attn: Dustin Davidson

Re: Tile in National Guard Armory in Duncan, OK

Dear Sir:

The City of Duncan respectfully requests that the green tile located in the entryway, hallway, and restrooms in the National Guard Armory in Duncan, OK not be removed during the decontamination process of the building. Thank you for your time

Respectfully,

Chief Danny Ford
Duncan Police Department

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

February 5, 2013

Mr. Gene Brown
Mayor of Duncan
P.O. Box 969
Duncan, OK 73534

Dear Mr. Brown:

The Department of Environmental Quality (DEQ) Site Cleanup Assistance Program (SCAP) is working to evaluate and clean up the lead and asbestos contamination in the armory building to allow for safe reuse of the building.

As you are aware, there is asbestos containing material in the mastic underneath the ceramic floor tiles in the entryway and hallway of the armory building. The City of Duncan has requested that the floor tile and mastic be left in place. The ceramic floor tile in the armory is not chipped or cracked; in fact, it is in very good condition. When left undisturbed, the mastic underneath the ceramic floor tile does not pose a health risk to building occupants. Asbestos containing material is usually not harmful unless dust or fibers are released into the air. Asbestos containing floor tile mastic will not release asbestos fibers into the air unless the tile is disturbed or damaged or subjected to certain mechanical, physical or chemical processes.

It is our understanding that you do not want the DEQ to remove the asbestos containing mastic under the ceramic floor tile from the armory building. We agree that it is not necessary to remove the floor tile mastic. Further, if we did remove the tile, we would not replace the flooring.

Please understand, however, that if we do not remove the flooring during our remediation process and you later decide that you want the floor tiles and mastic removed, you will be financially responsible to properly remove the floor tiles and asbestos containing mastic under the floor tiles and dispose of them in accordance with the law.

DEQ is required by law to file a recordable Notice of Remediation in the county land records for all sites that we remediate. The mastic discussed above will be noted in the Notice of Remediation. If you have questions about the asbestos containing floor tile mastic, please call me at 405-702-5115.

Sincerely,

Dustin Davidson

Dustin Davidson
Environmental Programs Specialist
DEQ Land Protection Division
Site Cleanup Assistance Program

INSPECTION REPORTS

DUNCAN ARMORY

3000 South 13th Street
Duncan, Oklahoma 73533

January 19, 2012

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 January 19, 2012 Marshall Environmental Management, Incorporated was contracted by the State of Oklahoma, Department of Central Services to conduct an Asbestos Inspection of the Duncan Armory, located at 3000 South 13th Street in Duncan, 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 Jacob Jones, representative of Marshall Environmental Management, Incorporated, 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, Incorporated. 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.

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*

Jacob Jones, B.S., Industrial Hygiene Associate ***Date***

EPA AHERA Certifications	*Asbestos Inspector*	*#801151*
ODOL License	*Asbestos Inspector*	*#OK-159891*

LABORATORY ANALYSIS PERFORMED BY

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

DUNCAN ARMORY
ASBESTOS INSPECTION

EXECUTIVE SUMMARY

On January 19, 2012, Marshall Environmental Management, Incorporated (MEM) completed an Asbestos Inspection of the Duncan 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, asbestos-containing floor tile was identified in room 5. Asbestos-containing mastic was discovered on the floors in room 5, 9, 10, 11, 19, 17, 18, 19 and 20, and an asbestos-containing vibration damper was identified on the Heating Ventilation and Air-Conditioning (HVAC) unit in room 4. The asbestos-containing homogenous materials (i.e. suspected ACM that are uniform in color and texture and believed to be applied during the same period) are summarized in the tables in the Observations and Findings portion of this Report.

The asbestos concentrations identified in the floor tile and mastic were greater than one percent (>1%). Furthermore, the floor tile and mastic are considered non-friable that which **cannot** be rendered to a powder via hand pressure. As a result, the floor tile and mastic are categorized as a "Category I Non-Friable" ACM for abatement purposes. In addition, the asbestos concentrations detected in the HVAC vibration damper were >1% and because this material is considered friable, that which **can** be rendered to a powder via hand pressure, the asbestos-containing vibration damper is classified as a "Regulated" ACM. Although asbestos-containing floor tile, mastic and vibration damper exist within the Armory, no action is required as long as these ACM remain in good condition and undisturbed. However, if these ACM remain 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 these materials. The asbestos-containing floor tile, mastic and vibration damper must be abated should any activities render or have the potential to render these materials friable.

Even though the abatement of Category I Non-Friable ACM is not regulated by the ODOL, an Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos-containing floor tile and mastic to make certain that Occupational Safety and Health Administration (OSHA) and EPA compliant methods are utilized. As required by EPA regulations, the abatement and disposal of the asbestos-containing HVAC vibration damper must be treated as a regulated response action, which must be accomplished by a licensed ODOL Asbestos Abatement Contractor. Because the quantity of the vibration damper can fit in one glove bag, a Project Design is not required. 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 to this Report.

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 National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules.

OBSERVATIONS AND FINDINGS

The Duncan Armory consists of a one-story structure with a brick façade and a flat roof that were constructed on a concrete foundation. The Armory was constructed circa 1975. Table I summarizes the sampling location and description of the ACM, the type of asbestos, the percent detected and the type and condition of the material. Table II reflects the homogenous locations and quantities of the respective ACM. A floor plan diagram illustrating the homogenous locations of the ACM and their respective quantities is included with the Appendix to this Report.

TABLE I: ASBESTOS-CONTAINING MATERIALS

SAMPLE LOCATION	DESCRIPTION	ASBESTOS TYPE	%	MATERIAL TYPE	CONDITION
ROOM 4 – HVAC UNIT	VIBRATION DAMPER	CHRYSOTILE	80	THERMAL SYSTEM INSULATION	GOOD
ROOM 5 – FLOOR	9x9 FLOOR TILE	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 5 – UNDER FLOOR TILE	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 9 – UNDER FLOOR TILE	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 10 – UNDER FLOOR TILE	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 11 – UNDER FLOOR TILE	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 16 – UNDER CARPET	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 17 – UNDER CARPET	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD
ROOM 19 – UNDER CARPET	BLACK MASTIC	CHRYSOTILE	3	MISCELLANEOUS	GOOD

TABLE II: ASBESTOS-CONTAINING HOMOGENOUS LOCATIONS & QUANTITIES

HOMOGENOUS LOCATION	FLOOR TILE	TOTAL QUANTITY
ROOM 5 – FLOOR	900-FT^2	900-FT^2

HOMOGENOUS LOCATION	MASTIC	TOTAL QUANTITY
ROOM 5 – UNDER FLOOR TILE	900-FT^2	3,360-FT^2
ROOM 9 – FLOOR	194-FT^2	
ROOM 10 – FLOOR	72-FT^2	
ROOM 11 – FLOOR	80-FT^2	
ROOM 16 – UNDER CARPET	198-FT^2	
ROOM 17 – UNDER CARPET	198-FT^2	
ROOM 18 – UNDER CARPET	198-FT^2	
ROOM 19 – UNDER CARPET	198-FT^2	
ROOM 20 – UNDER FLOOR TILE	1,322-FT^2	

HOMOGENOUS LOCATION	VIBRATION DAMPER	TOTAL QUANTITY
ROOM 4 – HVAC UNIT	4-FT^2	4-FT^2

ASBESTOS RECOMMENDED RESPONSE ACTIONS

NON-REGULATED ASBESTOS-CONTAINING MATERIALS

- As long as the asbestos-containing floor tile and mastic remain in good condition and undisturbed no action is required.
- An Asbestos Management Plan should be written if the asbestos-containing floor tile and mastic remain in place.
- The asbestos-containing floor tile and mastic must be abated should any activities render or have the potential to render theses ACM friable.
- An Asbestos Abatement Contractor licensed by the ODOL is recommended to carry out the abatement of the asbestos-containing floor tile and mastic if abatement becomes necessary.

REGULATED ASBESTOS-CONTAINING MATERIALS

- As long as the asbestos containing HVAC vibration damper remains in good condition and undisturbed no action is required.
- An Asbestos Management Plan should be written if the asbestos-containing vibration damper remains in place.
- The asbestos-containing vibration damper must be abated should any activities render or have the potential to render this ACM friable.
- If abatement becomes necessary, the abatement of the asbestos-containing vibration damper must be treated as a regulated response action, which must be accomplished by an Asbestos Abatement Contractor.

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 initiation of **any** renovation and/or demolition activities where ACM are present in quantities that meet or exceed 160-square feet (ft^2), 260-linear ft or 35-cubic ft (ft^3). 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

BULK SAMPLES

CHAIN OF CUSTODY

ANALYTICAL DATA

FLOOR PLAN DIAGRAMS

HOMOGENOUS ASBESTOS CONTAINING MATERIALS

PHOTOGRAPHS

CERTIFICATIONS/LICENSURES

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

Marshall Environmental Management, Inc.
Chain Of Custody

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PROJECT INFORMATION	
Project Identification	0016-AB-011912
Project Name	Duncan Armory Asbestos Inspection
Project Address	3000 South 13th Street Duncan, OK
Site Contact	
Phone Number	
Mobile Number	
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Jason Doss
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4804
Fax Number	405-522-0051
Mobile Number	
E-mail Address	Jason_Doss@dcs.state.ok.us

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

Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0012	1/19/2012	PLM-1	9x9 Floor Tile	Room 5 - South	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-2	9x9 Floor Tile	Room 5 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-3	9x9 Floor Tile	Room 5 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-4	Floor Tile Mastic	Room 5 - South	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-5	Floor Tile Mastic	Room 5 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-6	Floor Tile Mastic	Room 5 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-7	Wallboard	IFR - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-8	Wallboard	IFR - West	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-9	Wallboard	IFR - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-10	Floor Tile Mastic	Room 9 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM

Collected By		(print)	Date		Relinquished By	NA	(print)	Date	
		(signature)	Time			NA	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

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

Condition Upon Receipt	Acceptable
Method of Shipment	
Sample Notes	NA

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid/Bulk					
Page	1		of	4	

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PROJECT INFORMATION	
Project Identification	0016-AB-011912
Project Name	Duncan Armory Asbestos Inspection
Project Address	3000 South 13th Street Duncan, OK
Site Contact	
Phone Number	
Mobile Number	
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Jason Doss
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4804
Fax Number	405-522-0051
Mobile Number	
E-mail Address	Jason_Doss@dcs.state.ok.us

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

Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0012	1/19/2012	PLM-11	Floor Tile Mastic	Room 10 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-12	Floor Tile Mastic	Room 11 - West	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-13	HVAC Vibration Dampener	Room 4 - Top	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-14	HVAC Vibration Dampener	Room 4 - Middle	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-15	HVAC Vibration Dampener	Room 4 - Bottom	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-16	Tar Coat on Piping	Room 4 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-17	Tar Coat on Piping	Room 4 - West	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-18	Tar Coat on Piping	Room 4 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-19	Straight Run Pipe Insulation	Room 4 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-20	Straight Run Pipe Insulation	Room 4 - West	Good	Bulk	NA	NA	NA	Asbestos PLM

Collected By		(print)	Date		Relinquished By	NA	(print)	Date	
		(signature)	Time			NA	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

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

Condition Upon Receipt	Acceptable
Sample Notes	NA
Method of Shipment	

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid/Bulk					
Page	2		of	4	

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PROJECT INFORMATION	
Project Identification	0016-AB-011912
Project Name	Duncan Armory Asbestos Inspection
Project Address	3000 South 13th Street Duncan, OK
Site Contact	
Phone Number	
Mobile Number	
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Jason Doss
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4804
Fax Number	405-522-0051
Mobile Number	
E-mail Address	Jason_Doss@dcs.state.ok.us

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

Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0012	1/19/2012	PLM-21	Straight Run Pipe Insulation	Room 4 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-22	Duct Insulation	Room 5 - West	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-23	Duct Insulation	Room 5 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-24	Duct Insulation	Room 5 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-25	Hard Pack Elbow	Room 4 - South	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-26	Hard Pack Elbow	Room 4 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-27	Hard Pack Elbow	Room 4 - North	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-28	Hard Pack Elbow	Room 6 - Center	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-29	Hard Pack Elbow	Room 7 - East	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-30	Floor Tile Mastic	Under Carpet - Room 16 - East	Good	Bulk	NA	NA	NA	Asbestos PLM

Collected By		(print)	Date		Relinquished By	NA	(print)	Date	
		(signature)	Time			NA	(signature)	Time	
Received By		(print)	Date		Relinquished By		(print)	Date	
		(signature)	Time				(signature)	Time	

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

Condition Upon Receipt	Acceptable
Method of Shipment	
Sample Notes	NA

Matrix	Media				
Air	MV	MP	ST	SW	TL
Aqueous	Micro-Vacuum	Mold Plate	Spore Trap	Swab	Tape-Lift
Bulk					
Sludge					
Soil					
Solid/Bulk					
Page	3		of	4	

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PROJECT INFORMATION	
Project Identification	0016-AB-011912
Project Name	Duncan Armory Asbestos Inspection
Project Address	3000 South 13th Street Duncan, OK
Site Contact	
Phone Number	
Mobile Number	
email	

INVOICE TO	
Client/Company	State of Oklahoma Department of Central Services Construction & Properties Division
Attention	Jason Doss
Invoice To Address	P.O. Box 53448 Oklahoma City, OK 73102
Phone Number	405-522-4804
Fax Number	405-522-0051
Mobile Number	
E-mail Address	Jason_Doss@dcs.state.ok.us

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

Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
0012	1/19/2012	PLM-31	Floor Tile Mastic	Under Carpet - Room 17 - West	Good	Bulk	NA	NA	NA	Asbestos PLM
0012	1/19/2012	PLM-32	Floor Tile Mastic	Under Carpet - Room 19 - South	Good	Bulk	NA	NA	NA	Asbestos PLM

Collected By		(print)	Date		Relinquished By	NA	(print)	Date		Matrix	Media
		(signature)	Time			NA	(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				Condition Upon Receipt	Acceptable		Method of Shipment			Sludge	
X	Standard	5-7 Business Days								Soil	
	Rush	Nest Day		Sample Notes	NA					Solid/Bulk	
	Immediate	Same Day								Page	4 of 4

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

Bulk Asbestos Analysis

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PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0016-AB-011912	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Duncan Armory Asbestps Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	13000 South 13th Street Duncan, OK	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact		Phone	405-522-4804	Phone	405-702-5115
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-1	January 19, 2012	9x9 Floor Tile	COLOR	Beige	3%	Chrysotile	97%	Vinyl Aggregate
		Room 5 - South	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-2	January 19, 2012	9x9 Floor Tile	COLOR	Beige	3%	Chrysotile	97%	Vinyl Aggregate
		Room 5 - East	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-3	January 19, 2012	9x9 Floor Tile	COLOR	Beige	3%	Chrysotile	97%	Vinyl Aggregate
		Room 5 - Center	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-4	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Room 5 - South	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-5	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Room 5 - East	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

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

Lab Accreditation:
AIHA PAT ID# 102334

Bulk Asbestos Analysis

Marshall Environmental Management, Inc.

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marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0016-AB-011912	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Duncan Armory Asbestps Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	13000 South 13th Street Duncan, OK	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact		Phone	405-522-4804	Phone	405-702-5115
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		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			
0012-AB-011912-PLM-6	January 19, 2012	Floor Tile Mastic Room 5 - Center	COLOR	Black	3%	Chrysotile	97%	Tar
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0012-AB-011912-PLM-7	January 19, 2012	Wallboard IFR - East	COLOR	Beige	85%	Cellulose
			CONDITION	Good	15%	Calcareous Material
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0012-AB-011912-PLM-8	January 19, 2012	Wallboard IFR - West	COLOR	Beige	85%	Cellulose
			CONDITION	Good	15%	Calcareous Material
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		NO ASBESTOS DETECTED	
0012-AB-011912-PLM-9	January 19, 2012	Wallboard IFR - Center	COLOR	Beige	85%	Cellulose
			CONDITION	Good	15%	Calcareous Material
			TYPE	Miscellaneous		
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		ASBESTOS DETECTED			
0012-AB-011912-PLM-10	January 19, 2012	Floor Tile Mastic Room 9 - Center	COLOR	Black	3%	Chrysotile	97%	Tar
			CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

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

Lab Accreditation:
AIHA PAT ID# 102334

Bulk Asbestos Analysis

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marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0016-AB-011912	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Duncan Armory Asbestps Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	13000 South 13th Street Duncan, OK	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact		Phone	405-522-4804	Phone	405-702-5115
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-11	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Room 10 - East	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3% ASBESTOS DETECTED			
0012-AB-011912-PLM-12	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Room 11 - West	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		80% ASBESTOS DETECTED			
0012-AB-011912-PLM-13	January 19, 2012	HVAC Vibration Dampener	COLOR	Beige/White	80%	Chrysotile	20%	Calcareous Material
		Room 4 - Top	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		80% ASBESTOS DETECTED			
0012-AB-011912-PLM-14	January 19, 2012	HVAC Vibration Dampener	COLOR	Beige/White	80%	Chrysotile	20%	Calcareous Material
		Room 4 - Top	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		80% ASBESTOS DETECTED			
0012-AB-011912-PLM-15	January 19, 2012	HVAC Vibration Dampener	COLOR	Beige/White	80%	Chrysotile	20%	Calcareous Material
		Room 4 - Top	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

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

Bulk Asbestos Analysis

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marshenv@swbell.net

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0016-AB-011912	Client	State of Oklahoma Department of Central Services Construction & Properties Division	Client	Oklahoma Department of Environmental Quality Land Protection Division
Project	Duncan Armory Asbestps Inspection	Attention	Jason Doss, Programs Officer II	Attention	Dustin Davidson
Project Address	13000 South 13th Street Duncan, OK	Address	P.O. Box 53448 Oklahoma City, OK 73152-3448	Address	P.O. Box 1677 Oklahoma City, OK 73101
Contact		Phone	405-522-4804	Phone	405-702-5115
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		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		
0012-AB-011912-PLM-16	January 19, 2012	Tar Coat on Pipe Room 4 - East	COLOR	Black		100%	Tar
			CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
0012-AB-011912-PLM-17	January 19, 2012	Tar Coat on Pipe Room 4 - West	COLOR	Black		100%	Tar
			CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
0012-AB-011912-PLM-18	January 19, 2012	Tar Coat on Pipe Room 4 - Center	COLOR	Black		100%	Tar
			CONDITION	Good			
			TYPE	Miscellaneous			
			NOTE				
0012-AB-011912-PLM-19	January 19, 2012	Straight Run Pipe Insulation Room 4 - East	COLOR	Beige		100%	Fibrous Glass
			CONDITION	Good			
			TYPE	Thermal System Insulation			
			NOTE				
0012-AB-011912-PLM-20	January 19, 2012	Straight Run Pipe Insulation Room 4 - West	COLOR	Beige		100%	Fibrous Glass
			CONDITION	Good			
			TYPE	Thermal System Insulation			
			NOTE				

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
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

PROJECT LOCATION		INVOICE TO		REPORT TO	
Project Identification	0016-AB-011912	**Client**	State of Oklahoma Department of Central Services Construction & Properties Division	**Client**	Oklahoma Department of Environmental Quality Land Protection Division
Project	Duncan Armory Asbestps Inspection	**Attention**	Jason Doss, Programs Officer II	**Attention**	Dustin Davidson
Project Address	13000 South 13th Street Duncan, OK	**Address**	P.O. Box 53448 Oklahoma City, OK 73152-3448	**Address**	P.O. Box 1677 Oklahoma City, OK 73101
Contact		**Phone**	405-522-4804	**Phone**	405-702-5115
Phone		**Fax**	405-522-0051	**Fax**	
Cell		**Other**		**Other**	
email		**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	
0012-AB-011912-PLM-21	January 19, 2012	Straight Run Pipe Insulation Room 4 - Center	COLOR CONDITION TYPE NOTE	Beige Good Thermal System Insulation	100%	Fibrous Glass
0012-AB-011912-PLM-22	January 19, 2012	Duct Insulation Room 5 - West	COLOR CONDITION TYPE NOTE	Brown Good Miscellaneous	100%	Fibrous Glass
0012-AB-011912-PLM-23	January 19, 2012	Duct Insulation Room 5 - Center	COLOR CONDITION TYPE NOTE	Brown Good Miscellaneous	100%	Fibrous Glass
0012-AB-011912-PLM-24	January 19, 2012	Duct Insulation Room 5 - East	COLOR CONDITION TYPE NOTE	Brown Good Miscellaneous	100%	Fibrous Glass
0012-AB-011912-PLM-25	January 19, 2012	Hard Pack Elbow Room 4 - South	COLOR CONDITION TYPE NOTE	Beige Good Thermal System Insulation	15% 85%	Fibrous Glass Calcareous Material

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

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Contact		Phone	405-522-4804	Phone	405-702-5115
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION			
0012-AB-011912-PLM-26	January 19, 2012	Hard Pack Elbow Room 4 - Center	COLOR	Beige	NO ASBESTOS DETECTED	
			CONDITION	Good	15%	Fibrous Glass
			TYPE	Thermal System Insulation	85%	Calcareous Material
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION			
0012-AB-011912-PLM-27	January 19, 2012	Hard Pack Elbow Room 4 - North	COLOR	Beige	NO ASBESTOS DETECTED	
			CONDITION	Good	15%	Fibrous Glass
			TYPE	Thermal System Insulation	85%	Calcareous Material
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION			
0012-AB-011912-PLM-28	January 19, 2012	Hard Pack Elbow Room 6 Center	COLOR	White	NO ASBESTOS DETECTED	
			CONDITION	Significantly Damaged	15%	Fibrous Glass
			TYPE	Thermal System Insulation	85%	Calcareous Material
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION			
0012-AB-011912-PLM-29	January 19, 2012	Hard Pack Elbow Room 7 - East	COLOR	Beige	NO ASBESTOS DETECTED	
			CONDITION	Good	15%	Fibrous Glass
			TYPE	Thermal System Insulation	85%	Calcareous Material
			NOTE			

LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION			
0012-AB-011912-PLM-30	January 19, 2012	Floor Tile Mastic Under Carpet - Room 16 - East	COLOR	Black	3%	ASBESTOS DETECTED
			CONDITION	Good	3%	Chrysotile
			TYPE	Miscellaneous	97%	Tar
			NOTE			

Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

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

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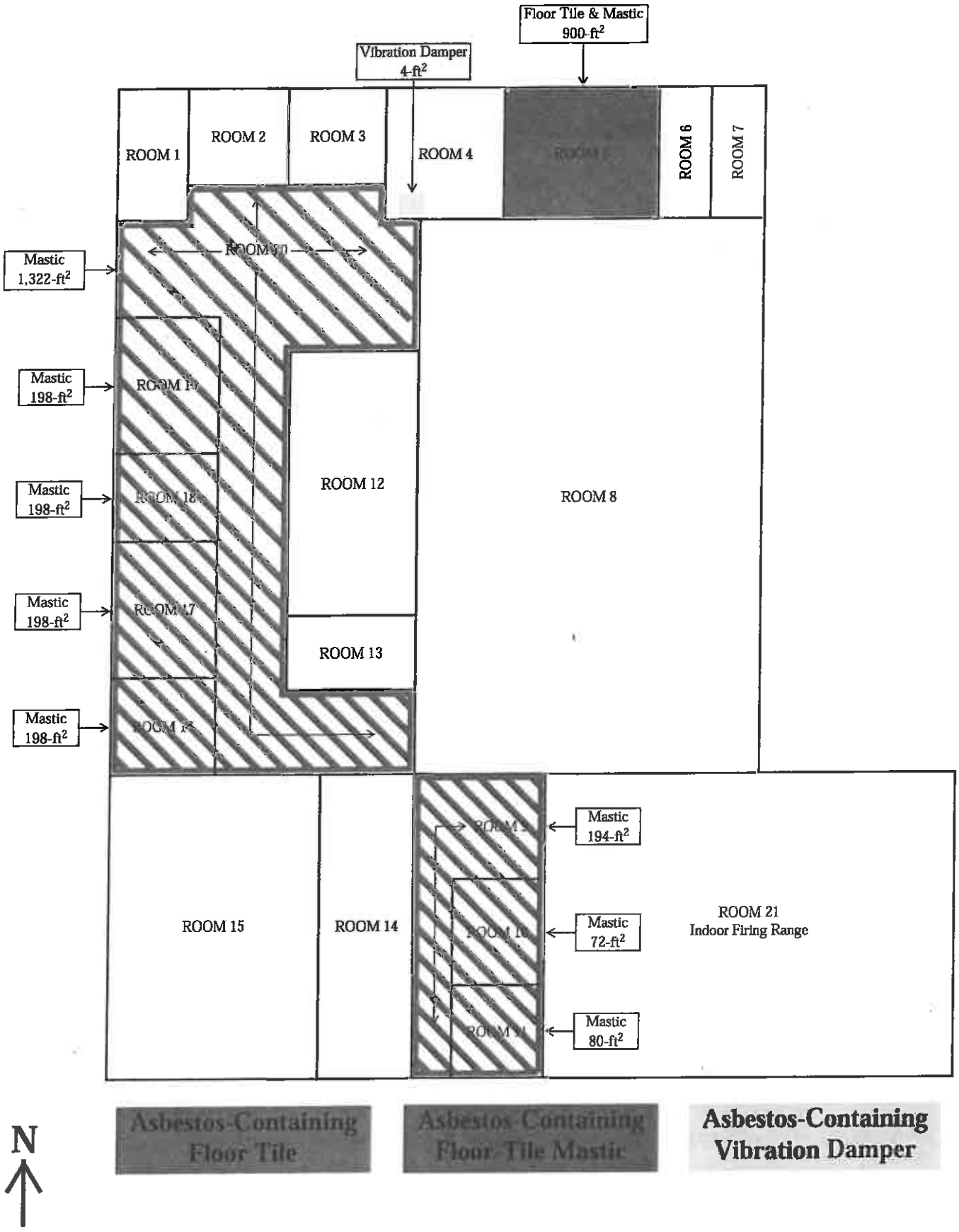
Phone		Fax	405-522-0051	Fax	
Cell		Other		Other	
email		email	jason_doss@dcs.state.ok.us	email	dustin.davidson@deq.ok.gov

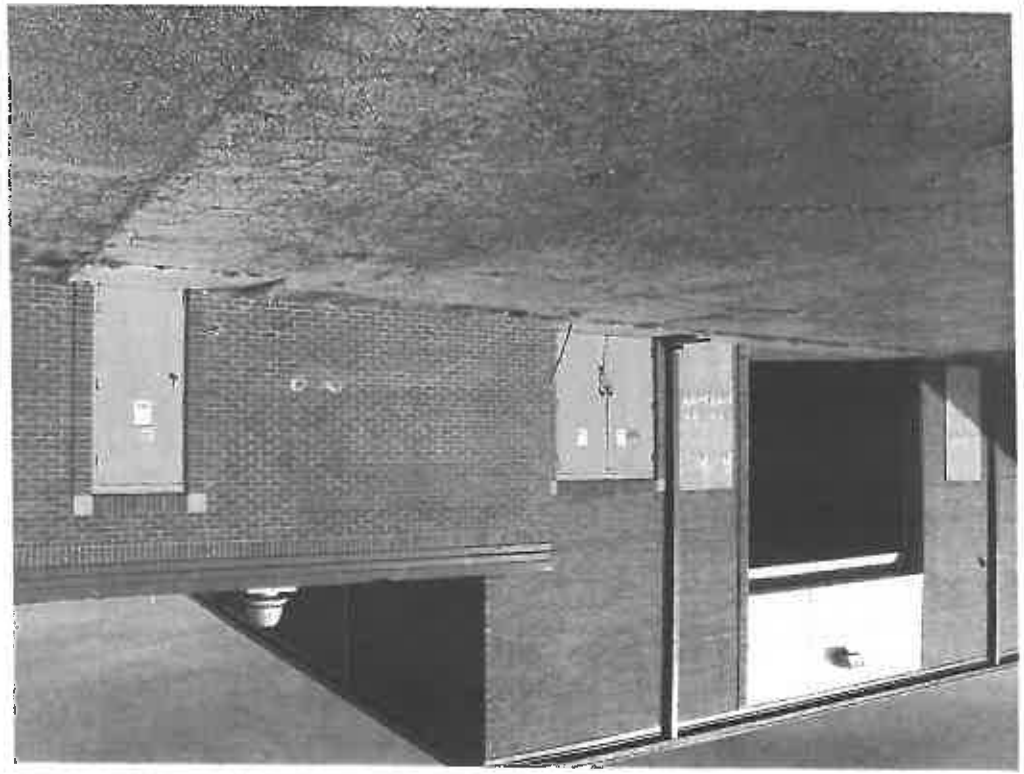
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3%	ASBESTOS DETECTED	97%	
0012-AB-011912-PLM-31	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Under Carpet - Room 17 - West	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					
LAB LOG NUMBER	DATE OF SAMPLING	SAMPLE DESCRIPTION/LOCATION	SAMPLE COMPOSITION		3%	ASBESTOS DETECTED	97%	
0012-AB-011912-PLM-32	January 19, 2012	Floor Tile Mastic	COLOR	Black	3%	Chrysotile	97%	Tar
		Under Carpet - Room 19 - South	CONDITION	Good				
			TYPE	Miscellaneous				
			NOTE					

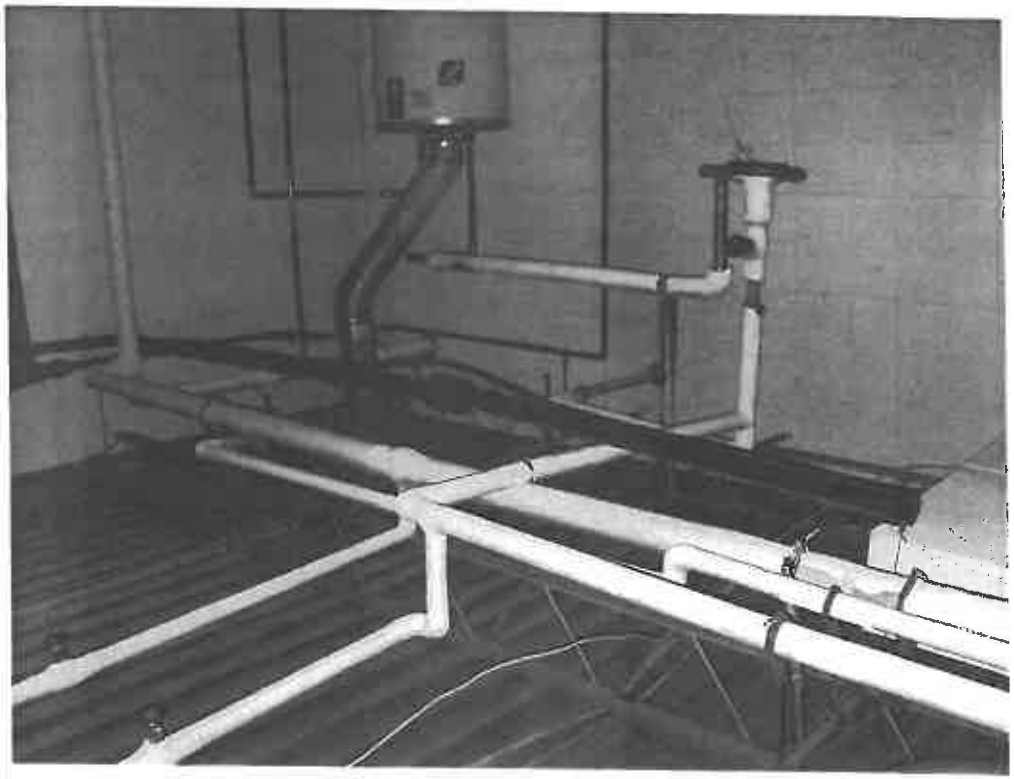
Jamie Marshall	Jamie Marshall, B.S., Industrial Hygiene Associate	February 10, 2012
ANALYST NAME (PRINT)	ANALYST SIGNATURE	DATE ANALYZED

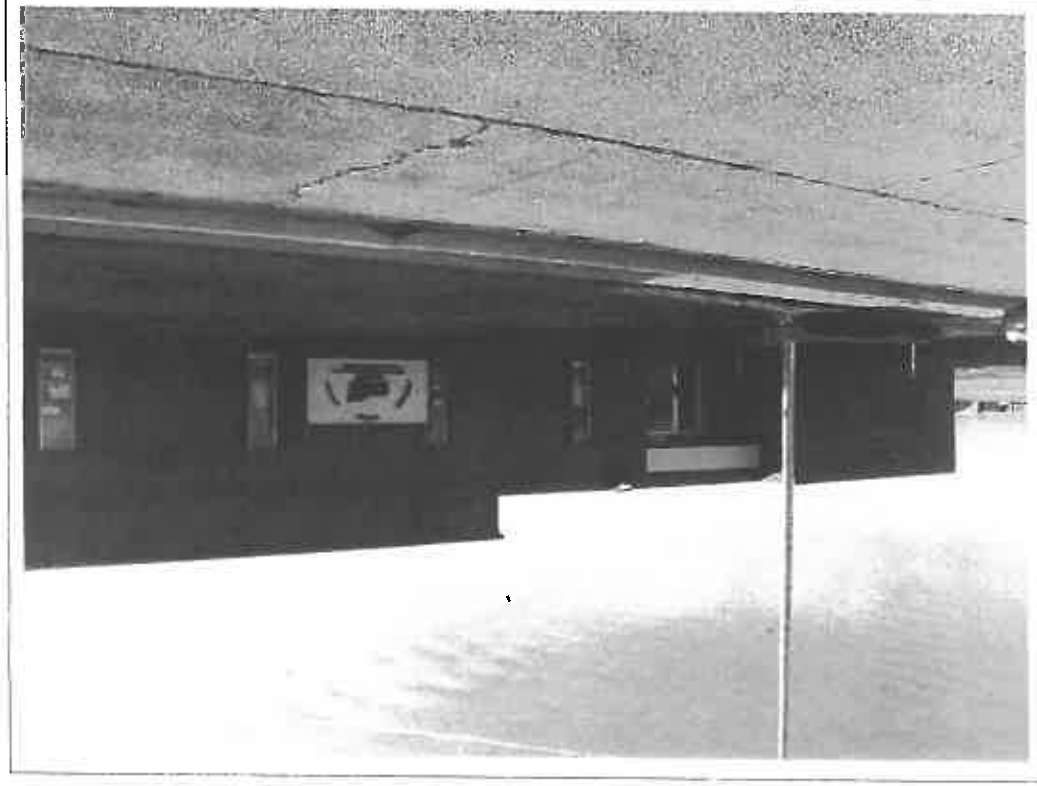
Polarized Light Microscopy Asbestos Analysis Test Method:	Lab Accreditation:
40 CFR Chapter I, Part 763, Subpart F, Appendix A, "Interim Method for determination of Asbestos in Bulk Insulation Samples" using Polarized Light Microscopy (PLM), US EPA 600/M4-82-020 1982.	AIHA PAT ID# 102334

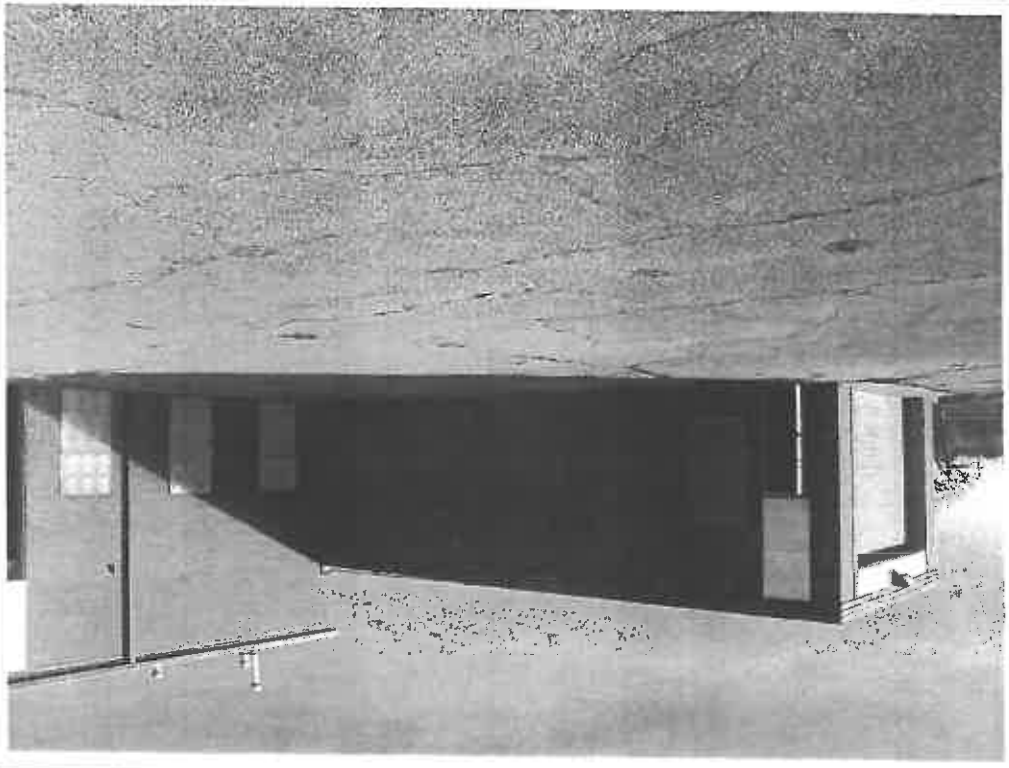
Duncan Armory
Homogenous Asbestos-Containing Materials

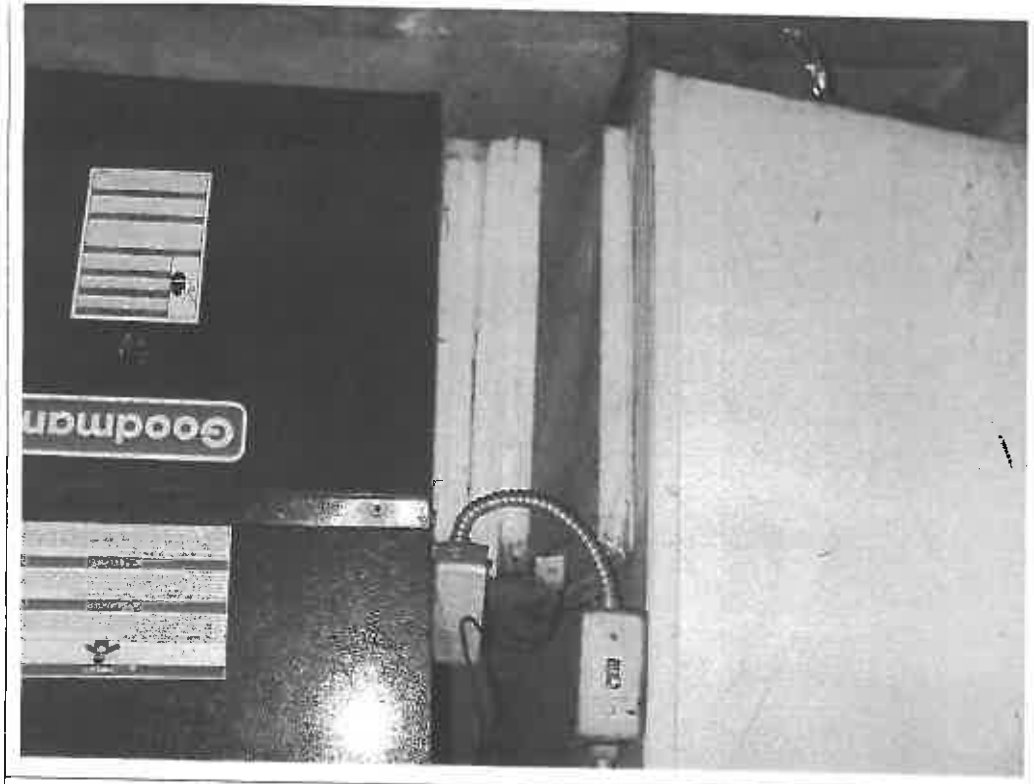


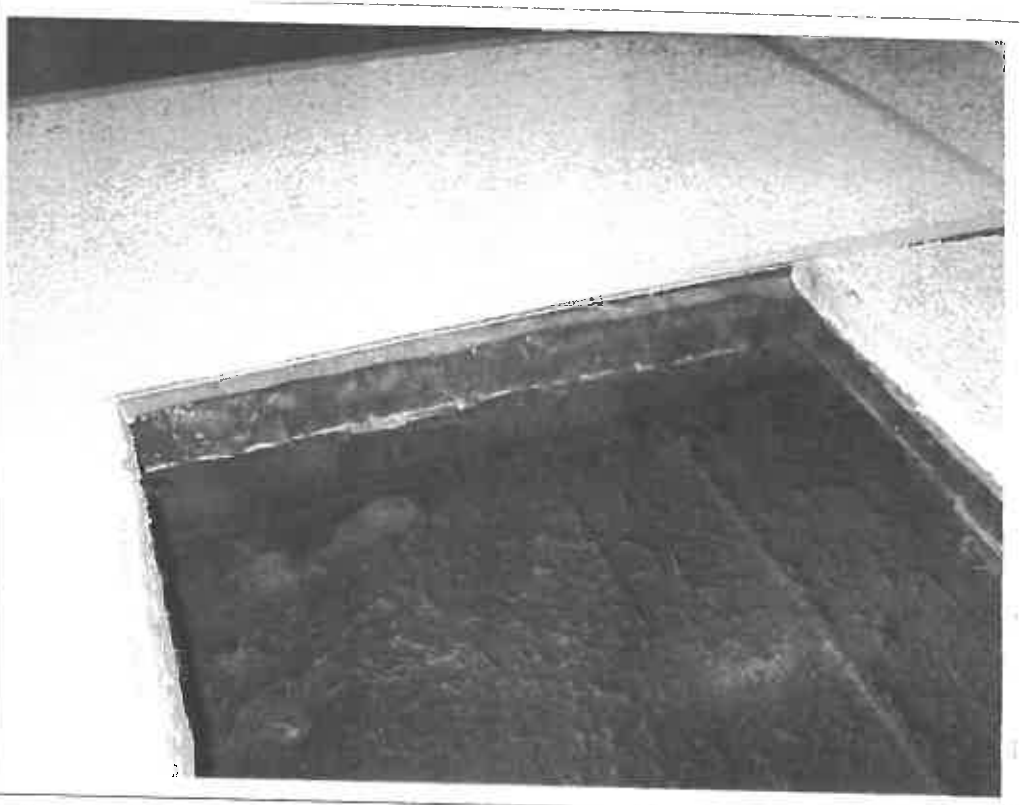


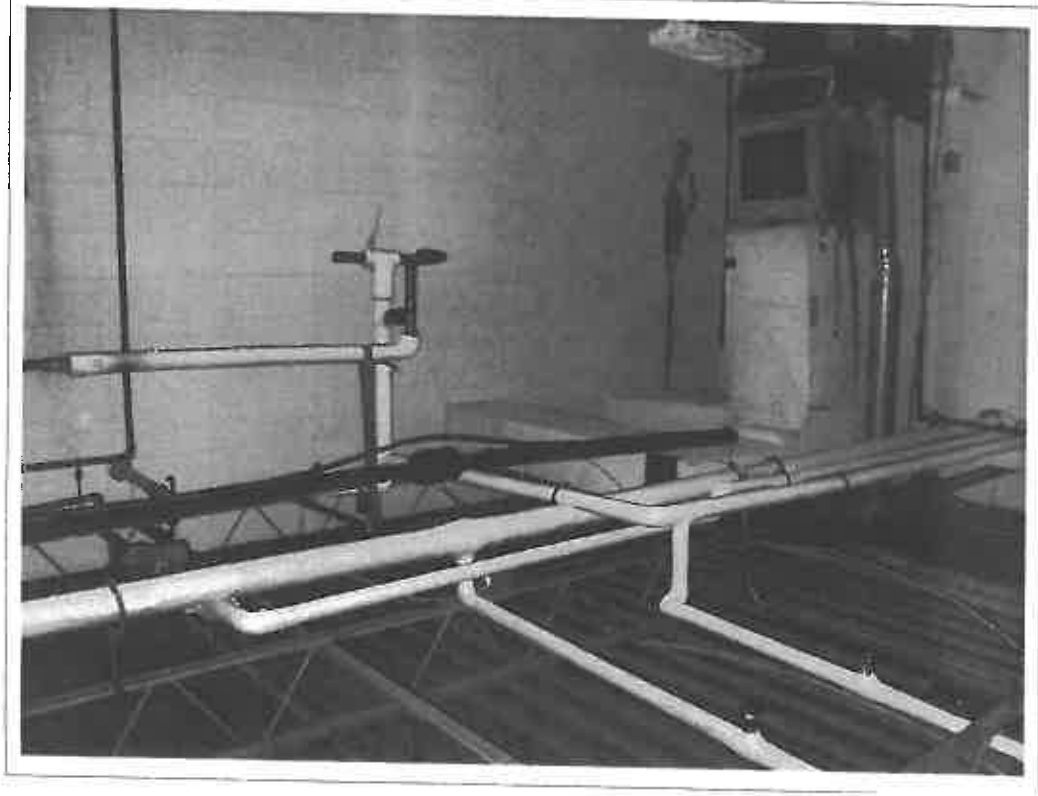







Goodman





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

DUNCAN POLICE DEPARTMENT

Office of the Chief of Police
18 S. 7th Street
Duncan, Oklahoma 73533
Phone: (580) 470-2092
Fax: (580) 252-4861

February 4, 2013

Oklahoma Department of Environmental Quality
707 N Robinson
Oklahoma City, OK 73102

Attn: Dustin Davidson

Re: Tile in National Guard Armory in Duncan, OK

Dear Sir:

The City of Duncan respectfully requests that the green tile located in the entryway, hallway, and restrooms in the National Guard Armory in Duncan, OK not be removed during the decontamination process of the building. Thank you for your time

Respectfully,

Chief Danny Ford
Duncan Police Department

STEVEN A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

February 5, 2013

Mr. Gene Brown
Mayor of Duncan
P.O. Box 969
Duncan, OK 73534

Dear Mr. Brown:

The Department of Environmental Quality (DEQ) Site Cleanup Assistance Program (SCAP) is working to evaluate and clean up the lead and asbestos contamination in the armory building to allow for safe reuse of the building.

As you are aware, there is asbestos containing material in the mastic underneath the ceramic floor tiles in the entryway and hallway of the armory building. The City of Duncan has requested that the floor tile and mastic be left in place. The ceramic floor tile in the armory is not chipped or cracked; in fact, it is in very good condition. When left undisturbed, the mastic underneath the ceramic floor tile does not pose a health risk to building occupants. Asbestos containing material is usually not harmful unless dust or fibers are released into the air. Asbestos containing floor tile mastic will not release asbestos fibers into the air unless the tile is disturbed or damaged or subjected to certain mechanical, physical or chemical processes.

It is our understanding that you do not want the DEQ to remove the asbestos containing mastic under the ceramic floor tile from the armory building. We agree that it is not necessary to remove the floor tile mastic. Further, if we did remove the tile, we would not replace the flooring.

Please understand, however, that if we do not remove the flooring during our remediation process and you later decide that you want the floor tiles and mastic removed, you will be financially responsible to properly remove the floor tiles and asbestos containing mastic under the floor tiles and dispose of them in accordance with the law.

DEQ is required by law to file a recordable Notice of Remediation in the county land records for all sites that we remediate. The mastic discussed above will be noted in the Notice of Remediation. If you have questions about the asbestos containing floor tile mastic, please call me at 405-702-5115.

Sincerely,

Dustin Davidson

Dustin Davidson
Environmental Programs Specialist
DEQ Land Protection Division
Site Cleanup Assistance Program

DUNCAN ARMORY

3000 South 13th Street
Duncan, Oklahoma 73533

January 19, 2012

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

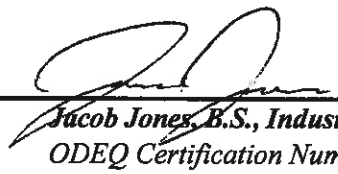
CERTIFICATION

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 surface dust within the Duncan Armory, located at 3000 South 13th Street in Duncan, Oklahoma, for the State of Oklahoma Department of Environmental Quality, Land Protection Division. All services performed on January 19, 2012 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 surface 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 Duncan

CERTIFIED LEAD-BASED PAINT INSPECTOR/RISK ASSESSOR



3-15-12

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

DUNCAN ARMORY

LEAD-BASED PAINT INSPECTION & SURFACE DUST SAMPLING

EXECUTIVE SUMMARY

On January 19, 2012 Marshall Environmental Management, Incorporated (MEM) performed a Lead-Based Paint (LBP) Inspection in addition to collecting samples of surface 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 surface 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 not identify any LBP surfaces. However, various surfaces were contaminated with lead-laden dust (see the Analytical Findings portion of this Report). It should be noted that, none of the windows throughout the Armory were tested for LBP due to their factory finish. Furthermore, all of the doors and doorjambs throughout the Armory were either negative for LBP or had a factory finish and therefore were 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 Surface-Dust Sampling Event were conducted in accordance with the US 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 start and stop times and calibration checks, and the floor plan diagrams that illustrate room equivalents and the locations of LBP surfaces are provided with the Appendix to this Report.

LEAD-LADEN DUST

Surface-dust collected from randomly selected floor surfaces throughout the Armory were sampled and analyzed for lead content. The surface 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 illustrated 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). At the time of this Inspection, no LBP was discovered.

LEAD-LADEN DUST

In accordance with HUD/EPA, surface-dust containing a concentration of lead equal to or greater than 40-micrograms per square foot (40-µg/ft^2) represents lead contamination; this action level applies to all surfaces within the Armory. The table below reflects the concentrations of lead in surface dust that were established throughout the Armory, and the "Bolded" data represents lead concentrations that exceeded the respective action level.

TABLE I: 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	<21.3	40-µg/ft^2
4	ROOM 4	**130**	40-µg/ft^2
5	ROOM 5	**23.0**	40-µg/ft^2
6	ROOM 6	<21.3	40-µg/ft^2
7	ROOM 7	**40.8**	40-µg/ft^2
8	ROOM 8	**48.8**	40-µg/ft^2
9	ROOM 8 – NORTH	**52.0**	40-µg/ft^2
10	ROOM 8 – CENTER	**46.8**	40-µg/ft^2
11	ROOM 8 – SOUTH	**35.9**	40-µg/ft^2
12	ROOM 9	**122**	40-µg/ft^2
13	ROOM 10	**33.0**	40-µg/ft^2
14	ROOM 11	**256**	40-µg/ft^2
15	ROOM 12	**58.0**	40-µg/ft^2
16	ROOM 13	**275**	40-µg/ft^2
17	ROOM 14	**49.0**	40-µg/ft^2
18	ROOM 15	**193**	40-µg/ft^2
19	ROOM 16	<21.3	40-µg/ft^2
20	ROOM 17	<21.3	40-µg/ft^2
21	ROOM 18	<21.3	40-µg/ft^2
22	ROOM 19	<21.3	40-µg/ft^2
23	ROOM 20	**25.2**	40-µg/ft^2
24	ROOM 21 – EAST	**1670.0**	40-µg/ft^2
25	ROOM 21 – CENTER	**7760.0**	40-µg/ft^2
26	ROOM 21 – WEST	**4590.0**	40-µg/ft^2

HISTORICAL OVERVIEW OF LEAD-BASED PAINT ACTIVITIES

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

DISCLAIMER AND STANDARD OF CARE

The Duncan Armory is a one-story structure with a brick façade and a flat roof that was constructed on a concrete slab circa 1975. Although the painted surfaces within the Armory do 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
SURFACE DUST

CERTIFICATIONS/LICENSURES

Duncan Armory
3000 South 13th Street
Duncan, OK 73533

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	PbK
2	2012-01-19 11:20	mg / cm ^2			CALIBRATE		Positive	1.00	1.00 ± 0.10	1.00 ± 0.10	0.90 ± 0.30
3	2012-01-19 11:20	mg / cm ^2			CALIBRATE		Positive	1.00	1.10 ± 0.10	1.10 ± 0.10	< LOD : 0.60
4	2012-01-19 11:21	mg / cm ^2			CALIBRATE		Positive	1.00	1.10 ± 0.10	1.10 ± 0.10	0.70 ± 0.40
5	2012-01-19 11:26	mg / cm ^2	SIDEWALK	CONCRETE	A	RED	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.36
6	2012-01-19 11:26	mg / cm ^2	SIDEWALK	CONCRETE	A	YELLOW	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 2.31
7	2012-01-19 11:27	mg / cm ^2	DOOR OVERHANG	CONCRETE	A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.10
8	2012-01-19 11:28	mg / cm ^2	SIGN	METAL	A	BROWN	Negative	1.00	< LOD : 0.10	< LOD : 0.10	< LOD : 3.60
9	2012-01-19 11:29	mg / cm ^2	SIGN	PIPE	B	BROWN	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 3.83
10	2012-01-19 11:29	mg / cm ^2	CONDUIT	PIPE	B	BROWN	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.57
11	2012-01-19 11:31	mg / cm ^2	DOOR# 1	METAL	C	BROWN	Negative	1.00	< LOD : 0.15	< LOD : 0.15	< LOD : 3.25
12	2012-01-19 11:32	mg / cm ^2	DOOR FRAME	METAL	C #1	BROWN	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 3.56
13	2012-01-19 11:33	mg / cm ^2	DOOR FRAME	METAL	C #2	BROWN	Negative	1.00	< LOD : 0.12	< LOD : 0.12	< LOD : 3.61
14	2012-01-19 11:33	mg / cm ^2	DOOR	METAL	C #2	BROWN	Negative	1.00	< LOD : 0.09	< LOD : 0.09	< LOD : 3.37
15	2012-01-19 11:33	mg / cm ^2	OVERHEAD DOOR FRAME	METAL	C #2	BROWN	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 3.70
16	2012-01-19 11:35	mg / cm ^2	VENT	METAL	B2	BROWN	Negative	1.00	< LOD : 0.50	< LOD : 0.50	< LOD : 3.85
17	2012-01-19 11:37	mg / cm ^2	DOOR	METAL	B2	GREY	Negative	1.00	< LOD : 0.12	< LOD : 0.12	< LOD : 1.94
18	2012-01-19 11:37	mg / cm ^2	DOOR FRAME	METAL	B2	GREY	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 3.70
19	2012-01-19 11:38	mg / cm ^2	DOOR FRAME	METAL	C2	BROWN	Negative	1.00	< LOD : 0.18	< LOD : 0.18	< LOD : 3.86
20	2012-01-19 11:38	mg / cm ^2	OVERHEAD DOOR	METAL	C2	BROWN	Negative	1.00	< LOD : 0.08	< LOD : 0.08	< LOD : 2.76
21	2012-01-19 11:39	mg / cm ^2	DOOR	METAL	D	BROWN	Negative	1.00	< LOD : 0.08	< LOD : 0.08	< LOD : 3.28
22	2012-01-19 11:40	mg / cm ^2	DOOR FRAME	METAL	D	BROWN	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 3.45
23	2012-01-19 11:40	mg / cm ^2	VENT	METAL	D	BROWN	Negative	1.00	< LOD : 0.72	< LOD : 0.72	< LOD : 3.63
24	2012-01-19 12:12	mg / cm ^2	WALL	CONCRETE	RM 1 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.93
25	2012-01-19 12:12	mg / cm ^2	WALL	CONCRETE	RM 1 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
26	2012-01-19 12:12	mg / cm ^2	WALL	CONCRETE	RM 1 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
28	2012-01-19 12:12	mg / cm ^2	WALL	CONCRETE	RM 1 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
29	2012-01-19 12:13	mg / cm ^2	WALL	CONCRETE	RM 2 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
30	2012-01-19 12:13	mg / cm ^2	WALL	CONCRETE	RM 2 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05
31	2012-01-19 12:13	mg / cm ^2	CABINET	WOOD	RM 2 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.59
32	2012-01-19 12:14	mg / cm ^2	WALL	CONCRETE	RM 2 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
33	2012-01-19 12:14	mg / cm ^2	WALL	CONCRETE	RM 2 D	WHITE	Negative	1.00	< LOD : 0.10	< LOD : 0.10	< LOD : 1.20
34	2012-01-19 12:15	mg / cm ^2	WALL	CONCRETE	RM 3 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
35	2012-01-19 12:15	mg / cm ^2	WALL	CONCRETE	RM 3 B	WHITE	Negative	1.00	< LOD : 0.09	< LOD : 0.09	< LOD : 1.20
36	2012-01-19 12:15	mg / cm ^2	WALL	CONCRETE	RM 3 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.35
37	2012-01-19 12:16	mg / cm ^2	WALL	CONCRETE	RM 3 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
38	2012-01-19 12:17	mg / cm ^2	WALL	CONCRETE	RM 4 A	WHITE	Negative	1.00	< LOD : 0.08	< LOD : 0.08	< LOD : 1.05
39	2012-01-19 12:17	mg / cm ^2	WALL	CONCRETE	RM 4 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.95
40	2012-01-19 12:18	mg / cm ^2	WALL	CONCRETE	RM 4 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 1.20
41	2012-01-19 12:18	mg / cm ^2	WALL	CONCRETE	RM 4 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.26
42	2012-01-19 12:19	mg / cm ^2	WALL	CONCRETE	RM 5 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80

Duncan Armory
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Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbL	PbK
43	2012-01-19 12:19	mg / cm ^2	WALL	CONCRETE	RM 5 B	WHITE	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 1.93
44	2012-01-19 12:20	mg / cm ^2	WALL	CONCRETE	RM 5 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
45	2012-01-19 12:20	mg / cm ^2	WALL	CONCRETE	RM 5 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
47	2012-01-19 12:21	mg / cm ^2	WALL	CONCRETE	RM 6 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80
48	2012-01-19 12:21	mg / cm ^2	WALL	CONCRETE	RM 6 B	WHITE	Negative	1.00	< LOD : 0.12	< LOD : 0.12	< LOD : 1.05
49	2012-01-19 12:21	mg / cm ^2	WALL	CONCRETE	RM 6 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
50	2012-01-19 12:21	mg / cm ^2	WALL	CONCRETE	RM 6 D	WHITE	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 1.95
51	2012-01-19 12:22	mg / cm ^2	WALL	CONCRETE	RM 7 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.14
52	2012-01-19 12:23	mg / cm ^2	WALL	CONCRETE	RM 7 B	WHITE	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 2.27
53	2012-01-19 12:23	mg / cm ^2	WALL	CONCRETE	RM 7 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 1.05
56	2012-01-19 12:24	mg / cm ^2	WALL	CONCRETE	RM 7 C	RED	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
57	2012-01-19 12:24	mg / cm ^2	WALL	CONCRETE	RM 7 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.10
58	2012-01-19 12:25	mg / cm ^2	WALL	CONCRETE	RM 8 A	RED	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 1.65
59	2012-01-19 12:25	mg / cm ^2	WALL	CONCRETE	RM 8 A	GREEN	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
60	2012-01-19 12:25	mg / cm ^2	WALL	CONCRETE	RM 8 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
61	2012-01-19 12:26	mg / cm ^2	WALL	CONCRETE	RM 8 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.02
62	2012-01-19 12:26	mg / cm ^2	WALL	CONCRETE	RM 8 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
63	2012-01-19 12:27	mg / cm ^2	WALL	CONCRETE	RM 8 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.95
64	2012-01-19 12:28	mg / cm ^2	CEILING	CONCRETE	RM 9	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80
65	2012-01-19 12:29	mg / cm ^2	CEILING	CONCRETE	RM 10	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
66	2012-01-19 12:29	mg / cm ^2	WALL	CONCRETE	RM 9 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.37
68	2012-01-19 12:30	mg / cm ^2	WALL	CONCRETE	RM 9 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.81
69	2012-01-19 12:30	mg / cm ^2	WALL	CONCRETE	RM 11 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
70	2012-01-19 12:31	mg / cm ^2	WALL	CONCRETE	RM 11 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
71	2012-01-19 12:31	mg / cm ^2	WALL	CONCRETE	RM 11 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.03
72	2012-01-19 12:31	mg / cm ^2	WALL	CONCRETE	RM 11 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
73	2012-01-19 12:32	mg / cm ^2	CEILING	CONCRETE	RM 11	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.06
74	2012-01-19 12:32	mg / cm ^2	WALL	CONCRETE	RM 12 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.14
75	2012-01-19 12:33	mg / cm ^2	WALL	CONCRETE	RM 12 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.95
76	2012-01-19 12:33	mg / cm ^2	WALL	CONCRETE	RM 12 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
77	2012-01-19 12:33	mg / cm ^2	WALL	CONCRETE	RM 12 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
78	2012-01-19 12:34	mg / cm ^2	WALL	CONCRETE	RM 13 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.35
79	2012-01-19 12:34	mg / cm ^2	WALL	CONCRETE	RM 13 B	WHITE	Negative	1.00	0.04 ± 0.02	0.04 ± 0.02	< LOD : 1.20
80	2012-01-19 12:34	mg / cm ^2	WALL	CONCRETE	RM 13 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
81	2012-01-19 12:35	mg / cm ^2	WALL	CONCRETE	RM 13 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
83	2012-01-19 12:36	mg / cm ^2	WALL	CONCRETE	RM 14 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 2.02
84	2012-01-19 12:36	mg / cm ^2	WALL	CONCRETE	RM 14 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
85	2012-01-19 12:37	mg / cm ^2	WALL	CONCRETE	RM 14 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
86	2012-01-19 12:37	mg / cm ^2	WALL	CONCRETE	RM 14 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80
87	2012-01-19 12:38	mg / cm ^2	WALL	CONCRETE	RM 15 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05

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Index	Time	Units	Component	Substrate	Side	Color	Results	Action Level	PbC	PbI	PbK
88	2012-01-19 12:39	mg / cm ^2	WALL	CONCRETE	RM 15 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05
89	2012-01-19 12:39	mg / cm ^2	WALL	CONCRETE	RM 15 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
90	2012-01-19 12:40	mg / cm ^2	WALL	CONCRETE	RM 15 D	WHITE	Negative	1.00	< LOD : 0.75	< LOD : 0.13	< LOD : 0.75
91	2012-01-19 12:40	mg / cm ^2	WALL	CONCRETE	RM 15 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
92	2012-01-19 12:40	mg / cm ^2	WALL	CONCRETE	RM 15 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
93	2012-01-19 12:41	mg / cm ^2	WALL	CONCRETE	RM 15 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
94	2012-01-19 12:41	mg / cm ^2	WALL	CONCRETE	RM 15 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
95	2012-01-19 12:42	mg / cm ^2	WALL	CONCRETE	RM 17A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
96	2012-01-19 12:42	mg / cm ^2	WALL	CONCRETE	RM 17B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
97	2012-01-19 12:42	mg / cm ^2	WALL	CONCRETE	RM 17C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
98	2012-01-19 12:43	mg / cm ^2	WALL	CONCRETE	RM 17D	WHITE	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 1.20
100	2012-01-19 12:43	mg / cm ^2	WALL	CONCRETE	RM 18 A	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
101	2012-01-19 12:44	mg / cm ^2	WALL	CONCRETE	RM 18 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.15
102	2012-01-19 12:44	mg / cm ^2	WALL	CONCRETE	RM 18 C	WHITE	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 1.20
103	2012-01-19 12:44	mg / cm ^2	WALL	CONCRETE	RM 18 D	WHITE	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 1.05
104	2012-01-19 12:45	mg / cm ^2	WALL	CONCRETE	RM 19 A	WHITE	Negative	1.00	0.60 ± 0.20	0.60 ± 0.20	1.00 ± 0.60
105	2012-01-19 12:45	mg / cm ^2	WALL	CONCRETE	RM 19 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05
106	2012-01-19 12:45	mg / cm ^2	WALL	CONCRETE	RM 19 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05
107	2012-01-19 12:45	mg / cm ^2	WALL	CONCRETE	RM 19 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.95
108	2012-01-19 12:46	mg / cm ^2	WALL	CONCRETE	RM 20	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
109	2012-01-19 12:46	mg / cm ^2	WALL	CONCRETE	RM 20 B	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.05
110	2012-01-19 12:47	mg / cm ^2	WALL	CONCRETE	RM 20 C	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
111	2012-01-19 12:47	mg / cm ^2	WALL	CONCRETE	RM 20 D	WHITE	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
112	2012-01-19 12:49	mg / cm ^2	IFR HATCH	METAL	RM 8 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
113	2012-01-19 12:51	mg / cm ^2	WALL	METAL	RM 21 B	RED	Negative	1.00	< LOD : 0.09	< LOD : 0.09	< LOD : 3.46
114	2012-01-19 12:51	mg / cm ^2	WALL	METAL	RM 21 D	RED	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
115	2012-01-19 12:52	mg / cm ^2	OVERHEAD DOOR TRACK	METAL	RM 21 C	BROWN	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 2.05
116	2012-01-19 13:10	mg / cm ^2	DOOR JAMB	METAL	1	BLACK	Negative	1.00	< LOD : 0.37	< LOD : 0.37	< LOD : 3.91
117	2012-01-19 13:10	mg / cm ^2	DOOR JAMB	METAL	2	BLACK	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 3.75
118	2012-01-19 13:10	mg / cm ^2	DOOR JAMB	METAL	3	BLACK	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 3.75
119	2012-01-19 13:11	mg / cm ^2	DOOR JAMB	METAL	4	BLACK	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 3.49
120	2012-01-19 13:11	mg / cm ^2	DOOR JAMB	METAL	5	BLACK	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.75
121	2012-01-19 13:11	mg / cm ^2	DOOR JAMB	METAL	6	BLACK	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 3.66
122	2012-01-19 13:11	mg / cm ^2	DOOR JAMB	METAL	7	BLACK	Negative	1.00	< LOD : 0.16	< LOD : 0.16	< LOD : 3.43
123	2012-01-19 13:12	mg / cm ^2	DOOR JAMB	METAL	8	BLACK	Negative	1.00	< LOD : 0.54	< LOD : 0.54	< LOD : 3.45
124	2012-01-19 13:12	mg / cm ^2	DOOR JAMB	METAL	9	BLACK	Negative	1.00	< LOD : 0.42	< LOD : 0.42	< LOD : 3.50
125	2012-01-19 13:12	mg / cm ^2	DOOR JAMB	WOOD	32	BLACK	Negative	1.00	< LOD : 0.21	< LOD : 0.21	< LOD : 3.49
126	2012-01-19 13:13	mg / cm ^2	DOOR	METAL	9	BLACK	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 1.57
127	2012-01-19 13:13	mg / cm ^2	DOOR JAMB	METAL	10	BLACK	Negative	1.00	< LOD : 0.13	< LOD : 0.13	< LOD : 2.89
128	2012-01-19 13:14	mg / cm ^2	DOOR JAMB	METAL	12	BLACK	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 3.58
									< LOD : 0.03	< LOD : 0.03	< LOD : 3.47

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129	2012-01-19 13:14	mg / cm ^2	DOOR JAMB	METAL	13	BLACK	Negative	1.00	< LOD : 0.03	< LOD : 0.03	< LOD : 3.60
130	2012-01-19 13:15	mg / cm ^2	DOOR JAMB	METAL	15	BLACK	Negative	1.00	< LOD : 0.12	< LOD : 0.12	< LOD : 3.29
131	2012-01-19 13:15	mg / cm ^2	DOOR	METAL	15	BROWN	Negative	1.00	< LOD : 0.10	< LOD : 0.10	< LOD : 3.16
132	2012-01-19 13:15	mg / cm ^2	DOOR	METAL	16	BROWN	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 3.02
133	2012-01-19 13:16	mg / cm ^2	DOOR JAMB	METAL	16	BLACK	Negative	1.00	< LOD : 0.10	< LOD : 0.10	< LOD : 3.65
134	2012-01-19 13:16	mg / cm ^2	DOOR	METAL	17	GREY	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.81
135	2012-01-19 13:16	mg / cm ^2	DOOR JAMB	METAL	17	GREY	Negative	1.00	< LOD : 0.06	< LOD : 0.06	< LOD : 3.86
136	2012-01-19 13:18	mg / cm ^2	DOOR JAMB	METAL	18	BLACK	Negative	1.00	< LOD : 0.10	< LOD : 0.10	< LOD : 3.90
137	2012-01-19 13:18	mg / cm ^2	DOOR JAMB	METAL	19	BLACK	Negative	1.00	< LOD : 0.23	< LOD : 0.23	< LOD : 3.55
138	2012-01-19 13:19	mg / cm ^2	DOOR JAMB	METAL	20	BLACK	Negative	1.00	< LOD : 0.05	< LOD : 0.05	< LOD : 3.64
139	2012-01-19 13:19	mg / cm ^2	DOOR JAMB	METAL	21	BLACK	Negative	1.00	< LOD : 0.04	< LOD : 0.04	< LOD : 3.38
140	2012-01-19 13:19	mg / cm ^2	DOOR JAMB	METAL	22	BLACK	Negative	1.00	< LOD : 0.11	< LOD : 0.11	< LOD : 3.60
141	2012-01-19 13:20	mg / cm ^2	DOOR JAMB	METAL	23	BLACK	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.75
142	2012-01-19 13:20	mg / cm ^2	DOOR JAMB	METAL	24	BLACK	Negative	1.00	< LOD : 0.15	< LOD : 0.15	< LOD : 3.75
143	2012-01-19 13:20	mg / cm ^2	DOOR JAMB	METAL	25	BLACK	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.60
144	2012-01-19 13:20	mg / cm ^2	DOOR JAMB	METAL	26	BLACK	Negative	1.00	< LOD : 0.17	< LOD : 0.17	< LOD : 3.67
145	2012-01-19 13:20	mg / cm ^2	DOOR JAMB	METAL	27	BLACK	Negative	1.00	< LOD : 0.21	< LOD : 0.21	< LOD : 3.62
146	2012-01-19 13:21	mg / cm ^2	DOOR JAMB	METAL	28	BLACK	Negative	1.00	< LOD : 0.07	< LOD : 0.07	< LOD : 3.52
147	2012-01-19 13:21	mg / cm ^2	DOOR JAMB	METAL	29	BLACK	Negative	1.00	< LOD : 0.23	< LOD : 0.23	< LOD : 3.74
148	**2012-01-19 13:23**	**mg / cm ^2**			**CALIBRATE**		**Positive**	**1.00**	**1.10 ± 0.10**	**1.10 ± 0.10**	**0.80 ± 0.40**
149	2012-01-19 13:23	mg / cm ^2			CALIBRATE		Negative	1.00	0.90 ± 0.10	0.90 ± 0.10	0.80 ± 0.50
150	**2012-01-19 13:24**	**mg / cm ^2**			**CALIBRATE**		**Positive**	**1.00**	**1.10 ± 0.10**	**1.10 ± 0.10**	**0.70 ± 0.40**

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

203602 1 of 3

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0017-LBP-011912	Client/Company		Client/Company	
Project Name		Attention Title		Attention Title	
Project Address		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	

	Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
1.	NA	1/19/2012	1	Room 1	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
2.	NA	1/19/2012	2	Room 2	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
3.	NA	1/19/2012	3	Room 3	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
4.	NA	1/19/2012	4	Room 4	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
5.	NA	1/19/2012	5	Room 5	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
6.	NA	1/19/2012	6	Room 6	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
7.	NA	1/19/2012	7	Room 7	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
8.	NA	1/19/2012	8	Room 8	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
9.	NA	1/19/2012	8-N	Room 8 - North	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
10.	NA	1/19/2012	8-C	Room 8 - Center	NA	NA	Dust	Wipe	1ft^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	1/19/2012	Relinquished By	Jacob Jones	(print)	Date	1/20/12	Matrix	Media
		(signature)	Time				(signature)	Time	12:30	Air	MV / MP / ST / SW / TL
Received By		(print)	Date	1/20/12	Relinquished By		(print)	Date		Aqueous	
		(signature)	Time	2:30			(signature)	Time		Bulk	
Turn-Around-Time										Sludge	
X	Standard	5-7 Business Days								Soil	
	Rush	Nest Day								Solid/Bulk	
	Immediate	Same Day								Page	1 of 3

Condition Upon Receipt:

Method of Shipment: Hand Delivery

Sample Notes:

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

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203602 2of3

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0017-LBP-011912	Client/Company		Client/Company	
Project Name		Attention Title		Attention Title	
Project Address		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	

	Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
11.	NA	1/19/2012	8-S	Room 8 - South	NA	NA	Dust	Wipe	1ft^2	NA	Total Pb
12.	NA	1/19/2012	9	Room 9	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
3.	NA	1/19/2012	10	Room 10	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
4.	NA	1/19/2012	11	Room 11	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
15.	NA	1/19/2012	12	Room 12	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
16.	NA	1/19/2012	13	Room 13	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
7.	NA	1/19/2012	14	Room 14	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
8.	NA	1/19/2012	15	Room 15	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
9.	NA	1/19/2012	16	Room 16	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
10.	NA	1/19/2012	17	Room 17	NA	NA	Dust	Wipe	108in^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	1/19/2012	Relinquished By	Jacob Jones	(print)	Date	1/20/12	Matrix	Media
		(signature)	Time	14:00			(signature)	Time	12:30	Air	W / MP / ST / SW / TL
Received By		(print)	Date	1/20/12	Relinquished By		(print)	Date		Aqueous	
		(signature)	Time	12:30			(signature)	Time		Bulk	
Turn-Around-Time										Sludge	
X	Standard	5-7 Business Days	Condition Upon Receipt		Method of Shipment	Hand Delivery				Soil	
	Rush	Nest Day								Solid/Bulk	
	Immediate	Same Day	Sample Notes							Page	2 of 3

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Marshall Environmental Management, Inc.
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203602 3 of 3

PROJECT INFORMATION		INVOICE TO		REPORT TO	
Project Identification	0017-LBP-011912	Client/Company		Client/Company	
Project Name		Attention Title		Attention Title	
Project Address		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	

	Laboratory Identification	Sample Date	Field Identification	Sample Composition	Sampling Location	Sample Condition	Sample Matrix	Sample Media	Volume/ Area	Unit	Analysis/ Parameters
1.	NA	1/19/2012	18	Room 18	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
2.	NA	1/19/2012	19	Room 19	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
3.	NA	1/19/2012	20	Room 20	NA	NA	Dust	Wipe	108in^2	NA	Total Pb
4.	NA	1/19/2012	21-E	Room 21 - East	NA	NA	Dust	Wipe	1ft^2	NA	Total Pb
5.	NA	1/19/2012	21-C	Room 21 - Center	NA	NA	Dust	Wipe	1ft^2	NA	Total Pb
6.	NA	1/19/2012	21-W	Room 21 - West	NA	NA	Dust	Wipe	1ft^2	NA	Total Pb

Collected By	Jacob Jones	(print)	Date	1/19/2012	Relinquished By	Jacob Jones	(print)	Date	1/20/12	Matrix	Media
		(signature)	Time	14:00			(signature)	Time	12:30	Air	MV MP ST SW TL
Received By		(print)	Date	1/20/12	Relinquished By		(print)	Date		Aqueous	
		(signature)	Time	12:30			(signature)	Time		Bulk	
Turn-Around-Time										Sludge	Micro-Vacuum / Mold Plate / Spore Trap / Swab / Tape-Lift
	Standard	5-7 Business Days								Soil	
	Rush	Nest Day								Solid/Bulk	
	Immediate	Same Day								Page	3 of 3

Condition Upon Receipt: | Method of Shipment: Hand Delivery

Sample Notes:

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 203602
Date Received: 01/20/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 1/23/2012

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.: 0017-LBP-011912

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.	01/23/12 14:00	W EPA 7420 (1)
002	2	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
003	3	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
004	4	Wipe	Lead	130	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
005	5	Wipe	Lead	23.0	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
006	6	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
007	7	Wipe	Lead	40.8	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
008	8	Wipe	Lead	48.8	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
009	8-N	Wipe	Lead	52.0	16	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
010	8-C	Wipe	Lead	46.8	16	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
011	8-S	Wipe	Lead	35.9	16	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
012	9	Wipe	Lead	122	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
013	10	Wipe	Lead	33.0	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
014	11	Wipe	Lead	256	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
015	12	Wipe	Lead	58.2	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
016	13	Wipe	Lead	275	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
017	14	Wipe	Lead	49.0	21.3	ug/sq. Ft.	01/23/12 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: 203602
Date Received: 01/20/12
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 1/23/2012

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.: 0017-LBP-011912

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	15	Wipe	Lead	193	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
019	16	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
020	17	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
021	18	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
022	19	Wipe	Lead	<21.3	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
023	20	Wipe	Lead	25.2	21.3	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
024	21-E	Wipe	Lead	1,670	16	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
025	21-C	Wipe	Lead	7,760	16	ug/sq. Ft.	01/23/12 14:00	W EPA 7420 (1)
026	21-W	Wipe	Lead	4,590	16	ug/sq. Ft.	01/23/12 14:00	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.

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

EPA Method 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: 9580
Test: Lead
Date: 1/23/2012
Matrix: Wipe
Lab Number: 203602
Approved By: Benton Miller
Date Approved: 1/23/2012

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	4.9	5.5
FCV	4.5	4.8	5.5
ICV	0.8	1	1.2
RLVS	0.256	0.37	0.384

Duplicate Data:

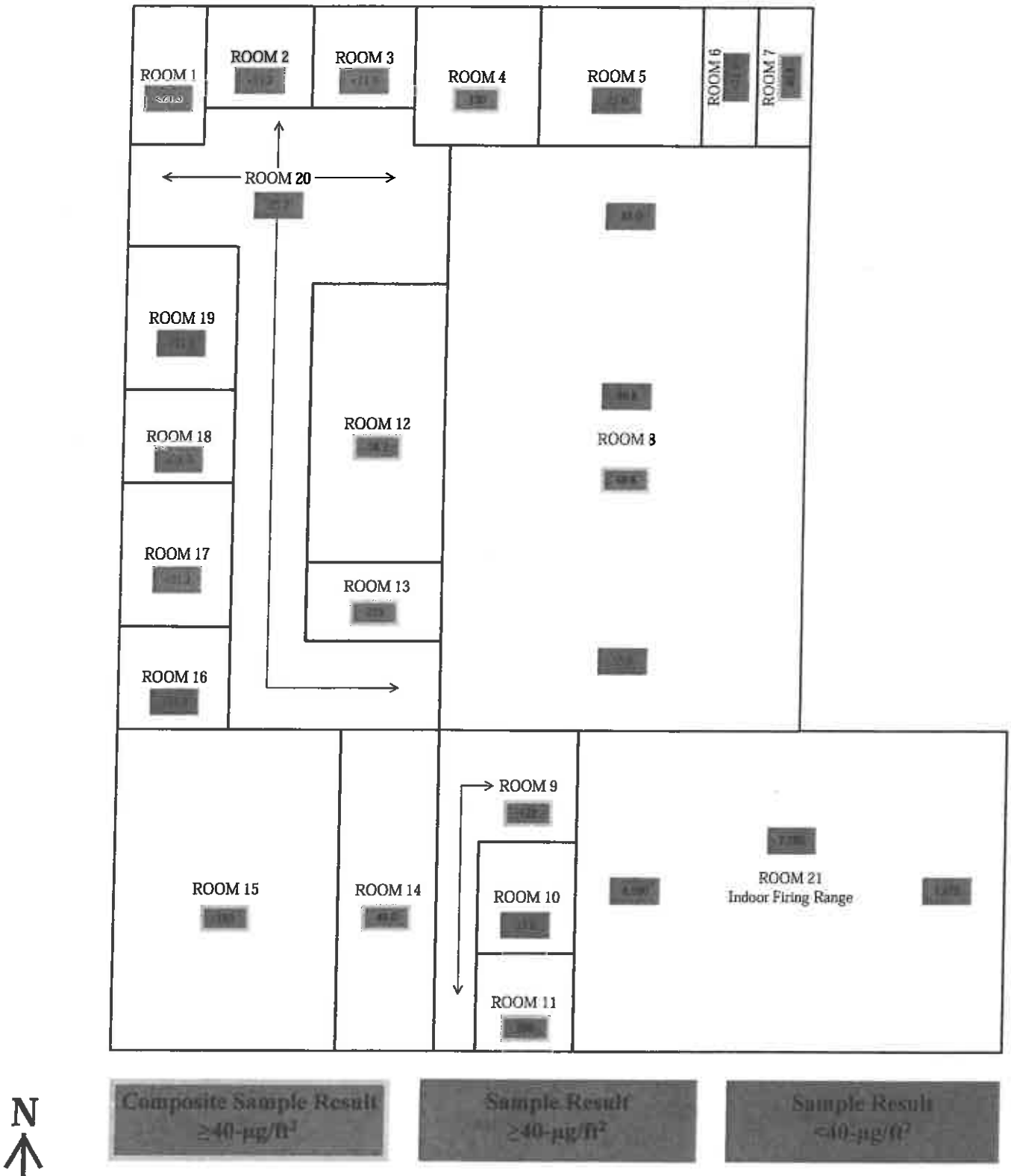
Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W2	0.000	5.525	5.476	99.1	5.153	93.3	6.1
MS-W1	0.000	5.514	6.191	112.3	5.573	101.1	10.5

Authorized Signature: _____

Benton Miller, Analyst

Duncan Armory
Lead in Surface 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

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

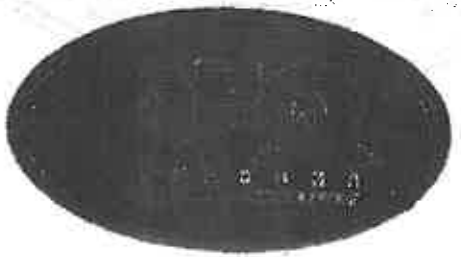
INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13457

This certification 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

SCOPES OF WORK

STATEMENT OF WORK
For
Remediation of Lead and Asbestos Contamination at the Duncan 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 Duncan, Oklahoma. This statement of work (SOW) describes the abatement of lead-based paint, 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 Duncan Armory is attached for review (**Attachment 1**).

The building is located at 3000 South 13th Street, Duncan, Oklahoma 73533. 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 forty five (45) 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. Contractor shall not cause damage to building structures, property, walls, fixtures, etc. during remediation/abatement process. If damage is caused to these items, contractor is responsible for repairing the damage.
    d. Coordination of work areas shall be scheduled with DEQ.
    e. 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 abatement shall be completed.
2. Second – Marshall Environmental shall be contacted to confirm all asbestos has been appropriately removed.
3. Third – The indoor firing range (IFR) shall be cleaned.
4. Fourth - All floors of the entire building shall be cleaned.
5. Fifth – 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 Duncan 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 locations listed in the Asbestos Inspection Report.
        - **There is a total of 900 ft^2 of asbestos containing floor tile that shall be removed from the building. See attached floor plan map in Asbestos Inspection Report for locations of asbestos containing floor tile.**

- **There is a total of 3,360 ft^2 of asbestos containing floor tile 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.**

- **HVAC – Vibration Damper**

  - **Remove** vibration damper from HVAC unit. For details and location of the vibration damper see the Asbestos Survey Report (**Attachment 2**).

  - Vibration Dampers can become friable so contractor shall remove as small quantity short duration and take care not disturb or cut the fibers during removal.

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.
  - The IFR bullet backstop and backstop stairs shall be decontaminated, wrapped in poly sheeting, and properly disposed.
    - Disassembling and cutting of these items may be required for removal.
    - Backstop stairs contain lead-based paint.
  - The IFR bullet trap sand shall be placed in sealed drums and disposed 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:

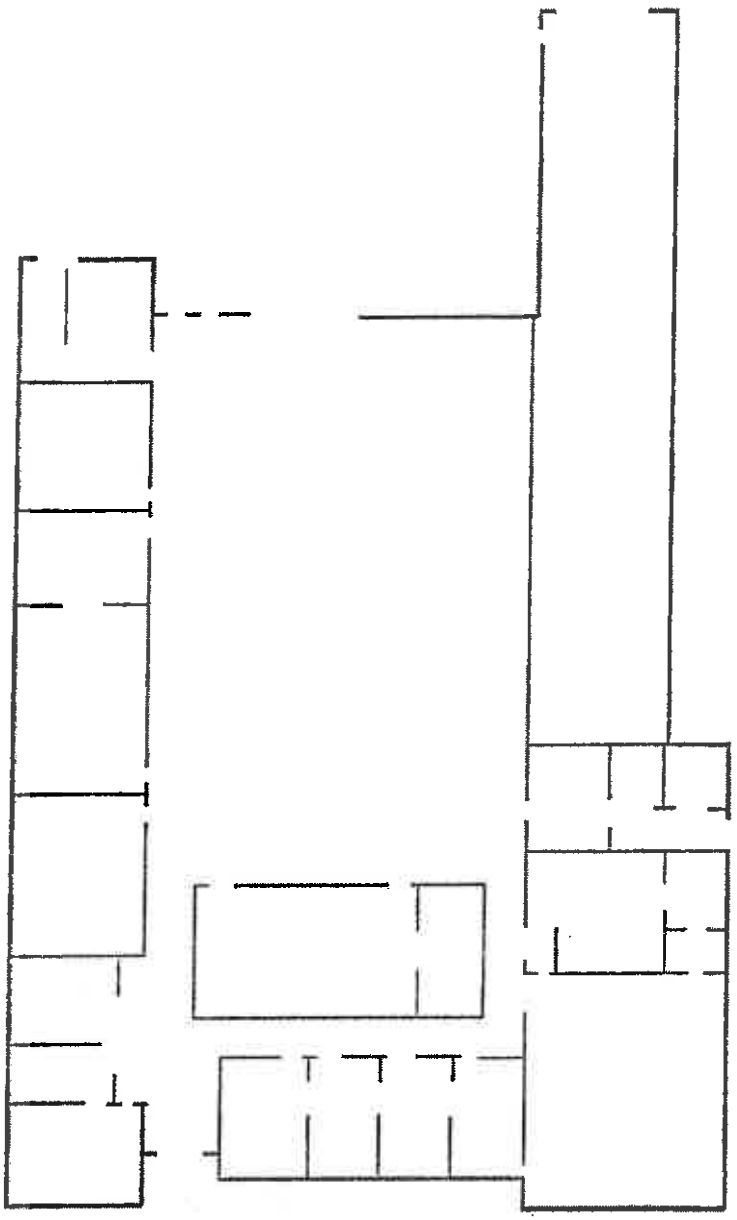
Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102

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

ATTACHMENT 1

Duncan Armory Floor Plan Map

Duncan Armory



Not to scale
Floor plan approximate

ATTACHMENT 2

Duncan 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 polymer	Significantly improves adhesion, cohesion, tensile, compressive, and flexural strengths of cement-based materials
• Excellent chemical and UV resistance	Promotes long-lasting repairs
• Improved freeze/thaw stability of Portland cement-based materials	Suitable for cold climates or cautions
• 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 Thorite®
- 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 mix 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	8.65 (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 98 cycles	102 at 300 cycles	Method A

Test values are averages obtained under laboratory conditions at 70° F (21° C) and 50% R. 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 patching 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 sheets.

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

03 60 13 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 1.15 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 aggregates	Fills large voids without additional mix water
• 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 extension 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 305 and ACI 306) 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® 616, 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 8 hours at a flowable consistency and 70°F (21° C).

Test Data

PROPERTY	RESULTS	TEST METHODS
Flow, %, 5 drops	126 – 145	ASTM C230
Volume change, %; flowable consistency, after 28 days	0.03	ASTM C 1090
Compressive strength, psi (MPa)		ASTM C 942, according to ASTM C 1107

	Consistency		
	Flowable[1]	Plastic[2]	Stiff[3] (dump 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 (58.5)	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. 1020199).
- 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 (bonded) 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).

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

ATTACHMENT 5

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

ATTACHMENT 6

Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges

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 3-1 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.*

(1) When placed in containers, wastewater should be left to evaporate.

(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. Waste water placed into containers can be left to evaporate. *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 rendiness 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) to be sampled, 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 of 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 area 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/ft²
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

FINAL ABATEMENT REPORTS

FINAL REPORT

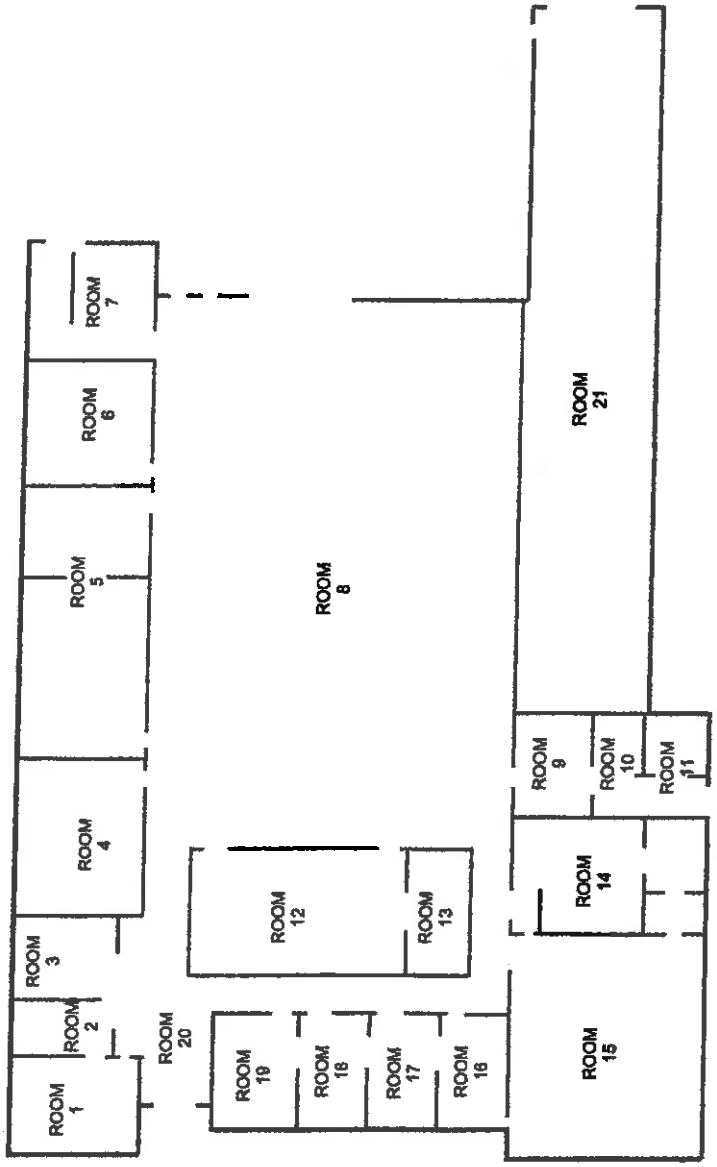
DUNCAN ARMORY -

REMEDIATION OF LEAD AND ASBESTOS CONTAMINATION

DCAM # 13126

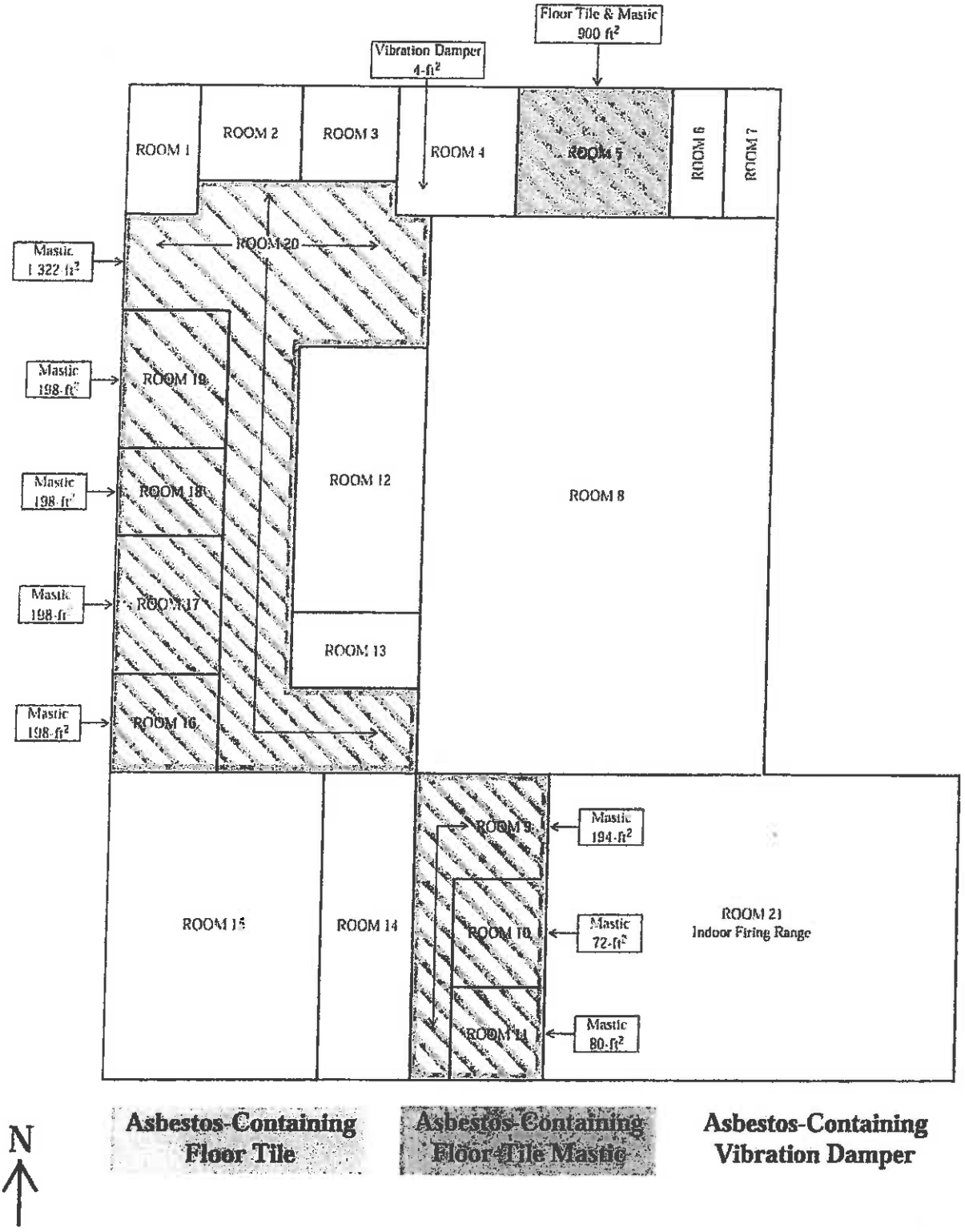
TABLE OF CONTENTS

Duncan Armory

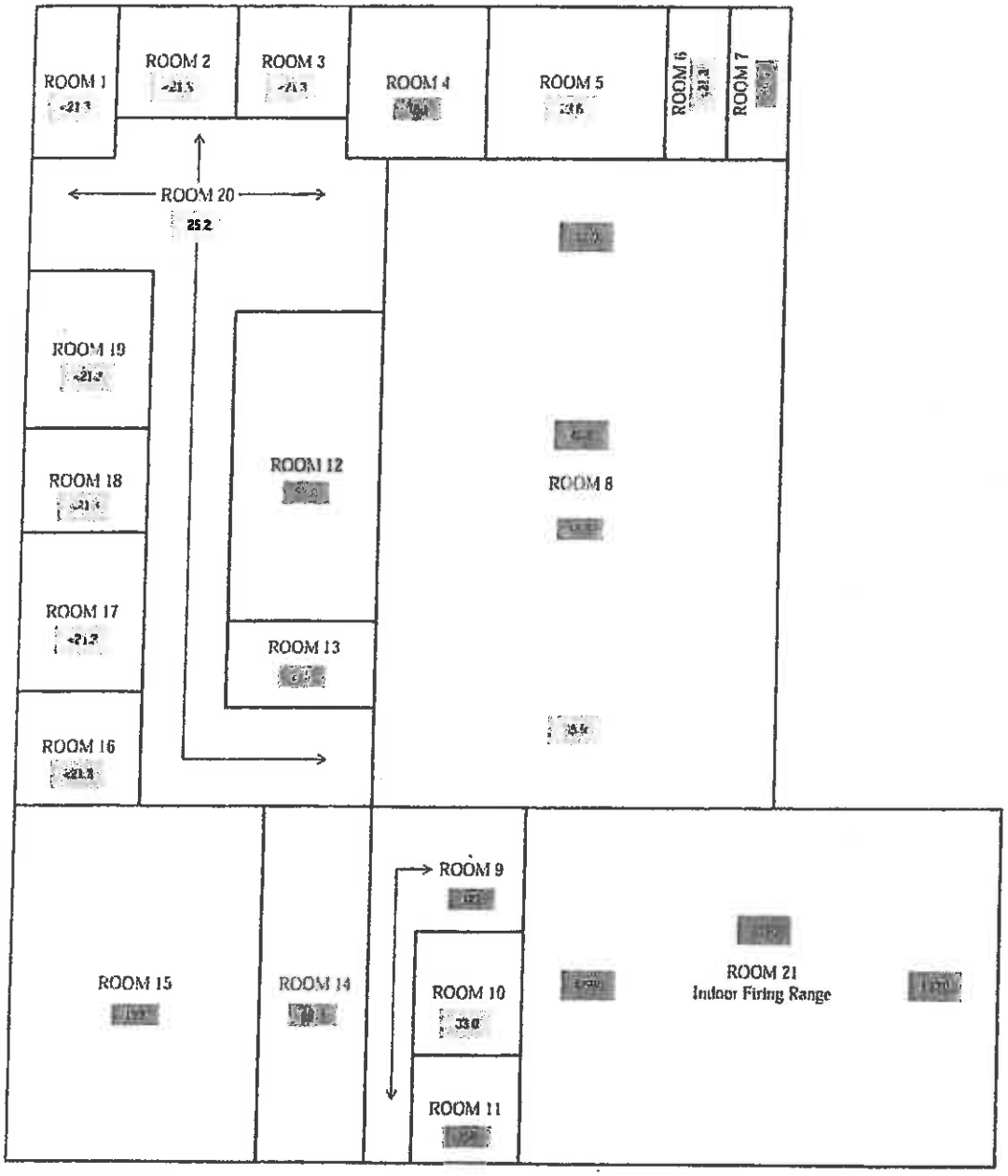


Not to scale
Floor plan approximate

Duncan Armory
Homogenous Asbestos-Containing Materials



Duncan Armory
Lead in Surface Dust



SUMMARY OF WORK

Upon arrival at site the asbestos abatement areas were prepared and removal of the asbestos containing floor tile and mastic commenced (Room 5). Removal of asbestos containing mastic from Rooms 9, 10, 11, 16, 17, 18, 19, & 20 followed and the HVAC vibration damper (Room 4) was removed. Upon completion of the asbestos abatement phase Marshall Environmental was notified to confirm abatement and that all asbestos containing material has been removed.

Lead abatement areas were then prepared and removal of lead contamination commenced. Abatement in the Indoor Firing Range began with the removal of all lead contaminated items on the floor, walls, and ceiling of the IFR. It was during this process that a metal ceiling was discovered above the acoustical tiles and wood covering the ceiling. This was removed in order to complete lead dust removal in the area above. The floor, walls and ceiling were then HEPA vacuumed, wet washed and sealed.

Lead dust abatement in the remainder of the building was started with abatement of walls, shelves, etc above the floors to avoid recontamination. The floors were then HEPA vacuumed and wet washed. The Oklahoma Department of Environmental Quality was then notified for post remediation sampling.

POST REMEDIATION SAMPLING REPORT(S)

ASBESTOS – Completed and reported by Marshall Environmental

LEAD – See following seven (7) pages.

Outreach Laboratory
311 North Aspen
Broken Arrow, OK 74012
(918) 251-2515
FAX (918) 251-0008

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L 2284 Testing

NJ OK001

Case Narrative

Lab No: 20130289

This report contains the analytical results for the 1 sample(s) received under chain of custody by Outreach Laboratory on 3/20/2013 4:31:04 PM. These samples are associated with your Duncan Armory project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Observations / Nonconformances

Outreach Laboratory
311 North Aspen
Broken Arrow, OK 74012
(918) 251-2515
FAX (918) 251-0008

Client:	Abatement Systems, Inc.
Client Project:	Duncan Armory
Lab Number:	20130289
Date Reported:	3/26/2013
Date Received:	3/20/13
Page Number:	2 of 2

Analytical Report

	Method	Result	DL	Units	Qual.	Prep Date	Analysis Date	Analyst
Lab ID:	**20130289-01**							
Client ID:	**Wall Board - Firing Range**							
Date Sampled:	**2/27/2013**							
Matrix:	**SCM**							
	Metals Analyses							
TCLP-Lead	EPA 1311/6010B*	BDL	0.100	mg/l		3/21/2013	3/25/2013	RE

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Date
TCLP-Lead	0	89.0					95.0	95.6	0.6	3/25/2013

Lab Approval:

*NELAC Certified Parameter BDL = Below Detection Limit

CHAIN OF CUSTODY

Package Shipped From: DUNCAN ARMORY Date: 2/27/13

Address: 3000 S. 13th DUNCAN, OK 73533

Phone #: 251-2504 Fax #: 251 3852 Contact: Jon Sumrers

Condition of package Upon Receipt: _____

Number of Samples Received: 1 Person Sampling: Joe Stevenson

Project I.D.: 13126 Sample Type: LEAD

NUMBER	RECEIVING SAMPLE	DESCRIPTION	AAL LOG NUMBER
1		WALL BOARD - FIRING RANGE	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Comments: analyze for TCLP Lead

Relinquished by: [signature] Date: 4:09 PM Time: 3/20/13 Received by: [signature] 03202013 1609

Relinquished by: _____ Date: _____ Time: _____ Received by: _____

Relinquished by: _____ Date: _____ Time: _____ Received by: _____

Relinquished by: _____ Date: _____ Time: _____ Received by: _____

20130289

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Broken Arrow, OK 74012
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LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L 2284 Testing

nelac
NJ OK001

Case Narrative

Lab No: 20130290

This report contains the analytical results for the 4 sample(s) received under chain of custody by Outreach Laboratory on 3/20/2013 4:36:21 PM. These samples are associated with your Duncan Armory project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Observations / Nonconformances

Outreach Laboratory
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Client:	Abatement Systems, Inc.
Client Project:	Duncan Armory
Lab Number:	20130290
Date Reported:	3/27/2013
Date Received:	3/20/13
Page Number:	2 of 3

Analytical Report

	Method	Result	DL	Units	Qual.	Prep Date	Analysis Date	Analyst
Lab ID:	**20130290-01**							
Client ID:	**Composite of Wipes/Mop heads**							
Date Sampled:	**2/28/2013**							
Matrix:	**SCM**							
		Metals Analyses						
TCLP-Lead	EPA 1311/6010B*	4.05	0.100	mg/l		3/21/2013	3/26/2013	RE
Lab ID:	**20130290-02**							
Client ID:	**Bullet Trap Fragments**							
Date Sampled:	**2/28/2013**							
Matrix:	**SCM**							
		Metals Analyses						
TCLP-Lead	EPA 1311/6010B*	1580	5.00	mg/l		3/21/2013	3/26/2013	RE
Lab ID:	**20130290-03**							
Client ID:	**Bullet Trap Fragments**							
Date Sampled:	**2/28/2013**							
Matrix:	**SCM**							
		Metals Analyses						
TCLP-Lead	EPA 1311/6010B*	1390	5.00	mg/l		3/21/2013	3/26/2013	RE
Lab ID:	**20130290-04**							
Client ID:	**Composite of Floor / Wall Residue**							
Date Sampled:	**2/28/2013**							
Matrix:	**SCM**							
		Metals Analyses						
TCLP-Lead	EPA 1311/6010B*	2680	5.00	mg/l		3/21/2013	3/26/2013	RE

*NELAC Certified Parameter BDL = Below Detection Limit

Outreach Laboratory
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Broken Arrow, OK 74012
(918) 251-2515
FAX (918) 251-0008

Client:	Abatement Systems, Inc.
Client Project:	Duncan Armory
Lab Number:	20130290
Date Reported:	3/27/2013
Date Received:	3/20/13
Page Number:	3 of 3

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Date
TCLP-Lead	0	95.0					107.0	110.0	1.3	3/26/2013

Lab Approval:

*NELAC Certified Parameter BDL = Below Detection Limit

CHAIN OF CUSTODY

Package Shipped From: Duncan Armory Date: 2/28/13

Address: 3000 S. 13th

Phone #: 251 2504 Fax #: 251 3852 Contact: Jon Summers

Condition of package Upon Receipt: _____

Number of Samples Received: 4 Person Sampling: Joe Stevenson

Project I.D.: 13126 Sample Type: Lead

NUMBER	RECEIVING SAMPLE	DESCRIPTION	AAL LOG NUMBER
1		Composite of Wipes/Mopheads	
2		Bullet trap fragments	
3		Bullet trap fragments	
4		Composite of floor/wall residue	
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Comments: analyze for TCLP lead

Relinquished by: _____ Date: 3/20/13 Time: 4:09 Received by: Lori Eldridge 03202013/1609

Relinquished by: _____ Date: _____ Time: _____ Received by: _____

Relinquished by: _____ Date: _____ Time: _____ Received by: _____

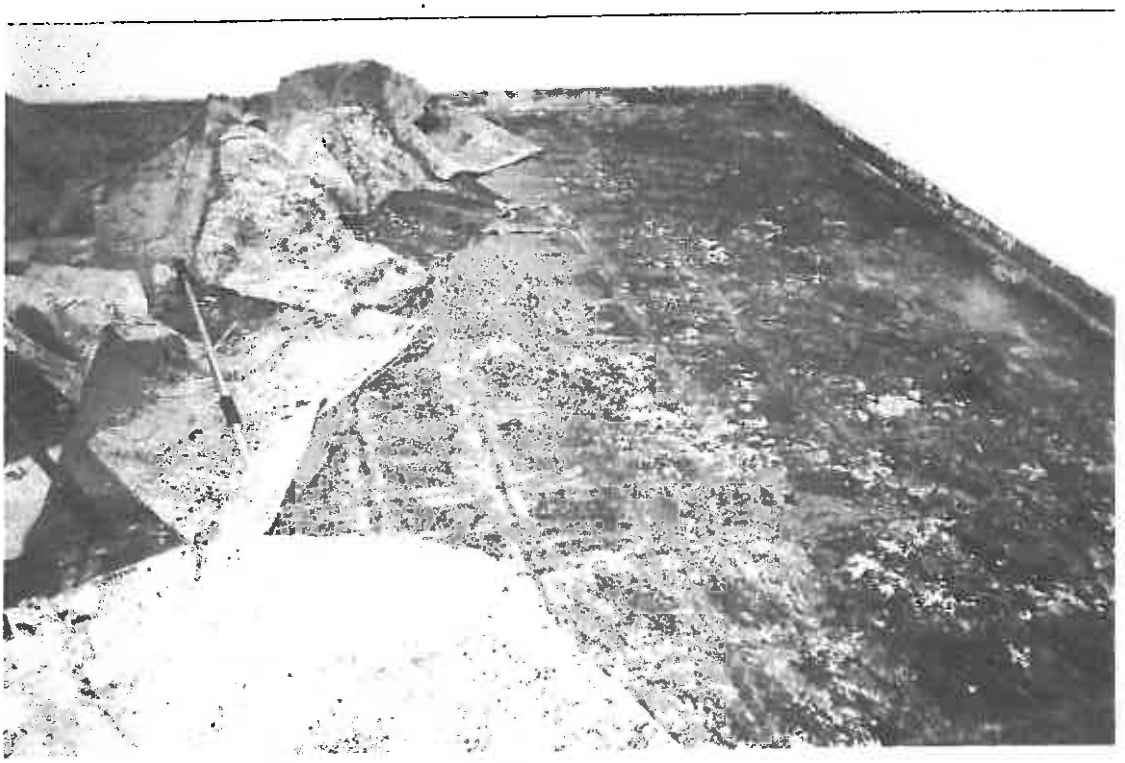
Relinquished by: _____ Date: _____ Time: _____ Received by: _____

C:\Documents and Settings\My Documents\MyDocs\SI\ASI Forms\Office Use

20130290

WASTE MANIFESTS

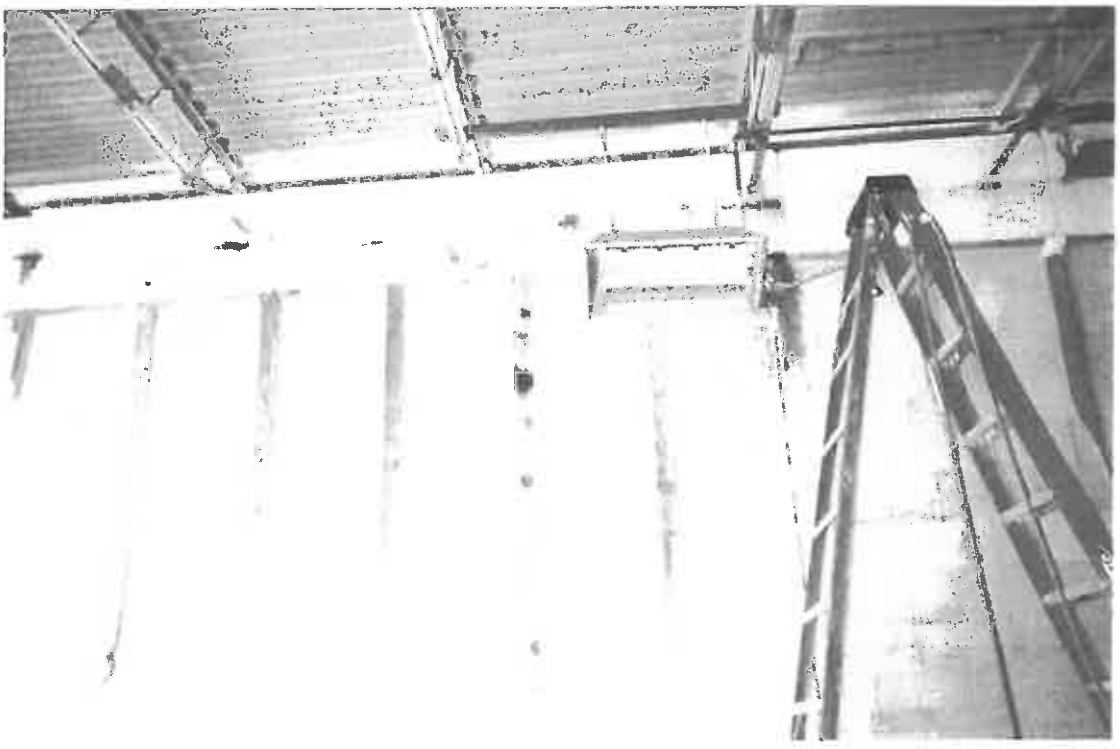
All contaminated waste secured at ASI site to be disposed of at the time sufficient quantities are reached.



Carpet removal - Main building

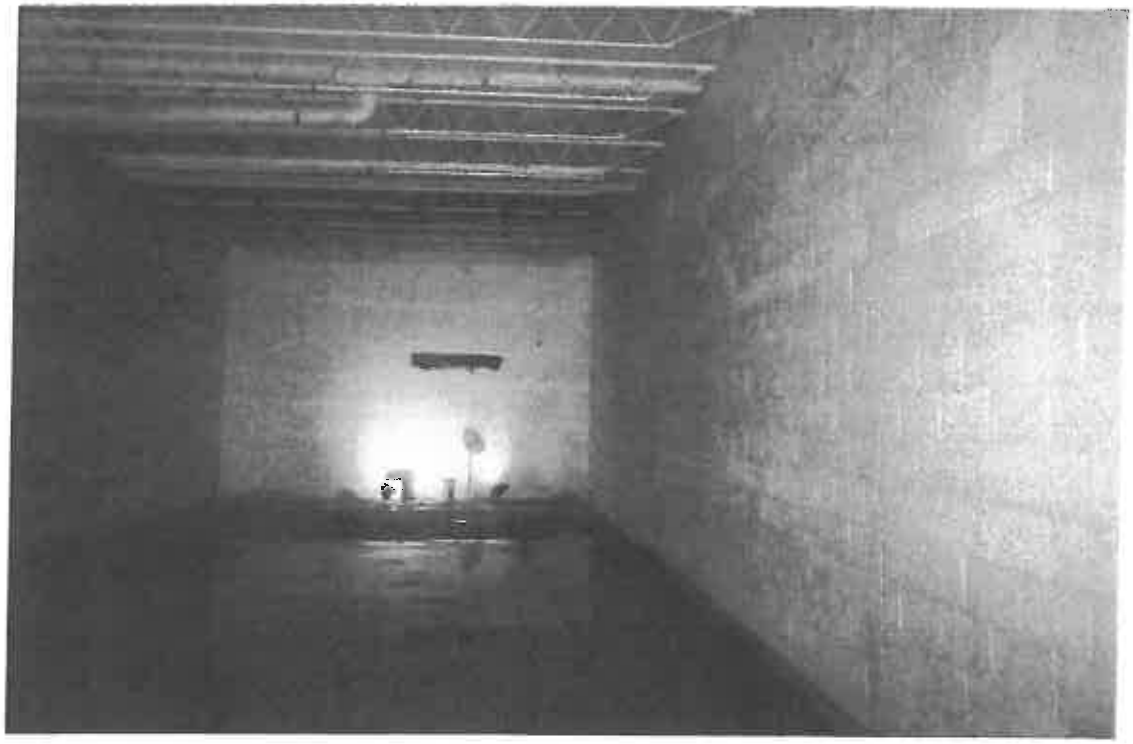
Floor tile and mastic removal - Main building

Fragments in wall - Indoor Firing Range

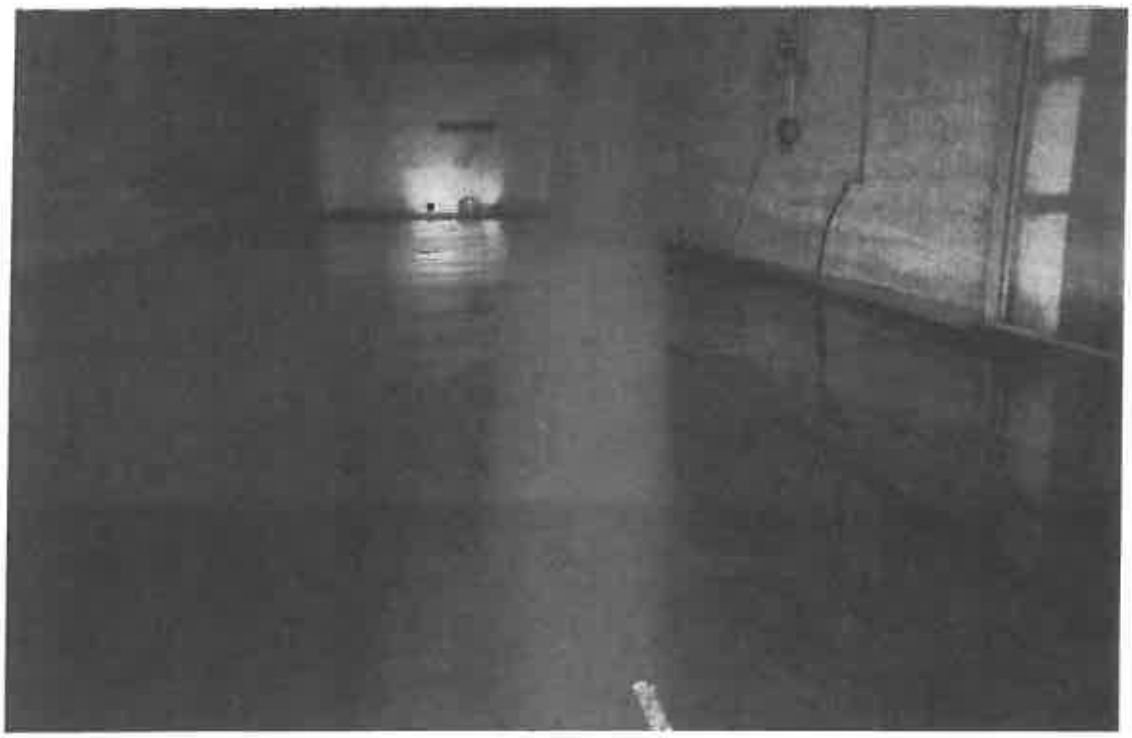


Wall/sound board removal - Indoor firing range

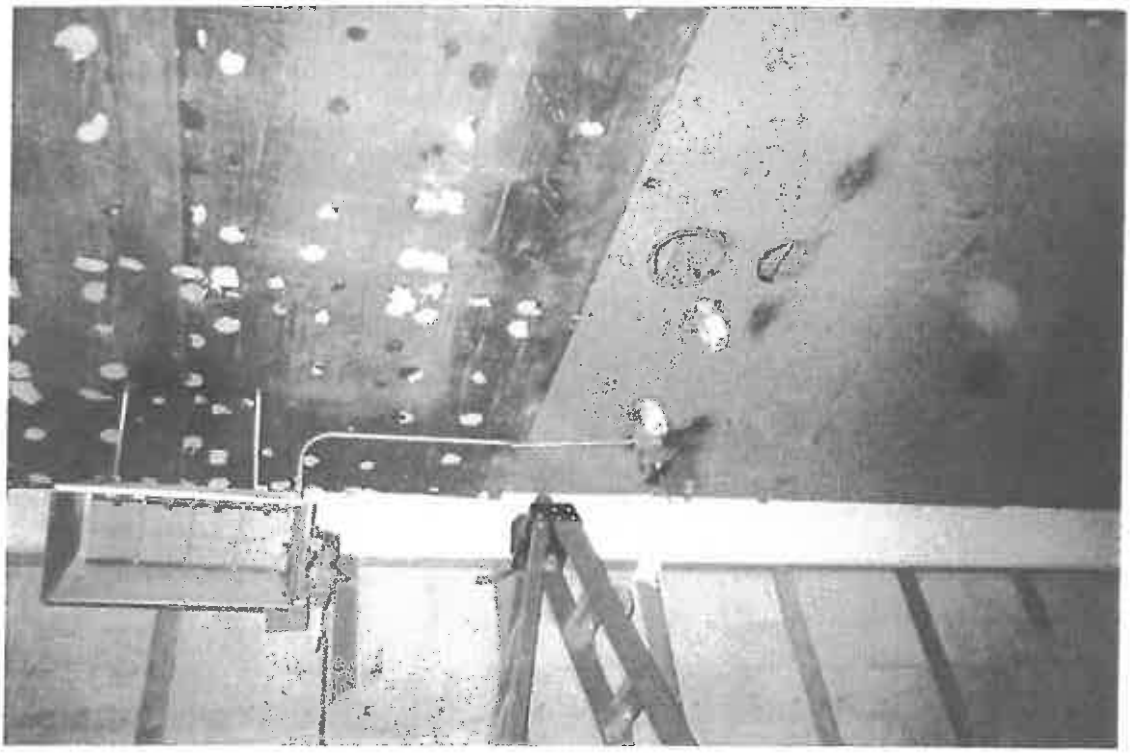
Decontamionation/cleaning - Indoor Firing Range



Cleaning - Indoor Firing Range

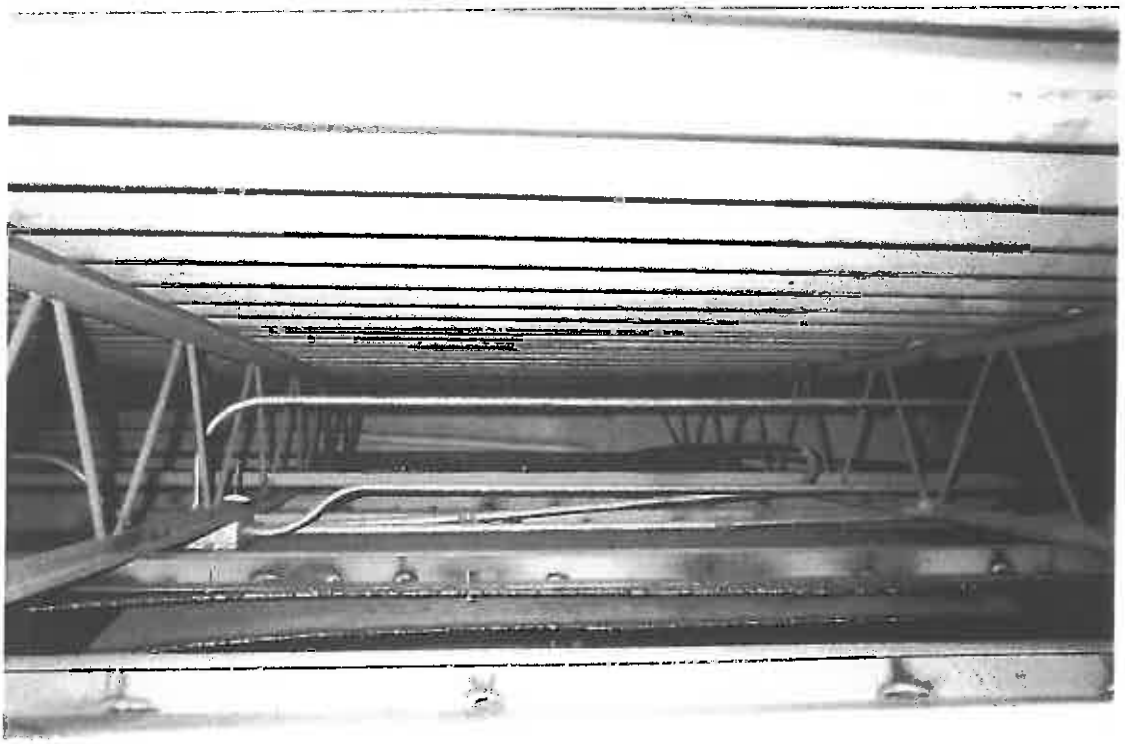


Clean floor - Indoor Firing Range



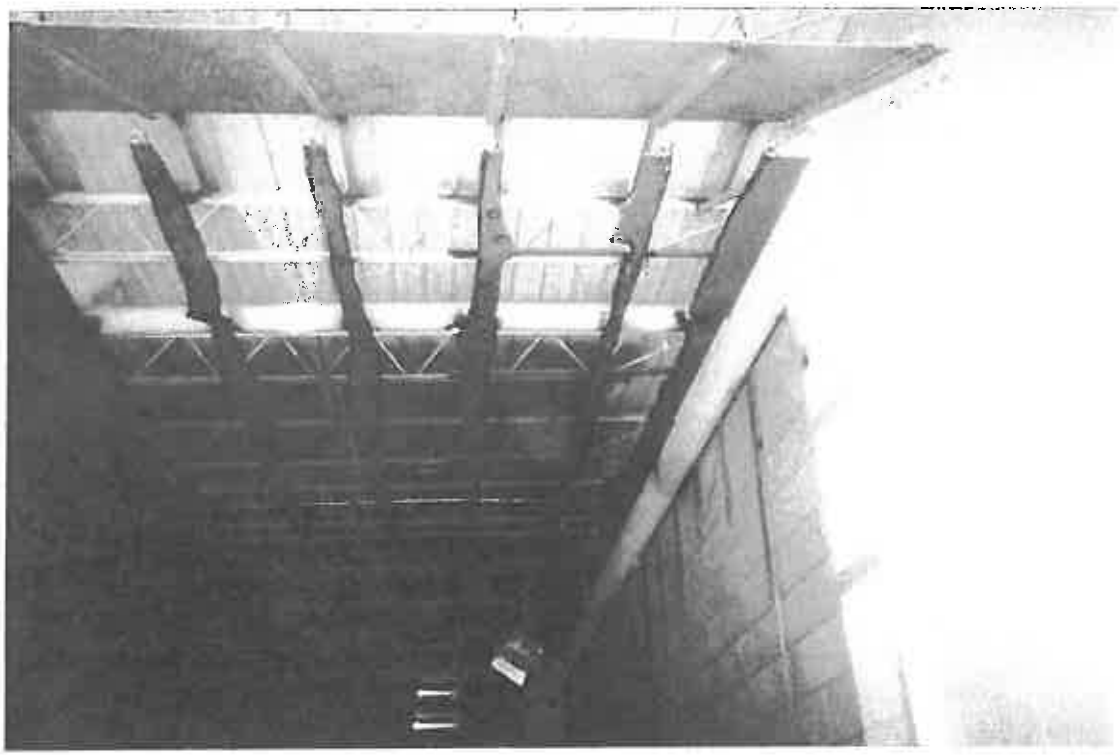
Hidden metal ceiling under plywood - Indoor Firing Range

Metal ceiling removal by torch - Indoor Firing Range



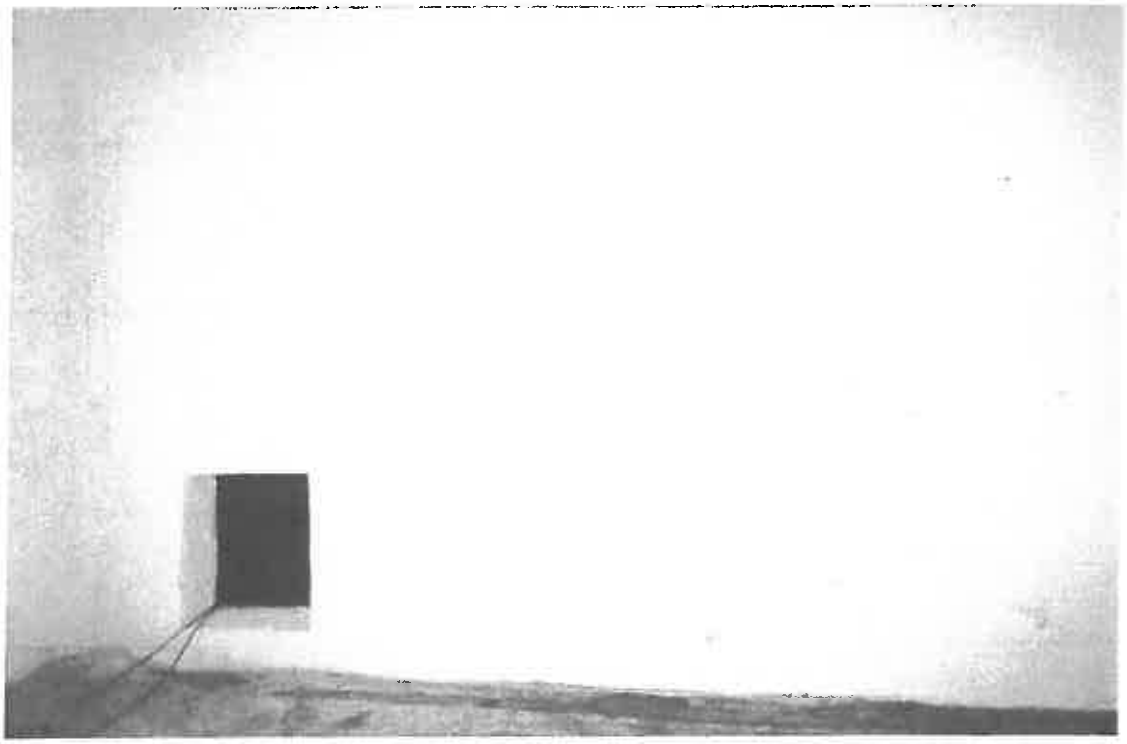
Space above metal ceiling - Indoor Firing Range

Metal ceiling removal - Indoor Firing Range



Partial removal of metal ceiling - Indoor Firing Range

Sealant process - Indoor Firing Range



Sealed - Indoor Firing Range

CONFIRMATION SAMPLING

CONFIRMATION SAMPLING RESULTS

Duncan Armory

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

On **March 19, 2013,** 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 µg/ft^2. DEQ personnel also sampled the walls and floor of the IFR to confirm these areas were below 200µg/ft^2. Below is a summary of the results. Sample results are attached **(Attachment 1).**

- Fifty one (51) samples were taken on the floor outside IFR and thirty one (31) samples were above 40 µg/ft^2.
- Twenty four (24) samples were taken on the walls and floor of the IFR and seven (7) samples were above 200 µg/ft^2.

On **April 12, 2013**, DEQ personnel sampled the floor locations where the previous samples had failed to confirm these areas were below the HUD standard of 40 $\mu g/ft^2$ for lead after the areas were re-cleaned by a DEQ contractor. DEQ personnel also sampled the walls and floor of the IFR where previous samples had failed to confirm these areas were below 200 $\mu g/ft^2$ after the areas were re-cleaned by a DEQ contractor. Below is a summary of the results. Sample results are attached **(Attachment 2).**

- Fourty one (41) samples were taken on the floor outside IFR and two (2) samples were above 40 $\mu g/ft^2$.
    - Sample #10 – Result = 57.7 $\mu g/ft^2$
    - Sample #14 – Result = 48.3 $\mu g/ft^2$
- Twelve (12) samples were taken on the walls and floor of the IFR and one (1) sample was above 200$\mu g/ft^2$.
    - Sample #54 – Result = 207 $\mu g/ft^2$

On **April 18, 2013**, DEQ personnel sampled the room locations where the previous samples had failed to confirm these areas were below the HUD standard of 40 $\mu g/ft^2$ for lead after the areas were re-cleaned by a DEQ contractor. In the IFR, DEQ contractors re-cleaned the area where the previous sample had failed and then encapsulated walls, ceiling, and floor with encapsulant. After the surfaces were encapsulated, DEQ personnel sampled the walls and floor of the IFR for lead to confirm these surfaces were below the HUD standard of 40 $\mu g/ft^2$. Below is a summary of the results. Sample results are attached **(Attachment 3).**

- The samples taken on the floor where the previous samples had failed were below 40 $\mu g/ft^2$.
- Sixteen (16) samples were taken on the walls and floor of the IFR. Fifteen (15) samples were below 40 ug/ft^2. One wall sample was slightly above 40 ug/ft^2 but still within the acceptable range.

ATTACHMENT 1

March 19, 2013 SAMPLE RESULTS

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

State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102

Re: QuanTEM ID 219366

QuanTEM appreciates the opportunity to provide analytical testing services to you. Attached are your reports and other supporting documentation for the above referenced project.

Thank you for making QuanTEM your lab of choice. If you have any question concerning this or other reports please feel free to contact us at 800-822-1650.

We continually work to improve our service. Help us out by providing feed back on your experience at www.QuanTEM.com. Click on Service Survey and fill out the form. We look forward to hearing from you.

Respectfully,
QuanTEM Laboratories, LLC.

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 219366
Date Received: 03/20/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 3/20/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	33.5	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
002	2	Wipe	Lead	142	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
003	3	Wipe	Lead	245	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
004	4	Wipe	Lead	74.4	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
005	5	Wipe	Lead	401	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
007	7	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
010	10	Wipe	Lead	19.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
013	13	Wipe	Lead	1,320	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
014	14	Wipe	Lead	569	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
015	15	Wipe	Lead	54.8	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
016	16	Wipe	Lead	1,560	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
017	17	Wipe	Lead	255	16	ug/sq. Ft.	03/20/13 14:30	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: 219366
Date Received: 03/20/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 3/20/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
018	18	Wipe	Lead	127	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
019	19	Wipe	Lead	196	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
020	20	Wipe	Lead	94.7	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
021	21	Wipe	Lead	81.9	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
022	22	Wipe	Lead	84.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
023	23	Wipe	Lead	93.2	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
024	24	Wipe	Lead	29.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
025	25	Wipe	Lead	146	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
026	26	Wipe	Lead	156	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
027	27	Wipe	Lead	247	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
028	28	Wipe	Lead	60.6	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
029	29	Wipe	Lead	96.5	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
030	30	Wipe	Lead	129	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
031	31	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
032	32	Wipe	Lead	78.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
033	33	Wipe	Lead	223	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
034	34	Wipe	Lead	28.7	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100

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

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

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: 219366
Date Received: 03/20/13
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Date Sampled:
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Analyst: BM
Date of Report: 3/20/2013

AIHA ID: 101352

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

Project: Duncan Armory
Location: Duncan, OK
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.	03/20/13 14:30	W NIOSH 9100
036	36	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
037	37	Wipe	Lead	323	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
038	38	Wipe	Lead	355	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
039	39	Wipe	Lead	468	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
040	40	Wipe	Lead	229	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
041	41	Wipe	Lead	59.4	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
042	42	Wipe	Lead	178	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
043	43	Wipe	Lead	99.7	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
044	44	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
045	45	Wipe	Lead	18.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
046	46	Wipe	Lead	18.2	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
047	47	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
048	48	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
049	49	Wipe	Lead	83.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
050	50	Wipe	Lead	19.2	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
051	51	Wipe	Lead	21.1	16	ug/sq. Ft.	03/20/13 14:30	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: 219366
Date Received: 03/20/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 3/20/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	52	Wipe	Lead	407	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
053	53	Wipe	Lead	86.9	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
054	54	Wipe	Lead	28.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
055	55	Wipe	Lead	30.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
056	56	Wipe	Lead	515	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
057	57	Wipe	Lead	109	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
058	58	Wipe	Lead	1,020	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
059	59	Wipe	Lead	3,230	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
060	60	Wipe	Lead	1,660	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
061	61	Wipe	Lead	216	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
062	62	Wipe	Lead	70.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
063	63	Wipe	Lead	97.5	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
064	64	Wipe	Lead	59.7	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
065	65	Wipe	Lead	18.5	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
066	66	Wipe	Lead	2,070	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
067	67	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
068	68	Wipe	Lead	<16.0	16	ug/sq. Ft.	03/20/13 14:30	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: 219366
Date Received: 03/20/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 3/20/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
069	69	Wipe	Lead	38.2	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
070	70	Wipe	Lead	32.6	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
071	71	Wipe	Lead	128	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
072	72	Wipe	Lead	28.3	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
073	73	Wipe	Lead	48.8	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
074	74	Wipe	Lead	48.7	16	ug/sq. Ft.	03/20/13 14:30	W NIOSH 9100
075	75	Wipe	Lead	136	16	ug/sq. Ft.	03/20/13 14:30	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: 10914
Test: Lead

Date: 3/20/2013
Matrix: Wipe

Lab Number: 219366
Approved By: Benton Miller
Date Approved: 3/20/2013

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	4.9	5.5
FCV	4.5	5.1	5.5
ICV	0.9	1	1.1
RLVS	0.256	0.324	0.384

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MS-W4	0.000	5.412	4.563	84.3	4.905	90.6	7.2
MS-W3	0.000	5.444	4.516	83.0	4.573	84.0	1.2
MS-W2	0.000	5.422	4.615	85.1	4.979	91.8	7.6
MS-W1	0.000	5.401	4.815	89.1	4.797	88.8	0.4

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

Page 1 of 1

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For Lab Use Only
Lab No. 219366
Accept / Reject

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

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

Sampled By: Name: Dustin Davidson Date: 3/19/13

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	3/20/13 8:45am	Prof Off	S. Pfwicl	3/20/13 8:45

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix code box)	Analysis: Pb			Units (☑ ONE box only): PPM	Wt %	mg / l	µg /ft²	µg / m³	mg / cm²
1	I-75			12" X 12"	C	X						X		
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

Sample Matrix Codes

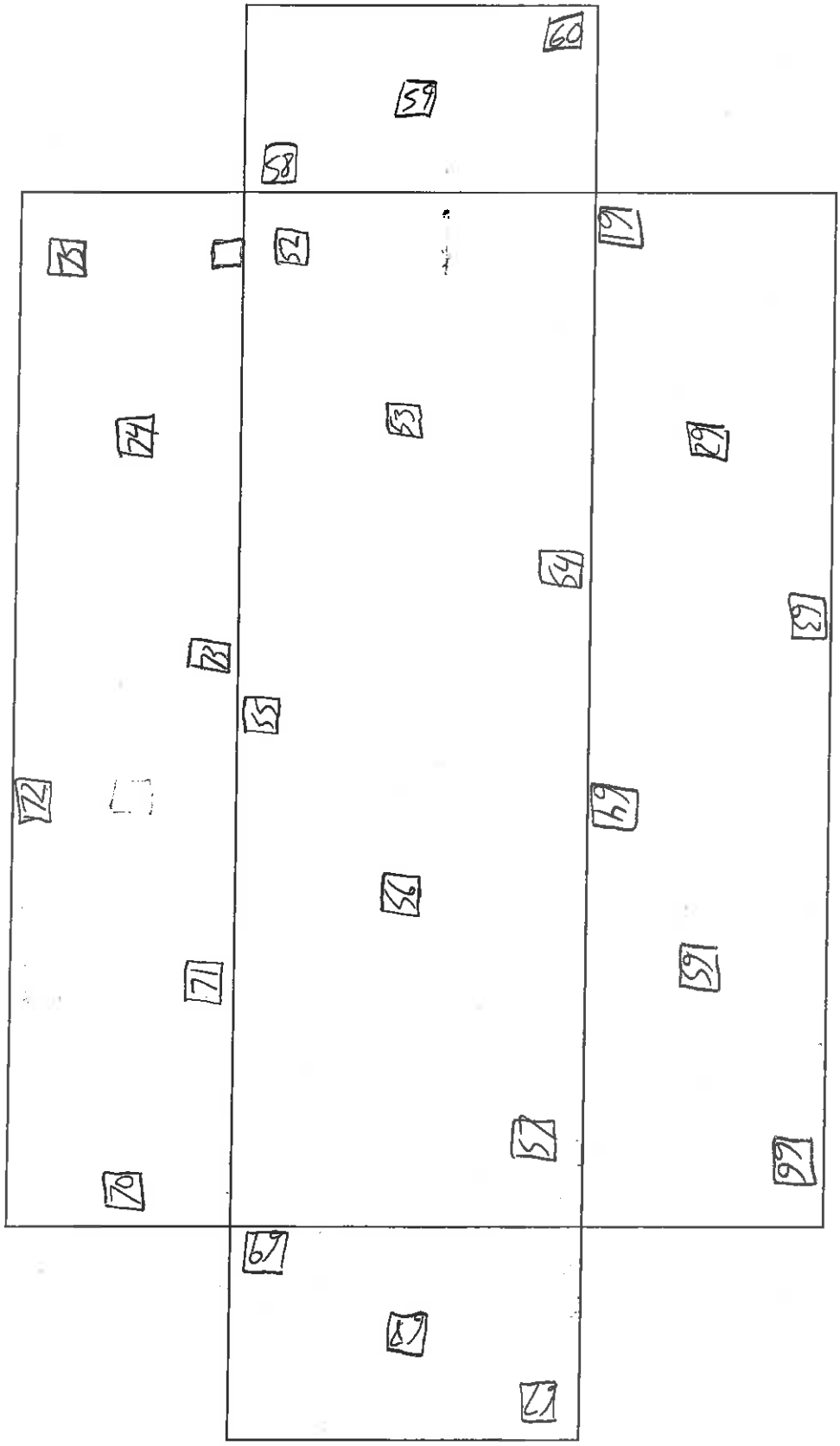
A	Soil
B	Paint Chips
C	Surface / Dust Wipes
D	Bulk Miscellaneous
E	Air Cassette

TURNAROUND TIME

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

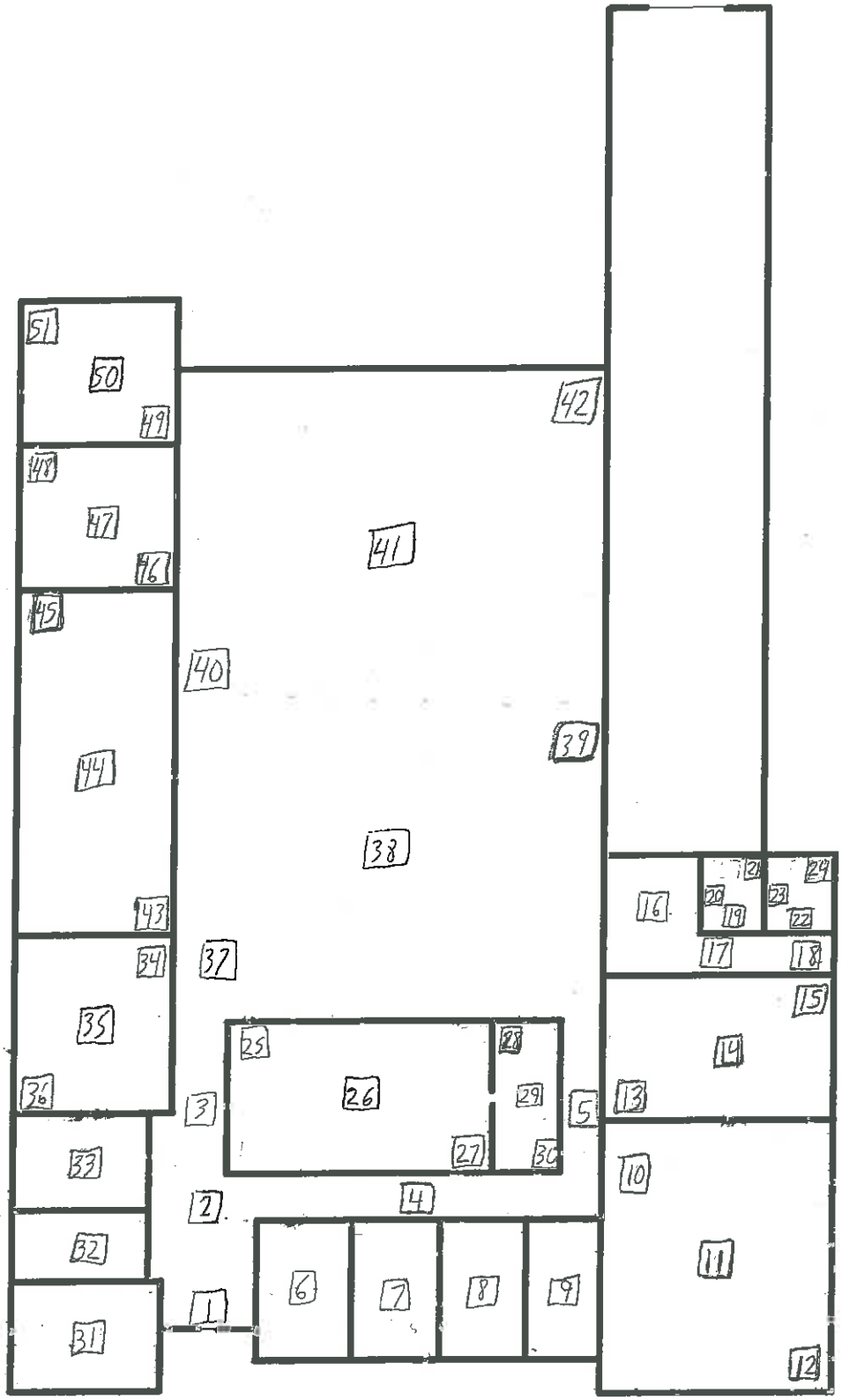
SATURDAY SAMPLE DELIVERY - CALL TO SCHEDULE • Use this address for Saturday Delivery only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517 • Mark Package "Hold for Saturday Pickup"

219366



219366

DUNCAN ARMORY



ATTACHMENT 2

April 12, 2013 SAMPLE RESULTS

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

State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102

Re: QuanTEM ID 220309

QuanTEM appreciates the opportunity to provide analytical testing services to you. Attached are your reports and other supporting documentation for the above referenced project.

Thank you for making QuanTEM your lab of choice. If you have any question concerning this or other reports please feel free to contact us at 800-822-1650.

We continually work to improve our service. Help us out by providing feed back on your experience at www.QuanTEM.com. Click on Service Survey and fill out the form. We look forward to hearing from you.

Respectfully,
QuanTEM Laboratories, LLC.

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 220309
Date Received: 04/15/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/16/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	1	Wipe	Lead	18.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
002	2	Wipe	Lead	16.7	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
003	3	Wipe	Lead	35.3	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
007	7	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
010	10	Wipe	Lead	57.7	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
012	12	Wipe	Lead	35.6	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
013	13	Wipe	Lead	16.6	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
014	14	Wipe	Lead	48.3	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
016	16	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	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: 220309
Date Received: 04/15/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/16/2013

AIHA ID: 101352

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

Project: Duncan Armory
Location: Duncan, OK
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.	04/15/13 15:20	W NIOSH 9100
019	19	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
020	20	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
021	21	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
022	22	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
023	23	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
024	24	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
025	25	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
026	26	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
027	27	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
028	28	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
029	29	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
030	30	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
031	31	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
032	32	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
033	33	Wipe	Lead	38.2	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
034	34	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100

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

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 220309
Date Received: 04/15/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/16/2013

AIHA ID: 101352

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

Project: Duncan Armory
Location: Duncan, OK
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.	04/15/13 15:20	W NIOSH 9100
036	36	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
037	37	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
038	38	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
039	39	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
040	40	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
041	41	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
042	42	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
043	43	Wipe	Lead	17.1	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
044	44	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
045	45	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
046	46	Wipe	Lead	132	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
047	47	Wipe	Lead	22.4	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
048	48	Wipe	Lead	56.8	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
049	49	Wipe	Lead	55.4	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
050	50	Wipe	Lead	41.1	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
051	51	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100

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

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

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: 220309
Date Received: 04/15/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/16/2013

AIHA ID: 101352

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

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

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
052	52	Wipe	Lead	44.8	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
053	53	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
054	54	Wipe	Lead	207	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
055	55	Wipe	Lead	77.5	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
056	56	Wipe	Lead	36.4	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
057	57	Wipe	Lead	133	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
058	58	Wipe	Lead	90.8	16	ug/sq. Ft.	04/15/13 15:20	W NIOSH 9100
059	59	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/15/13 15:20	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: 10961
Test: Lead

Date: 4/15/2013
Matrix: Wipe

Lab Number: 220309
Approved By: Benton Miller
Date Approved: 4/15/2013

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

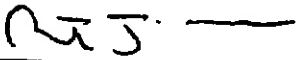
Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5	5.5
FCV	4.5	5.3	5.5
ICV	0.9	1	1.1
RLVS	0.256	0.35	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	5.422	5.589	103.1	5.545	102.3	0.8
MS-W2	0.000	5.433	5.510	101.4	5.372	98.9	2.5
MS-W1	0.000	5.433	5.067	93.3	5.308	97.7	4.6

Authorized Signature: 

Benton Miller, Analyst

QuanTEM LABORATORIES
www.QuanTEM.com

LEAD CHAIN OF CUSTODY

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. 220309	
Accept (circled)	Reject

Report Results (☑ one box)	
	QuanTEM Website
	Other ______

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

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

Sampled By	Name: Dustin Davidson	Date: 4/12/13

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	4/15/13 9:39 Am	Drop off	S. Liftwich	4/15/13 9:39

REQUESTED SERVICES (Please ☑ the Appropriate Boxes)

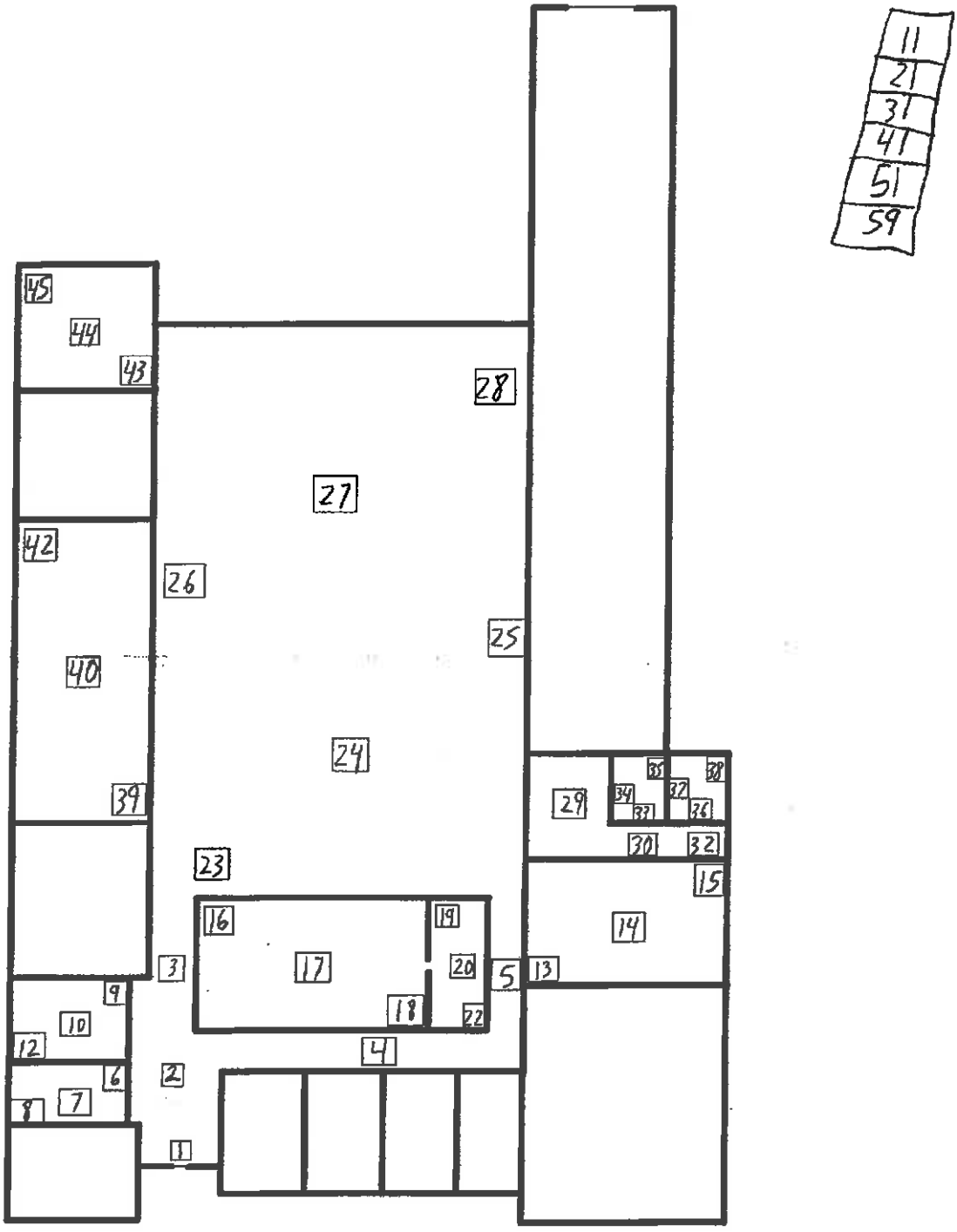
No.	Sample ID (10 Characters Max)	Sample Description	Volume (Liters)	Volume Area (Length x Width)	Sample Matrix (see matrix codebox)	Analysis: Pb			Units (☑ ONE box only): PPM	Wt %	mg / l	µg / ft²	µg / m³	mg / cm²
1	1-59		3	12"X12"	C	X						X		
2														
3														
4														
5														
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

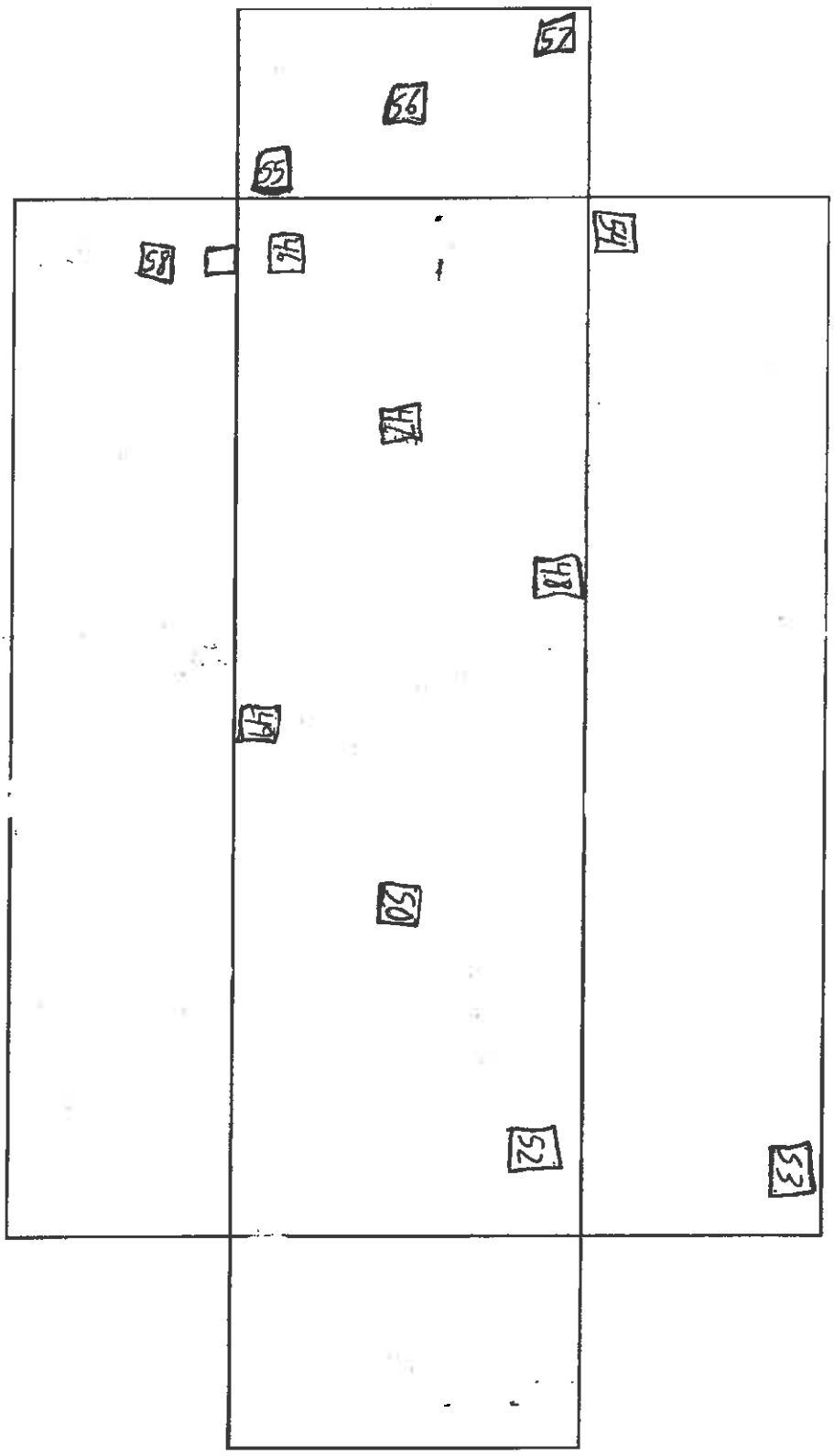
TURNAROUND TIME	
	Same Day
X	24-Hour
	3-Day
	5-Day

220309
2 of 3

DUNCAN ARMORY



220309
3 of 3



ATTACHMENT 3

April 18, 2013 SAMPLE RESULTS

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

State of Oklahoma
DEQ Land Protection
Attn: Dustin Davidson
707 N. Robinson
Oklahoma City, OK 73102

Re: QuanTEM ID 220521

QuanTEM appreciates the opportunity to provide analytical testing services to you. Attached are your reports and other supporting documentation for the above referenced project.

Thank you for making QuanTEM your lab of choice. If you have any question concerning this or other reports please feel free to contact us at 800-822-1650.

We continually work to improve our service. Help us out by providing feed back on your experience at www.QuanTEM.com. Click on Service Survey and fill out the form. We look forward to hearing from you.

Respectfully,
QuanTEM Laboratories, LLC.

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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 220521
Date Received: 04/19/13
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: BM
Date of Report: 4/22/2013

AIHA ID: 101352

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

Project: Duncan Armory
Location: Duncan, 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.	04/19/13 14:45	W NIOSH 9100
002	2	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
003	3	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
004	4	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
005	5	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
006	6	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
007	7	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
008	8	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
009	9	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
010	10	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
011	11	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
012	12	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
013	13	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
014	14	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
015	15	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
016	16	Wipe	Lead	41.6	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
017	17	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	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

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

Project: Duncan Armory
Location: Duncan, OK
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.	04/19/13 14:45	W NIOSH 9100
019	19	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100
020	20	Wipe	Lead	<16.0	16	ug/sq. Ft.	04/19/13 14:45	W NIOSH 9100

Authorized Signature: _____

Benton Miller, Analyst

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

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EPA Method 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: 10978
Test: Lead

Date: 4/19/2013
Matrix: Wipe

Lab Number: 220521
Approved By: Benton Miller
Date Approved: 4/19/2013

Notes:

Blank Data:

Type of Blank	Blank Value
FCB	0
Matrix Blank	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	4.5	5.2	5.5
FCV	4.5	5.1	5.5
ICV	0.9	1	1.1
RLVS	0.256	0.35	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	5.433	4.973	91.5	5.098	93.8	2.5

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

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Page 1 of 1

For Lab Use Only
Lab No 220521
Accept / Reject

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

Contact Information

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

Project Information

Project Name:	Duncan Armory
Project Location:	Duncan OK
Project ID:	

Sampled By: Name: Dustin Davidson Date: 4/19/13

RELINQUISHED BY	DATE & TIME	VIA	RECEIVED BY	DATE & TIME
Dustin Davidson	4/19/13 10:20		SLeftwich	4/19/13 10:20

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
1-20	1	1-20		12"X12"	C	X						X		
	2													
	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

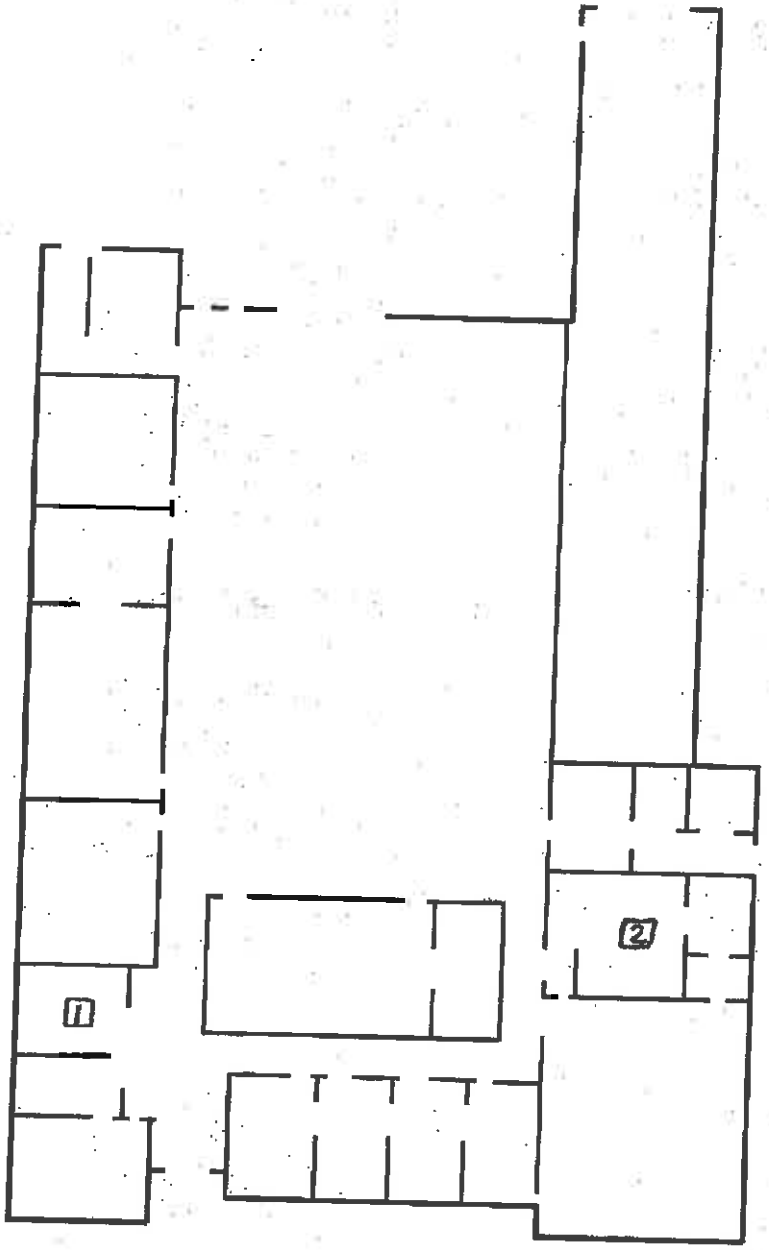
TURNAROUND TIME

	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"

220521

Duncan Armory



Not to scale
Floor plan approximate

220521

11
20