

**Former National Guard Armory
Cherokee, Oklahoma**

Remediation Final Report



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

May 2009



The Oklahoma Department of Environmental Quality (DEQ) is pleased to present the City of Cherokee with the Final Remediation Report for the former Cherokee 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 Cherokee 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
- Asbestos abatement, including:
 - Removal of floor tile and mastic, black mastic and wooden paneling, and cement asbestos bathroom stalls
- Proper disposal of associated waste

TARGETED BROWNFIELD ASSESSMENT

In December 2006, DEQ provided a Phase I Targeted Brownfield Assessment to the City of Cherokee. A copy has not been included in this report.

LEAD REMEDIATION

DEQ and its contractors completed the following activities:

- Lead-based paint (LBP) inspection and lead dust wipe sampling
- Sand sampling in firing range
- LBP abatement, including:
 - Removal of LBP from handrails and application of primer; removal and replacement of all interior doors containing LBP; wet scraping and encapsulation of all door frames, window lintels, downspouts, overhead door frames, door lintels, stairs, and floors containing LBP; and removal and replacement of wooden firing range vent fan framing
- Indoor firing range cleanup, including:
 - Lead dust cleanup; removal of sand trap; and HEPA (high efficiency particulate air) vacuuming, wet washing, and sealing with appropriate sealant floors, walls, and ceiling
- HEPA vacuuming and wet washing all floors in the building
- Proper disposal of associated waste



Additional copies of this report can be found at <http://www.deq.state.ok.us/lpdnew/scapIndex.htm> and DEQ Central Records at 707 N Robinson Oklahoma City, Oklahoma 73101.



This publication is issued by the Oklahoma Department of Environmental Quality authorized by Steven A. Thompson, Executive Director. Copies have been prepared at a cost of \$0.053 each. Copies have been deposited with the Publications Clearinghouse of the Oklahoma Department of Libraries. 6/17/09 dh\LPDcherokeearmoryreport\cherokeearmoryreport.indd.

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DEEDS AND LEGAL DOCUMENTS

044955

**NOTICE OF REMEDIATION AND EASEMENT
FORMER CHEROKEE ARMORY
CHEROKEE, 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.

The owner of the Affected Property has the legal authority to create, and does hereby voluntarily create, an easement granted to the DEQ and its employees and agents, for ingress and egress through, across and onto the parking and other outside areas of the Affected Property as they exist from time to time to assure the ongoing protection of the Remedy, Engineering Controls and Land Use Restrictions. This easement touches and concerns the land and runs with the land, is legally binding on all current and future owners and tenants of the Affected Property, and shall only be removed or modified if and when the DEQ modifies or removes the Land Use Restrictions, Engineering Controls and Continuing Operation, Maintenance of said Engineering Controls.

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 March 22, 2007, indicated that there was asbestos, lead-based paint, and lead dust in the building. Sampling performed by DEQ personnel, conducted on October 12, 2006, indicated that there was lead contaminated sand in the indoor firing range. The indoor firing range is located on the Southwest corner of the building, in the basement.

AFFECTED PROPERTY: The Affected Property is the former Cherokee Armory located at 122 E 2nd Street in Cherokee, Oklahoma.

000638

Lots Nineteen (19), Twenty (20), Twenty-one (21), Twenty-two (22), Twenty-three (23), and Twenty-four (24) in Block Twenty-six (26), Original Town, now City of Cherokee, Alfalfa County, Oklahoma.

REMEDY: Remediation activities ("Remedy") at the Affected Property included:

The remedy included an abatement of asbestos, lead-based paint, lead dust, and removal of lead contaminated sand. The remedy was completed on March 4, 2009.

For more detailed information please refer to *Former National Guard Armory Cherokee, Oklahoma Remediation Final Report*.

To obtain a copy of the report, contact:

Oklahoma Department of Environmental Quality
Central Records
P.O. Box 1677
Oklahoma City, Oklahoma 73101

CONTINUING OPERATION, MAINTENANCE AND MONITORING

- (A) **Lead-based paint:** The 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:** The DEQ did not test all building materials inside and outside of the building, therefore there is a potential for asbestos at the affected property.
- (C) **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.
- (D) **Sealant:** Following cleanup, sealant was applied to the indoor firing range 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. Residential use is defined as having any person present at the Affected Property for more than sixteen (16) hours within one twenty four (24) hour period.
- 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.

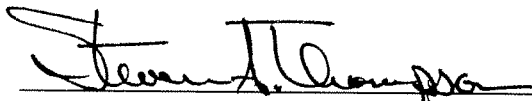
These land use restrictions apply to the entirety of the Affected Property described herein above.

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

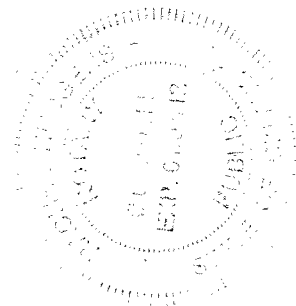
5-22-09
Date

Subscribed and sworn to before me this 22 day of May, 2009.


Notary Public

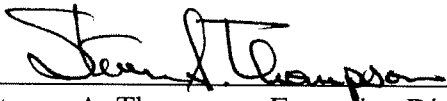
My Commission expires:

01/07, 2012.



EASEMENT

I hereby certify that I have the legal right to, and do hereby, create an easement and encumber the real property as described in the foregoing Notice of Remediation. I hereby voluntarily grant an easement to the DEQ and its employees and agents, for ingress and egress through, across and onto the Affected Property to assure the ongoing placement, operation and protection of the remedy, engineering controls and land use restrictions described herein above.

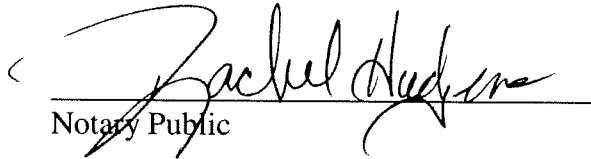


Steven A. Thompson, Executive Director
Oklahoma Department of Environmental Quality

5.22-09

Date

Subscribed and sworn to before me this 22 day of May, 2009.


Notary Public

My Commission expires:

01/07, 2012.

STATE OF OKLAHOMA
COUNTY OF ALFALFA SS
THIS INSTRUMENT WAS FILED FOR RECORD
AT 2:34 O'CLOCK P.M.
DATE 6-5-09 AND DULY
RECORDED IN BOOK 626 PAGE 338 638
DOCUMENTARY STAMPS \$ 0
BY Bruce Martin DEPUTY
BRUCE MARTIN, COUNTY CLERK



000641

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS:

THAT THE STATE OF OKLAHOMA, ACTING THROUGH THE OKLAHOMA MILITARY DEPARTMENT, by its Adjutant General, Major General Harry M. Wyatt, III, hereinafter referred to as the "Grantor," and in consideration of the sum of Ten and No/100 Dollars (\$10.00) and other valuable consideration in hand paid, the receipt of which is hereby acknowledged, does hereby Quitclaim, Grant, Bargain, Sell and Convey unto the OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, hereinafter referred to as the "Grantee," the following described Real Property, together with any and all improvements thereon and appurtenances thereunto belonging situated in Alfalfa County, Oklahoma to-wit:

Lots Nineteen (19), Twenty (20), Twenty-one (21), Twenty-two (22), Twenty-three (23) and Twenty-four (24) in Block Twenty-six (26), Original Town, now City of Cherokee, Alfalfa County, Oklahoma.

Grantee to hold said land for the purposes of environmental characterization and remediation thereof as determined to be necessary by the Oklahoma Department of Environmental Quality, and upon the filing of a recordable Notice of Remediation in the land records of Alfalfa County, the described real property shall transfer to the City of Cherokee, together with any and all improvements thereon and appurtenances thereunto belonging.

TO HAVE AND TO HOLD the Real Property unto the Grantee, free, clear and discharged of and from all former grants, charges and other encumbrances of whatsoever nature except for the interest specifically granted to the City of Cherokee herein and any easements of record.

EXECUTED AND DELIVERED this 14th day of March 2007.

STATE OF OKLAHOMA
COUNTY OF ALFALFA

I hereby certify the within to be a true & correct copy of the instrument filed of record in Book 605, Page 62 in the Alfalfa County Clerk's office. Witness my hand this 17 Day of August, 2007.
BRUCE MARTIN, COUNTY CLERK

STATE OF OKLAHOMA

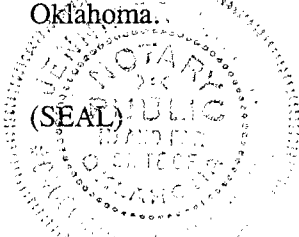
By: [Signature]

Major General Harry M. Wyatt, III,
Adjutant General of the State of Oklahoma

This Transaction Is Exempt From
Document Stamps, 68 O.S. § 3202(11).

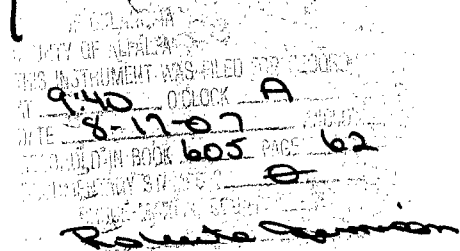
STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)

This instrument was acknowledged before me this 14 day of March, 2007, by Major General Harry M. Wyatt, III, as Adjutant General of the State of Oklahoma, on behalf of the State of Oklahoma.



[Signature]
Notary Public

No: 040001085
My Commission Expires: 1/23/08



W A R R A N T Y D E E D

THIS INDENTURE, Made and entered into this 30th day of September, 1935, by and between the City Commissioners of City of Cherokee, Alfalfa County, Oklahoma, acting by and through Ira A. Hill, the duly elected, qualified and acting Mayor of City of Cherokee, Alfalfa County, Oklahoma, party of the first part, and the State of Oklahoma, acting as trustee for the Oklahoma National Guard, party of the second part, Witnesseth:

That, Whereas, on the 30th day of September, 1935, the said City Commissioners of City of Cherokee, Alfalfa County, Oklahoma, made an Order by proper resolution, authorizing the said party of the first part to sell certain real estate belonging to the said City of Cherokee, Alfalfa County, Oklahoma, to the said second party, and directing said Mayor of said City of Cherokee, Alfalfa County, Oklahoma, to execute and deliver a deed thereto to the said second party.

Now, Therefore, Know All Men By These Presents: That the City of Cherokee, Alfalfa County, Oklahoma, acting by and through Ira A. Hill, the duly elected and qualified and acting Mayor of City of Cherokee, Alfalfa County, Oklahoma, party of the first part, in consideration of the sum of One Dollar and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, does grant, bargain, sell and convey unto the State of Oklahoma for the use and benefit of the Oklahoma National Guard, party of the second part, the following described real property and premises situated in Alfalfa County, State of Oklahoma, to-wit:

Lots nineteen (19), twenty (20), twenty-one (21) twenty-two (22), twenty-three (23) and twenty-four (24), in Block twenty-six (26), Original Town, now City of Cherokee, Alfalfa County, Oklahoma,

together with all improvements thereon and the appertenances thereunto belonging, and warrant the title to same.

To Have and To Hold the said described premises unto the said party of the second part, its successors and assigns forever

free, clear and discharged of and from all former grants, taxes, judgments, mortgages, and other liens and incumbrances of whatsoever nature.

Signed and delivered this 30th day of September, 1935.

CITY OF CHEROKEE
ALFALFA COUNTY, OKLAHOMA

BY Ira A. Hill
MAYOR

ATTEST:

Bey Bontrager
CITY CLERK

STATE OF OKLAHOMA)
COUNTY OF ALFALFA) SS

Before me the undersigned, a Notary Public, within and for the above named County and State, on this 30th day of September, 1935, personally appeared Ira A. Hill to me known to be the duly qualified and acting Mayor of City of Cherokee, Alfalfa County, Oklahoma, and the identical person who executed the within and foregoing instrument, and acknowledged to me that he executed the same in his capacity as Mayor of City of Cherokee, Alfalfa County, Oklahoma, as his free and voluntary act and deed of the City of Cherokee, Alfalfa County, Oklahoma, for the use and purposes therein set forth.

WITNESS my hand and seal the date first above written.

W. H. Goshorn
Notary Public

My commission expires:

Aug. 27 - 1938

Accepted by the undersigned, Charles F. Barrett, the Adjutant General of the State of Oklahoma, pursuant to Chapter 25, House Bill No. 226 of the Session Laws of the State of Oklahoma for 1931.

This 1st day of October, 1935.

Charles F. Barrett
Charles F. Barret, Adjutant General,
State of Oklahoma.

I, E. W. MARLAND, Governor of the State of Oklahoma, do hereby approve the above and foregoing acceptance, this 28 day of October, 1935.



E. W. Marland, Governor
State of Oklahoma.

ASBESTOS

ASBESTOS INSPECTION REPORT

ASBESTOS INSPECTION REPORT

CHEROKEE ARMORY

Cherokee, Oklahoma

March 22, 2007

Services Provided For:

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

Asbestos Inspection Services Provided By:

Marshall Environmental Management, Inc.
1145 SW 74th Street, Building E, Suite 300
Oklahoma City, Ok 73139
(405) 616-0401

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APPENDIX

ASBESTOS SAMPLING TEST RESULTS

CHAIN OF CUSTODY FORMS


SUMMARY OF ESTIMATED QUANTITIES OF ACM

ARMORY FLOOR PLAN

DIGITAL PHOTO

I. CERTIFICATION

This is to certify that an Asbestos Inspection was performed at the Cherokee Armory located in Cherokee Oklahoma 74035 for the Land Protection Division of the Oklahoma Department of Environmental Quality on March 22, 2007. The inspection was performed in an attempt to identify building materials considered suspect for asbestos content. This Inspection for friable and non-friable building materials was performed by an Oklahoma State Department of Labor Licensed AHERA Management Planner, Dr. Charles L. Marshall, Ph.D., C.I.H. The contents, conclusions, and recommendations made in this report are believed to accurately depict the site conditions as noted on the date the inspection work was performed.


Charles L. Marshall, Ph.D., C.I.H., C.S.P

4-30-07
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 - #400517 Inspector
#500396 Management Planner
#2415 Project Designer
Oklahoma Department of Labor License - #OKMP-0028 Project Designer
#OKMP-0246 Management Planner
#OK-150343 Inspector
AIHA/NIOSH PAT Lab ID #201334

Laboratory Analysis Performed by:
Marshall Environmental Management, Inc. (AIHA PAT ID# 102334)
1145 SW 74th Street, E-300
Oklahoma City, OK. 73139

II. LIMITATIONS OF SURVEY

This Inspection was conducted within the limitations of budgetary constraints, cost, time, and scope and reflects a limited investigation and evaluation. Physical limitations of facility construction may have, in some cases, prevented the complete inspection of hidden or inaccessible building materials and substrates. Inaccessible Asbestos Containing Building Materials (ACM) were not inspected. Locations with high potential for disturbance, or locations presenting a hazard to the inspectors, or the Armory staff or visitors were also not inspected at this time. Additional inspections should be conducted whenever the Owner anticipates conducting demolition or renovation work. Plans for the abatement of friable asbestos should only be developed by an Oklahoma State Department of Labor (ODOL) Licensed Asbestos Project Designer. Additional sampling may be required to support the planning for asbestos abatement work.

Our Investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by professional consultants practicing in this or similar localities. The findings of this Report are valid as of the date of the investigation. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, from the broadening of knowledge, or from other reasons. Professional services have been performed, results 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 based on field inspections and other data presented in this report.

III. EXECUTIVE SUMMARY

The Oklahoma Department of Environmental Quality (DEQ) Land Protection Division (LPD) requested that the Oklahoma Department of Central Services (DCS) provide a Licensed Asbestos Inspection Firm to evaluate the locations and conditions of Asbestos Containing Materials (ACM) in the Cherokee Armory located in Cherokee, Oklahoma.

Marshall Environmental Management, Inc. (MEM) was contracted by DCS to conduct an Asbestos Inspection for the ODEQ at the Cherokee Armory. The Asbestos Inspection was conducted on March 22, 2007. A total of twelve (12) asbestos samples were analyzed in accordance with the EPA authorized Method 600 49 CFR Part 61 Subpart M, Asbestos NESHAPS Rules.

The Asbestos Inspection did not identify the presence of asbestos Surfacing Materials or for the Armory's plumbing system's Thermal System Insulation (TSI). Asbestos was found in some miscellaneous materials such as, Transite Panels/Piping, older 9 inch by 9 inch floor tiles and the black asphalt mastics in the Armory Building.

The principal recommendations of the Asbestos Inspection Report consist of developing plans for a response action to remove the asbestos containing floor tile and black asphalt asbestos containing mastics located in the CDR's, Administration, and CDR's Latrine

IV. REGULATORY REVIEW

The Cherokee Armory Building was constructed prior to 1980. Completed in approximately 1938, the Armory Building was constructed in the era when asbestos was used in construction and installed in certain building components. In 1994, the Occupational Safety and Health Administration (OSHA) required employers to identify asbestos containing building materials (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 identification surveys, owners and/or operators must treat suspected ACM as asbestos. In such cases, this is referred to as presumed ACM or PACM. One of the purposes of the Asbestos Survey was to identify the types of ACM present in the various building components.

The Oklahoma Department of Labor (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 for in OAC 380 Chapter 45. [http://www.state.ok.us/~okdol/peosh/PEOSHTitle%20380-45%20\(8-06\).pdf](http://www.state.ok.us/~okdol/peosh/PEOSHTitle%20380-45%20(8-06).pdf)

Specific provisions of the Standard (OAC: 45-15-1) addresses an Asbestos Notice and Labeling requirement. The Labeling requirements specify that various equipment, such as pipe insulation and equipment with asbestos insulation (e.g. HVAC equipment), as well as room locations where asbestos is present, such as mechanical rooms, be provided with an Asbestos Warning Label. These 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 is used in acoustical materials on ceilings and walls. This type of ACM is referred to as Surfacing Material.

The U.S. Environmental Protection Agency (EPA) requires inspections in schools grades K through 12, as part of the Asbestos Hazard and Emergency Response Act (AHERA), which is authorized in 40 CFR 763.6. These AHERA requirements would only be applicable to the Armory in the case that the future use of the Armory Facility would include any use by a Local Educational Authority (LEA), such as a school grades K through 12. The AHERA inspection protocol requires a thorough sampling of all forms of asbestos. The types of ACM to be assessed as part of an AHERA Inspection include:

Thermal System Insulation (TSI) – found on plumbing lines, HVAC equipment, boilers and steam lines

Surfacing Materials (SM) – blown on, textured or troweled onto building components (e.g. ceilings and beams)

Miscellaneous Materials (Misc.) – floor tile, mastics, ceiling tile, wallboard, cement asbestos boards, etc.

The AHERA sampling protocol addresses the systematic sampling of each of these forms of ACM and the identification of both friable ACM (i.e. that which can be rendered to a powder by hand pressure) and non-friable ACM, such as floor tiles and mastic. This Inspection also evaluated the condition of the ACM identified as good, damaged, or significantly damaged. No significantly damaged ACM was identified in the Inspection. The potential for disturbance of the ACM identified was indicated on the field inspection forms in accordance with the AHERA inspection protocol in order to assist with future Asbestos Management Planning efforts.

In addition to AHERA, the EPA regulates asbestos removal and land disposal requirements. These efforts are now administered by the Oklahoma Department of Environmental Quality (DEQ). Air quality regulations require the filing of advance notices of any demolition or renovation activities. These notices are referred to as a National Emission Standard for Hazard Air Pollutants (NESHAPS) Notice. Both historical and future asbestos abatement response actions track asbestos removal from the Armory to the DEQ approved landfill on a project by project basis as part of this NESHAP notification process.

The ODOL Asbestos Division regulates the abatement of asbestos in Oklahoma. Under the ODOL asbestos rule, OAC 380:50, only Licensed Contractors can perform asbestos abatement, develop management plans and project designs. All abatement supervisors, abatement workers, and asbestos inspectors must also be licensed by the Oklahoma State Department of Labor. It should be noted that the ODOL Asbestos Rules are currently undergoing a Rule Change process regarding the current ODOL Asbestos Rules.

One of the goals of the Asbestos Inspection was to identify the presence, types, and quantity of ACM within the Armory so that plans can be made to abate the asbestos, and therefore eliminate the need for any long term asbestos management requirements, such as those required by ODOL or the EPA AHERA regulations.

V. HISTORICAL OVERVIEW OF ASBESTOS ACTIVITIES

This Asbestos Inspection did not identify any evidence of prior asbestos inspection work or previous abatement of friable ACM. No historical inspection records were available. As a result, this Asbestos Inspection took the approach of a thorough initial sampling of the Armory, as opposed to a re-inspection and confirmation sampling approach.

VI. RESULTS OF THE ASBESTOS INSPECTION

The DEQ LPD requested that the DCS provide a Licensed Asbestos Inspection Firm to perform an initial Asbestos Inspection of the Armory. Marshall Environmental Management, Inc. began a systematic inspection of the Armory on March 22, 2007 to locate and assess the condition of the suspected Asbestos Containing Materials in the facility. Each room was visually inspected by a Licensed AHERA Asbestos Inspector. All accessible locations throughout the Armory were visually inspected for suspected ACM.

Sampling consisted of taking bulk asbestos samples from each category of suspected ACM consisting of the following typical examples:

Surfacing Materials (SM) – blown on or troweled on ACM, typically observed on ceilings, structural steel, and concrete ceils or metal pan decks.

Thermal System Insulation (TSI) - typically located on plumbing, HVAC equipment, boilers, steam lines and heated thermal processes.

Miscellaneous Materials (Misc.) - typically consists of floor tiles, mastics, ceiling tiles, sheet vinyl flooring and wallboard bedding tapes and joint compounds, and other suspect ACM not typically included in Surfacing Materials or TSI designations.

A total of Twelve (12) samples were collected and Five (5) were identified by laboratory testing to be “Positive” for asbestos content, which is defined by EPA regulations to consist of any material with more than 1% asbestos as determined by the EPA approved Test Method 0600 or Polarized Light Microscopy (PLM).

The following Table is a summary of the samples collected by location and type of building component. Locations where ACM was identified can be identified by referring to the facility floor plan diagram provided in the Appendix of this Inspection Report. A summary of the estimated quantities of ACM located during the Asbestos Inspection is provided in the Appendix.

Location	Sample ID	Type of ACM	Asbestos Content Type (%)	Condition - Item
Restroom	K-2	Misc.	Chrysotile 60%	Good – Transite Stall Walls
CDR's Office	K-8	Misc. Mastic	Chrysotile 5%	Good –Black Mastic Back of Wood Wall Panels
Mask Room	K-9	Misc.	Chrysotile 60%	Good – Transite Exhaust Flue
CDR/Admin/ CDR Restroom	K-11a	Misc. Floor Tile	Chrysotile 2%	Good – 9-in. x 9-in. Brown Floor Tile
CDR/Admin/ CDR Restroom	K-11b	Misc. Mastic	Chrysotile 5%	Good – Black Mastic from back of K-11a

Table 1 - Summary of Sampling Data for Samples that were Positive for Asbestos Content

Copies of the individual asbestos sample test results provided by the accredited testing lab, along with the chain of custody forms and several digital photos are provided for review in the Appendix of this Inspection Report.

VII. ASBESTOS INSPECTION – CONCLUSIONS AND FINDINGS

The results for this initial Asbestos Inspection did identify that ACM was present in the Cherokee Armory in the form of non-friable asbestos containing Floor Tile and black asphalt asbestos containing mastic.

The following are some of the conclusions and findings related to the results of this initial Asbestos Inspection Report.

1. **Surfacing Materials** – No surfacing materials in the form of blown on fireproofing or acoustical insulation were observed for sampling at any of the accessible locations selected for sampling as a part of this initial Asbestos Inspection.

CONDITION OF SURFACING MATERIALS – No Surfacing Materials were found.

2. **Thermal System Insulation** – No Thermal System Insulation (TSI) was found to contain asbestos as part of the Asbestos Inspection of the Cherokee Armory.

Plumbing – No ACM were found on TSI within the Cherokee Armory.

HVAC – No Friable ACM was identified on HVAC equipment or components, but an exhaust flue is made of Transite.

CONDITION OF TSI – Good.

3. **Miscellaneous Materials** – The miscellaneous ACM located within the Cherokee Armory is older 9-inch by 9-inch Floor Tile and black asphalt containing mastics that containing approximately 3-5% Chrysotile asbestos.

The other miscellaneous forms of asbestos consisted of the non-friable Transite exhaust flue for hot water tank and Transite Stall Walls in the Restroom.

CONDITION OF MISCELLANEOUS ACM –

Asbestos Containing Floor Tiles and mastics - Good

Transite Panels in Restroom – Good

Transite Exhaust Flues in Mask Room – Good

VIII. RECOMMENDATIONS

This Asbestos Inspection Report should be considered as the initial step in a process to develop plans for asbestos abatement or an Armory Asbestos Management Plan.

The principal recommendations of the Asbestos Inspection Report consist of developing plans for a response action to remove the asbestos containing floor tile and associated black asphalt asbestos containing mastic located in the CDR's Office/Latrine and Administration Office.

The following specific recommendations help address the future goals for facility asbestos management and abatement:

1. A Scope of Work needs to be developed to address the safe removal of the asbestos containing floor tiles and associated asbestos containing mastic. This does not have to be done as a Project Design, because the floor tiles and are non-friable and not regulated by ODOL.
2. The Scope of work should include the recommended methods for floor tile and mastic removal along with a Bid Form to assist obtaining a bid from a qualified Licensed Asbestos Contractor.
3. The removal of non-friable Transite Restroom Stalls and Exhaust Flue can also be accomplished so long as funds are provided for the corresponding repairs to the roof that would be needed if these items were removed.

APPENDIX

ASBESTOS SAMPLING TEST RESULTS

CHAIN OF CUSTODY FORMS

SUMMARY OF ESTIMATED QUANTITIES OF ACM

ARMORY FLOOR PLAN

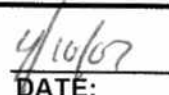
DIGITAL PHOTOS

Marshall Environmental Management, Inc.
1145 Southwest 74th Street, E-300
Oklahoma City, Oklahoma 73139
Phone: (405) 616-0401 Fax: (405) 972-0525

Project:	Oklahoma Department of Environmental Quality	Lab Accreditation:	AIHA PAT ID #102334
	Cherokee Armory Asbestos Inspection	Job Identification:	2201
		Project Location:	Cherokee Armory
			Cherokee, Oklahoma
Date Sampled:	3-22-07		
Analyst:	Brice Semrad		

Sample Identification	Sample Description	Results
K-1 Storage #4 Stage Ceiling	Material: Ceiling Tile Color: White Type: Condition: Note:	<u>Asbestos Not Detected</u> 25% Calcareous Material 65% Cellulose 10% Polyethylene Foam <u>Total Asbestos: None Detected</u>
K-2 Restroom Stall Walls (6x5)+2(4x6)+1x6	Material: Transite Color: White Type: Miscellaneous Condition: Fair Note:	<u>Asbestos Detected</u> 40% Cementous 60% Chrysotile <u>Total Asbestos: 60%</u>
K-3 Restroom Drywall	Material: Drywall Color: White Type: Condition: Note:	<u>Asbestos Not Detected</u> 45% Calcareous Material 40% Cellulose 15% Fibrous Glass <u>Total Asbestos: None Detected</u>
K-4 Restroom Joint Compound	Material: Joint Compound Color: White Type: Condition: Note:	<u>Asbestos Not Detected</u> 90% Calcareous Material 10% Cellulose <u>Total Asbestos: None Detected</u>


 Brice Semrad I.H./Environmental Tech


 DATE:

Test Method: 40 CFR Chapter I, Part 763, Subpart F, Appendix A Interim Method for Determination of Asbestos in Bulk Insulation Samples and/or Current EPA Method for the Analysis of Asbestos in Building Materials by Polarized Light Microscopy.

Marshall Environmental Management, Inc.
1145 Southwest 74th Street, E-300
Oklahoma City, Oklahoma 73139
Phone: (405) 616-0401 Fax: (405) 972-0525

Project:	Oklahoma Department of Environmental Quality	Lab Accreditation:	AIHA PAT ID #102334
	Cherokee Armory Asbestos Inspection	Job Identification:	2201
		Project Location:	Cherokee Armory
			Cherokee, Oklahoma
Date Sampled:	3-22-07		
Analyst:	Brice Semrad		

Sample Identification		Sample Description	Results
K-5 Restroom Ceiling Tile	Material:	Ceiling Tile	<u>Asbestos Not Detected</u> 100% Styrofoam <u>Total Asbestos: None Detected</u>
	Color:	White	
	Type:		
	Condition:		
	Note:		
K-6 Classroom #19 Chalk Board	Material:	Chalk Board	<u>Asbestos Not Detected</u> 100% Cellulose <u>Total Asbestos: None Detected</u>
	Color:	Black/White	
	Type:		
	Condition:		
	Note:		
K-7 Classroom #19 Ceiling Tile	Material:	Ceiling Tile	<u>Asbestos Not Detected</u> 100% Styrofoam <u>Total Asbestos: None Detected</u>
	Color:	White	
	Type:		
	Condition:		
	Note:		
K-8 CDR's Office Mastic Behind Wood Panels	Material:	Mastic	<u>Asbestos Detected</u> 5% Chrysotile 95% Tar <u>Total Asbestos: 5%</u>
	Color:	Black	
	Type:	Miscellaneous	
	Condition:		
	Note:		


 Brice Semrad I.H/Environmental Tech

4/10/07
 DATE:

Test Method: 40 CFR Chapter I, Part 763, Subpart F, Appendix A Interim Method for Determination of Asbestos in Bulk Insulation Samples and/or Current EPA Method for the Analysis of Asbestos in Building Materials by Polarized Light Microscopy.

Marshall Environmental Management, Inc.
1145 Southwest 74th Street, E-300
Oklahoma City, Oklahoma 73139
Phone: (405) 616-0401 Fax: (405) 972-0525


Project:	Oklahoma Department of Environmental Quality	Lab Accreditation:	AIHA PAT ID #102334
	Cherokee Armory Asbestos Inspection	Job Identification:	2201
		Project Location:	Cherokee Armory
			Cherokee, Oklahoma
Date Sampled:	3-22-07		
Analyst:	Brice Semrad		

Sample Identification	Sample Description	Results
K-9 Mask Room Water Heater Vent 17'	Material: Transite Pipe Color: White Type: Condition: Good Note:	<u>Asbestos Detected</u> 60% Cementous 40% Chrysotile <u>Total Asbestos: 40%</u>
K-10 Chief's Office Drywall	Material: Chalk Board Color: Black/White Type: Condition: Note:	<u>Asbestos Not Detected</u> 45% Calcareous Material 40% Cellulose 15% Fibrous Glass <u>Total Asbestos: None Detected</u>
K-11a CDR's Office Administration Office Latrine 356 ft ²	Material: Floor Tile Color: Brown Type: Miscellaneous Condition: Note:	<u>Asbestos Detected</u> 98% Calcareous Material 2% Chrysotile <u>Total Asbestos: 2%</u>
K-11b CDR's Office Administration Office Latrine 356 ft ²	Material: Mastic Color: Black Type: Miscellaneous Condition: Note:	<u>Asbestos Detected</u> 5% Chrysotile 95% Tar <u>Total Asbestos: 5%</u>


 Brice Semrad I.H/Environmental Tech

4/16/07
 DATE:

Test Method: 40 CFR Chapter I, Part 763, Subpart F, Appendix A Interim Method for Determination of Asbestos in Bulk Insulation Samples and/or Current EPA Method for the Analysis of Asbestos in Building Materials by Polarized Light Microscopy.

Marshall Environmental Management, Inc. 1145 SW 74th Street Suite E-300 Oklahoma City, OK 73139 email: marshenv@swbell.net		Turn Around Time:		Job Identification:	
				2201	
		Phone: (405) 616-0401		Project Name:	
		Fax: (405) 972-0525		Cherokee Armory	
Project Location:				Invoice To:	
Cherokee Armory				Oklahoma Department of Environmental Quality	
Cherokee, Oklahoma				Attention: Land Protection Division	
				Address: 707 North Robinson	
Contact:				Oklahoma City, Oklahoma 73102	
Phone No.:		Fax No.:		Phone No.:	
				Fax No.:	
Date	Sample Number	Location/Description	Sample Type/Media	Time/Volume	Analysis Requested
3/22/2007	K-1	Storage # 4 Stage - 2'x4' Ceiling Tile	Bulk	N/A	Asbestos
3/22/2007	K-2	Restroom - Stall Walls	Bulk	N/A	Asbestos
3/22/2007	K-3	Restroom - Drywall	Bulk	N/A	Asbestos
3/22/2007	K-4	Restroom - Joint Compound	Bulk	N/A	Asbestos
3/22/2007	K-5	Restroom - 2'x4' Ceiling Tile	Bulk	N/A	Asbestos
3/22/2007	K-6	Classroom # 19 - Chalk Board	Bulk	N/A	Asbestos
3/22/2007	K-7	Classroom # 19 - 2'x4' Ceiling Tile	Bulk	N/A	Asbestos
3/22/2007	K-8	CDR's Office - Black Mastic Behind Wood Paneling	Bulk	N/A	Asbestos
3/22/2007	K-9	MASKs Room - Transite Pipe for Under Heater	Bulk	N/A	Asbestos
3/22/2007	K-10	Chief's Office Chalk Board	Bulk	N/A	Asbestos
3/22/2007	K-11a	CDR's/Administration/CDR Latrine 9x9 Floor Tile	Bulk	N/A	Asbestos
3/22/2007	K-11b	CDR's/Administration/CDR Latrine Mastic under Floor Tile	Bulk	N/A	Asbestos
Instructions/Special Requirements:					
Collected By (print):	Brice Semrad	Date:	3/22/2007	Collector's Signature:	
		Time:	1700		Date: 3/22/07
Relinquished By:		Date:		Receive By:	Time: 17:00
		Time:			
Relinquished By:		Date:		Receive By:	
		Time:			
Method of Shipment:		Condition Upon Reception:			

ANNEX 3

SECOND STREET

LOWER LEVEL

FRONT DOOR

D

MANHOLE

ALLEY

BATTALION SUPPLY

GUN ROOM

5

POL STORAGE

OIL RM

FLAMMABLE MATERIALS STORAGE CABINET

12

FLOOR DRAIN (PIT)
4'X5'X2' DEEP

11
FDC ROOM

10
REST ROOM

U.S.T.

A

FLAG POLE



STORAGE

STAGE

3

DRILL FLOOR

9

RENTAL AREA

2

IFR

FLOOR

FLOOR PIT AND DRAIN

4'X4'X2'

B

LAUNDRY MAT



UPPER LEVEL

↓ STAIRS

RIFLE RANGE

located under the stage area

CHIEF'S OFFICE

22

CONFERENCE ROOM

23

14
ADMIN OFFICE

15
CDR'S OFFICE

LATRINE

23

UTIL

21

STAIR

24

19
CLASS ROOM

17
SUPPLY ROOM

COMMO

MASKS

18
VAULT

LATRINE

CHEROKEE ARMORY
1936

O FLOOR DRAIN



Hot Water Heater Transite Exhaust Pipe



9x9 Floor Tile under Carpet in the CDR/Admin Office



9x9 Floor Tile in CDR's Latrine

ASBESTOS SCOPE OF WORK

**Scope of Work
For
Remediation of Non-Friable Asbestos at
Former National Guard Armories**

The Oklahoma Department of Environmental Quality (DEQ) is requesting bids from licensed asbestos abatement contractors for asbestos remediation services at former National Guard armories in Oklahoma. This scope of work (SOW) describes the non-friable asbestos containing materials (ACM) that will either be removed or left in place in accordance with all appropriate OSHA requirements. The ACM to be removed shall be included in your bid.

Below is a list of the non-friable asbestos in each armory that will be removed or left in place:

CUSHING ARMORY

Remove floor tile and mastic from Support Room floor;

Remove floor tile and mastic from Classroom & Squad Room floor;

Remove floor tile and mastic from Storage/POL Room floor;

Remove floor tile and mastic from ORD Room/CO Office floor;

Remove outside chemical safe;

- Seal with two layers of polyethylene and dispose of this item as part of the asbestos abatement action;

PAWNEE ARMORY

Remove floor tile and mastic from Room #21 floor;

Remove floor tile and mastic from Office #25 floor;

CHEROKEE ARMORY (Currently Unknown)

Remove restroom stall divider walls from 1st floor restroom;

Remove carpet covering floor tile from CDR's Office and Administration Office;

- Roll up carpet and leave in building;

Remove floor tile and mastic from CDR's Office, Administration Office, and latrine;

Remove black mastic and wood panels from CDR's Office and Administration Office;

ATOKA

Remove cement asbestos ceiling tiles from Men's Restroom and Kitchen Area;

ASBESTOS FINAL REPORT

Do not staple!

WASTE MANAGEMENT

Manifest NO: _____

(For Generator Use)

Quarry Landfill
4041 N. 141st. East Ave
Tulsa, OK 74116
FAX: (918) 437-7805
Phone: (918) 439-7835

NESHAP ADMINISTRATOR
Air Quality Control (405) 702-1000
Oklahoma Dept of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73101

Profile # 00-16998

NON-HAZARDOUS SPECIAL WASTE MANIFEST

State of Oklahoma

Generator: Construction & Properties Division Name: Same Cherokee Agency

Address: 2401 N. Lincoln Address: 122 E. 2nd Street
Oklahoma City, OK 73152-3448 Cherokee, Oklahoma

Phone: (405) 521-2112 Phone: (Same)

QUANTITY AND DESCRIPTION

Proper Shipping Name: x Floor Tile & Elastic Quantity: x 1 1/4 cu yd
Cement Asbestos (Transite)

DOT Hazard Class: N/A

Identification Number: N/A

Reportable Quantity: N/A

DRUM ☐ BAG ☐ CARTON ☐ TRUCK ☐ TONS ☐ CUBIC YARDS ☐ OTHER ☐

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 (unless approved WM profile reflects free liquid) or any applicable state law, is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

James G. Keith
Generator Authorized Agent

James G. Keith
Signature

4-7-08
Shipment Date

Transporter: Abatement Systems

Address: PO Box 773 Broken Arrow, OK 74013-0773 Phone: 918-251-2504

Driver: Sammy Edwards Truck No: 15 Tag # / State: _____

[Signature] x 4-7-08
Signature Shipment Date

[Signature] x 4-7-08
Driver Signature Delivery Date

I hereby certify that the above material was
picked up from generator listed above

I hereby certify that the above named material was
delivered without incident to the site listed below

Received at Quarry Landfill 4041 N. 141st East Ave. Tulsa, OK

I hereby certify that the above named material has been accepted and to the best of my knowledge, the above is correct.

Signed: [Signature] Ticket: 9815411

Ralph Kincaid Date: 4-7-08

WASTE SHIPMENT RECORD

1. Work Site Name & Mailing Address (Generator)
Cherokee Armory
122 East 2nd Street, Cherokee, OK

Owner's Name
State of Oklahoma
Construction & Properties Div.

Owner's Telephone
(405) 521-2112

2. Remover's Name & Address
Abatement Systems, Inc., P. O. Box 773, Broken Arrow, OK 74013-0773

Remover's Telephone
(918) 251-2504

3. Waste Disposal Site (WDS)
Quarry Landfill 4041 N. 141st E. Ave Tulsa, OK 74116

WDS's Telephone
(918) 437-7773

4. Name & Address of EP Office local, state or regional
Tulsa City- County Health Dept 4616 E. 15th St Tulsa, OK 74112

5. HM

Desc. Of Material

Hazard Class

ID Number

Packing Group #

6. Containers No. Type

7. Total Quantity

X Floor tile & Mastic
 X Cement Asbestos (transite)

X 1 1/4 Cu yd
 X

8. Special Handling Instruction & 24 Hrs Emergency Response Telephone Number (provided by Generator)

9. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and government regulations. NOTE: Generator must retain a copy of this form

Print/Type Name & Title

Nancy Vacin

James Keith

Signature

Date

Office Manager

IT Specialist

James Keith

4-7-08

10. Transporter 1 (Acknowledgement of Receipt of Materials) Note: Transporter must retain a copy of this form

Print/Type Name, Title, Address & Telephone Number

Signature/Date

Abatement Systems, Inc.

P. O. Box 773

Broken Arrow, OK 74013-0773

(918) 251-2504

11. Transporter 2 (Acknowledgement of Receipt of Materials) Note: Transporter must retain a copy of this form

Print/Type Name, Title, Address & Telephone Number

Signature/Date

12. Problems with Containment or Packaging

Rejected Yes/No

13. WASTE DISPOSAL SITE OWNER OR OPERATOR:

Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.

Print/Type Name & Title

Signature

Date

Kari Kincaid

Kari Kincaid

4-7-08

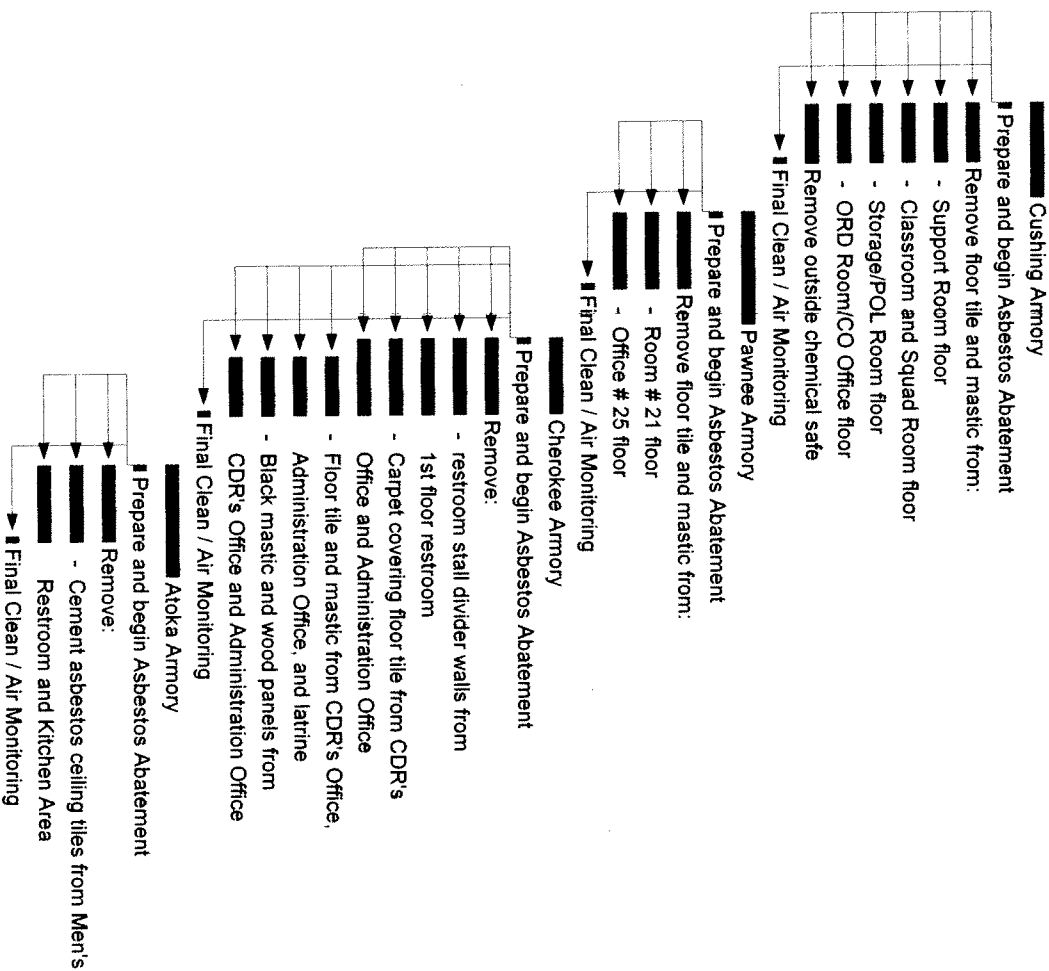
Quarry Landfill Scale Clerk

Note: The Waste Disposal Site must retain a completed copy of this form and send a completed copy to the Remover listed in Item #2

981541

Asbestos Abatement - 4 Armories
Abatement Systems, Inc.
DCS # 8210

Act ID	Description	Orig Dur	Rem Dur	Early Start	Early Finish	2006 MAR 03	10	17	24	31	07	14	21	28
1000	Asbestos Abatement - 4 NG Armories	45d	0 *	11MAR08 A	24APR08 A									Asbestos
1100	Cushing Armory	6d	0 *	11MAR08 A	16MAR08 A									
1110	Prepare and begin Asbestos Abatement	1d	0 *	11MAR08 A	11MAR08 A									
1120	Remove floor tile and mastic from:	4d	0	11MAR08 A	14MAR08 A									
1121	- Support Room floor	1d	0	11MAR08 A	14MAR08 A									
1122	- Classroom and Squad Room floor	1d	0	11MAR08 A	14MAR08 A									
1123	- Storage/POL Room floor	1d	0	11MAR08 A	14MAR08 A									
1124	- ORD Room/CO Office floor	1d	0	11MAR08 A	14MAR08 A									
1125	Remove outside chemical safe	1d	0	11MAR08 A	14MAR08 A									
1130	Final Clean / Air Monitoring	1d	0	14MAR08 A	14MAR08 A									
1200	Pawnee Armory	7d	0 *	17MAR08 A	23MAR08 A									
1210	Prepare and begin Asbestos Abatement	1d	0 *	17MAR08 A	17MAR08 A									
1220	Remove floor tile and mastic from:	4d	0 *	17MAR08 A	21MAR08 A									
1221	- Room # 21 floor	1d	0	17MAR08 A	21MAR08 A									
1222	- Office # 25 floor	1d	0	17MAR08 A	21MAR08 A									
1230	Final Clean / Air Monitoring	1d	0 *	21MAR08 A	21MAR08 A									
1300	Cherokee Armory	7d	0 *	24MAR08 A	28MAR08 A									
1310	Prepare and begin Asbestos Abatement	7d	0 *	24MAR08 A	24MAR08 A									
1320	Remove:	4d	0 *	24MAR08 A	28MAR08 A									
1321	- restroom stall divider walls from	1d	0	24MAR08 A	28MAR08 A									
1322	1st floor restroom	1d	0	24MAR08 A	28MAR08 A									
1323	- Carpet covering floor tile from CDR's	1d	0	24MAR08 A	28MAR08 A									
1324	Office and Administration Office	1d	0	24MAR08 A	28MAR08 A									
1325	- Floor tile and mastic from CDR's Office,	1d	0	25MAR08 A	28MAR08 A									
1326	Administration Office, and latrine	1d	0	25MAR08 A	28MAR08 A									
1327	- Black mastic and wood panels from	1d	0	25MAR08 A	28MAR08 A									
1328	CDR's Office and Administration Office	1d	0	25MAR08 A	28MAR08 A									
1330	Final Clean / Air Monitoring	1d	0 *	28MAR08 A	28MAR08 A									
1400	Atoka Armory	7d	0 *	31MAR08 A	06APR08 A									
1410	Prepare and begin Asbestos Abatement	1d	0 *	31MAR08 A	31MAR08 A									
1420	Remove:	4d	0 *	31MAR08 A	04APR08 A									
1421	- Cement asbestos ceiling tiles from Men's	1d	0	31MAR08 A	04APR08 A									
1422	Restroom and Kitchen Area	1d	0	31MAR08 A	04APR08 A									
1430	Final Clean / Air Monitoring	1d	0 *	04APR08 A	04APR08 A									



Start date 04MAR08
 Finish date 05MAR08
 Data date 05MAR08
 Run date 05MAR08
 Page number 1A
 © Primavera Systems, Inc.

Abatement Systems, Inc.
Asbestos Abatement - 4 Armories

Early bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

LEAD

LEAD-BASED PAINT INSPECTION REPORT

**LEAD-BASED PAINT INSPECTION REPORT
FOR**

Cherokee Armory

Cherokee, Oklahoma

March 22, 2007

Services Provided for:

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

Certified Industrial Hygiene Services Provided By:

Marshall Environmental Management, Inc.
1145 SW 74th Street, E-300
Oklahoma City, OK 73139
(405) 616-0401

CERTIFICATION

This is to certify that the Lead-Based Paint Inspection conducted at the Cherokee Armory Located in Cherokee Oklahoma (Year of Construction: 1938) on March 22, 2007 was conducted in accordance with "*Good Industrial Hygiene Practice.*" The results of the testing accurately reflect the condition of the property at the time the sampling was performed.

Current Owner Information

State of Oklahoma

Certified Lead Based Paint Risk Assessor/Inspector



Brice Semrad, Sr. Industrial Hygienist

Certified Lead-Based Paint Inspector/Risk Assessor OKRASR13046

Certified Lead-Based Paint Firm #OKFIRM11160

Marshall Environmental Management, Inc.

1145 SW 74th E-300

Oklahoma City, Oklahoma 73139

(405) 616-0401

XRF Information

Niton XLp Spectrum Analyzer

Model #XLp 300A

Serial #12585

Source: 40 mCi

Executive Summary:

Sampling Methodology:

Lead based paint (LBP) testing was done to determine lead levels on painted structural building components at the Cherokee Armory. Each room of the Building was numbered on a floor plan that is provided in the Appendix. The front side of the Armory Building was marked "Side A" and going in a clockwise motion the remaining sides were categorized as Sides B, C, and D, respectively.

The building is a two-story structure constructed on a concrete slab foundation with an asphalt composite flat roof over the Office/Supply Areas and a metal pitched roof over the Drill Floor. Brick covers the sides of the Building. All of the windows are metal. Throughout the Building were concrete floors and windowsills. The roof was constructed with steel rafters and concrete decking with asphalt roof / metal.

The findings from the XRF testing indicated that there is lead-based paint in amounts greater than the EPA Standard for XRF readings or equal to 1.0 mg/cm² located on the Building components.

The following locations contain lead-based paint:

1. Interior and Exterior Doors and Door Frames
2. Overhead Doors and Frames the Building
3. Hand Rails/Stairs in the Drill Floor to the Stage
4. Garage Bay yellow columns in the area
5. Shower room door frame
6. IFR exhaust fan box
7. Outside Down Spouts
8. Outside Yellow curb strip

Please note that the following items were not tested in this inspection:

1. Structural Steel in the Drill Floor do to inaccessibility
2. Non-painted floors
3. Non-painted wood panels
4. Non-fixed Items on the property

ROOM LEGEND

<u>Site</u>	<u>Current Use</u>
1	Indoor Firing Range (IFR)
2	Rental Area on Stage
3	Stage
4	Stage Storage
5	Gun Room
6	Drill Floor
7	Battalion Supply
8	Closet
9	Maint Room
10	Restroom
11	FDC Room
12	Garage Bay
13	Stairs
14	Admin Office
15	CDR's Office
16	CDR's Latrine
17	Supply Room
18	Vault
19	Classroom
20	Latrine
21	Utility
22	Chief's Office
23	Conference Room
24	Upstairs Hallway
Blank	Outside of Building

CERTIFICATES

SITE MAP

ANNEX a

SECOND STREET

LOWER LEVEL

FRONT DOOR

STAIRS

11
FDC
ROOM

BATTALION SUPPLY

FLAMMABLE
MATERIALS
STORAGE
CABINET

12
FLOOR DRAIN
(Pit)
4'x5'x2' DEEP

ALLEY

GUN
ROOM

POL
STORAGE

OIL
RM

8
CLOSET

9
MAINT
ROOM

10
REST
ROOM

UST

FLAG POLE

STORAGE

STAGE

DRILL FLOOR

RENTAL
AREA

Floor

Floor Pit
AND DRAIN

4'x4'x2'

LAUNDRY MAT

UPPER LEVEL

STAIRS

CHIEF's
OFFICE
22

CONFER-
ENCE
ROOM
23

14
ADMIN
OFFICE

15
CDR's
OFFICE

LATRINE

UTIL

STAIR

17
SUPPLY ROOM

LATRINE

CHEROKEE
ARMORY
1936

0 FLOOR DRAIN

19
CLASS ROOM

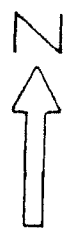
COMMO

MASKs

18
VAULT

RIFLE
RANGE

located
under
the
stage
area



C

B

A

SANITARY SEWER

MANHOLE

MANHOLE

60 YDS.

MANHOLE

XRF READINGS

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Site	Room	Results	PbC	PbL	PbK
1									10.09 ± 0.00	1.54 ± 0.00	0.00 ± 0.00
2			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
3			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.70 ± 0.40
4			CALIBRATE					Positive	1.20 ± 0.10	1.20 ± 0.10	0.90 ± 0.50
5	WALL	BRICK	A	INTACT	WHITE	2	RENTAL AREA	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.32
6	WALL	BRICK	B	POOR	WHITE	2	RENTAL AREA	Negative	< LOD: 0.15	< LOD: 0.15	< LOD: 2.53
7	WALL	BRICK	C	POOR	WHITE	2	RENTAL AREA	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.26
8	WALL	BRICK	D	POOR	WHITE	2	RENTAL AREA	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.54
9	DOOR	WOOD	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.60 ± 1.20	2.60 ± 1.20	< LOD: 6.15
10	DOOR FRAME	METAL	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.80 ± 1.30	2.80 ± 1.30	< LOD: 7.65
11	FLOOR	CONCRETE	LOWER	POOR	GREEN	2	RENTAL AREA	Positive	2.30 ± 1.00	2.30 ± 1.00	< LOD: 6.90
12	WALL	BRICK	B	INTACT	BEIGE	3	STAGE	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.09
13	WALL	BRICK	C	INTACT	BEIGE	3	STAGE	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.30
14	WALL	BRICK	D	INTACT	BEIGE	3	STAGE	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.60
15	WALL	BRICK	C	POOR	WHITE	4	STAGE STORAGE	Negative	< LOD: 0.04	< LOD: 0.04	< LOD: 2.06
16	WALL	BRICK	D	POOR	WHITE	4	STAGE STORAGE	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.41
17	WALL	BRICK	A	POOR	WHITE	4	STAGE STORAGE	Negative	< LOD: 0.05	< LOD: 0.05	< LOD: 1.95
18	DOOR	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	4.10 ± 2.70	4.10 ± 2.70	< LOD: 8.85
19	DOOR FRAME	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	3.30 ± 2.20	3.30 ± 2.20	< LOD: 12.30
20	DOOR FRAME	METAL	B	INTACT	RED	5	GUN ROOM	Positive	4.50 ± 2.70	4.50 ± 2.70	< LOD: 13.35
21	DOOR	WOOD	B	INTACT	RED	5	GUN ROOM	Positive	3.30 ± 2.00	3.30 ± 2.00	< LOD: 9.60
22	WALL	BRICK	A	INTACT	BEIGE	5	GUN ROOM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.43
23	WALL	BRICK	B	INTACT	BEIGE	5	GUN ROOM	Negative	< LOD: 0.09	< LOD: 0.09	< LOD: 2.23
24	WALL	BRICK	C	INTACT	BEIGE	5	GUN ROOM	Negative	< LOD: 0.04	< LOD: 0.04	< LOD: 1.35
25	WALL	BRICK	D	INTACT	BEIGE	5	GUN ROOM	Negative	< LOD: 0.05	< LOD: 0.05	< LOD: 1.38
26	FLOOR	CONCRETE	LOWER	FAIR	BLUE	5	GUN ROOM	Positive	1.70 ± 0.60	1.70 ± 0.60	< LOD: 3.75
27	FLOOR	CONCRETE	LOWER	POOR	GREEN	5	GUN ROOM	Positive	1.60 ± 0.60	1.60 ± 0.60	< LOD: 3.75
28	HAND RAIL	METAL	C	FAIR	YELLOW	6	DRILL FLOOR	Positive	4.00 ± 2.40	4.00 ± 2.40	< LOD: 12.60
29	STAIRS	CONCRETE	C	INTACT	BROWN	6	DRILL FLOOR	Positive	1.20 ± 0.20	1.20 ± 0.20	< LOD: 1.35
30	WALL	BRICK	D	INTACT	BROWN	6	DRILL FLOOR	Negative	< LOD: 0.31	< LOD: 0.31	< LOD: 2.64
31	WALL	BRICK	D	INTACT	WHITE	6	DRILL FLOOR	Negative	< LOD: 1.00	< LOD: 1.00	< LOD: 1.00
32	WALL	BRICK	A	INTACT	BROWN	6	DRILL FLOOR	Negative	< LOD: 0.26	< LOD: 0.26	< LOD: 2.34
33	WALL	BRICK	B	INTACT	BROWN	6	DRILL FLOOR	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.55
34	WALL	BRICK	C	INTACT	BROWN	6	DRILL FLOOR	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.29
35	DOOR	WOOD	D	INTACT	BROWN	6	DRILL FLOOR	Positive	1.60 ± 0.30	1.60 ± 0.30	1.80 ± 0.70
36	DOOR FRAME	METAL	D	INTACT	BROWN	6	DRILL FLOOR	Positive	3.20 ± 1.40	3.20 ± 1.40	< LOD: 4.80
37	FLOOR STRIP	WOOD	LOWER	INTACT	BLACK	6	DRILL FLOOR	Negative	< LOD: 0.04	< LOD: 0.04	< LOD: 1.99
38	FLOOR STRIP	WOOD	LOWER	INTACT	RED	6	DRILL FLOOR	Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.69
39	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	< LOD: 0.10	< LOD: 0.10	< LOD: 2.66
40	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	< LOD: 1.04	< LOD: 0.06	< LOD: 1.04

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Site	Room	Results	PtC	PtI	PtK
41	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	< LOD : 0.13	< LOD : 0.13	< LOD : 2.54
42	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	< LOD : 0.09	< LOD : 0.09	< LOD : 2.55
43	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.66
44	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 1.05
45	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 2.63
46	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	< LOD : 0.20	< LOD : 0.20	< LOD : 2.21
47	WALL	WOOD	A	INTACT	WHITE	8	CLOSET	Negative	< LOD : 0.10	< LOD : 0.10	< LOD : 1.64
48	WALL	BRICK	B	INTACT	WHITE	8	CLOSET	Negative	< LOD : 0.08	< LOD : 0.08	< LOD : 2.29
49	WALL	BRICK	A	INTACT	WHITE	9	MAINTENANCE RM	Negative	< LOD : 0.05	< LOD : 0.05	< LOD : 1.03
50	WALL	BRICK	B	INTACT	WHITE	9	MAINTENANCE RM	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 1.21
51	WALL	BRICK	C	INTACT	WHITE	9	MAINTENANCE RM	Negative	< LOD : 0.22	< LOD : 0.22	< LOD : 2.48
52	WALL	BRICK	D	INTACT	WHITE	9	MAINTENANCE RM	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 1.35
53	FLOOR	CONCRETE	LOWER	POOR	BLUE	9	MAINTENANCE RM	Negative	< LOD : 0.06	< LOD : 0.06	< LOD : 2.37
54	DOOR	WOOD	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	2.40 ± 1.40	2.40 ± 1.40	< LOD : 4.65
55	DOOR FRAME	METAL	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	3.00 ± 1.50	3.00 ± 1.50	< LOD : 7.80
56	WALL	BRICK	A	INTACT	WHITE	10	RESTROOM	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 2.20
57	WALL	BRICK	B	INTACT	WHITE	10	RESTROOM	Negative	< LOD : 0.39	< LOD : 0.39	< LOD : 2.17
58	WALL	BRICK	C	INTACT	WHITE	10	RESTROOM	Negative	0.11 ± 0.06	0.11 ± 0.06	< LOD : 1.30
59	WALL	BRICK	D	INTACT	WHITE	10	RESTROOM	Negative	< LOD : 0.05	< LOD : 0.05	< LOD : 2.17
60	FLOOR	CONCRETE	LOWER	POOR	BROWN	10	RESTROOM	Negative	< LOD : 0.06	< LOD : 0.06	< LOD : 2.63
61	FLOOR	CONCRETE	LOWER	POOR	BLUE	11	FDC ROOM	Negative	< LOD : 0.13	< LOD : 0.13	< LOD : 2.11
62	WALL	WALL BOARD	A	INTACT	BLUE	11	FDC ROOM	Negative	< LOD : 0.28	< LOD : 0.28	< LOD : 1.40
63	WALL	WALL BOARD	A	INTACT	WHITE	11	FDC ROOM	Negative	< LOD : 0.12	< LOD : 0.12	< LOD : 1.48
64	WALL	WALL BOARD	B	INTACT	BLUE	11	FDC ROOM	Negative	< LOD : 0.24	< LOD : 0.24	< LOD : 1.50
65	WALL	WALL BOARD	C	INTACT	BLUE	11	FDC ROOM	Negative	< LOD : 0.20	< LOD : 0.20	< LOD : 1.40
66	WALL	WALL BOARD	D	INTACT	BLUE	11	FDC ROOM	Negative	< LOD : 0.26	< LOD : 0.26	< LOD : 1.55
67	DOOR	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.10 ± 0.80	2.10 ± 0.80	3.10 ± 1.90
68	DOOR	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.00 ± 0.70	2.00 ± 0.70	< LOD : 2.70
69	DOOR FRAME	METAL	C	INTACT	BLUE	11	FDC ROOM	Positive	< LOD : 3.75	< LOD : 3.75	< LOD : 12.75
70	WALL	BRICK	A	FAIR	WHITE	12	GARAGE BAY	Negative	< LOD : 1.29	< LOD : 0.12	< LOD : 1.29
71	WALL	BRICK	B	FAIR	WHITE	12	GARAGE BAY	Negative	< LOD : 0.13	< LOD : 0.13	< LOD : 1.34
72	WALL	BRICK	C	FAIR	WHITE	12	GARAGE BAY	Negative	< LOD : 1.15	< LOD : 0.30	< LOD : 1.15
73	WALL	BRICK	D	FAIR	WHITE	12	GARAGE BAY	Negative	< LOD : 0.21	< LOD : 0.21	< LOD : 2.23
74	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	2.70 ± 1.60	2.70 ± 1.60	< LOD : 10.95
75	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	1.20 ± 0.10	1.20 ± 0.10	1.50 ± 0.90
76	OVERHEAD DOOR	WOOD	B	INTACT	WHITE	12	GARAGE BAY	Negative	< LOD : 0.13	< LOD : 0.13	< LOD : 1.52
77	OVERHEAD DR FRAME	METAL	B	INTACT	BROWN	12	GARAGE BAY	Positive	< LOD : 4.20	< LOD : 4.20	< LOD : 7.80
78	STAIRS	CONCRETE	LOWER	INTACT	GREY	13	STAIRS	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.44
79	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE DARK	13	STAIRS	Negative	< LOD : 0.27	< LOD : 0.27	< LOD : 2.06
80	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE LIGHT	13	STAIRS	Negative	< LOD : 0.06	< LOD : 0.06	< LOD : 2.01

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Site	Room	Results	PbC	PbL	PbK
81	WALL	CONCRETE	A	INTACT	BLUE LIGHT	13	STAIRS	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.30
82	WALL	CONCRETE	B	INTACT	BLUE LIGHT	13	STAIRS	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.91
83	WALL	CONCRETE	C	INTACT	BLUE LIGHT	13	STAIRS	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.08
84	WALL	CONCRETE	D	INTACT	BLUE LIGHT	13	STAIRS	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 2.09
85	DOOR FRAME	METAL	C	INTACT	BLUE	14	ADMIN OFFICE	Positive	2.90 ± 1.40	2.90 ± 1.40	< LOD : 7.95
86	DOOR FRAME	METAL	C	INTACT	RED	16	LATRINE	Positive	2.70 ± 1.50	2.70 ± 1.50	< LOD : 7.05
87	DOOR	WOOD	C	INTACT	RED	16	LATRINE	Positive	2.40 ± 0.80	2.40 ± 0.80	2.90 ± 1.90
88	WALL	CONCRETE	A	INTACT	WHITE	16	LATRINE	Negative	< LOD : 0.11	< LOD : 0.11	< LOD : 1.20
89	WALL	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	< LOD : 0.05	< LOD : 0.05	< LOD : 1.80
90	WALL	CONCRETE	D	INTACT	WHITE	16	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80
91	WALL SHOWER	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	< LOD : 0.07	< LOD : 0.07	< LOD : 1.92
92	WALL SHOWER	CONCRETE	C	INTACT	WHITE	16	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 0.90
93	WALL SHOWER FRAME	METAL	C	INTACT	WHITE	16	LATRINE	Positive	< LOD : 3.75	< LOD : 3.75	< LOD : 7.35
94	DOOR	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	2.50 ± 1.30	2.50 ± 1.30	< LOD : 6.00
95	DOOR FRAME	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	3.00 ± 1.50	3.00 ± 1.50	< LOD : 8.55
96	DOOR FRAME	METAL	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	3.00 ± 1.80	3.00 ± 1.80	< LOD : 7.35
97	DOOR	WOOD	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.70 ± 0.70	1.70 ± 0.70	< LOD : 2.40
98	WALL	BRICK	C	INTACT	BROWN	17	SUPPLY ROOM	Negative	< LOD : 0.08	< LOD : 0.08	< LOD : 2.30
99	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	< LOD : 0.04	< LOD : 0.04	< LOD : 2.09
100	WALL	BRICK	B	INTACT	WHITE	17	SUPPLY ROOM	Negative	< LOD : 0.05	< LOD : 0.05	< LOD : 2.30
101	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	< LOD : 0.05	< LOD : 0.05	< LOD : 1.30
102	WALL	BRICK	D	INTACT	WHITE	17	SUPPLY ROOM	Negative	< LOD : 0.18	< LOD : 0.18	< LOD : 1.96
103	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.20 ± 0.20	1.20 ± 0.20	< LOD : 1.35
104	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Negative	0.90 ± 0.10	0.90 ± 0.10	1.00 ± 0.60
105	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.30 ± 0.30	1.30 ± 0.30	< LOD : 1.50
106	CABINET	WOOD	A	INTACT	BLUE	18	VAULT	Negative	< LOD : 0.60	< LOD : 0.60	< LOD : 1.65
107	WALL	CONCRETE	B	INTACT	BLUE	18	VAULT	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.13
108	WALL	CONCRETE	C	INTACT	BLUE	18	VAULT	Negative	< LOD : 0.07	< LOD : 0.07	< LOD : 2.57
109	WALL	CONCRETE	D	INTACT	BLUE	18	VAULT	Negative	< LOD : 0.12	< LOD : 0.12	< LOD : 3.09
110	DOOR	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.40 ± 0.20	0.40 ± 0.20	< LOD : 2.92
111	DOOR FRAME	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.50 ± 0.30	0.50 ± 0.30	< LOD : 3.45
112	WALL	BRICK	A	INTACT	BLUE	19	CLASSROOM	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.15
113	WALL	BRICK	B	INTACT	BLUE	19	CLASSROOM	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 3.08
114	WALL	BRICK	C	INTACT	BLUE	19	CLASSROOM	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.33
115	WALL	BRICK	D	INTACT	BLUE	19	CLASSROOM	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.23
116	WALL	CONCRETE	A	INTACT	WHITE	20	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.65
117	WALL	CONCRETE	B	INTACT	WHITE	20	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.20
118	WALL	CONCRETE	C	INTACT	WHITE	20	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 1.80
119	WALL	CONCRETE	D	INTACT	WHITE	20	LATRINE	Negative	< LOD : 0.03	< LOD : 0.03	< LOD : 2.31
120	WALL STAIL	WOOD	D	INTACT	WHITE	20	LATRINE	Negative	< LOD : 0.13	< LOD : 0.13	< LOD : 1.50

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Site	Room	Results	PbC	PbL	PbK
121	FLOOR	CONCRETE	LOWER	INTACT	BLUE	20	LATRINE	Negative	< LOD: 0.05	< LOD: 0.05	< LOD: 2.10
122	FLOOR	CONCRETE	LOWER	INTACT	BLUE	21	UTIL	Negative	0.09 ± 0.05	0.09 ± 0.05	< LOD: 1.31
123	WALL	CONCRETE	A	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.20
124	WALL	CONCRETE	B	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.25
125	WALL	CONCRETE	C	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.95
126	WALL	CONCRETE	D	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.15
127	WALL	DRYWALL	A	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.76
128	WALL	DRYWALL	B	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.87
129	WALL	DRYWALL	C	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.84
130	WALL	DRYWALL	D	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.67
131	WALL	DRYWALL	A	INTACT	BEIGE	23	CONFERANC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
132	WALL	DRYWALL	B	INTACT	BEIGE	23	CONFERANC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.72
133	WALL	DRYWALL	C	INTACT	BEIGE	23	CONFERANC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.54
134	WALL	DRYWALL	D	INTACT	BEIGE	23	CONFERANC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
135	WALL	CONCRETE	A	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.20	< LOD: 0.20	< LOD: 1.98
136	WALL	CONCRETE	C	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.65
137	FLOOR	CONCRETE	LOWER	INTACT	GREY	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.29
138	OVERHEAD DR FRAME	METAL	A	FAIR	WHITE	25		Positive	4.10 ± 2.60	< LOD: 1.95	4.10 ± 2.60
139	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.14	< LOD: 0.14	< LOD: 2.71
140	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.35
141	WINDOW SILL	CONCRETE	B	FAIR	WHITE	25		Negative	< LOD: 0.15	< LOD: 0.15	< LOD: 1.20
142	DOWN SPOUTS	METAL	B	POOR	WHITE	25		Positive	< LOD: 9.60	< LOD: 7.95	< LOD: 9.60
143	IFR FAN BOX	WOOD	C	POOR	WHITE	25		Positive	3.90 ± 2.40	< LOD: 3.90	3.90 ± 2.40
144	OVERHEAD DR	METAL	A	INTACT	WHITE	25		Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.01
145	OVERHEAD DR FRAME	METAL	A	INTACT	WHITE	25		Positive	5.60 ± 3.40	< LOD: 4.65	5.60 ± 3.40
146	CURB STRIP	CONCRETE	B	INTACT	YELLOW	25		Positive	< LOD: 5.25	< LOD: 5.25	< LOD: 15.60
147	DOOR	METAL	C	INTACT	BEIGE	25		Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.75
148	DOOR FRAME	METAL	C	INTACT	BEIGE	25		Positive	5.90 ± 3.30	< LOD: 2.10	5.90 ± 3.30
149			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
150			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.50
151			CALIBRATE					Positive	1.20 ± 0.20	1.20 ± 0.20	1.10 ± 0.70

LEAD DUST

LEAD DUST SAMPLE RESULTS

Marshall Environmental Management, Inc.

Charles L. Marshall, Ph.D., C.I.H.
President

Established 1987

- Certified Industrial Hygiene
- Environmental Science
- Occupational Health & Safety
- Asbestos Management
- Toxic & Hazardous Waste
- Medical Hazards Management
- Research & Consultation

April 20, 2007

Ms. Angela Brunsmann
Land Protection Division
Oklahoma Department of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73102

RECEIVED
MAY 03 2007

LAND PROTECTION DIVISION
DEPT OF ENVIRONMENTAL QUALITY

RE: Cherokee Armory Surface Wipe Sampling for Lead in Dust.

Dear Angela:


As part of the Inspection at the Cherokee, Oklahoma Armory on March 22, 2007, Marshall Environmental Management, Inc. was requested to collect surface wipe samples for lead in dust at various locations in the Armory. Attachments to this correspondence include the Certified Lab Analysis for the surface wipe samples conducted by the EPA Accredited Environmental Lead Lab and the associated Chain of Custody form.

The results of the testing for floor wipes identified nine (9) out of the twenty-three samples taken on the floor of the Armory as exceeding the Army National Guard (ARNG) and Air National Guard (ANG) action level of 200 micrograms/ft² for floor surfaces. However the Firing Range was not tested and is assumed to be over the action level. The QC Blank was below detection limits.

The ARNG and ARG Guidelines for Converting Indoor Firing Ranges to Other Use advise that floor surfaces exceeding 200 micrograms/ft² be cleaned, so that post cleaning lead wipe testing is below this action level or that, at least, a 75% reduction is obtained between the pre-and post-cleanup levels. Appendix C of the guidelines provides recommendations for interpretation of these results.

If we can be of further assistance in this regard, please don't hesitate to give us a call.

Sincerely,
Marshall Environmental Management, Inc.


Charles L. Marshall, CIH
President

Attachments



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 148198
Date Received: 04/03/07
Received By: Teresa DeJarnett
Date Sampled:
Time Sampled:
Analyst: HS
Date of Report: 4/6/07

Client: Marshall Environmental Management, Inc.
1145 S.W. 74th Street, Ste. E-300
Oklahoma City, OK 73139

Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	K-DF-01	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
002	K-DF-02	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
003	K-DF-03	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
004	K-DF-04	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
005	K-RA-05	Wipe	Lead	527.45	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
006	K-SG-06	Wipe	Lead	196.67	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
007	K-ST-07	Wipe	Lead	343.08	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
008	K-GR-08	Wipe	Lead	409.09	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
009	K-RR-09	Wipe	Lead	103.66	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
010	K-FD-10	Wipe	Lead	509.90	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
011	K-GB-11	Wipe	Lead	94.21	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
012	K-BS-12	Wipe	Lead	643.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
013	K-MR-13	Wipe	Lead	227.27	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
014	K-AO-14	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
015	K-CD-15	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
016	K-SR-16	Wipe	Lead	239.12	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
017	K-VT-17	Wipe	Lead	1065.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
018	K-CR-18	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
019	K-LT-19	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	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.



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 148198
Date Received: 04/03/07
Received By: Teresa DeJarnett
Date Sampled:
Time Sampled:
Analyst: HS
Date of Report: 4/6/07

Client: Marshall Environmental Management, Inc.
1145 S.W. 74th Street, Ste. E-300
Oklahoma City, OK 73139

Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
020	K-CR-20	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
021	K-CO-21	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
022	K-HW-22	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
023	K-SP-23	Wipe	Lead	271.50	16.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
024	K-BB-24	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
025	K-BB-25	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100

Authorized Signature: Heather C Seal
Heather C. Seal, 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.

QAQC Results

QA ID: 4919

Test: Lead

Date: 4/5/2007

Matrix: Wipe

Lab Number: 148198

Approved By: Heather C. Seal

Date Approved 4/5/2007

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
FCV	225	247	275
CCV	225	248	275
ICV	22.5	22.5	27.5
RLVS	12.8	16.2	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 7	0.000	5369.000	5380.000	100.2	5760.000	107.3	6.8
MSW 9	0.000	5369.000	5463.000	101.8	5517.000	102.8	1.0
MSW 8	0.000	5369.000	5578.000	103.9	5185.000	96.6	7.3

Authorized Signature: _____

Heather C. Seal

Heather C. Seal, Analyst

Marshall Environmental Management, Inc.

1145 SW 74th Street Suite E-300

Oklahoma City, OK 73139

Email: marshenv@swbell.net

TAT Standard ☒ Rush

Phone: (405) 616-0401

Fax: (405) 972-0525

JOB ID: 2201

Project Name: Cherolene Armory

Location Address:

Invoice To:

Name: Cherolene Armory

Company: MEM

Contact Name: Brian Semrad

Company: N/A

Mailing Address:

Mailing Address: Cherolene Oklahoma

Phone No:

Contact Name: N/A

Fax No:

PO Number: N/A

Department: N/A

Email:

Sample 10510

Phone Results

Fax Results

Email Results

Date Sample Number Location/Description

Sample Type Volume Area

Analysis Requested

3/22/07 K-DF-01 Drill Floor 10ft away from exit Door to Outside

10510 10510 in

Pb

K-DF-02 Drill Floor Middle of Room

10510 10510 in

Pb

K-DF-03 Drill Floor 10ft away from IFR Stairs

10510 10510 in

Pb

K-DF-04 Drill Floor C

10510 10510 in

Pb

K-RA-05 Rental Area C

10510 10510 in

Pb

K-S6-06 Stage Area C

10510 10510 in

Pb

K-ST-07 Stage Storage C

10510 10510 in

Pb

K-GR-08 Guard Room C

10510 10510 in

Pb

K-RR-09 Restrooms C

10510 10510 in

Pb

K-FD-10 FDC Room C

10510 10510 in

Pb

K-GB-11 Garage Area C

10510 10510 in

Pb

K-B5-12 Battalion Supply C

10510 10510 in

Pb

K-MR-13 Maintenance Room C

10510 10510 in

Pb

K-AG-14 Admin Office C 2nd floor

10510 10510 in

Pb

3/22/07 K-CD-15 CDR's Office C 2nd floor

10510 10510 in

Pb

Instructions/Special Requirements:

Collected By (print): Brian Semrad

Date: 3/22/07

Collector's Signature:

Brian Semrad

Relinquished By:

Date: 4/3/07

Receive By:

Brian Semrad

Date: 4/3/07

Relinquished By:

Date: 4/15/07

Receive By:

Brian Semrad

Date: 4/15/07

Relinquished By:

Date: 4/15/07

Receive By:

Brian Semrad

Date: 4/15/07

Method of Shipment:

Condition Upon Reception: Acceptable Unacceptable

Marshall Environmental Management, Inc.

TAT

Standard

Rush

JOB ID: 2201

Project Name:

Cherokee Armory

1145 SW 74th Street Suite E-300

Phone:

(405) 616-0401

Fax:

(405) 972-0525

Email: marshenv@swbell.net

Location Address:

Company:

Mailing Address:

Phone No.:

Fax No.:

Email:

Name: Cherokee Armory

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

Location Address:

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

Name: Cherokee Armory

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

Company: N/A

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

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Company: N/A

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Contact Name: N/A

Company: N/A

Mailing Address: Cherokee Oklahoma

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PO Number: N/A

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

Department: N/A

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

Sample Number

Location/Description

Sample Type

Volume Area

Analysis Requested

Date

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

3/22/07

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-SR-16

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-VT-17

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-CR-18

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-LT-19

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-CR-20

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-CO-21

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-HV-22

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-SP-23

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-BB-24

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-BB-25

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

3/22/07

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-BB-25

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-BB-25

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

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Company: N/A

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Phone No.:

Fax No.:

Email:

K-BB-25

Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:

K-BB-25

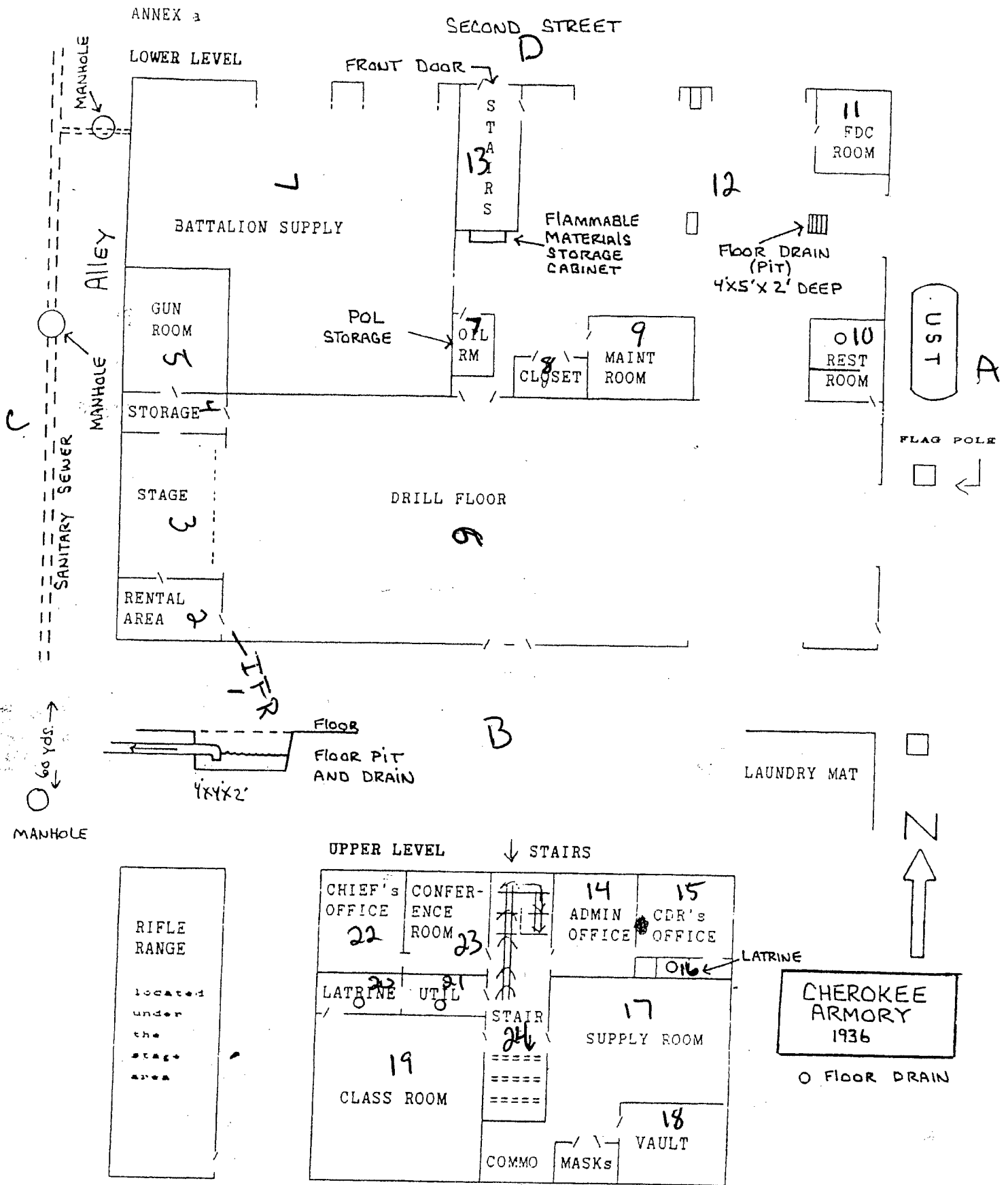
Company: N/A

Mailing Address: Cherokee Oklahoma

Phone No.:

Fax No.:

Email:



**LETTER REGARDING
LEAD DUST ON SHELVING**



STEVEN A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

BRAD HENRY
Governor

August 11, 2008

Terry Chapman
Cherokee High School
PO Box 325
Cherokee, OK 73728

RE: Removal of Shelves at Cherokee Armory

Dear Mr Chapman:

As we have discussed via phone call on August 7, 2008, Cherokee School plans to remove shelving from the Drill Floor of the Cherokee Armory on August 10, 2008.

Since these shelves have been stored for a period of time, they have accumulated dust. DEQ believes these shelves may contain lead contaminated dust. DEQ recommends the shelves be cleaned before they are taken from the armory property. Once all accumulated dust is removed, these shelves should be safe for use.

If you have any questions regarding this matter, please feel free to call me at (405) 702-5119.

Sincerely,

A handwritten signature in black ink that reads "Dustin Davidson". The signature is written in a cursive, flowing style.

Dustin Davidson
Environmental Programs Specialist I
Land Protection Division



DEQ SAMPLE RESULTS

Sample Number: 407472
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1430
Date Received: 10/13/2006
Date Completed: 11/22/2006
Collected By: JR
PWS ID:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-800-869-1400
Sample Receiving: (405) 702-1113
Report of Analysis by Metals

LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		56200.	MG/KG	11/06/06	6010
Lead (TCLP)		509000.	UG/L	11/06/06	6010
% Solids		99.84	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

EGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-1L

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

ANALYST 

Labs performing analysis on this Sample:
Metals

Sample Number: 407473
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1435
Date Received: 10/13/2006
Data Completed: 11/22/2006
Collected By: JR
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-800-869-1400
Sample Receiving: (405) 702-1113
Report of Analysis by Metals

LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		35300.	MG/KG	11/06/06	6010
Lead (TCLP)		521000.	UG/L	11/06/06	6010
% Solids		99.93	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

LEGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-2R

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*
ANALYST 

Labs performing analysis on this Sample:
Metals

Remarks:

^aIndicate the number of containers for each analysis in the proper column.

LEAD SCOPE OF WORK

April 2008

Lead Remediation at Cherokee Armory

08296



State of Oklahoma
Department of Central Services
Construction and Properties Division

This addendum forms a part of the contract document and modifies the original specifications as noted below. Please acknowledge receipt of this addendum in the space provided on the bid form. Failure to do so may subject bidders to disqualification.

Date of Issue: May 20, 2008

Addendum Number: One (1)

DCS Project Number: 08296

Project Name: Lead Remediation at Cherokee Armory

TO ALL BIDDERS OF CONCERN:

-
- Item# 1: Addendum corrections summary sheet (1 page)
 - Item# 2: Statement of Work, Remaining Building replacement sheet (1 page)
 - Item# 3: Site Specific Conditions replacement sheets (2 pages)
 - Item# 4: Door Measurement scope and key map replacement sheets (5 pages)
-

ALL OTHER DOCUMENTS, SPECIFICATIONS AND DRAWINGS ARE TO REMAIN THE SAME AND INTACT.

DAVID MORRISON 

John W. Morrison, AIA
State Construction Administrator

Lead Remediation in Cherokee Armory Addendum #1 Summary Sheet

Additions (Corrected Specific Site Conditions Page and Statement of Work Attached)

- Window lintels over external windows will be wet scraped and encapsulated with EPA approved elastomeric encapsulant.
- Stage Storage has lead-based paint on floor that will require abatement.
- Firing range fan box will have wood removed, properly disposed, and replaced with unpainted pressure treated lumber.
- Scheduling and Access section added to Specific Site Conditions Page.
- A 30' X 30' area outside firing range door on Drill Floor will require appropriate cleaning and confirmation sampling to the level of the Indoor Firing Range (40 ug/SF).
- Only the lower portion of the down spouts (down spout guards) requires lead-based paint abatement.
- Drill Floor Stairs abatement will extend 18" onto drill floor from bottom step.

Door Corrections (Corrected Door Scope of Work Attached)

- Door # 7 – The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 12 – No door or frame. Doorway does not require any abatement.
- Door # 13 – Remove all lead-based paint from shower frame. Once paint is removed, frame will be painted with a neutral colored primer.
- Door # 15 – Door and frame does not contain lead-based paint. No abatement is required.
- Door # 17 – No door to remove and replace. Instead remove all lead-based paint from door frame. Frame will be painted with a neutral colored primer.
- Door # 24 – Door will be removed. Lead-based paint will be removed from door frame and frame will be painted with neutral colored primer. Door will be replaced with pre-hung door unit.
- Door # 25 – No Door and frame does not contain lead based paint. No abatement is required.
- Doors # 26 and 27 - The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 28 – Correct door measurement is 6'11" X 3'
- Door # 29 – Correct door measurement is 7' X 3'
- Door # 32 – The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 33 – Correct door measurement is 7' X 3'
- Door # 34 – (Added Door) Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
- Door # 35 – (Added Door) Remove all lead-based paint from shower frame. Once paint is removed, paint frame with a neutral colored primer.

Corrections (Corrected Specific Site Conditions Page Attached)

- Latrine Shower frame is removed from Specific Site Conditions Page and addressed in the Door Scope of Work.

Remaining Building

- **Lead-based Paint Abatement (See Attachment 1)**

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

- Building surfaces with lead-based paint, with the exception of hand rails, firing range fan box, impact surfaces and friction surfaces, will be wet scraped and encapsulated with EPA approved elastomeric encapsulant;
 - Hand rails will have all lead-based paint removed and will then be painted with a neutral colored primer;
 - Firing Range fan box will have wood removed, properly disposed, and replaced with unpainted pressure treated lumber.
 - Deteriorated paint removed from building surface will be properly disposed;

- **Friction and Impact Surfaces**

- **Floors**

- Floors and stairs with lead-based paint will have lead-based paint removed. Once paint is visibly removed, floors will be HEPA vacuumed, wet washed, and sealed with KM-669 Acrylic Sealer or equivalent;

- **Doors and Frames**

- A Door-Scope of Work with map, door measurements, and specific details on abatement requirements for each door is attached (Attachment 1);
 - Doors will be replaced with pre-hung Steelcraft Commercial Replacement Door Units (Specifications Attached) or approved equal;
 - Doors shall be replaced with UL listed 90 minute standard metal, Steelcraft L18 and L16 Series Honeycomb Doors (Specifications Attached) or approved equal;
 - Contractor must submit product data for approval if different from doors or door frames in bid package;
 - Replacement doors and frames must meet all compliance and fire rating requirements mentioned in the attached specifications;

- **Exterior Doors**

- Exterior doors will be replaced with galvanized, 16 gage, honeycomb core insulated doors;
 - Hinges: As manufactured by Hagar or approved equal – Plain Bearing - Standard Weight 1279 NRP, 4 ½ X 4 ½ (Specifications Attached);
 - Threshold: As manufactured by National Guard Products or approved equal – 426E (Specifications Attached);
 - Weather Strip: As manufactured by National Guard Products or approved equal – 160VA (Specifications Attached);
 - Lever: As manufactured by Schlage or approved equal – D Series “Rhodes”, 626 finish, function ND60PD (Specification Attached);
 - Keying: All doors to be keyed alike;
 - Provide sealant per 07920 specification attached.

- **Interior Doors**

- Interior doors will be replaced with non-galvanized, 18 gage, honeycomb core insulated doors;
 - Hinges: As manufactured by Hagar or approved equal – Plain Bearing – Standard Weight 1279, 4 ½ X 4 ½ (Specification Attached);
 - Knob: As manufactured by Schlage or approved equal – A Series “Orbit”, 626 finish, function A10S (Specification Attached);
 - Provide sealant (caulking) per 07920 specification attached.

LEAD REMEDIATION SPECIFIC SITE CONDITIONS CHEROKEE ARMORY

These conditions must be reviewed and included in your bid in order for your firm to be considered responsive.

Scheduling and Access

The building will be split into two parts for the internal lead remediation of floors. The first section to be remediated will be the Stage Rooms, Indoor Firing Range, Drill Floor, and Restrooms. The second section to be remediated will be the remaining building. There will be a 10 day delay between the completion of the first section and the start of the second section. The lead-based paint abatement can occur at anytime. DEQ will require a schedule of planned activities with a timeline of start and finish dates to be reviewed and accepted by the City of Cherokee prior to start of work.

Rooms, other than indoor firing range (IFR), with lead contamination on floor
The Rental Area, Stage Area, Stage Storage, Gun Room, 30' X 30' area outside firing range door on Drill Floor, Downstairs Restrooms, FDC Room, Garage Area, Battalion Supply Room, Maintenance Room, 2nd Floor Supply Room and 2nd Floor Vault require appropriate cleaning and confirmation sampling to the level of the IFR. See Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges (40 ug/SF).

Lead Based Paint Contamination

1. Non-Friction and Non-Impact Surfaces - All overhead door frames, all window lintels, all down spout guards, Firing Range fan box, yellow column in Garage Bay, and white wall shower frame in latrine, contain lead based paint. All hand rails in the drill floor also contain lead-based paint. These surfaces will be abated appropriately. See Statement of Work and Lead-Based Paint Inspection Report for details.
2. Floors - Floors with lead-based paint consist of the Rental Area Floor, Stage Storage Floor, Gun Room Floor, Supply Room Floor, and Drill Floor Stairs. The lead-based paint on Drill Floor Stairs extends 18" onto Drill Floor from bottom step. These areas also contain high levels of lead dust and will be abated appropriately. See Statement of Work, Lead Wipe Results and Lead-Based Paint Inspection Report for details.
3. Doors and Frames - Doors and frames with lead-based paint consist of regular hinged doors and frames listed on the attached Cherokee Armory Door Measurements and Scope of Work (See Attachment 1). These surfaces will be abated appropriately. See Statement of Work, Door Scope of Work, and Lead-Based Paint Inspection Report for details.

General Housekeeping Requirements

All floors of the armory shall be HEPA vacuumed and mopped to ensure that any remaining lead contaminated dust has been removed. No sampling is required.

Soil Remediation Requirements

N/A – No soil contamination was found at this armory.

Location

The building address is:

Cherokee Armory
122 East 2nd Street
Cherokee, Oklahoma 73728

Available Utilities

Water: Yes

Electric: Yes

Cherokee Armory Door Measurements And Scope of Work

- Door measurements are listed as approximate Height X Width; Contractor to field verify.
 - All removed doors will be properly disposed.
 - All removed lead-based paint will be properly disposed.
 - Attached is a Cherokee armory Floor Plan with designated door numbers that correspond with the numbers on this Scope of Work.
-
1. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 2. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 3. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 78" X 30"
 4. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 4'
 5. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 6. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"
 7. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – ~~7' X 5'~~ (Pair of Doors) Each Door – 7' X 30"
 8. Vault door and frame does not contain lead-based paint. No abatement is required.

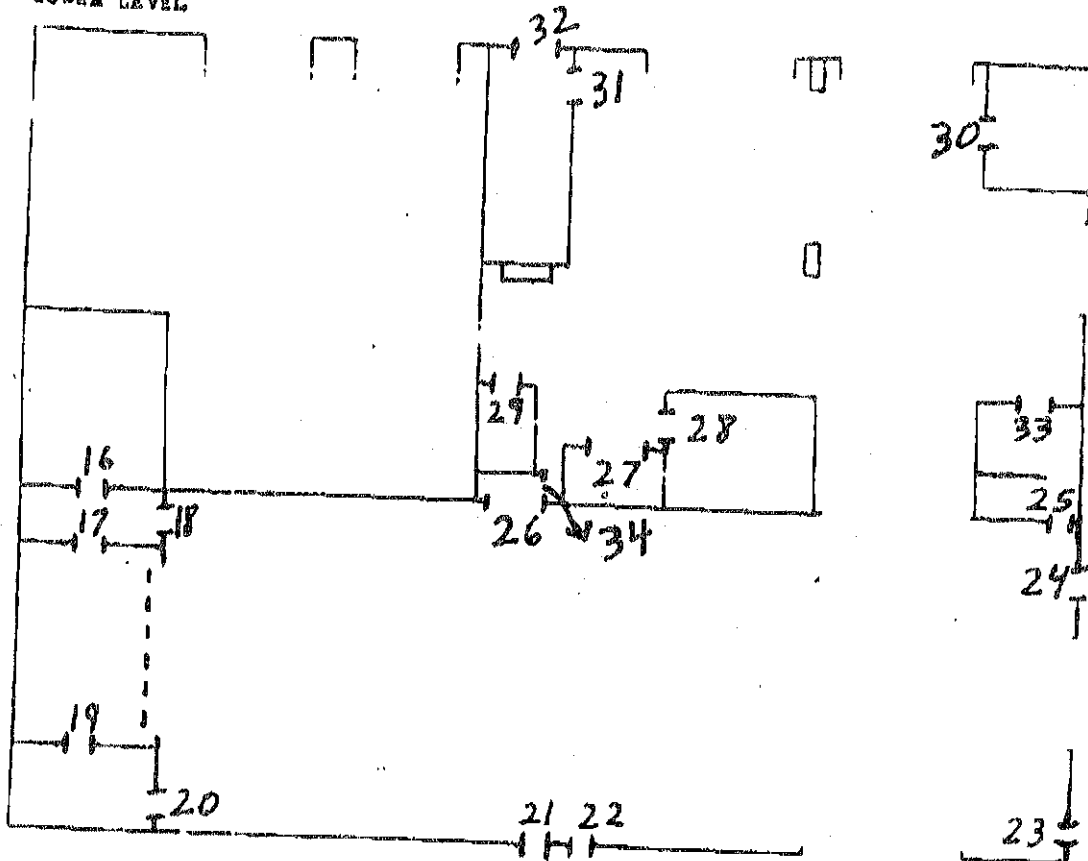
9. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
10. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
11. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
12. No door or frame. Doorway does not require any lead-based paint abatement.
~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
13. Remove all lead-based paint from shower frame. Once paint is removed, frame will be painted with a neutral colored primer. ~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
14. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
15. Door and frame does not contain lead-based paint. No abatement is required.
~~Remove indoor firing range door and frame and do not replace.~~
16. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
17. ~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
18. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
19. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'

20. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
21. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
22. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
23. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer. °
24. Remove door. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer. Replace door with pre-hung door unit.
Door Measurements 6' 8" X 2' 8"
25. Frame does not contain lead-based paint. No abatement is required. Remove door. Remove all lead-based paint from door frame. Replace door with pre hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 80" X 32"
26. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Doors will open into drill floor.
Door Measurements – 7' X 5' (Pair of Doors) Each Door – 7' X 30"
27. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 5' (Pair of Doors) Each Door – 7' X 30"
28. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" 6' 11" X 3'
29. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 83" 7' X 3'
30. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
31. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"

32. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – ~~7' X 5'~~ (Pair of Doors) Each Door – 7' X 30"
33. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" 7' X 3'
34. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
35. Remove all lead-based paint from shower frame. Once paint is removed, paint frame with a neutral colored primer.

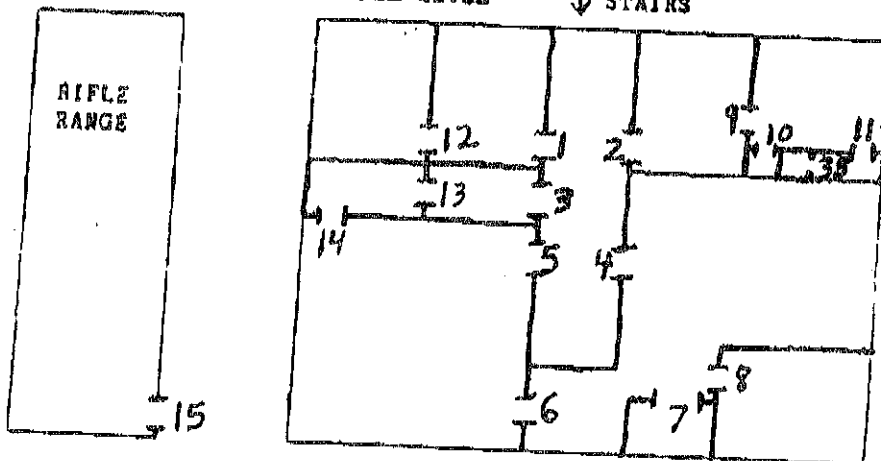
SECOND STREET

LOWER LEVEL



UPPER LEVEL

↓ STAIRS



CHEROKEE
ARMORY
1936

STATEMENT OF WORK

For

Remediation of Lead Contamination at Cherokee Armory

The Oklahoma Department of Environmental Quality (DEQ) is requesting bids from qualified bidders for remediation services at former National Guard armories in Oklahoma. This statement of work (SOW) describes the cleanup of lead contamination associated with indoor firing ranges (IFRs) and lead-based paint at former National Guard armories. 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 site visit and walk through will be held to give a better understanding of the site. Site specific conditions and sample results are attached for review (**Attachment 1**).

SPECIAL PROVISIONS:

1. Work Schedule: The Contractor shall schedule all work to be complete within thirty (30) calendar days after date of the written "Notice to Proceed".
 - a. 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 State and Federal regulations.
 - b. The contractor shall perform this work in such a manner as to cause a minimum of interruption to normal work being performed in the contract area.
 - c. Coordination of work areas shall be scheduled with DEQ.
 - d. Disposal of Removed Materials: All materials removed by the Contractor under this contract shall be disposed of in accordance with State and Federal regulations. DEQ will sign as generator, if necessary.

CONTRACTOR SHALL:

- Attend mandatory pre-bid meeting and site walk through;
- Posses a current lead-based paint license and have a certified lead-based paint supervisor in order to perform lead-based paint abatement;
- Send samples to a EPA accredited laboratory for analysis;
- Read Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges, November 3, 2006, Departments of the Army and Air Force, National Guard Bureau (**Attachment 4**), 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 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;
- Name of independent third-party firm that will be collecting the confirmation lead wipe samples;

LEAD REMEDIATION INSTRUCTIONS

Indoor Firing Range (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 being present;
 - When inside IFR wear appropriate personal protective equipment including full-face air purifying respirator with HEPA cartridges (See **Attachment 2**);
- Pre-remediation Removal
 - Decontaminate shelving, equipment, etc. and remove from IFR;
 - Decontaminate items determined by DEQ to be trash and dispose as non-hazardous waste;
 - Items such as acoustical tiles, carpet, or other porous materials shall be HEPA vacuumed, washed, and sampled for TCLP. Acoustical tile, if present, will have 3 – five part composite samples taken. If samples pass TCLP then properly dispose. If samples fail TCLP, crumble or shred materials, mix materials in concrete, sample concrete for TCLP, and properly dispose.
- Remediation
 - Containerize and remove from IFR, lead contaminated sand;
 - HEPA vacuum and wet wash walls, floor, ceiling, vent fan, etc.
 - Dispose lead contaminated sand, lead dust, wash water, and appropriate cleaning materials as hazardous waste or as appropriate;
- Post-remediation (See Confirmation Sampling Instructions – **Attachment 3**)
 - Perform independent third-party post remediation wipe sampling 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;
 - 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;
 - After surfaces are sealed, perform independent third-party 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;

Remaining Building

- **Lead-based Paint Abatement (See Attachment 1)**

Non-Friction and Non-Impact Surfaces

- Building surfaces with lead-based paint, with the exception of hand rails, impact surfaces and friction surfaces, will be wet scraped and encapsulated with EPA approved elastomeric encapsulant;
- Hand rails will have all lead-based paint removed and will then be painted with a neutral colored primer;
- Deteriorated paint removed from building surface will be properly disposed;

Friction and Impact Surfaces

Floors

- Floors and stairs with lead-based paint will have lead-based paint removed. Once paint is visibly removed, floors will be HEPA vacuumed, wet washed, and sealed with KM-669 Acrylic Sealer or equivalent;

Doors and Frames

- A Door-Scope of Work with map, door measurements, and specific details on abatement requirements for each door is attached (Attachment 1);
- Doors will be replaced with pre-hung Steelcraft Commercial Replacement Door Units (Specifications Attached) or approved equal;
- Doors shall be replaced with UL listed 90 minute standard metal, Steelcraft L18 and L16 Series Honeycomb Doors (Specifications Attached) or approved equal;
- Contractor must submit product data for approval if different from doors or door frames in bid package;
- Replacement doors and frames must meet all compliance and fire rating requirements mentioned in the attached specifications;

Exterior Doors

- Exterior doors will be replaced with galvanized, 16 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing - Standard Weight 1279 NRP, 4 ½ X 4 ½ (Specifications Attached);
- Threshold: As manufactured by National Guard Products or approved equal – 426E (Specifications Attached);
- Weather Strip: As manufactured by National Guard Products or approved equal – 160VA (Specifications Attached);
- Lever: As manufactured by Schlage or approved equal – D Series “Rhodes”, 626 finish, function ND60PD (Specification Attached);
- Keying: All doors to be keyed alike;
- Provide sealant per 07920 specification attached.

Interior Doors

- Interior doors will be replaced with non-galvanized, 18 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing – Standard Weight 1279, 4 ½ X 4 ½ (Specification Attached);
- Knob: As manufactured by Schlage or approved equal – A Series “Orbit”, 626 finish, function A10S (Specification Attached);
- Provide sealant (caulking) per 07920 specification attached.

Clearance Sampling

- Once lead-based paint abatement is complete and after room floors are cleaned, third party post abatement clearance wipe sampling will be performed in these areas;
- If samples do not meet EPA and HUD standards for lead dust (40ug/SF for floors), areas shall be re-cleaned and re-sampled;

• **Lead Dust Remediation (See Attachment 1)**

- HEPA vacuum and wet wash room floors where lead contamination has been found;
- Remove dust from all equipment, shelving, trash, etc, and remove these items from room before remediation begins;...
- Dispose any materials, determined by the DEQ to be trash, as non-hazardous waste;
- Perform independent third-party post remediation wipe sampling to confirm that room floors with lead contamination have been appropriately remediated to 40 micrograms per square foot (ug/SF);
- Areas above 40 ug/SF shall be re-cleaned and re-tested until results are at or below 40 ug/SF;
- Wash water, lead dust, and appropriate cleaning materials shall be disposed as appropriate;

• **General Housekeeping**

- Perform general housekeeping, which includes HEPA vacuuming and moping the floors of the entire armory;
- Wash water, dust, and appropriate cleaning materials shall be disposed as appropriate;

Confirmation Sampling

- The contractor shall be responsible for acquiring independent third-party sampling. This shall be included in the contractors base bid;
- All confirmation and clearance wipe sampling done outside the indoor firing range will be performed after all initial abatement, remediation, and cleaning is complete;
- See Confirmation Sampling Instructions (**Attachment 3**);

FINAL REPORT

- Write final report including: summary of work, post-remediation sampling analytical data, waste manifests (if any), and photo documentation of work;

OWNER REPRESENTATIVE

Owner's Representative:

Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102
(405) 702-5119 (Office)
(405) 702-5101 (Fax)
E-Mail: Dustin.Davidson@deq.state.ok.us

Heather Mallory
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102
(405) 702-5138 (Office)
(405) 702-5101 (Fax)
E-Mail: Heather.Mallory@deq.state.ok.us

ATTACHMENT 1

Site Information

Specific Site Conditions

Sample Results

Door Scope of Work Including Measurements and Specifications

SPECIFIC SITE CONDITIONS

2
282

LEAD REMEDIATION SPECIFIC SITE CONDITIONS CHEROKEE ARMORY

These conditions must be reviewed and included in your bid in order for your firm to be considered responsive.

Rooms, other than indoor firing range (IFR), with documented lead contamination on floor

The Rental Area, Stage Area, Stage Storage, Gun Room, Downstairs Restrooms, FDC Room, Garage Area, Battalion Supply Room, Maintenance Room, 2nd Floor Supply Room and 2nd Floor Vault require appropriate cleaning and confirmation sampling to the level of the IFR. See Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges (40 ug/SF).

Lead Based Paint Contamination

1. Non-Friction and Non-Impact Surfaces - All overhead door frames, all down spouts, IFR fan box, yellow column in Garage Bay, and white wall shower frame in latrine, contain lead based paint. All hand rails in the drill floor also contain lead-based paint. These surfaces will be abated appropriately. See Statement of Work and Lead-Based Paint Inspection Report for details.
2. Floors - Floors with lead-based paint consist of the Rental Area Floor, Gun Room Floor, Supply Room Floor, and Drill Floor Stairs. These areas also contain high levels of lead dust and will be abated appropriately. See Statement of Work, Lead Wipe Results and Lead-Based Paint Inspection Report for details.
3. Doors and Frames - Doors and frames with lead-based paint consist of regular hinged doors and frames listed on the attached Cherokee Armory Door Measurements and Scope of Work (See Attachment 1). These surfaces will be abated appropriately. See Statement of Work, Door Scope of Work, and Lead-Based Paint Inspection Report for details.

General Housekeeping Requirements

All floors of the armory shall be HEPA vacuumed and mopped to ensure that any remaining lead contaminated dust has been removed. No sampling is required.

Soil Remediation Requirements

N/A - No soil contamination was found at this armory.

Location

The building address is:

Cherokee Armory
122 East 2nd Street
Cherokee, Oklahoma 73728

Available Utilities

Water: Yes

Electric: Yes



2

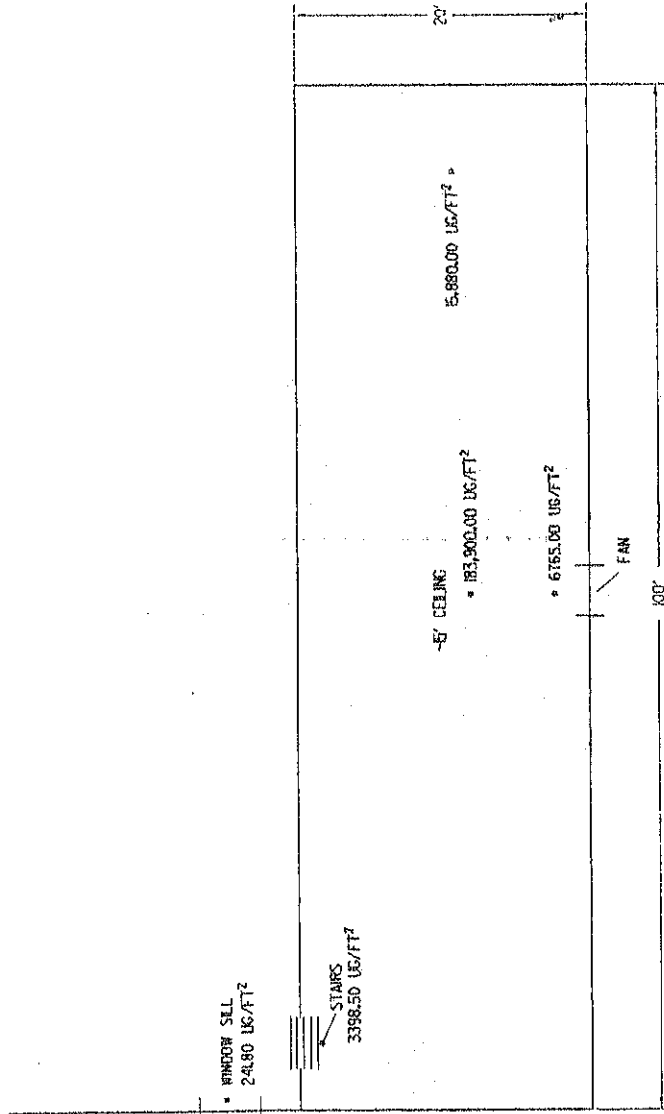
1. **Identify the main idea of the passage.**
 2. **Identify the supporting details.**
 3. **Identify the author's purpose.**
 4. **Identify the author's tone.**
 5. **Identify the author's point of view.**
 6. **Identify the author's bias.**
 7. **Identify the author's audience.**
 8. **Identify the author's style.**
 9. **Identify the author's structure.**
 10. **Identify the author's language.**

13

Conclusions

Abstract

Supplement 5 Approved by C



SAMPLE RESULTS

20

SUMMARY OF LEAD WIPE RESULTS

CHEROKEE ARMORY

ROOM	RESULTS
RENTAL AREA	527.45 ug/sq. Ft.
STAGE AREA	196.67 ug/sq. Ft.
STAGE STORAGE	343.08 ug/sq. Ft.
GUN ROOM	409.09 ug/sq. Ft.
RESTROOMS	103.66 ug/sq. Ft.
FDC ROOM	509.90 ug/sq. Ft.
GARAGE AREA	94.21 ug/sq. Ft.
BATTALION SUPPLY ROOM	643.71 ug/sq. Ft.
MAINTENANCE ROOM	227.27 ug/sq. Ft.
SUPPLY ROOM	239.12 ug/sq. Ft.
VAULT	1065.71 ug/sq. Ft.



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

Environmental Chemistry Analysis Report

Quantem Set ID: 148198
Date Received: 04/03/07
Received By: Teresa DeJarnett
Date Sampled:
Time Sampled:
Analyst: HS
Date of Report: 4/6/07

Client: Marshall Environmental Management, Inc.
1145 S.W. 74th Street, Ste. E-300
Oklahoma City, OK 73139

Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	K-DF-01	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
002	K-DF-02	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
003	K-DF-03	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
004	K-DF-04	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
005	K-RA-05	Wipe	Lead	527.45	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
006	K-SG-06	Wipe	Lead	196.67	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
007	K-ST-07	Wipe	Lead	343.08	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
008	K-GR-08	Wipe	Lead	409.09	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
009	K-RR-09	Wipe	Lead	103.66	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
010	K-FD-10	Wipe	Lead	509.90	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
011	K-GB-11	Wipe	Lead	94.21	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
012	K-BS-12	Wipe	Lead	643.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
013	K-MR-13	Wipe	Lead	227.27	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
014	K-AO-14	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
015	K-CD-15	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
016	K-SR-16	Wipe	Lead	239.12	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
017	K-VT-17	Wipe	Lead	1065.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
018	K-CR-18	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
019	K-LT-19	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	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 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.



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

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QuantEM Set ID: 148198
Date Received: 04/03/07
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Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
020	K-CR-20	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
021	K-CO-21	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
022	K-HW-22	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
023	K-SP-23	Wipe	Lead	271.50	16.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
024	K-BB-24	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
025	K-BB-25	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100

Authorized Signature: Heather C. Seal
Heather C. Seal, Analyst

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

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

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

QAQC Results

QA ID: 4919

Test: Lead

Date: 4/5/2007

Matrix: Wipe

Lab Number: 148198

Approved By: Heather C. Seal

Date Approved: 4/5/2007

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
FCV	225	247	275
CCV	225	248	275
ICV	22.5	22.5	27.5
RLVS	12.8	16.2	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 7	0.000	5369.000	5380.000	100.2	5760.000	107.3	6.8
MSW 9	0.000	5369.000	5463.000	101.8	5517.000	102.8	1.0
MSW 8	0.000	5369.000	5578.000	103.9	5185.000	96.6	7.3

Authorized Signature: Heather C. Seal

Heather C. Seal, Analyst

Marshall Environmental Management, Inc. 1145 SW 74th Street Suite E-300 Oklahoma City, OK 73139 Email: marshenv@swbell.net		TAT Standard Rush (405) 616-0401 (405) 972-0525		BID: 230 Project Name: Cherokee Armory	
Location Address:				Invoice To:	
Name: Cherokee Armory		Company: MEM		Contact Name: Brire Semrad	
Company: N/A		Mailing Address:		Phone Results	
Mailing Address: Cherokee Oklahoma		Phone No:		Fax Results	
Contact Name: N/A		Fax No:		Email Results	
PO Number: N/A		Department: N/A		Analysis Requested	
Date	Sample Number	Location/Description	Sample Type	Volume Area	Analysis Requested
3/22/07	K-DF-01	Drill Floor 10ft away from exit Door to Outside	Wipe	16 sq. in	Pb
"	K-DF-02	Drill Floor Middle of Room	Wipe	16 sq. in	Pb
"	K-DF-03	Drill Floor 10ft away from IFR Stairs	Wipe	16 sq. in	Pb
"	K-DF-04	Drill Floor C	Wipe	48 sq. in	Pb
"	K-RA-05	Rental Area C	Wipe	48 sq. in	Pb
"	K-SG-06	Stage Area C	Wipe	48 sq. in	Pb
"	K-ST-07	Steel Storage C	Wipe	48 sq. in	Pb
"	K-GRO-8	Gun Room C	Wipe	48 sq. in	Pb
"	K-RR-09	Restrooms C	Wipe	48 sq. in	Pb
"	K-FD-10	FDC Room C	Wipe	48 sq. in	Pb
"	K-GB-11	Gun Area C	Wipe	48 sq. in	Pb
"	K-B-12	Battalion Supply C	Wipe	48 sq. in	Pb
"	K-MR-13	Maintenance Room C	Wipe	48 sq. in	Pb
"	K-AG-14	Admin Office C 2nd floor	Wipe	48 sq. in	Pb
3/22/07	K-CD-15	CDR's Office C 2nd floor	Wipe	48 sq. in	Pb
Instructions/Special Requirements:					
Collected By (print): Brire Semrad	Date: 3/22/07 Time: 17:00	Collector's Signature:	Date: 4/13/07 Time: 4:15 PM		
Relinquished By:	Date: 4/13/07 Time: 16:15	Receive By:	Date: _____ Time: _____		
Relinquished By:	Date: _____ Time: _____	Receive By:	Date: _____ Time: _____		
Relinquished By:	Date: _____ Time: _____	Receive By:	Date: _____ Time: _____		
Method of Shipment:		Condition Upon Receipt:		Acceptable _____ Unacceptable _____	

UNITED STATES

Marshall Environmental Management, Inc. 1145 SW 74th Street Suite E-300 Oklahoma City, OK 73139 Email: marshenv@swbell.net		TAT Standard Rush Phone: (405) 616-0401 Fax: (405) 972-0525	BID: 2201 Project Name: Cherokee Armory	
Location Address:		Invoice To:		
Name: Cherokee Armory		Company: NEM		
Company: N/A		Contact Name: Brice Semrad		
Mailing Address: Cherokee Oklahoma		Mailing Address:		
Contact Name: N/A		Phone No: 502 220		
PO Number: N/A		Fax No: 502 220		
Department: N/A		Email:		
Sample Number		Sample Type		
Date		Volume		
Location/Description		Area		
Analysis Requested				
3/22/07	K-SR-16 Supply Room C 2nd floor	Wipe	48 sq.in	Pb
"	K-UT-17 Vault C 2nd floor	Wipe	48 sq.in	Pb
"	K-CR-18 Classroom C 2nd floor	Wipe	48 sq.in	Pb
"	K-LT-19 Labrine / Utility C 2nd floor	Wipe	48 sq.in	Pb
"	K-CR-20 Chief's Office C 2nd floor	Wipe	48 sq.in	Pb
"	K-CO-21 Conference Room C 2nd floor	Wipe	48 sq.in	Pb
"	K-HJ-22 Hallway C 2nd floor	Wipe	48 sq.in	Pb
"	K-SP-23 OACD	Wipe	48 sq.in	Pb
"	K-BB-24 Blank	Wipe	48 sq.in	Pb
3/22/07	K-BB-25 Blank	Wipe	16 sq.in	Pb
Instructions/Special Requirements:				
Collected By (print):	Brice Semrad	Collector's Signature:	Brice Semrad	Date: 4/3/07
Relinquished By:	Brice Semrad	Receive By:	Brice Semrad	Time: 4:15 PM
Relinquished By:		Receive By:		Date:
Relinquished By:		Receive By:		Time:
Relinquished By:		Receive By:		Date:
Relinquished By:		Receive By:		Time:
Method of Shipment:		Condition Upon Reception: Acceptable Unacceptable		

**LEAD-BASED PAINT INSPECTION REPORT
FOR**

Cherokee Armory

Cherokee, Oklahoma

March 22, 2007

Services Provided for:

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

Certified Industrial Hygiene Services Provided By:

Marshall Environmental Management, Inc.
1145 SW 74th Street, E-300
Oklahoma City, OK 73139
(405) 616-0401

Executive Summary:

Sampling Methodology:

Lead based paint (LBP) testing was done to determine lead levels on painted structural building components at the Cherokee Armory. Each room of the Building was numbered on a floor plan that is provided in the Appendix. The front side of the Armory Building was marked "Side A" and going in a clockwise motion the remaining sides were categorized as Sides B, C, and D, respectively.

The building is a two-story structure constructed on a concrete slab foundation with an asphalt composite flat roof over the Office/Supply Areas and a metal pitched roof over the Drill Floor. Brick covers the sides of the Building. All of the windows are metal. Throughout the Building were concrete floors and windowsills. The roof was constructed with steel rafters and concrete decking with asphalt roof / metal.

The findings from the XRF testing indicated that there is lead-based paint in amounts greater than the EPA Standard for XRF readings or equal to 1.0 mg/cm² located on the Building components.

The following locations contain lead-based paint:

1. Interior and Exterior Doors and Door Frames
2. Overhead Doors and Frames the Building
3. Hand Rails/Stairs in the Drill Floor to the Stage
4. Garage Bay yellow columns in the area
5. Shower room door frame
6. IFR exhaust fan box
7. Outside Down Spouts
8. Outside Yellow curb strip

Please note that the following items were not tested in this inspection:

1. Structural Steel in the Drill Floor do to inaccessibility
2. Non-painted floors
3. Non-painted wood panels
4. Non-fixed Items on the property

CERTIFICATES

Department of Environmental Quality

MARSHALL ENVIRONMENTAL MANAGEMENT

This is to Certify That

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

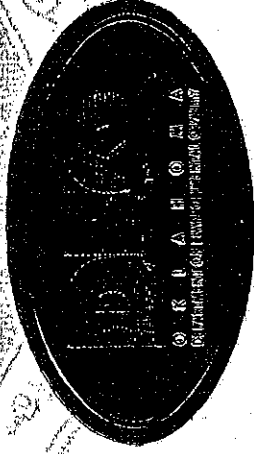
FIRM

Certification # OKHEM11160

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

Issued on: 4/11/2007

Expires on: 3/31/2008



A. Todd

Division Director
Air Quality Division

Randall L. Ward

Environmental Programs Manager
Air Quality Division

ROOM LEGEND

<u>Site</u>	<u>Current Use</u>
1	Indoor Firing Range (IFR)
2	Rental Area on Stage
3	Stage
4	Stage Storage
5	Gun Room
6	Drill Floor
7	Battalion Supply
8	Closet
9	Maint Room
10	Restroom
11	FDC Room
12	Garage Bay
13	Stairs
14	Admin Office
15	CDR's Office
16	CDR's Latrine
17	Supply Room
18	Vault
19	Classroom
20	Latrine
21	Utility
22	Chief's Office
23	Conference Room
24	Upstairs Hallway
Blank	Outside of Building

SITE MAP

XRF READINGS

Cherokee Armory

LINE	COMPONENT	SUBSTRATE	SIZE	CONDITION	Color	Size	Room	Remarks	PHC	DI	PA
1									10.09 ± 0.00	1.54 ± 0.00	0.00 ± 0.00
2			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
3			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.70 ± 0.40
4			CALIBRATE					Positive	1.20 ± 0.10	1.20 ± 0.10	0.90 ± 0.50
5	WALL	BRICK	A	INTACT	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.32
6	WALL	BRICK	B	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.15	<LOD:0.15	<LOD:2.53
7	WALL	BRICK	C	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.26
8	WALL	BRICK	D	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.54
9	DOOR	WOOD	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.60 ± 1.20	2.60 ± 1.20	<LOD:6.15
10	DOOR FRAME	METAL	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.80 ± 1.30	2.80 ± 1.30	<LOD:7.65
11	FLOOR	CONCRETE	LOWER	POOR	GREEN	2	RENTAL AREA	Positive	2.30 ± 1.00	2.30 ± 1.00	<LOD:6.90
12	WALL	BRICK	B	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.09
13	WALL	BRICK	C	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.30
14	WALL	BRICK	D	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.60
15	WALL	BRICK	C	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.06
16	WALL	BRICK	D	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.41
17	WALL	BRICK	A	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.95
18	DOOR	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	4.10 ± 2.70	4.10 ± 2.70	<LOD:8.85
19	DOOR FRAME	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	3.30 ± 2.26	3.30 ± 2.26	<LOD:12.38
20	DOOR FRAME	METAL	B	INTACT	RED	5	GUN ROOM	Positive	4.50 ± 2.70	4.50 ± 2.70	<LOD:13.35
21	DOOR	WOOD	B	INTACT	RED	5	GUN ROOM	Positive	3.30 ± 2.09	3.30 ± 2.00	<LOD:9.60
22	WALL	BRICK	A	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.43
23	WALL	BRICK	B	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.09	<LOD:0.09	<LOD:2.23
24	WALL	BRICK	C	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.04	<LOD:0.04	<LOD:1.35
25	WALL	BRICK	D	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.38
26	FLOOR	CONCRETE	LOWER	FAIR	BLUE	5	GUN ROOM	Positive	1.70 ± 0.60	1.70 ± 0.60	<LOD:3.75
27	FLOOR	CONCRETE	LOWER	POOR	GREEN	5	GUN ROOM	Positive	1.60 ± 0.60	1.60 ± 0.60	<LOD:3.75
28	HAND RAIL	METAL	C	FAIR	YELLOW	6	DRILL FLOOR	Positive	4.00 ± 2.40	4.00 ± 2.40	<LOD:12.60
29	STAIRS	CONCRETE	C	INTACT	BROWN	6	DRILL FLOOR	Positive	1.20 ± 0.20	1.20 ± 0.20	<LOD:1.35
30	WALL	BRICK	D	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.31	<LOD:0.31	<LOD:2.64
31	WALL	BRICK	D	INTACT	WHITE	6	DRILL FLOOR	Negative	<LOD:1.00	<LOD:1.00	<LOD:1.00
32	WALL	BRICK	A	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.26	<LOD:0.26	<LOD:2.34
33	WALL	BRICK	B	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.55
34	WALL	BRICK	C	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.29
35	DOOR	WOOD	D	INTACT	BROWN	6	DRILL FLOOR	Positive	1.60 ± 0.30	1.60 ± 0.30	1.80 ± 0.70
36	DOOR FRAME	METAL	D	INTACT	BROWN	6	DRILL FLOOR	Positive	3.20 ± 1.40	3.20 ± 1.40	<LOD:4.88
37	FLOOR STRIP	WOOD	LOWER	INTACT	BLACK	6	DRILL FLOOR	Negative	<LOD:0.04	<LOD:0.04	<LOD:1.99
38	FLOOR STRIP	WOOD	LOWER	INTACT	RED	6	DRILL FLOOR	Negative	<LOD:0.06	<LOD:0.06	<LOD:1.69
39	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD:0.10	<LOD:0.10	<LOD:2.66
40	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD:1.04	<LOD:0.06	<LOD:1.04

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Src	Room	Results	PRC	PHI	PHK
41	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 2.54
42	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD: 0.09	<LOD: 0.09	<LOD: 2.55
43	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.03	<LOD: 0.03	<LOD: 2.66
44	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.05
45	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 2.63
46	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.20	<LOD: 0.20	<LOD: 2.21
47	WALL	WOOD	A	INTACT	WHITE	8	CLOSET	Negative	<LOD: 0.10	<LOD: 0.10	<LOD: 1.64
48	WALL	BRICK	B	INTACT	WHITE	8	CLOSET	Negative	<LOD: 0.08	<LOD: 0.08	<LOD: 2.29
49	WALL	BRICK	A	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.05	<LOD: 0.05	<LOD: 1.63
50	WALL	BRICK	B	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.21
51	WALL	BRICK	C	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.22	<LOD: 0.22	<LOD: 2.48
52	WALL	BRICK	D	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.35
53	FLOOR	CONCRETE	LOWER	POOR	BLUE	9	MAINTENANCE RM	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.37
54	DOOR	WOOD	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	2.40 ± 1.40	2.40 ± 1.40	<LOD: 4.65
55	DOOR FRAME	METAL	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	3.00 ± 1.58	3.00 ± 1.58	<LOD: 7.80
56	WALL	BRICK	A	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 2.20
57	WALL	BRICK	B	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.39	<LOD: 0.39	<LOD: 2.17
58	WALL	BRICK	C	INTACT	WHITE	10	RESTROOM	Negative	0.11 ± 0.06	0.11 ± 0.06	<LOD: 1.30
59	WALL	BRICK	D	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.05	<LOD: 0.05	<LOD: 2.17
60	FLOOR	CONCRETE	LOWER	POOR	BROWN	10	RESTROOM	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.63
61	FLOOR	CONCRETE	LOWER	POOR	BLUE	11	FDC ROOM	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 2.11
62	WALL	WALL BOARD	A	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.28	<LOD: 0.28	<LOD: 1.40
63	WALL	WALL BOARD	A	INTACT	WHITE	11	FDC ROOM	Negative	<LOD: 0.12	<LOD: 0.12	<LOD: 1.48
64	WALL	WALL BOARD	B	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.24	<LOD: 0.24	<LOD: 1.50
65	WALL	WALL BOARD	C	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.20	<LOD: 0.20	<LOD: 1.40
66	WALL	WALL BOARD	D	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.26	<LOD: 0.26	<LOD: 1.55
67	DOOR	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.10 ± 0.88	2.10 ± 0.88	3.18 ± 1.90
68	DOOR FRAME	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.60 ± 0.78	2.60 ± 0.78	<LOD: 2.70
69	WALL	METAL	C	INTACT	BLUE	11	FDC ROOM	Positive	<LOD: 3.75	<LOD: 3.75	<LOD: 12.75
70	WALL	BRICK	A	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 1.29	<LOD: 1.29	<LOD: 1.29
71	WALL	BRICK	B	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 1.34
72	WALL	BRICK	C	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 1.15	<LOD: 0.30	<LOD: 1.15
73	WALL	BRICK	D	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 0.21	<LOD: 0.21	<LOD: 2.25
74	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	2.70 ± 1.50	2.70 ± 1.50	<LOD: 10.95
75	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	1.28 ± 0.10	1.28 ± 0.10	1.58 ± 0.90
76	OVERHEAD DOOR	WOOD	B	INTACT	WHITE	12	GARAGE BAY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 1.52
77	OVERHEAD DR FRAME	METAL	B	INTACT	BROWN	12	GARAGE BAY	Positive	<LOD: 4.20	<LOD: 4.20	<LOD: 7.80
78	STAIRS	CONCRETE	LOWER	INTACT	GREY	13	STAIRS	Negative	<LOD: 0.03	<LOD: 0.03	<LOD: 2.44
79	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE DARK	13	STAIRS	Negative	<LOD: 0.27	<LOD: 0.27	<LOD: 2.06
80	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.01

Cherokee Armory

Item #	Description	Substrate	Size	Condition	Color	Site	Room	Results	PAC	HT	PAC
81	WALL	CONCRETE	A	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
82	WALL	CONCRETE	B	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.91
83	WALL	CONCRETE	C	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.08
84	WALL	CONCRETE	D	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.09
85	DOOR FRAME	METAL	C	INTACT	BLUE	14	ADMIN OFFICE	Positive	2.90 ± 1.40	<LOD:7.95	<LOD:7.95
86	DOOR FRAME	METAL	C	INTACT	RED	16	LATRINE	Positive	2.70 ± 1.50	<LOD:7.95	<LOD:7.95
87	DOOR	WOOD	C	INTACT	RED	16	LATRINE	Positive	2.40 ± 0.80	2.90 ± 1.90	2.90 ± 1.90
88	WALL	CONCRETE	A	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.11	<LOD:0.11	<LOD:1.20
89	WALL	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.80
90	WALL	CONCRETE	D	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
91	WALL SHOWER	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.07	<LOD:0.07	<LOD:1.92
92	WALL SHOWER	CONCRETE	C	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:0.90
93	WALL SHOWER FRAME	METAL	C	INTACT	WHITE	16	LATRINE	Positive	<LOD:3.75	<LOD:3.75	<LOD:7.55
94	DOOR	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	2.50 ± 1.30	2.50 ± 1.30	<LOD:6.60
95	DOOR FRAME	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	3.00 ± 1.50	3.00 ± 1.50	<LOD:8.55
96	DOOR FRAME	METAL	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	3.00 ± 1.80	3.00 ± 1.80	<LOD:7.55
97	DOOR	WOOD	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.70 ± 0.70	1.70 ± 0.70	<LOD:2.40
98	WALL	BRICK	C	INTACT	BROWN	17	SUPPLY ROOM	Negative	<LOD:0.08	<LOD:0.08	<LOD:2.30
99	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.09
100	WALL	BRICK	B	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:2.30
101	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.30
102	WALL	BRICK	D	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.18	<LOD:0.18	<LOD:1.96
103	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.20 ± 0.20	1.20 ± 0.20	<LOD:1.55
104	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Negative	0.90 ± 0.10	0.90 ± 0.10	1.00 ± 0.60
105	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.30 ± 0.30	1.30 ± 0.30	<LOD:1.50
106	CABINET	WOOD	A	INTACT	BLUE	18	VAULT	Negative	<LOD:0.60	<LOD:0.60	<LOD:1.65
107	WALL	CONCRETE	B	INTACT	BLUE	18	VAULT	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.13
108	WALL	CONCRETE	C	INTACT	BLUE	18	VAULT	Negative	<LOD:0.07	<LOD:0.07	<LOD:2.57
109	WALL	CONCRETE	D	INTACT	BLUE	18	VAULT	Negative	<LOD:0.12	<LOD:0.12	<LOD:3.09
110	DOOR	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.40 ± 0.20	0.40 ± 0.20	<LOD:2.92
111	DOOR FRAME	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.50 ± 0.30	0.50 ± 0.30	<LOD:3.45
112	WALL	BRICK	A	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.15
113	WALL	BRICK	B	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:3.08
114	WALL	BRICK	C	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.33
115	WALL	BRICK	D	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.23
116	WALL	CONCRETE	A	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.65
117	WALL	CONCRETE	B	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.20
118	WALL	CONCRETE	C	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
119	WALL	CONCRETE	D	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.31
120	WALL STAIL	WOOD	D	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.13	<LOD:0.13	<LOD:1.90

Cherokee Armory

ID	Component	Substrate	Size	Condition	Color	Size	Room	Results	PH	TH	Chk
121	FLOOR	CONCRETE	LOWER	INTACT	BLUE	20	LATRINE	Negative	< LOD: 0.05	< LOD: 0.05	< LOD: 2.10
122	FLOOR	CONCRETE	LOWER	INTACT	BLUE	21	UTIL	Negative	0.09 ± 0.05	0.09 ± 0.05	< LOD: 1.31
123	WALL	CONCRETE	A	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.20
124	WALL	CONCRETE	B	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.25
125	WALL	CONCRETE	C	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.95
126	WALL	CONCRETE	D	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.15
127	WALL	DRYWALL	A	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.76
128	WALL	DRYWALL	B	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.87
129	WALL	DRYWALL	C	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.84
130	WALL	DRYWALL	D	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.67
131	WALL	DRYWALL	A	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
132	WALL	DRYWALL	B	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.72
133	WALL	DRYWALL	C	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.54
134	WALL	DRYWALL	D	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
135	WALL	CONCRETE	A	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.20	< LOD: 0.20	< LOD: 1.98
136	WALL	CONCRETE	C	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.65
137	FLOOR	CONCRETE	LOWER	INTACT	GREY	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.29
138	OVERHEAD DR FRAME	METAL	A	FAIR	WHITE	25		Positive	4.10 ± 2.60	< LOD: 1.95	4.10 ± 2.60
139	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.14	< LOD: 0.14	< LOD: 2.71
140	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.35
141	WINDOW SILL	CONCRETE	B	FAIR	WHITE	25		Negative	< LOD: 0.15	< LOD: 0.15	< LOD: 1.20
142	DOWN SPOUTS	METAL	B	POOR	WHITE	25		Positive	< LOD: 9.60	< LOD: 7.95	< LOD: 9.60
143	FR PAN BOX	WOOD	C	POOR	WHITE	25		Positive	3.90 ± 2.40	< LOD: 3.90	3.90 ± 2.40
144	OVERHEAD DR	METAL	A	INTACT	WHITE	25		Negative	< LOD: 0.05	< LOD: 0.03	< LOD: 1.01
145	OVERHEAD DR FRAME	METAL	A	INTACT	WHITE	25		Positive	5.60 ± 3.40	< LOD: 4.65	5.60 ± 3.40
146	CHUB STRIP	CONCRETE	B	INTACT	YELLOW	25		Positive	< LOD: 5.25	< LOD: 5.25	< LOD: 15.60
147	DOOR	METAL	C	INTACT	BEIGE	25		Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.75
148	DOOR FRAME	METAL	C	INTACT	BEIGE	25		Positive	5.90 ± 3.30	< LOD: 2.10	5.90 ± 3.30
149		CALIBRATE						Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
150		CALIBRATE						Positive	1.70 ± 0.10	1.70 ± 0.10	0.90 ± 0.50
151		CALIBRATE						Positive	1.20 ± 0.20	1.20 ± 0.20	1.10 ± 0.70

Sample Number: 407472
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1430
Date Received: 10/13/2006
Date Completed: 11/22/2006
Collected By: JR
PWS ID:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-800-869-1400
Sample Receiving: (405) 702-1113
Report of Analysis by Metals

LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		56200.	MG/KG	11/06/06	6010
Lead (TCLP)		509000.	UG/L	11/06/06	6010
% Solids		99.84	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

EGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-1L

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

ANALYST 

Labs performing analysis on this Sample:
Metals

Sample Number: 407473
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1435
Date Received: 10/13/2006
Data Completed: 11/22/2006
Collected By: JR
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
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LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		35300.	MG/KG	11/06/06	6010
Lead (TCLP)		521000.	UG/L	11/06/06	6010
% Solids		99.93	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

LEGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-2R

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*
ANALYST 

Labs performing analysis on this Sample:
Metals

**DOOR SCOPE OF WORK INCLUDING MEASUREMENTS
AND SPECIFICATIONS**

Cherokee Armory Door Measurements And Scope of Work

- **Door measurements are listed as approximate Height X Width; Contractor to field verify.**
 - **All removed doors will be properly disposed.**
 - **All removed lead-based paint will be properly disposed.**
 - **Attached is a Cherokee armory Floor Plan with designated door numbers that correspond with the numbers on this Scope of Work.**
-
1. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 2. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 3. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 78" X 30"
 4. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 4'
 5. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 6. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"
 7. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 5'
 8. Vault door and frame does not contain lead-based paint. No abatement is required.

9. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
10. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
11. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
12. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
13. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
14. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
15. Remove indoor firing range door and frame and do not replace.
16. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
17. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
18. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
19. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
20. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.

Door Measurements – 7' X 3'

21. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
22. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
23. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
24. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
25. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 80" X 32"

26. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Doors will open into drill floor.
Door Measurements – 7' X 5'

27. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'

28. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" X 3'

29. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 83" X 3'

30. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'

31. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 32"

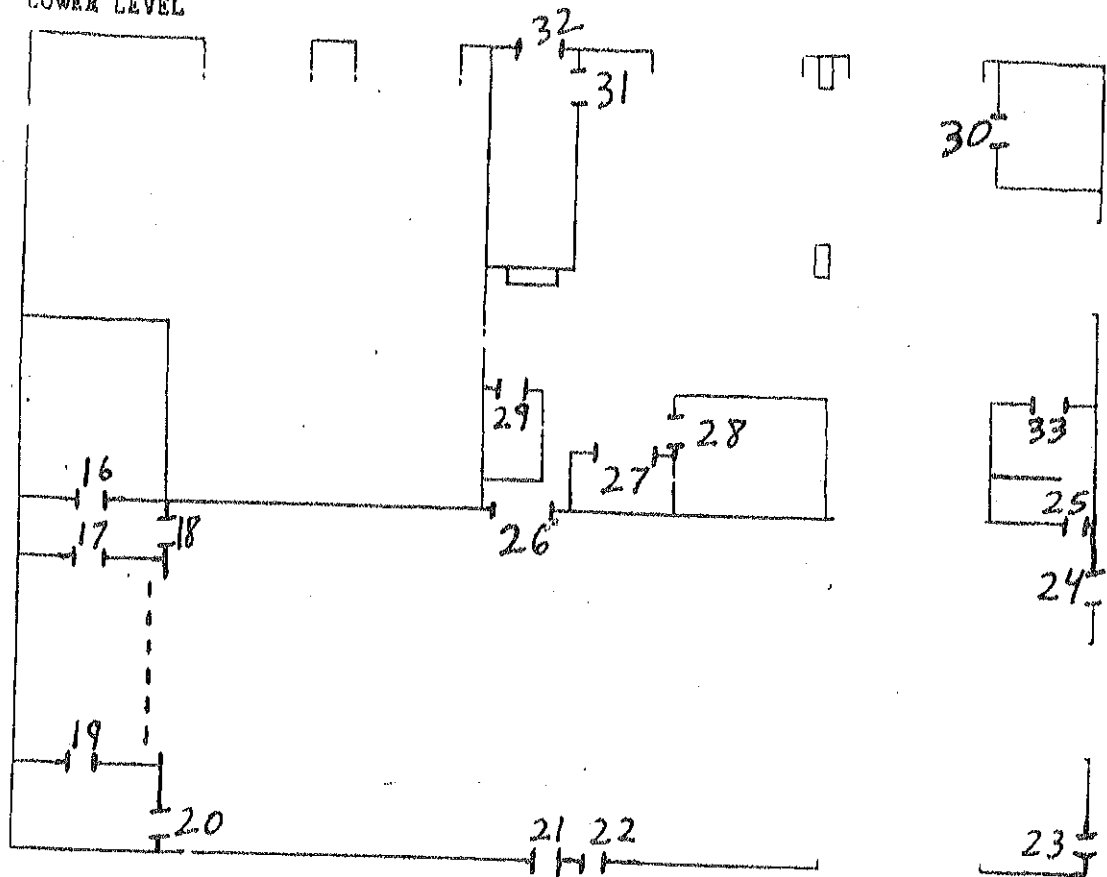
32. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.

Door Measurements – 7' X 5'

33. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" X 3'

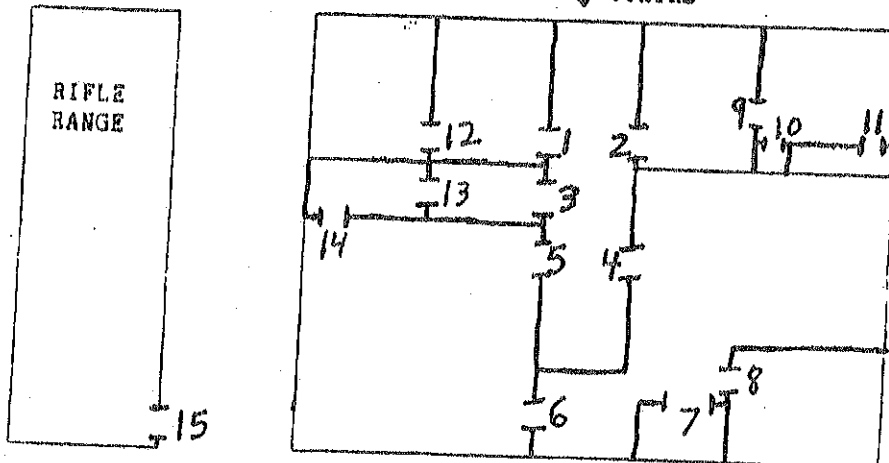
SECOND STREET

LOWER LEVEL



UPPER LEVEL

↓ STAIRS



CHEROKEE
ARMORY
1936



Install a pre-hung

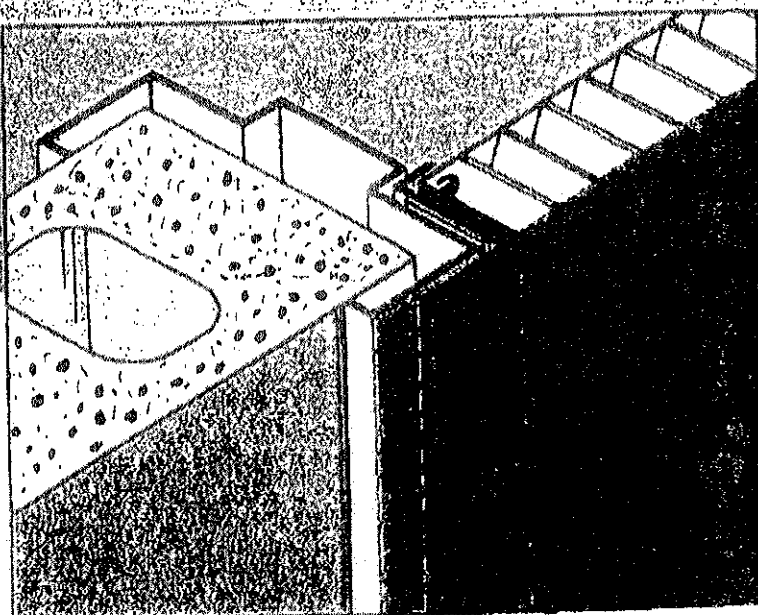


COMMERCIAL REPLACEMENT DOOR UNIT

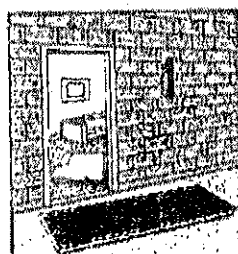
UL LISTED
1½ HR (B) LABEL
can be used in existing
non-listed or listed
steel frame.

New beauty
and security
for worn out doors.

The Steelcraft Commercial Replacement Unit is the only product of its kind specifically designed for the rehab market. Fits these nominal sizes: 2868, 3068, 3668, 3868, 4068, 2870, 3070, 3670, 3870, 4070 single, and 5468, 6068, 5470 and 6070 double doors.



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



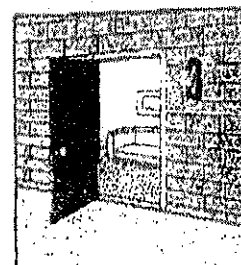
QUICK

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



'N EASY

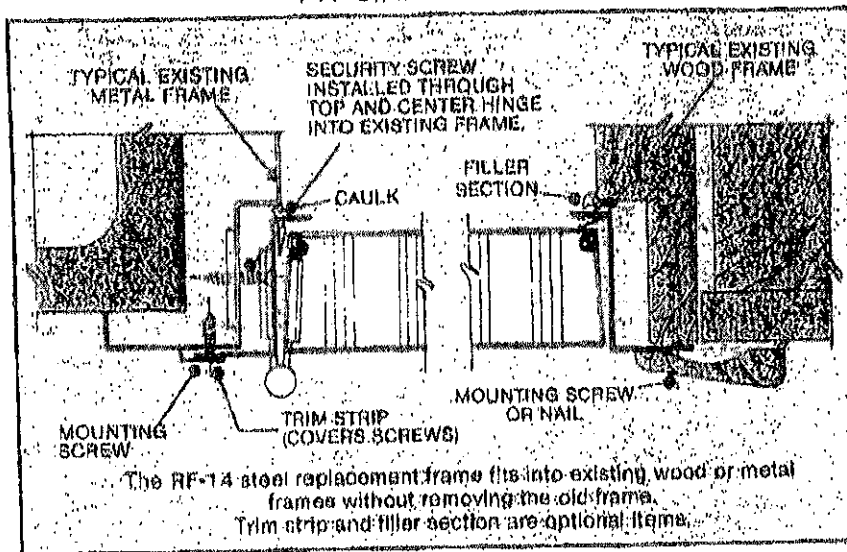
2. Set pre-hung unit into frame opening. Install mounting screws through face, cut banding and install security screws.



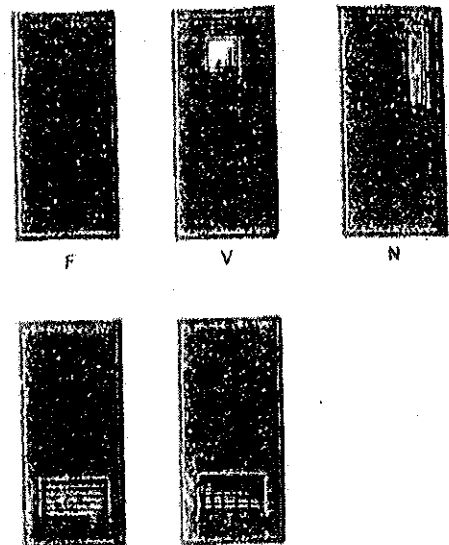
INSTALLATION

3. Mount hardware as required. Paint.

TYPICAL SECTION



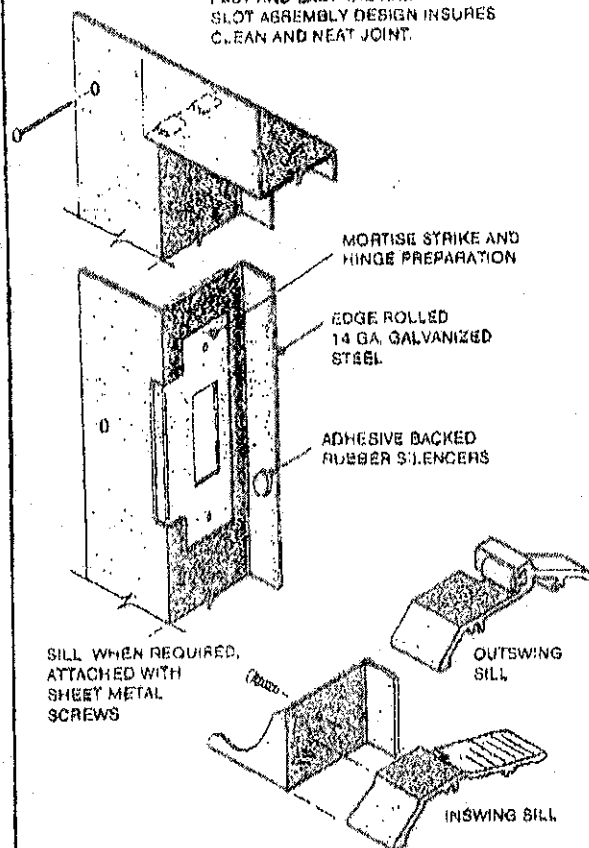
DESIGNS AND FINISHES AVAILABLE



LOUVERS

FRAME DETAIL

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



SPECIFICATIONS

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

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

Doors shall conform to the following:

Doors shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RL-18 (1 1/2" 18 ga. steel).

Doors shall be fabricated from cold rolled steel.

Doors shall have 1/8" bevel in 2" on hinge and lock edges.

Doors shall have vertical mechanical interlocking seams on hinge and lock edges with visible edge seams.

Doors shall be provided with top and bottom inverted steel channels spotwelded within the door.

Doors shall be reinforced, stiffened and sound deadened with impregnated kraft honeycomb core completely filling the inside of the door and laminated to the inside faces of panels.

Doors shall be mortised and adequately reinforced for all hardware.

Doors shall be phosphatized and receive one coat of baked-on prime paint.

Frames shall conform to the following:

Frames shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RF-14 (14 ga.).

Frames shall be accurately formed from galvanized steel.

Frames shall be furnished knocked down (KD). Corners shall have tabs for secure and easy interlocking of jambs to head at each corner.

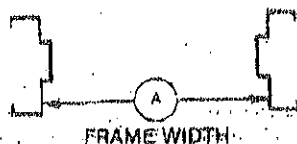
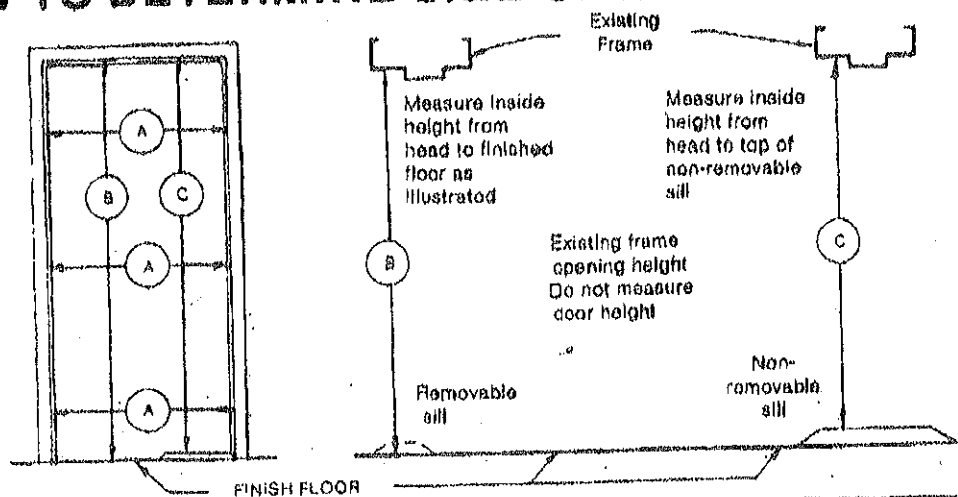
Frames shall be adequately reinforced for all hardware.

Frames shall be supplied with adhesive backed rubber bumpers; three per strike jamb, two per double door frame head.

Frames shall be phosphatized and receive one coat of baked-on prime paint.

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

HOW TO DETERMINE SIZE OF EXISTING FRAME



Measure in 3 places. Use narrowest dimension for ordering.

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

SIZE (Nominal)	FITS THESE EXISTING OPENINGS			
	A WIDTHS		B C HEIGHTS	
	MIN.	MAX.	MIN.	MAX.
2'8" x 6'8"	31 1/4"	32 1/4"	79 1/4"	80 1/4"
3'0" x 6'8"	36 1/4"	38 1/4"	79 1/4"	80 1/4"
3'8" x 6'8"	41 1/4"	42 1/4"	79 1/4"	80 1/4"
3'8" x 6'8"	43 1/4"	44 1/4"	79 1/4"	80 1/4"
4'0" x 6'8"	47 1/4"	48 1/4"	79 1/4"	80 1/4"
2'8" x 7'0"	31 1/4"	32 1/4"	83 1/4"	84 1/4"
3'0" x 7'0"	35 1/4"	36 1/4"	83 1/4"	84 1/4"
3'8" x 7'0"	41 1/4"	42 1/4"	83 1/4"	84 1/4"
3'8" x 7'0"	43 1/4"	44 1/4"	83 1/4"	84 1/4"
4'0" x 7'0"	47 1/4"	48 1/4"	83 1/4"	84 1/4"
5'4" x 6'8"	63 1/4"	64 1/4"	79 1/4"	80 1/4"
6'0" x 6'8"	71 1/4"	72 1/4"	79 1/4"	80 1/4"
5'4" x 7'0"	63 1/4"	64 1/4"	83 1/4"	84 1/4"
6'0" x 7'0"	71 1/4"	72 1/4"	83 1/4"	84 1/4"

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

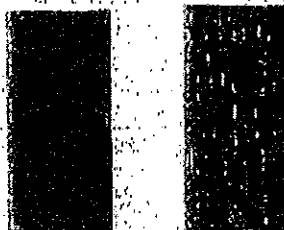
TO HAND A DOOR — FACE IT FROM THE OUTSIDE OR KEYSIDE

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



Steelcraft®

8017 Blue Ash Road Cincinnati, Ohio 45242 513/745-6400



FINISH PAINTED AND WOOD GRAIN FINISHES

HARDWARE

Replacement Units shall be prepared for the following hardware:

Hinges:

1-1/2" pair of 4-1/2" x 4-1/2" x .134" template hinges

Lock and Strike:

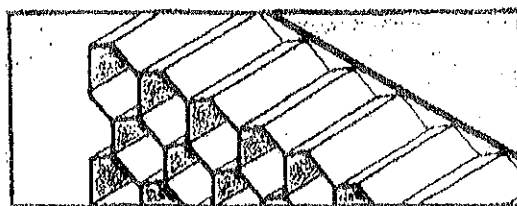
Government 164 (ANSI A115.2) cylindrical or Government 86 (ANSI A115.1) mortise lock with an ANSI A115.1 or 2 strike

Consult distributor for other hardware preparations.

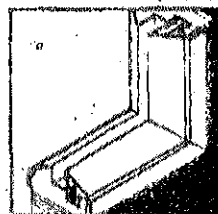
	NOMINAL SIZE	FRAME SIZE (FINISHED OPENING)		NET DOOR SIZE*	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE	286B	31"	79 1/4"	30-13/16"	79 1/4"
	306B	35"		34-13/16"	
	366B	41"		40-13/16"	
	386B	43"		42-13/16"	
	406B	47"		46-13/16"	
	2870	31"	83 1/4"	30-13/16"	82 1/4"
	3070	35"		34-13/16"	
	3670	41"		40-13/16"	
	3870	43"		42-13/16"	
	4070	47"		46-13/16"	
PAIR	546B	63"	79 1/4"	30-13/16" & 31-13/16"	78 1/4"
	606B	71"		34-13/16" & 35-13/16"	
	5470	63"	83 1/4"	30-13/16" & 31-13/16"	82 1/4"
	6070	71"		34-13/16" & 35-13/16"	

*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF. CONSULT DISTRIBUTOR FOR OTHER SIZES.

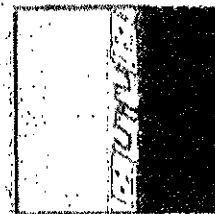
DOOR DETAILS



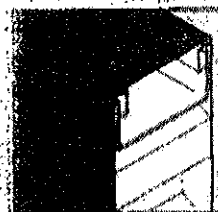
Full honeycomb core of phenolic resin-impregnated kraft paper reinforces the door every 1-inch, providing superior resistance to impact and assuring a flat surface.



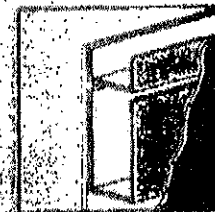
Aluminum glass trim (snap-in).



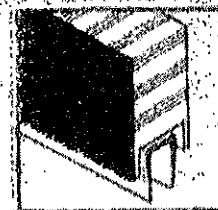
8-gage thick hinge reinforcement.



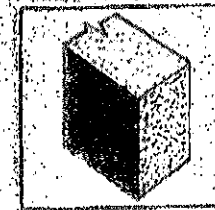
Snap-in steel top caps for exterior openings.



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

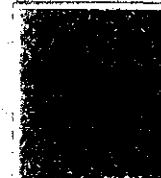


Door bottom with double sweep when required.



Insulated doors: one pound polystyrene core, 1 1/2 pound polyurethane core when required.

PAIRS OF DOORS

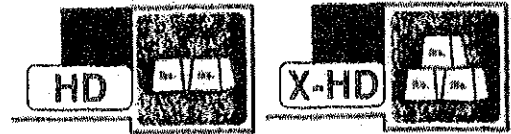


Designs shown may be combined for pairs of doors. Pairs of doors consist of two leaves and a 14 ga. steel "Z" astragal field mounted to inactive leaf of pair. Inactive leaf may be secured with flush bolts or surface bolts.

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

STEELCRAFT®

L18 AND L16-SERIES HONEYCOMB DOORS



L-SERIES DOORS



ABOUT THE PRODUCT:

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

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

FEATURES AND BENEFITS:

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

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

SPECIFICATION COMPLIANCE:

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

FIRE RATINGS:

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

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

MATERIAL:

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

¹ Usage frequency is based on ANSI A250.8-1998

² Reinforcements for galvannealed doors are also galvannealed

³ Commercial quality carbon steel

IR Security & Safety

Details are subject to change without prior notice.

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Spec Manual
Rev. 5/2002

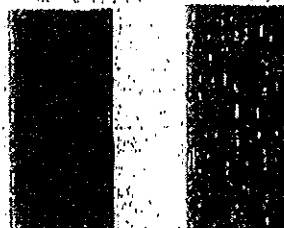
L1-1



ENL

G

G2/G4



FINISH: PAINTED AND WOOD
GRAIN FINISHES

HARDWARE

Replacement Units shall be prepared for the following hardware:

Hinges:

1-1/2" pair of 4-1/2" x 4-1/2" x 130 template hinges

Lock and Strike:

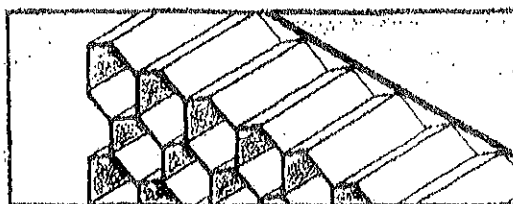
Government 164 (ANSI A115.2) cylindrical or Government 88 (ANSI A115.1) mortise lock with an ANSI A115.1 or 2 strike

Consult distributor for other hardware preparations.

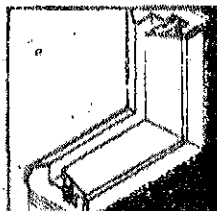
	NOMINAL SIZE	FRAME SIZE (FINISHED OPENING)		NET DOOR SIZE*	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE	2868	31"	79 1/4"	30-13/16"	78 3/4"
	3068	35"		34-13/16"	
	3868	41"		40-13/16"	
	3868	43"		42-13/16"	
	4068	47"		46-13/16"	
	2870	31"	83 3/4"	30-13/16"	82 3/4"
	3070	35"		34-13/16"	
	3870	41"		40-13/16"	
	3870	43"		42-13/16"	
	4070	47"		46-13/16"	
PAIR	5468	63"	79 3/4"	30-13/16" & 31-13/16"	78 3/4"
	6068	71"		34-13/16" & 35-13/16"	
	5470	63"	83 3/4"	30-13/16" & 31-13/16"	82 3/4"
	6070	71"		34-13/16" & 35-13/16"	

*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF.
CONSULT DISTRIBUTOR FOR OTHER SIZES.

DOOR DETAILS



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



Aluminum glass trim
(3/8" x 1/2")



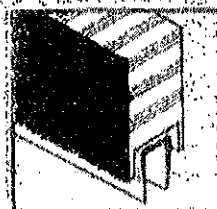
8-gauge thick hinge
reinforcement.



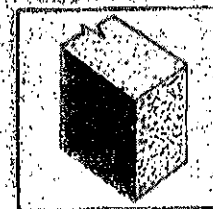
Snap-in steel top cap
for exterior openings.



Steel top and bottom
reinforcing channels
14-gauge closer rein-
forcement when
required.

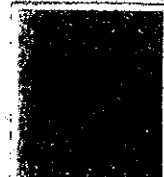


Door bottom with
double sweep when
required.



Insulated doors:
one pound polystyrene
core, 1 1/2 pound
polyurethane core
when required.

PAIRS OF DOORS



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

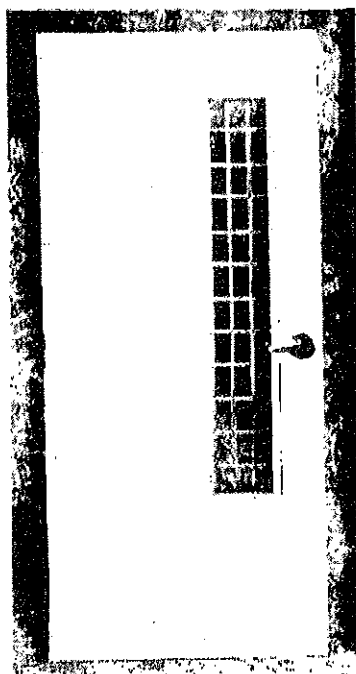
Note: For pairs of doors, right hand will be active, unless
specifically ordered.

STEELCRAFT®

L18 AND L16-SERIES HONEYCOMB DOORS



L-SERIES DOORS



ABOUT THE PRODUCT:

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

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

FEATURES AND BENEFITS:

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

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

SPECIFICATION COMPLIANCE:

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

FIRE RATINGS:

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

Steel Thickness	Opening	Usage Frequency ¹	Frame Applications
16 gage (1.3mm)	Interior & Exterior	Extra-heavy duty	• 16 & 14 gage steel frames
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Galvannealed ²	Mainly Exterior	• Used in locations with high humidity and/or weather exposure	

MATERIAL:

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

¹ Usage frequency is based on ANSI A250.8-1998

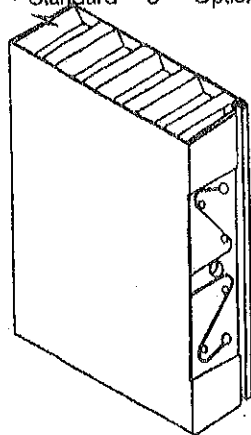
² Reinforcements for galvannealed doors are also galvannealed

³ Commercial quality carbon steel

IR Security & Safety

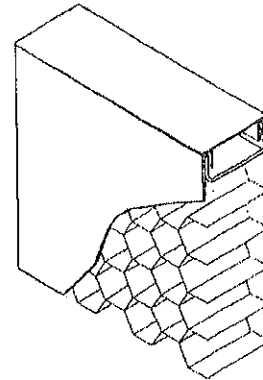
Details are subject to change without prior notice.

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

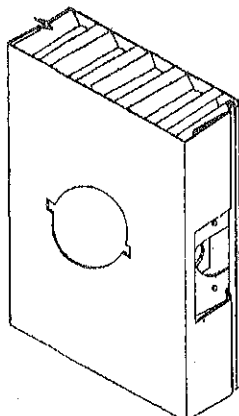


7 Gage Hinge Reinforcement

Optional Snap-In Top Cap

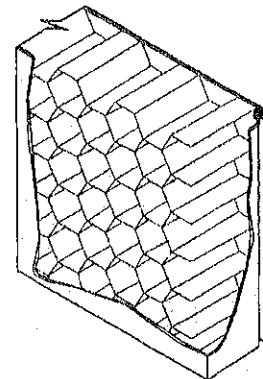


Lock Prep

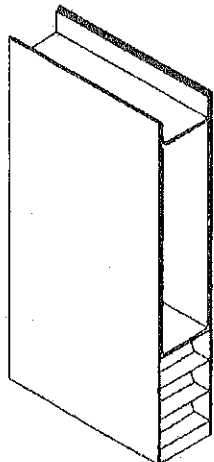


161 Cylindrical Lock shown

Rigid Honeycomb Core

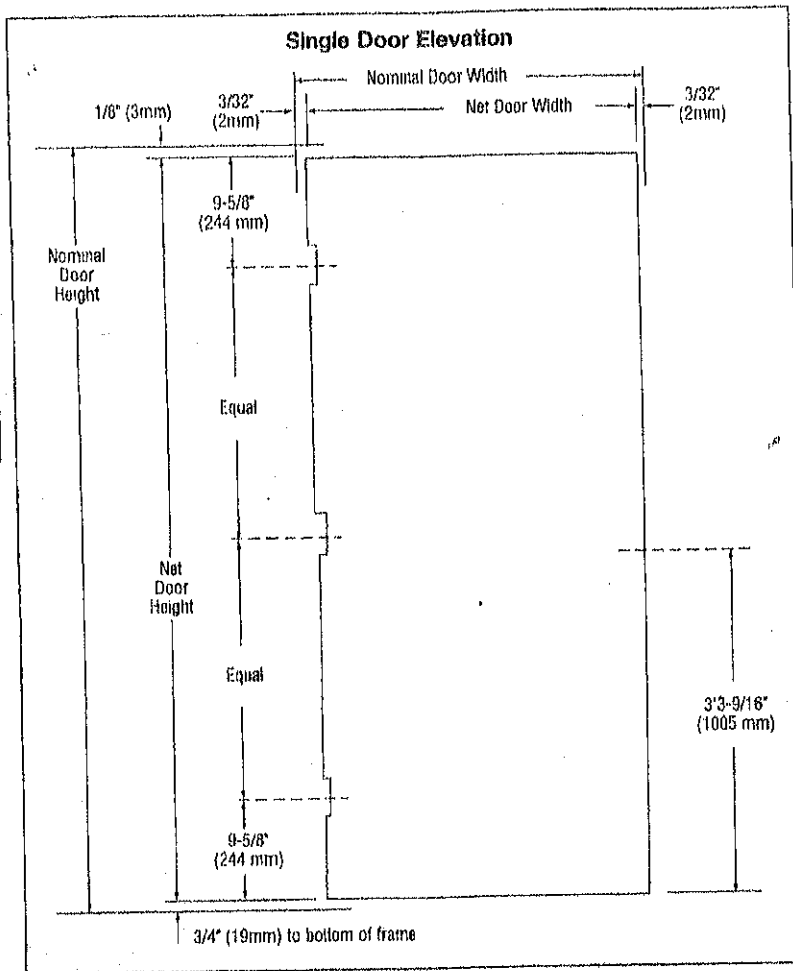


Optional 14 Gage Closer Reinforcement



GENERAL NOTES:

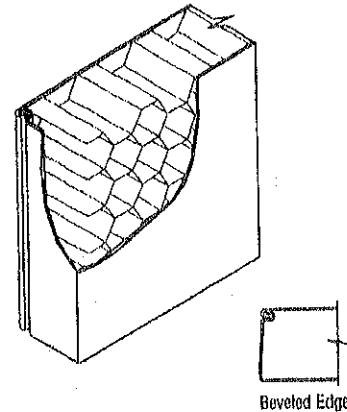
1. **Edge construction:**
 - Vertical edges (both hinge and lock) are beveled with a visible seam.
 - Top and bottom edges are closed with inverted 14 gage welded channels. Exterior applications require the addition of snap-in top caps to protect against the weather.
2. **Optional edge seams** available in the L-Series door construction are as follows:
 - **LF** – The mechanical edge seam is filled and finished prior to applying the factory primer.
 - **LW** – The mechanical edge seam is welded and finished prior to applying the factory primer.
3. **Optional cores** available in the L-Series door construction:
 - **Polystyrene** for exterior applications in extreme weather conditions.
 - **Polyurethane** for exterior applications in arctic weather conditions. Not Fire Rated.
4. **Standard hardware preparations:** standard mortised and reinforced for:
 - **Universal hinge preps** – 4½" (114mm) patented preparation which allows easy and quick field conversion from standard to heavy weight hinges.
 - **Locks** – A multitude of standard lock preps are available. The most commonly used with a 4¾" (124mm) strike are 161, 61L and 86.



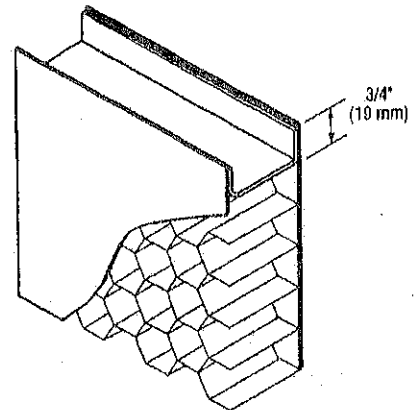
CONSTRUCTION NOTES:

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

Beveled Edge with Full Height Mechanical Interlock

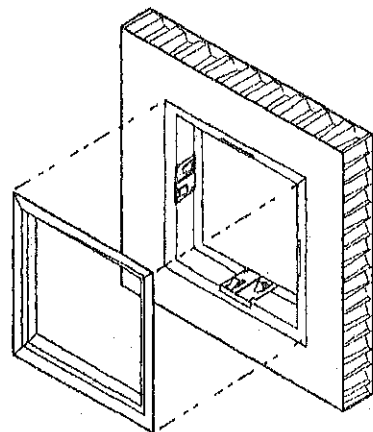


Inverted Top & Bottom Channels 14 Gage



Designer Trim Option

1/4" – Standard 1/2" – Optional



INSTALLATION:

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

DOOR EDGE APPLICATIONS:

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

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

CONVERSION CHART

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

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

DOUBLE DOOR APPLICATIONS:

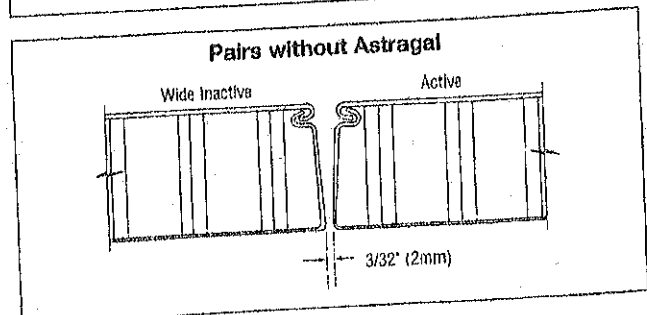
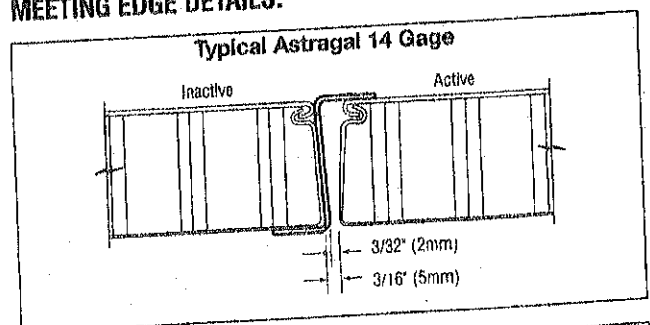
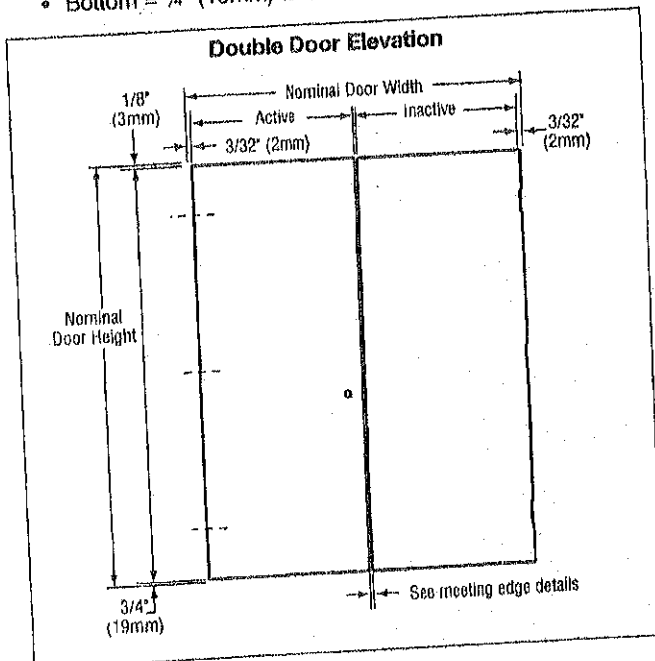
L-Series doors are available in double door elevations, with active and inactive leaves and an overlapping astragal.

- **Standard operating clearances (installed in frame):**
 - Head = $\frac{1}{8}$ " (3mm) to bottom of head or transom panel
 - Hinge side = $\frac{3}{32}$ " (2mm) to rabbet on jamb
 - Meeting edges = $\frac{3}{32}$ " (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
 - Bottom = $\frac{3}{4}$ " (19mm) to bottom of frame

Meeting edges:

- 14 Gage astragal is furnished loose for installation in the field by others.
- Overlapping astragal kits are available to convert an active leaf to an inactive leaf.
- When an astragal is not used, the width of the inactive leaf is increased $\frac{3}{32}$ " (2mm).
- **Hardware preparations:** the inactive leaf can be prepared for hardware as specified.

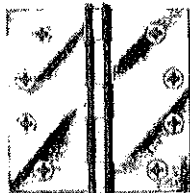
MEETING EDGE DETAILS:



Architectural Hinges

Full Mortise

Five Knuckle



Plain Bearing - Standard Weight

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

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

- 1279** Steel with Steel pin
- ANSI A8133

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

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

Five Knuckle



Plain Bearing - Standard Weight - Wide Throw

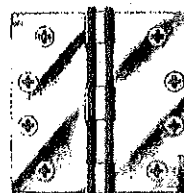
For use on medium weight doors or doors requiring low frequency service

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

- 1279 Wide Throw**
Steel with Steel pin
- ANSI A8133

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

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



Concealed Bearing - Standard Weight

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

- CB1191** Stainless Steel with Stainless Steel pin
- ANSI A5112

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

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



INSTALLATION:

1. Installation shall conform to the published Steelcraft installation instructions, SDI 105 *Recommended Installation Instructions for Steel Frames*, and ANSI/DHI A115-IG *Installation Guide for Doors and Hardware*.
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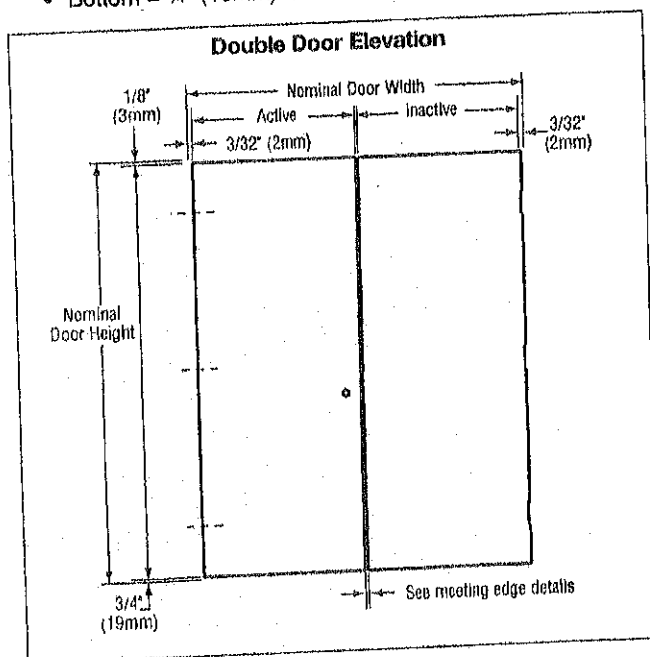
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LF16	3	2	Seamless	L-Series with epoxy filled edge seams
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L-Series doors are available in double door elevations, with active and inactive leaves and an overlapping astragal.

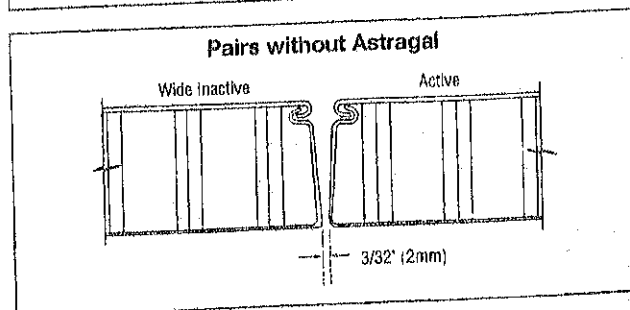
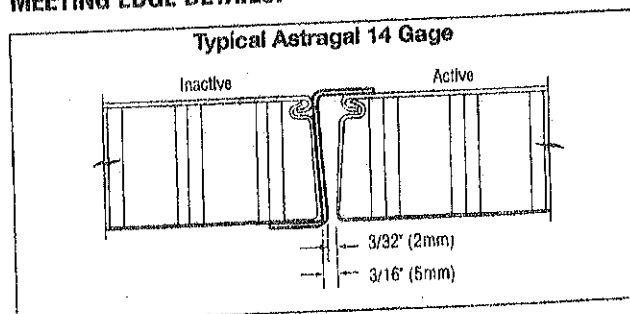
- **Standard operating clearances (installed in frame):**
 - Head = $\frac{1}{8}$ " (3mm) to bottom of head or transom panel
 - Hinge side = $\frac{3}{32}$ " (2mm) to rabbet on jamb
 - Meeting edges = $\frac{3}{32}$ " (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
 - Bottom = $\frac{3}{4}$ " (19mm) to bottom of frame



Meeting edges:

- 14 Gage astragal is furnished loose for installation in the field by others.
- Overlapping astragal kits are available to convert an active leaf to an inactive leaf.
- When an astragal is not used, the width of the inactive leaf is increased $\frac{3}{32}$ " (2mm).
- **Hardware preparations:** the inactive leaf can be prepared for hardware as specified.

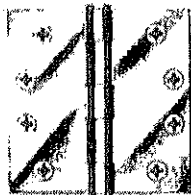
MEETING EDGE DETAILS:



Architectural Hinges

Full Mortise

Five Knuckle



Plain Bearing - Standard Weight

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

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

- 1279** Steel with Steel pin
- ANSI A8133

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3 x 3	76 x 76	0.097	6	-	1 x 9
3 1/2 x 3 1/2	89 x 89	0.119	6	1/2 x 10-24	1 x 9
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6 x 5	152 x 127	0.160	10	1/2 x 1/4-20	1 1/2 x 14
6 x 6	152 x 152	0.160	10	1/2 x 1/4-20	1 1/2 x 14

Five Knuckle



Plain Bearing - Standard Weight - Wide Throw

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

1191 Wide Throw

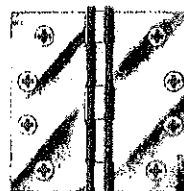
- Brass with Stainless Steel pin
- ANSI A2133
Stainless Steel with Stainless Steel pin
- ANSI A5133

1279 Wide Throw

- Steel with Steel pin
- ANSI A8133

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

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



Concealed Bearing - Standard Weight

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

- CB1191** Stainless Steel with Stainless Steel pin
- ANSI A5112

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

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






Saddle Thresholds



All thresholds this page

MATERIALS & FINISHES

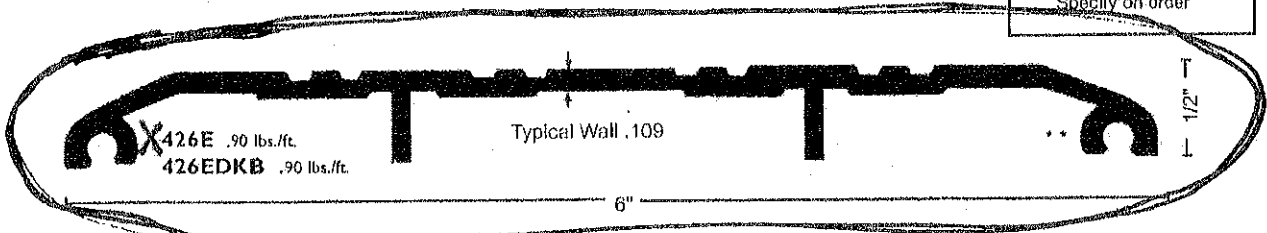
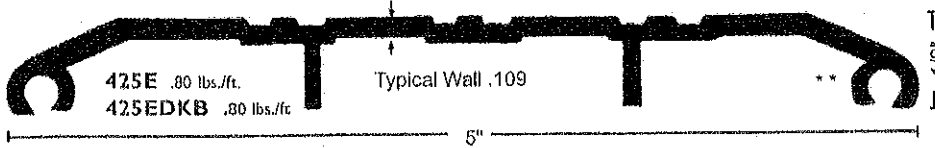
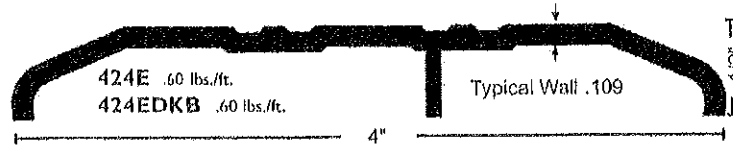
- Aluminum mill finish
- DKB - Aluminum dark bronze finish

Slip Resistant SIA Finish 

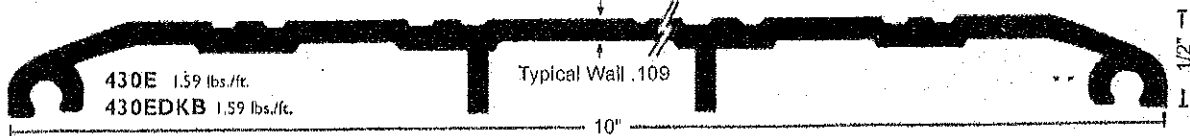
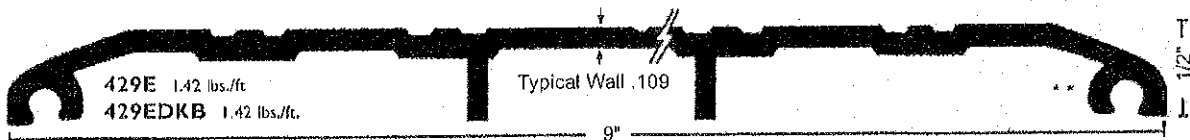
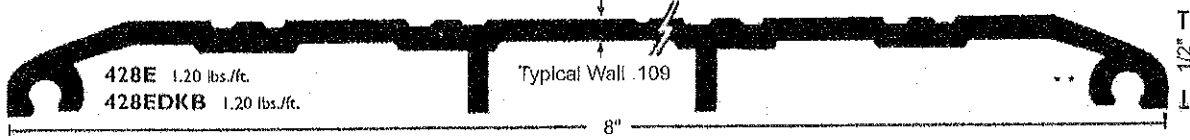
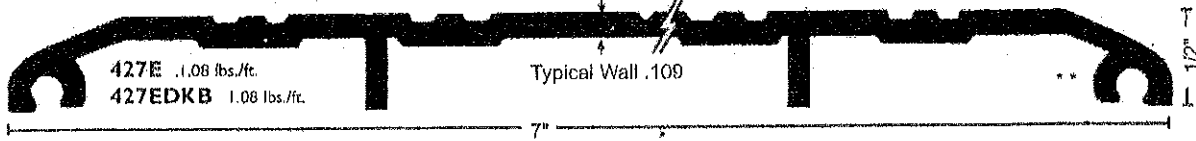
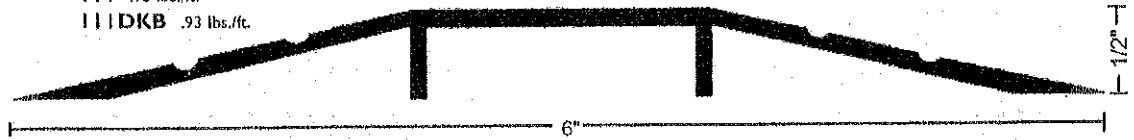
All thresholds are available with our slip resistant, non-skid finish for better traction. Suffix "SIA".



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



III .93 lbs./ft.
IIIDKB .93 lbs./ft.



NATIONAL GUARD PRODUCTS, INC.

Vinyl Seals

Properties:

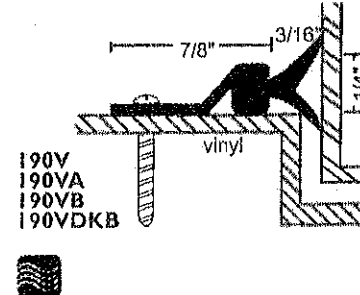
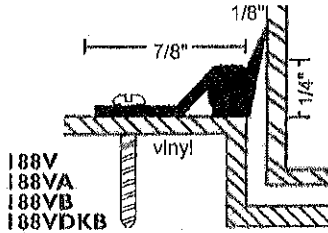
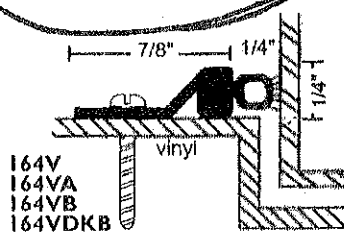
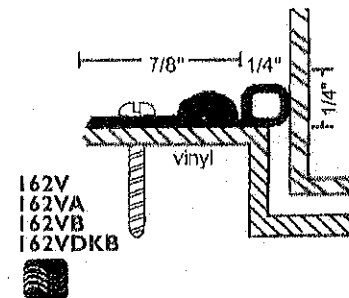
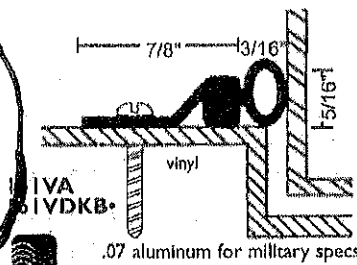
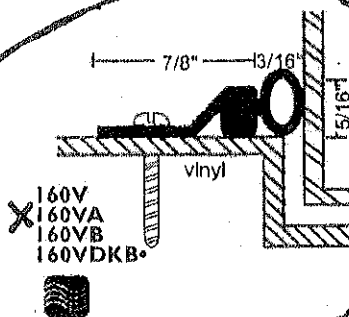
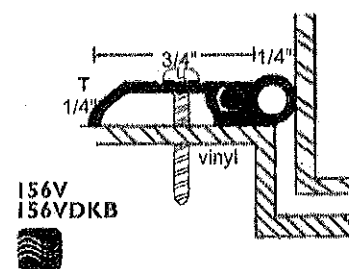
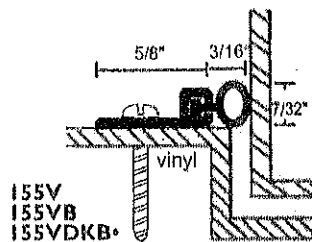
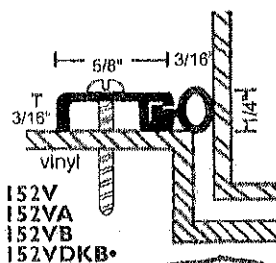
- Synthetic polymer: Polyvinyl Chloride
- Economical
- Flame resistant
- Moisture resistant
- Temperature range 0F to 140F
- Plasticizers evaporate with age and exposure to UV, Cold, Heat causing hardening, loss of memory, loss of resilience, cracking and crazing

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

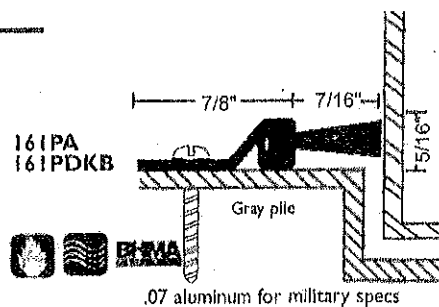
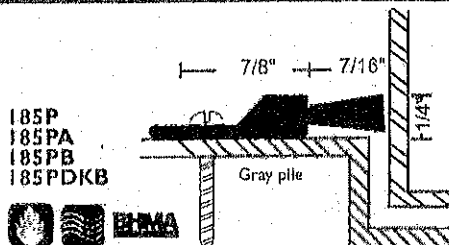


All vinyl seals this section

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



Pile Seals



Vinyl Perimeter Seals

Pile Seals

Specifications

Handing:

All D-Series lever locksets are non-handed.

Door Thickness:

1½" to 2½" (41mm-54mm) standard including Vandlgard® functions.

See accessories (Page 12) for spacers required for 1¾" doors.

Backsets:

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

Faceplate:

Brass, bronze or stainless steel. 1½" x 2¼" (29 mm x 57mm) square corner, beveled.

Lock Chassis:

Zinc plated for corrosion resistance.

Latch Bolt:

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

Exposed Trim:

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

Striker:

ANSI curved lip strike 1¼" x 4⅞" x 1⅜" lip to center standard. Optional strikes, lip lengths and ANSI strike box available. See page 11.

Cylinder & Keys:

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

Keying Options:

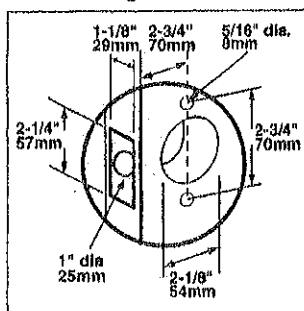
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying and construction keying.

Warranty:

Seven-year limited for all functions including Vandlgard®.

Door Preparation

Lever Designs



Certifications

ANSI

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

Federal

Meets FF-H-106C Series 161.

California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

All levers with returns comply; levers return to within ½" of door face.

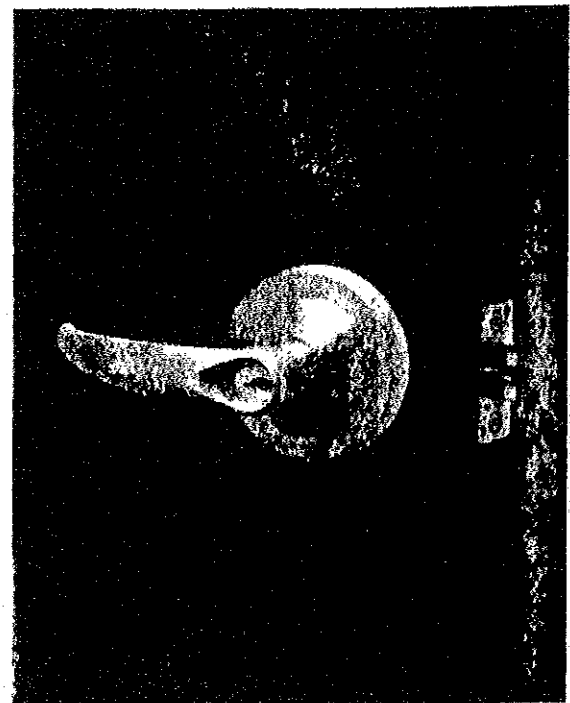
UL / cUL:

All locks listed for A label single doors, 4' x 8'.

Letter F and UL symbol on latch front indicate listing.

Electrified functions are UL19X Listed for single point locking applications.

UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.



D SERIES LEVERS

Functions

Non-Keyed Locks

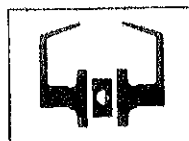
SCHLAGE ANSI

ND10S F75



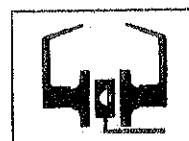
Passage Latch
Both levers always unlocked.

ND12D F89



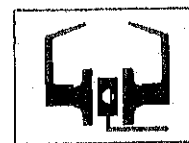
Exit Lock
Outside lever always fixed. Inside lever always unlocked.

ND12DEL



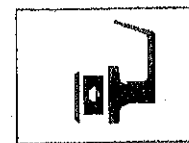
Electrically Locked (Fail Safe)
Outside lever continuously locked electrically. Unlocked by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.

ND12DEU



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

ND25D



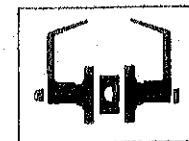
Exit Lock
Blank plate outside. Inside lever always unlocked.

ND40S F76



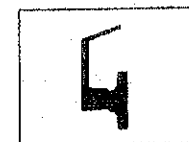
Bath/Bedroom Privacy Lock
Push-button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button.

ND44S



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

ND170



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

Keyed Locks

SCHLAGE ANSI

ND50PD F82



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

ND53PD F109



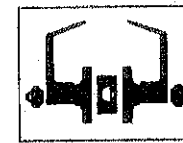
Entrance Lock*
Turn/push-button locking; pushing and turning button locks outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button locks outside lever until unlocked by key or by turning inside lever.

ND60PD F88



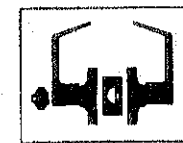
Vestibule/Classroom Security Lock*
Latch retracted by key from outside when outside lever is locked by key in inside lever. Inside lever is always unlocked.

ND66PD F91



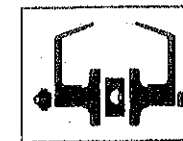
Store Lock*†
Key in either lever locks or unlocks both levers.

ND70PD F84



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

ND73PD F90



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

* Available functions for small format interchangeable core.

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

Specifications

Handing:

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

Door Thickness:

1 $\frac{3}{8}$ " to 1 $\frac{7}{8}$ " (35 mm to 48 mm) standard.

2" (51 mm) to 2 $\frac{1}{2}$ " (64 mm) optional extended inside.

Backset:

2 $\frac{3}{4}$ " (60 mm) standard. 2 $\frac{3}{4}$ " (70 mm), 3 $\frac{3}{4}$ " (95 mm) and 5" (127 mm) optional.

Front:

Steel. 1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ " square corner, beveled, for 2 $\frac{3}{4}$ " backset standard. Optional 1" square corner, 1" radius corner, and non-UL drive-in / round face. For availability with specific backsets, see page 6.

Lock Chassis:

Steel, zinc dichromate plated for corrosion resistance.

Latch Bolt:

Brass, chrome plated, $\frac{1}{2}$ " throw, deadlocking on keyed and exterior functions.

Exposed Trim:

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

Strike:

T-strike 1 $\frac{1}{8}$ " x 2 $\frac{3}{4}$ " (29 mm x 70 mm) x 1 $\frac{1}{8}$ " (29 mm) lip to center with box standard. Optional strikes, lip lengths and ANSI strike box available. See page 7.

Cylinder & Keys:

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

Residential: 6-pin C keyway, keyed 5-pin.

Keying Options:

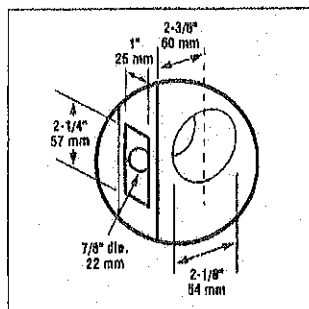
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying, and construction keying.

Warranty:

Commercial: three-year limited.

Residential: Full mechanical lifetime.

Door Preparation



Certifications

ANSI

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

Federal

Meets FF-H-106C.

California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

All levers with returns comply; levers return to within $\frac{1}{2}$ " of door face.

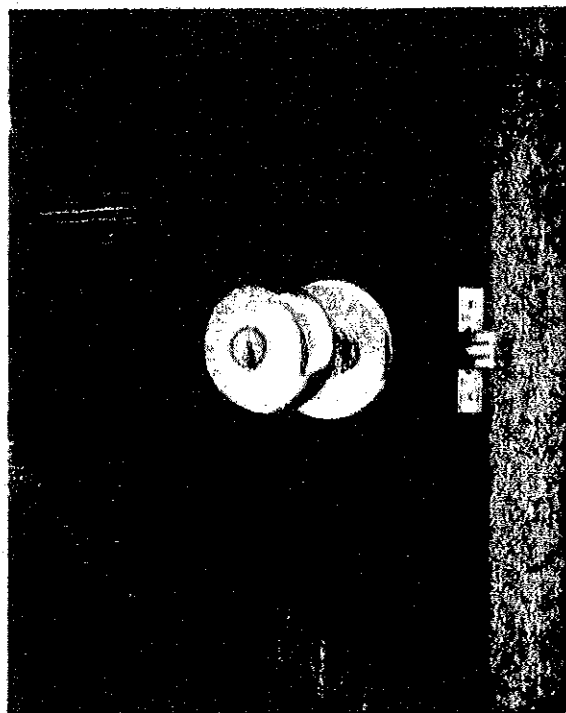
UL / ULC:

All locks listed for A label single doors, 4' x 8'.

Letter F and UL symbol on latch front indicate listing.

UL437 Listed locking cylinder optional: specify

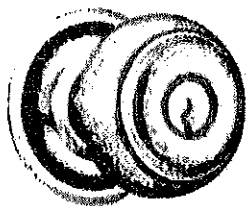
Primus 20-500 Series cylinder.



Designs & Finishes

GEORGIAN

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



609

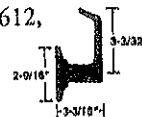


LEVON

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

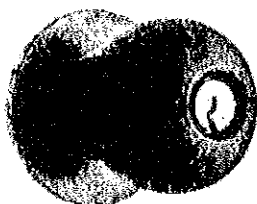


605



ORBIT

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



613



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

Finishes

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

PLYMOUTH

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

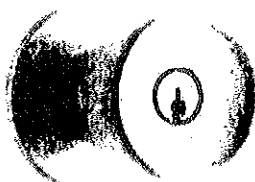


605

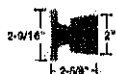


TULIP

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



626






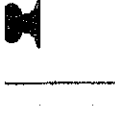


8 Keyed functions available with full size interchangeable core option for Orbit design.


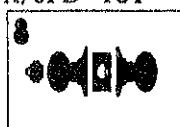



tions

156.2 Series 4000 Grade 2

Keyed Functions

ANSI	
F75	Passage Latch Both knobs always unlocked.
	
F76	Exit Lock Blank plate outside. Inside knob always unlocked. Specify door thickness, 1 3/8" or 1 3/4".
	
F77	Patio Lock Push-button locking. Turning inside knob or closing door releases button, preventing lock-out.
	
F79	Bath/Bedroom Privacy Lock Push-button locking. Can be opened from outside with small screwdriver. Turning inside knob or closing door releases button.
	
F79	Communicating Lock Turn-button in outer knob locks and unlocks knob and inside thumbturn.
	
F79	Single Dummy Trim Dummy trim for one side of door. Used for door pull or as matching inactive trim.
	

Keyed Functions

SCHLAGE	ANSI	
A53PD	F109	Entrance Lock Turn/push-button locking: pushing and turning button locks outside knob requiring use of key until button is manually unlocked. Push-button locking: pushing button locks outside knob until unlocked by key or by turning inside knob.
		
A70PD	F84	Classroom Lock Outside knob locked and unlocked by key. Inside knob always unlocked.
		
A79PD		Communicating Lock Locked or unlocked by key from outside. Blank plate inside.
		
A80PD	F86	Storeroom Lock Outside knob fixed. Entrance by key only. Inside knob always unlocked.
		
A85PD	F93	Hotel/Motel Lock Outside knob fixed. Entrance by key only. Push-button in inside knob activates visual occupancy indicator, allowing only emergency masterkey to operate. Rotation of inside spanner-button provides lock-out feature by keeping indicator thrown.
		

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

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4. Wood Surfaces: Keep wood surfaces to be in contact with sealants free of splinters and sawdust or other loose particles.
- B. Do not add liquids, solvents, or powders to the sealant. Mix multi-component elastomeric sealants in accordance with manufacturer's instructions.

3.2 INSTALLATION

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

1. Acceptable Ratios:	<u>Minimum</u>	<u>Maximum</u>
a) For metal, glass, or other nonporous surfaces:		
(1) 1/4 inch (6 mm) (minimum)	1/4 inch (6 mm)	1/4 inch (6 mm)
(2) Over 1/4 inch (6 mm)	1/2 of width	Equal to width
b) For wood, concrete, masonry, or stone:		
(1) 1/4 inch (6 mm) (minimum)	1/4 inch (6 mm)	1/4 inch (6 mm)
(2) Over 1/4 inch (6 mm) to 1/2 inch (13 mm)	1/4 inch (6 mm)	Equal to width
(3) Over 1/2 inch (13 mm) to 2 inch (50 mm)	1/2 inch (50 mm)	5/8 inch (16 mm)
(4) Over 2 inch (50 mm)	(As recommended by sealant mfr.)	
2. Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is not required on metal surfaces.
- B. Masking Tape: Place masking tape on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Remove masking tape within 10 minutes after joint has been filled and tooled.
- C. Immediately prime prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.
- D. Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.
- E. Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Make sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Apply sealer over the sealant when and as specified by the sealant manufacturer.
- F. Thresholds: Place double band of sealant under and along all sides of all exterior thresholds.

END OF SECTION 07920

ATTACHMENT 2

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.**

nance, Cleaning and Conversion

5, Appendix 13, requires an information and training program for **all** to lead above the action level **or** who may suffer skin or eye irritation from must inform the employees of the specific hazards associated with their work tive measures which can be taken, the danger of lead to their bodies oductive systems), and their rights under the standard. In addition you must le to all employees, including those exposed below the action level, a copy its appendices. This training program shall be repeated annually for leanup operations.

all ensure that each individual employee is informed of the following:

of the standard and its appendices.

nature of operations that could result in exposure to lead above the action

, proper selection, fitting, use, and limitations of respirators.

and a description of medical surveillance program.

rinking are prohibited in lead contaminated areas.

l smoking materials shall not be permitted in contaminated areas.

must wash their hands and other exposed skin whenever they leave the work

it of Health,

ing controls and work practices associated with the individual's job

onal Guard

of any compliance plan in effect.

s to employees that chelating agents should not routinely be used to remove

on

odies and should not be used at all except under the direction of a licensed

I

Areas Outside IFR with Elevated Lead Dust on Floor

1. A 3 section by 3 section grid system shall be used. Samples shall not be collected on all one section or end of a grid. A total of 3 samples shall be collected per 3 section by 3 section grid.
 - Each floor surface less than 50 feet in length shall be divided into a 3 section by 3 section grid. (Figure 1 and Figure 2)
 - Each floor surface more than 50 feet in length shall be divided in half and a 3 section by 3 section grid shall be established on each half. (Figure 3 and Figure 4)
2. Sample results in excess of 40 ug/SF are considered to have failed. If a sample fails, the entire 3 section by 3 section grid shall be re-cleaned and re-sampled.
3. DEQ reserves the right to take additional confirmation samples.

Figure 1. ACCEPTABLE FOR SURFACES LESS THAN 50 FEET

Wipe Sample		
	Wipe Sample	
		Wipe Sample

Figure 2. NOT ACCEPTABLE FOR SURFACES LESS THAN 50 FEET

Wipe Sample	<u>OR</u> Wipe Sample	Wipe Sample
Wipe Sample		
Wipe Sample		

Figure 3. **ACCEPTABLE FOR SURFACES GREATER THAN 50 FEET**

Wipe Sample					Wipe Sample
	Wipe Sample		Wipe Sample		
		Wipe Sample		Wipe Sample	

Surface Center

Figure 4. **NOT ACCEPTABLE FOR SURFACES GREATER THAN 50 FEET**

				Wipe Sample	
Wipe Sample	Wipe Sample	Wipe Sample		Wipe Sample	
				Wipe Sample	

Surface Center

ATTACHMENT 4

Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges

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

*NG Pam 420-15

Facilities Engineering

Guidelines and Procedures for Rehabilitation and
Conversion of Indoor Firing Ranges

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

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

Official:

GEORGE R. BROCK
Chief, Plans and Policy Division

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

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

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

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

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

Distribution. A.

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Health and Medical Aspects

- 2-1. Health Effects
- 2-2. Medical Surveillance for Occupational Exposure to Lead (Pb)
- 2-3. Air Monitoring

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

- 2-4. Wipe Sampling Protocol and Media
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Glossary

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 ($\mu\text{g}/\text{ft}^2$) (40 micrograms in the case of child exposure). The sampling strategy, which is the amount and location of wipe samples to be collected, is provided in Appendix C.

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

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

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

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

1-5. Goal

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

1-6. Deviation

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

Chapter 2**Health and Medical Aspects****2-1. Health Effects**

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

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

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

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

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

2-3. Air Monitoring

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

2-4. Wipe Sampling Protocol and Media

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

2-5. Personal Protective Equipment

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

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

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

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

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

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

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

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

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

Chapter 3 Education, Maintenance, Cleaning and Conversion

3-1. Worker Education

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

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

- (1) The content of the standard and its appendices.
- (2) The specific nature of operations that could result in exposure to lead above the action level.
- (3) The purpose, proper selection, fitting, use and limitations of respirators.
- (4) The purpose and a description of medical surveillance program.
- (5) Eating and drinking are prohibited in lead contaminated areas.
- (6) Smoking and smoking materials will not be permitted in contaminated areas.
- (7) Soldiers and ARNG employees must wash their hands and other exposed skin whenever they leave

the work area.

- (8) The engineering controls and work practices associated with the individual's job assignment.
- (9) The contents of any compliance plan in effect.
- (10) Instructions to soldiers and ARNG employees that chelating agents should not routinely be used to

remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

3-2. Range Cleaning Instructions

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

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

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

d. Prohibited methods include:

(1) Wet cleaning using high-pressure systems, since this method may embed the lead into the substratum and generate large quantities of hazardous waste.

(2) Dry sweeping is not permitted.

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

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

(1) Clean the steel bullet trap, areas in front of and behind the bullet trap, and the steel bullet trap plate(s), after removing the sand (if applicable).

(2) Clean the ceiling, floors, lights, baffles, retrieval system, heating system(s), and ventilation duct(s).

(3) Vacuum and remove acoustical material. *Painting over this material is not recommended.*

(4) Clean the floor the last, starting at the bullet trap and ending behind the firing line.

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

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

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

(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/ft²) 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/ft², if any sample is above 200 ug/ft², the range is not considered clean, the range will need to be re-washed until clearance samples are below 200 ug/ft².
- k. The regional industrial hygienist will do quality assurance sampling as needed.
- l. After obtaining clearance, the walls of the range will be coated with a sealant (Not Paint), which is smooth, wood floors will receive a coat of deck enamel or urethane, concrete floors will be sealed with deck enamel. After sealing, floors will be tiled or covered with linoleum.
- m. As a variety of conditions exist in ranges, unique situations may arise and specific written guidance from the Regional Industrial Hygiene Office may be required.
- n. All personnel involved in the decontamination/conversion of IFRs as a minimum will be provided with the following personal protective equipment.
 - (1). Full Face air purifying respirator with HEPA cartridges. The requirements outline in 29 CFR 1910.134, must be met prior to placing workers in respiratory protection.
 - (2). Individuals will be provided personal protective equipment as required per paragraph 2-5, this pamphlet.
- o. Any conversion must be supervised by a person certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs. All work shall be according to current industry engineering standards under the control of the State Construction and Facilities Management Officer. Cleaning must recognize that there likely will be "background" lead presence in the readiness center totally independent of the existence of an indoor range and that the method of cleaning is less important than achieving the goal of less than 200 micrograms (40 micrograms in the case of child exposure).
- p. After conversion, lead testing shall continue on an annual basis to verify that no lead migration from the substrate is occurring.

Appendix A
References

Section I
Required Publications

There are no entries in this section

Section II
Related Publications

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

AR 11-34
The Respiratory Protection Program

AR 40-5
Preventive Medicine

DODI 6055.5
Industrial Hygiene and Occupational Health

DOD 6055.5-M
Occupational Medical Surveillance Manual

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

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

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

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

NGR 420-10
Construction and Facilities Management Office Operations

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

Section III
Prescribed Forms

There are no entries in this section

Section IV
Referenced Forms

There are no entries in this section

Appendix B
Protocol for Collecting Wipe Samples

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

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

B-3. Wipe Samples

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

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

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

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

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

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

Appendix C
Sampling Strategy for Collection of Wipe Samples

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

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

Glossary

Section I Abbreviations

ARNG
Army National Guard

CFR
Code of Federal Regulations

HEPA
High Efficiency Particulate Air

IFR
Indoor Firing Range

NIOSH
National Institute for Occupational Safety and Health

OSHA
Occupational Safety and Health Administration

ug/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 be 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.

3 November 2006

NGP 420-15

Section III
Special Abbreviations and Terms

This section contains no entries

LEAD REMEDIATION REPORT



Lead Remediation 08296

Lead Remediation for Cherokee Armory

Cherokee Armory, 122 E 2nd Street, Cherokee, OK

Report Date: March 4, 2009



ENVIRONMENTAL ENGINEERING AND CONSTRUCTION

1401 CORNELL PARKWAY, SUITE 100 • OKLAHOMA CITY, OKLAHOMA 73108
PH: (405) 942-2233 • FAX: (405) 949-5482 • WWW.CRYSTALCREEKINC.COM

SUMMARY

Crystal Creek Environmental Solutions, Inc. (Crystal Creek) prepared preformed Lead Remediation under contract with the Department of Central Services and with oversight from the Oklahoma Department of Environmental Quality at the Cherokee National Guard Armory. The purpose for the remediation was to provide for safe re-use of the facility with unrestricted use such as storage areas, classrooms or office space.

All remediation efforts were preformed in accordance with the Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges, November 3, 2006, Department of the Army and Air Force, National Guard Bureau and in accordance with OSHA Lead in Construction Interim Final Standard (29 CFR 1926.62) for lead based paint abatement, indoor firing range remediation and lead dust remediation.

All work was preformed by skilled, Licensed Lead Based Paint Workers, licensed by the State of Oklahoma.

LOCATIONS:

Location 1:

Cherokee Armory, 122 E Second, Cherokee, OK

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Contract Documents and Change Orders	Section 1
Statement of Work and Addendums	Section 2
Cherokee Photos	Section 3
Cherokee Clearance Testing	Section 4
Waste Manifest	Section 5

SECTION 1

Contract Documents And Change Orders



**State of Oklahoma
Department of Central Services
Construction and Properties**

NOTICE TO PROCEED / WORK ORDER

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Notice to proceed date: **07/07/08**

In accordance with the Agreement or Purchase Order dated: **06/25/08**

Between the Vendor's client identified as the Owner: **The State of Oklahoma,
acting through the Department of Central Services,
Construction and Properties Division on behalf of the**

**Department of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73101**

and the Vendor: **Crystal Creek Environmental Solutions, Inc.
1401 Cornell Parkway #100
Oklahoma City, OK 73108**

For the following Project: **DCS Project Number: 08296 (Please, reference on all invoices)**
DCS Purchase Order Number: 2929009144 (Please, reference on all invoices)
Project Name: Lead Remediation at Cherokee Armory

1. Authorization is given to proceed with the **Lead Remediation at Cherokee Armory Project.**
2. Work Periods set forth in the agreement or purchase order begin upon receipt of this Notice to Proceed / Work Order.
3. Contract Time: **30 Calendar days**
4. Contract Sum: **\$69,600.00**
5. Completion Date: **08/11/08**

Distribution:

- ☒ Contractor
- ☐ Consultant, If Applicable
- ☒ Using Agency
- ☒ CAP Project Manager
- ☒ CAP Project File



Dept of Environmental Quality
OK DEPT OF ENVIRONMENTAL QUALITY
SHIPPING & RECEIVING
707 N ROBINSON
OKLAHOMA CITY OK 73102

Purchase Order

Dispatch via Print

Purchase Order	Date	Revision	Page
2929009144	06/25/2008		1
Payment Terms	Freight Terms	Ship Via	
0 Days	Free on board at Destination	Common	
Buyer	Phone	Currency	
Julie Mathis (580)	405/522-0281	USD	

Ship To: OK DEPT OF ENVIRONMENTAL QUALITY
SHIPPING & RECEIVING
707 N ROBINSON
OKLAHOMA CITY OK 73102

Vendor: 0000237377
CRYSTAL CREEK ENVIRONMENTAL SOLUTIONS
1401 CORNELL PARKWAY
OKLAHOMA CITY OK 73108-1811

Bill To: OK DEPT OF ENVIRONMENTAL QUALITY
FINANCIAL & HUMAN RESOURCES MGMNT
PO BOX 1677
OKLAHOMA CITY OK 731011677

Tax Exempt? N		Tax Exempt ID:					
Line-Sch	Item Id	Description	Quantity	UOM	PO Price	Extended Amt	Due Date
1- 1	096131	Environmental Remediation Services. Furnish All Labor, Materials & Equipment Necessary.	1.0000	SUM	69,600.0000	69,600.00	06/25/2008

BIDDING FOR LEAD REMEDIATION
AT THE CHEROKEE ARMORY

Total PO Amount

69,600.00

COMMENTS:

DCS# 08296
David Mihm
405-522-4079
DCS/CAP Project Manager

FY08

PROJECT: SITE CLEANUP ASSISTANCE PROGRAM

JUSTIFICATION: UNDER THE SITE CLEANUP ASSISTANCE PROGRAM THE DEQ WILL HIRE A LICENSED PROFESSIONAL TO ABATE LEAD DUST AND LEAD-BASED PAINT IN THE CHEROKEE ARMORY.

(FOR AGENCY USE ONLY)

CONTACT: KAREN RUMSEY/ASD/(405)702-1168
MARY JOHNSON/LPD/(405)702-5100

DEQ IS AN EQUAL OPPORTUNITY EMPLOYER.

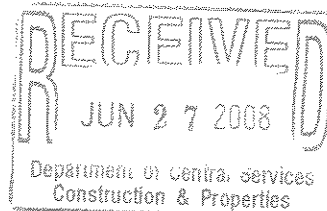
FUNDING: 493

REQUISITION #2920002697 - PLEASE RETURN PO TO MARY JOHNSON

1/16/08

WORK ORDER	
NOTICE TO PROCEED DATE:	07/07/08
CONTRACT TIME:	30 days
COMPLETION DATE:	08/11/08

Authorized Signature

RECEIVED
JUN 23 2008
Department of Central Services
Construction & PropertiesState of Oklahoma
Department of Central Services
Construction and Properties Division**Standard Form of Agreement Between Owner and Contractor where
the basis of payment is a Stipulated Sum**

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AGREEMENT made as of the June day of 9, 2008.

BETWEEN the Owner: **State of Oklahoma**
Construction and Properties Division
Department of Central Services
Will Rogers Office Building
2401 N. Lincoln, Suite 106
Oklahoma City, OK 73152-3448

On behalf of: **Department of Environmental Quality**
707 N. Robinson
Oklahoma City, OK 73101

And the Contractor: **Crystal Creek Environmental Solutions, Inc.**
1401 Cornell Parkway #100
Oklahoma City, OK 73108

The Project is: **Lead Remediation at Cherokee Armory**
122 E. Second Street
Cherokee, OK

The Consultant is: **N/A**

The Owner and the Contractor agree as follows:

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 8.

ARTICLE 2 THE WORK OF THIS CONTRACT

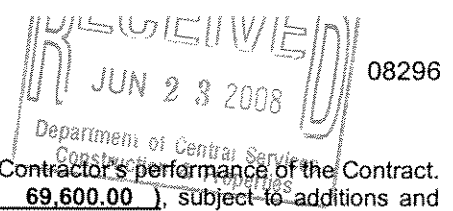
The Contractor shall fully execute the Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

3.2 The Contract Time shall be measured from the date of Work Order.

3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than 30 days from the date of commencement, subject to adjustments of this Contract Time as provided in the Contract Documents.

**ARTICLE 4 CONTRACT SUM**

4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be Sixty-nine thousand, six hundred Dollars (\$ 69,600.00), subject to additions and deductions as provided in the Contract Documents.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner. **N/A**

4.3 Options. The following options shall remain available for 30 days after the contract date. After the expiration date, the cost of the option may be negotiated by the Owner and Contractor. **N/A**

4.4 Unit prices, if any, are as follows: **N/A**

ARTICLE 5 PAYMENTS**5.1 PROGRESS PAYMENTS**

5.1.1 The Contractor shall follow the current Rules and Procedures established by the Construction and Properties Division of the Department of Central Services, State of Oklahoma to ensure compliance with state statutes.

5.1.2 Based upon Applications for Payment submitted to the Consultant by the Contractor and Certificates for Payment issued by the Consultant, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

5.1.3 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month or as follows: (Insert other date)

5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Consultant may require. This schedule, unless objected to by the Consultant, shall be used as a basis for reviewing the Contractor's Application for Payment.

5.1.5 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedules of values, less retainage of ten percent (10%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Subparagraph 7.3.8 of CAP Document A201-General Conditions;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of ten percent (10%).

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Consultant has withheld or nullified a Certificate for Payment as provided in Paragraph 9.5 of CAP Document A201-1997.

5.1.7 The progress payment amount determined in accordance with Subparagraph 5.1.6 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Consultant and Owner shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and (stat other requirements if any).

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Subparagraph 9.10.3 of CAP Document A201-General Conditions.

- 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:
Refer to CAP Form A201 General Conditions Section 9.3.1.1.

5.2 FINAL PAYMENT

5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when:

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Subparagraph 12.2.2 of CAP Document A201-General Conditions, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Consultant and accepted by the Owner.

5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Consultant's final Certificate for Payment.

ARTICLE 6 TERMINATION OR SUSPENSION

6.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of CAP Document A201-General Conditions.

6.2 The Work may be suspended by the Owner as provided in Article 14 of CAP Document A201-General Conditions.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 Where reference is made in this Agreement to a provision of CAP Document A201-General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Document.

7.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the legal state rate.

7.3 The Owner's representative is: **John W. Morrison AIA**
State Construction Administrator
Construction and Properties Division
Department of Central Services
P. O. Box 53448
Oklahoma City, OK 73152-3448

7.4 The Contractor's representative is: **Mike Jenkinson.**

7.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

7.6 Other provisions: **None**

ARTICLE 8 ENUMERATION OF CONTRACT DOCUMENTS

8.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

8.1.1 The Agreement is this executed edition of the Standard Form of Agreement Between Owner and Contractor, CAP Document A101.

8.1.2 The General Conditions are the current edition of the General Conditions of the Contract for Construction, CAP Document A201, as incorporated in the Project Manual.

8.1.3 The Supplementary and other Conditions of the Contract are those contained in the Project Manual dated **April 2008** and are as follows:

April 2008 – Lead Remediation at Cherokee Armory - 08296

8.1.4 The Specifications are those contained in the Project Manual dated **April 2008** as in Subparagraph 8.1.3, and are as follows:

Title	Date
Statement of Work	April 2008
Lead Remediation Specific Site Conditions Cherokee Armory	April 2008
Lead-Based Paint Inspection Report for Cherokee Armory	March 22, 2007

**Health & Safety Aspects to Consider
Confirmation Sampling Instructions
Guidelines for Rehabilitation and Conversion of IFR**

April 2008
April 2008
November 3, 2006

8.1.5 The Drawings are as follows, and are dated unless a different date is shown below: **N/A**

8.1.6 The Addenda, if any, are as follows:

Number	Date	Pages
One (1)	May 20, 2008	10, incl. cover

8.1.7 Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 8.

8.1.8 Other documents, if any, forming part of the Contract Documents are as follows: **N/A**

8.1.9 AUDITS AND RECORDS CLAUSE: As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form. In accepting any contract with the State, the Consultant agrees any pertinent State or Federal agency will have the right to examine and audit all records relevant to execution of the resultant contract. The consultant is required to retain all records relative to this contract for the duration of the contract term and for a period of three years following completion and/or termination of the contract. If an audit, litigation, or other action involving such records are started before the end of the three year period, the records are required to be maintained for three years from the date that all issues arising out of the action are resolved or until the end of the three year retention period, whichever is later.

This agreement is entered into as of the day and year first written above and is executed in at least three original copies, of which one is to be delivered to the Contractor, one to the Consultant for use in the administration of the Contract, and the remainder to the Owner.

This Agreement entered into as of the day and year written above.

STATE OF OKLAHOMA
DEPARTMENT OF CENTRAL SERVICES

CRYSTAL CREEK ENVIRONMENTAL SOLUTIONS, INC.

Owner (Signature)

Contractor (Signature)

John W. Morrison AIA
State Construction Administrator
Construction and Properties Division

Michael Jenkinson, President.
(Printed name and title) FEI # 73-1462615

The Using Agency certifies that funds are available and dedicated to complete the contract sums stated in this Contract. The Using Agency agrees to pay all project related costs including but not limited to work related to unknown site conditions, remediation of discovered environmental conditions, legal expenses, judgments and any reasonable project related expense.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Using Agency Authorized Representative (Signature)

DAVID R. DYKE DIRECTOR - ASD
(Printed name and title)



State of Oklahoma
Department of Central Services
Construction and Properties Division



Non-Collusion Affidavit

The statement below must be signed and notarized before this contract will become effective

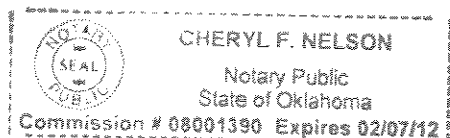
Michael Jenkins, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by Contractor to submit the above Contract to the State of Oklahoma.

Affiant further states that contractor has not paid, given, or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma any money or other thing of value, either directly or indirectly, in the procuring of the Contract.

[Signature]
Contractor

Michael Jenkins, President
(Printed name and title)

Subscribed and sworn to before me this 23rd day of June, 2008.



[Signature]
Notarial Officer

Commission Number:

08001390

My Commission Expires:

02/07/12

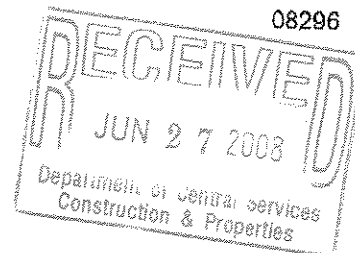
April 2008

Lead Remediation at Cherokee Armory

08296



JUN 23 2008

Department of Central Services
Construction & PropertiesState of Oklahoma
Department of Central Services
Construction and Properties Division

Performance Bond

Bond # 17965

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable. This document may not be altered or modified.

CONTRACTOR (Name and Address):

Crystal Creek Environmental Solutions, Inc.
1401 Cornell Parkway, #100
Oklahoma City, OK 73108

SURETY (Name and Principal Place of Business):

Victore Insurance Company
4334 NW Expressway, Suite 151
Oklahoma City, OK 73116

OWNER: Construction and Properties Division

Department of Central Services
State of Oklahoma
P.O. Box 53448
Oklahoma City, OK. 73152-3448

CONSTRUCTION CONTRACT

Date: June 9, 2008

Amount: \$ 69,600.00 (Sixty-Nine Thousand Six Hundred Dollars and no/cents)

Description (Name and Location):

DCS# 08296 - Lead Remediation at Cherokee Armory, 122 E. Second St, Cherokee OK

BOND:

Date (Not earlier than Construction Contract Date): June 17, 2008

Amount: \$ 69,600.00 (Sixty-Nine Thousand Six Hundred Dollars and no/cents)

CONTRACTOR (Representative):**SURETY (Representative):**

Signature:

Signature:

Name and Title: Wesley Anderson, Vice President

Name and Title: John Gipson, Attorney-in-fact

(FOR INFORMATION ONLY-Name, Address and Telephone)

AGENT or BROKER:**OWNER'S REPRESENTATIVE (Architect, Engineer or other party):**

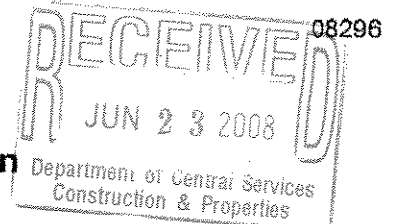
The Insurance Center Agency, Inc.
709 Wall Street
Norman, OK 73069

April 2008

Lead Remediation at Cherokee Armory



State of Oklahoma
Department of Central Services
Construction and Properties Division

**Payment Bond**

Bond # 17965

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable. This document may not be altered or modified.

CONTRACTOR (Name and Address):

Crystal Creek Environmental Solutions, Inc.
1401 Cornell Parkway #100
Oklahoma City, OK 73108

SURETY (Name and Principal Place of Business):

Victore Insurance Company
4334 NW Expressway, Suite 151
Oklahoma City, OK 73116

OWNER: Construction and Properties Division

Department of Central Services
State of Oklahoma
P.O. Box 53448
Oklahoma City, OK. 73152-3448

CONSTRUCTION CONTRACT

Date: June 9, 2008

Amount: \$69,600.00 (Sixty-Nine Thousand Six Hundred Dollars and no/cents)

Description (Name and Location):

DCS#08296 - Lead Remediation at Cherokee Armory, 122 E. Second St, Cherokee OK

BOND:

Date (Not earlier than Construction Contract Date): June 17, 2008

Amount: \$69,600.00 (Sixty-Nine Thousand Six Hundred Dollars and no/cents)

CONTRACTOR (Representative):

Signature:

Name and Title: Wesley Anderson, Vice President

SURETY (Representative):

Signature:

Name and Title: John Gipson, Attorney-in-fact

(FOR INFORMATION ONLY-Name, Address and Telephone)

AGENT or BROKER:

The Insurance Center Agency, Inc.
709 Wall Street
Norman, OK 73069

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

April 2008

Lead Remediation at Cherokee Armory



State of Oklahoma
Department of Central Services
Construction and Properties Division



Statutory Defect Bond

61 O.S. 1991, Section 113 (B)(3)

Bond # 17965

KNOW ALL MEN BY THESE PRESENTS:

That Crystal Creek Environmental Solutions, Inc., as Principal
and Victore Insurance Company, a corporation organized under the laws of the State

of Oklahoma and authorized to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto the
Dollars and no/cents

State of Oklahoma in the penal sum of Sixty-Nine Thousand Six Hundred Dollars (\$69,600.00)
in lawful money of the United States of America, said sum being equal to One Hundred percent (100%) of the Contract price, for the
payment of which, well and truly to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees,
successors, and assigns, jointly and severally, firmly by these presents:

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written contract with the State of Oklahoma, dated June 9th, ~~XX~~ 2008, for
Lead Remediation at Cherokee Armory, 122 E Second Street, Cherokee OK

DCS Project Number 08296
all in compliance with the plans and specifications therefore, made a part of said contract and on file in the Department of Central
Services, Construction and Properties Division, 2401 N. Lincoln Blvd., Suite 108, Oklahoma City, Oklahoma 73105.

NOW, THEREFORE, if said Principal shall pay or cause to be paid to the State of Oklahoma all damage, loss, and expense
which may result by reason of defective materials and/or workmanship in connection with said work, occurring within a period of one
(1) year from and after the acceptance of said project by the State of Oklahoma; then this obligation shall be null and void, otherwise
to be and remain in full force and effect.

It is expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations
from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of
this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to
be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its
corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year set forth below.

DATED this 17th day of June, 20 08.Principal: Crystal Creek Environmental Solutions, Inc.By: Wesley Anderson
Wesley Anderson (Title) Vice PresidentATTEST: [Signature]Surety: John Gipson
(Attorney-in-fact)By: John GipsonName: Victore Insurance CompanyAddress: 4334 NW Expressway, Suite 151City: Oklahoma City State: OK 73116Telephone: (800) 948-9487

VICTORE INSURANCE COMPANY
4334 NW EXPRESSWAY, SUITE 151
OKLAHOMA CITY, OK 73116-1574

25141

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That VICTORE INSURANCE COMPANY a Corporation duly organized under the laws of the State of Oklahoma, having its principal office in Oklahoma City, Oklahoma pursuant to the following resolution which is now in full force and effect:

"That the President may from time to time appoint Attorneys-in-Fact, and Agents to act for and on behalf of the Company and he may give any such appointee such authority as his certificate and other writings obligatory in nature of a bond, and such officer or the Board of Directors may at any time remove such appointee and revoke the power and authority given him"
does hereby make and appoint:

JOHN CATE, HAROLD STOCKSTILL, DEE LYLES, CARYOL WALTRIP

JOHN GIPSON

its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver on its behalf, and as its act and deed, as follows:

\$375,000.00

All bonds or undertakings, except Bail Bonds not to exceed on any single instrument _____

This Power of Attorney is signed and sealed by facsimile under authority of the following Resolution adopted by the Board of Directors of the Company at a meeting called and held on the 14th day of May, 2001.

"Resolved, that the signature of the Chairman, Vice Chairman, President, Executive Vice President, Senior Vice President, Vice President and Assistant Vice Presidents and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signatures and seal shall be valid and binding on the company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company"

IN WITNESS WHEREOF VICTORE INSURANCE COMPANY has caused these presents to be signed by its President and its corporate seal to be affixed this 5th day of January, 2004.



(STATE OF OKLAHOMA)
(COUNTY OF OKLAHOMA)

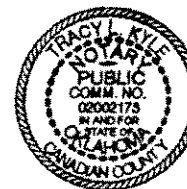
Altus E Wilder III
Altus E. Wilder, III

On this 5th day of JANUARY, 2004
before me, a Notary Public of the State of Oklahoma in and for the county of Oklahoma came Altus E. Wilder, III, to me personally known to be the individual and officer described herein, and who executed the preceding instrument and acknowledged the execution of the same, and being by me duly sworn, deposed and said, that he is the officer of said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and signatures as an officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that the resolution of said Company, referred to in the preceding instrument, is now in force.

In Testimony Whereof, I have hereunto set my hand, and affixed by official seal at Oklahoma City, Oklahoma the day and year written above.

Tracy L. Kyle
Tracy L. Kyle

Notary Public, Canadian County, Oklahoma City, Oklahoma
My Commission Expires MARCH 10, 2010
Commission No. 02002173



CERTIFICATE

I, the undersigned, President of VICTORE INSURANCE COMPANY a corporation of the State of Oklahoma DO HEREBY CERTIFY that the foregoing and attached Power of Attorney and Certificate of Authority remains in full force and has not been revoked; and furthermore, that the Resolution of the Board of Directors, as set forth in the Certificate of Authority, are now in force.

Signed and Sealed at the said Company at Oklahoma City, Oklahoma, dated this 17th day of June, 2008

Altus E Wilder III
President

VOID IF THIS LINE NOT IN RED INK.

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
6/17/2008

PRODUCER (405) 321-2727 FAX: (405) 321-3074
The Insurance Center Agency, Inc.
709 Wall Street

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

Norman OK 73069-6303

INSURERS AFFORDING COVERAGE

NAIC #

INSURED

INSURER A American Safety RRG, Inc.

Crystal Creek Environmental Solutions, Inc. &
Environmental Solutions Specialists, Inc.
1401 Cornell Parkway, #100
Oklahoma City OK 73108

INSURER B:

INSURER C:

INSURER D:

INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR	ADD'L LTR	INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A			GENERAL LIABILITY	ENV013101-08-03	4/3/2008	4/3/2009	EACH OCCURRENCE \$ 1,000,000
			<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
			AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
			GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
A			EXCESS/UMBRELLA LIABILITY	ENU019014-08-01	4/3/2008	4/3/2009	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 DEDUCTIBLE \$ RETENTION \$
			WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below WC STATUTORY LIMITS OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A			OTHER Professional Liability	ENV013101-08-03	4/3/2008	4/3/2009	Limit 1,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

RE: DCS#08296, Lead Remediation at Cherokee Armory. - Microbiological Decontamination and Microbiological Contamination consulting coverage is on a claims made form with each having a \$5,000 per claim SIR. General Liability has a \$5,000 deductible per occurrence. Professional liability is on a claims made form and has a \$5,000 deductible per claim.

CERTIFICATE HOLDER

State of Oklahoma, Department of Central
Construction and Properties Division
PO Box 53448
Oklahoma City, OK 73152

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

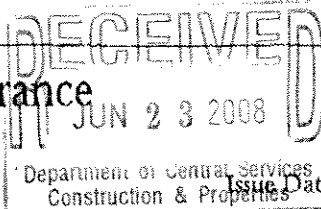
AUTHORIZED REPRESENTATIVE

John Gipson/ADM

John Gipson

Commercial Certificate of Insurance

Agency
Name • Monty Moore Agency
& • 323 West Gray
Address • Norman, OK 73069
• 405 321 0153



FARMERS

(MM/DD/YY)

06/17/2008

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies shown below.

St. 08 Dist. 41 Agent 381

Companies Providing Coverage:

Insured
Name • Crystal Creek Environmental Solutions
& • 1401 Cornell Parkway Suite 100
Address • Oklahoma City, Oklahoma 73108

Company A Truck Insurance Exchange
Letter
Company B Farmers Insurance Exchange
Letter
Company C Mid-Century Insurance Company
Letter
Company D

Coverages

This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. Limits shown may have been reduced by paid claims.

Co. Ltr.	Type of Insurance	Policy Number	Policy Effective Date (MM/DD/YY)	Policy Expiration Date (MM/DD/YY)	Policy Limits	
	General Liability Commercial General Liability - Occurrence Version Contractual - Incidental Only Owners & Contractors Prot.				General Aggregate Products-Comp/OPS Aggregate Personal & Advertising Injury Each Occurrence Fire Damage (Any one fire) Medical Expense (Any one person)	\$ \$ \$ \$ \$ \$
B	Automobile Liability All Owned Commercial Autos Scheduled Autos Hired Autos Non-Owned Autos Garage Liability	60103 37 50	10/19/07	10/19/08	Combined Single Limit Bodily Injury (Per person) Bodily Injury (Per accident) Property Damage Garage Aggregate	\$ 1,000,000 \$ \$ \$ \$
	Umbrella Liability				Limit	\$
	Workers' Compensation and Employers' Liability				Statutory Each Accident Disease - Each Employee Disease - Policy Limit	\$ \$ \$ \$

Description of Operations/Vehicles/Restrictions/Special Items:

Certificate Holder

Name • State Of Oklahoma
& • Department of Central Services
Address • Construction and Properties
• Division

2401 No Lincoln Ste 106

Oklahoma City, OK 73105-4402

Cancellation

Should any of the above described policies be cancelled before the expiration date hereof, the issuing company will endeavor to mail 30 days written notice to the certificate holder named to the left, but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives.

Monty Moore
Authorized Representative

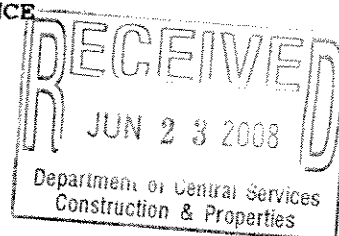


The Source for Workers' Compensation Insurance

CERTIFICATE OF INSURANCE

FORM UN6

CERTIFICATE ISSUED TO:



DEPT OF CENTRAL SVCS
CONSTRUCTION & PROPERTIES DIV
PO BOX 53448
OKLAHOMA CITY OK 73152-3448

THIS IS TO CERTIFY THAT POLICY NUMBER 01327788 08 1 ISSUED IN THE NAME OF:

ENVIROMENTAL SOLUTIONS SPECI
1401 CORNELL PARKWAY
OKLAHOMA CITY OK 73108

OTHER BUSINESSES COVERED:
CRYSTAL CREEK ENVIRONMENTAL
EFF: 03/01/08 EXP: 03/01/09

IS IN FORCE ON THE DATE HEREOF, AS FOLLOWS:

CERTIFICATE OF INSURANCE APPLIES ONLY TO LOCATIONS AND OPERATIONS
WITHIN THE STATE OF OKLAHOMA AND EXTRA TERRITORIAL JURISDICTION.
THIS POLICY DOES NOT COVER INJURIES TO RESIDENTS OF OTHER STATES
WHILE PERFORMING WORK IN THAT OTHER STATE UNLESS SUCH WORKER IS
HIRED IN OKLAHOMA AND SPECIFICALLY AFFORDED COVERAGE BY ENDORSEMENT.

KIND OF INSURANCE: WORKERS COMPENSATION AND EMPLOYERS LIABILITY

POLICY PERIOD: EFFECTIVE: 03 01 08 AT 12:01 A.M.

EXPIRES: 03 01 09 AT 12:01 A.M.

THIS CERTIFICATE OF INSURANCE NEITHER AFFIRMATIVELY NOR NEGATIVELY AMENDS
EXTENDS OR ALTERS THE COVERAGE AFFORDED IN THE POLICY DESCRIBED HEREIN.

LIMITS OF LIABILITY:

WORKERS COMPENSATION INSURANCE: FULLY COMPLIES WITH THE REQUIREMENTS OF
THE STATE LAWS OF OKLAHOMA.

EMPLOYERS LIABILITY INSURANCE:

BODILY INJURY BY ACCIDENT	100,000	EACH ACCIDENT
BODILY INJURY BY DISEASE	100,000	EACH EMPLOYEE
BODILY INJURY BY DISEASE	500,000	POLICY LIMIT

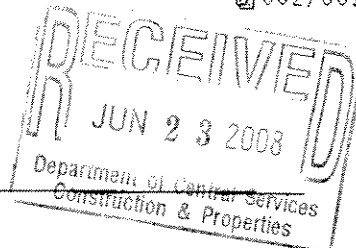
THE DESCRIBED POLICY IS A STANDARD OKLAHOMA WORKERS COMPENSATION AND EMPLOYERS
LIABILITY POLICY APPROVED BY THE STATE PROPERTY AND CASUALTY RATE BOARD. IN
THE EVENT OF ANY MATERIAL CHANGE IN, OR CANCELLATION OF SAID POLICY THE
UNDERSIGNED COMPANY WILL GIVE A 10 DAY WRITTEN NOTICE TO THE PARTY TO WHOM
THIS CERTIFICATE IS ISSUED, BUT FAILURE TO GIVE SUCH NOTICE SHALL IMPOSE NO
OBLIGATION NOR LIABILITY UPON THE COMPANY. SIGNED 06-18-08 AT ITS
OKLAHOMA CITY, OKLAHOMA OFFICE.

COMPSOURCE OKLAHOMA

UNDERWRITER

FAX 405-949-5482

SR



FORM UN6

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

POLICY NUMBER 01327788 08 1

WE HAVE THE RIGHT TO RECOVER OUR PAYMENTS FROM ANYONE LIABLE FOR AN INJURY COVERED BY THIS POLICY. WE WILL NOT ENFORCE OUR RIGHT AGAINST THE PERSON OR ORGANIZATION NAMED IN THIS SCHEDULE. (THIS AGREEMENT APPLIES ONLY TO THE EXTENT THAT YOU PERFORM WORK UNDER A WRITTEN CONTRACT THAT REQUIRES YOU TO OBTAIN THIS AGREEMENT FROM US.)

THIS AGREEMENT SHALL NOT OPERATE DIRECTLY OR INDIRECTLY TO BENEFIT ANY ONE NOT NAMED IN THE SCHEDULE.

SCHEDULE

DEPT OF CENTRAL SVCS
CONSTRUCTION & PROPERTIES DIV
PO BOX 53448
OKLAHOMA CITY OK 73152-3448

COMPSOURCE OKLAHOMA

WC 00 03 13
REV. (6/88)

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

Certificate Request Form Results

Below is what you submitted to underwriting@compsourceok.com on Tuesday, June 17, 2008 at 16:09:01

temp_company: no

policyholder_name: Crystal Creek Environmental Solutions, Inc.

policy_number: 01945447

certificate_holder_name: Department of Central Services - Construction and Property Division

address: P.O. Box 53448

city: Oklahoma City

state: OK

zip: 73152

alternate_employer_endorsement: no

waver_of_subrogation: no

contact_name: Dante Lazzarotto

contact_phone: (405) 942-2233

contact_email: dante@crystalcreekinc.com

- [Back to Certificate Request Form](#)

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SECTION 2

Statement of Work And Addendums

April 2008

Lead Remediation at Cherokee Armory

08296



State of Oklahoma
Department of Central Services
Construction and Properties Division

This addendum forms a part of the contract document and modifies the original specifications as noted below. Please acknowledge receipt of this addendum in the space provided on the bid form. Failure to do so may subject bidders to disqualification.

Date of Issue: May 20, 2008

Addendum Number: One (1)

DCS Project Number: 08296

Project Name: Lead Remediation at Cherokee Armory

TO ALL BIDDERS OF CONCERN:

-
- Item# 1: Addendum corrections summary sheet (1 page)
 - Item# 2: Statement of Work, Remaining Building replacement sheet (1 page)
 - Item# 3: Site Specific Conditions replacement sheets (2 pages)
 - Item# 4: Door Measurement scope and key map replacement sheets (5 pages)
-

ALL OTHER DOCUMENTS, SPECIFICATIONS AND DRAWINGS ARE TO REMAIN THE SAME AND INTACT.

DAVID MORRISON 

John W. Morrison, AIA
State Construction Administrator

Lead Remediation in Cherokee Armory Addendum #1 Summary Sheet

Additions (Corrected Specific Site Conditions Page and Statement of Work Attached)

- Window lintels over external windows will be wet scraped and encapsulated with EPA approved elastomeric encapsulant.
- Stage Storage has lead-based paint on floor that will require abatement.
- Firing range fan box will have wood removed, properly disposed, and replaced with unpainted pressure treated lumber.
- Scheduling and Access section added to Specific Site Conditions Page.
- A 30' X 30' area outside firing range door on Drill Floor will require appropriate cleaning and confirmation sampling to the level of the Indoor Firing Range (40 ug/SF).
- Only the lower portion of the down spouts (down spout guards) requires lead-based paint abatement.
- Drill Floor Stairs abatement will extend 18" onto drill floor from bottom step.

Door Corrections (Corrected Door Scope of Work Attached)

- Door # 7 – The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 12 – No door or frame. Doorway does not require any abatement.
- Door # 13 – Remove all lead-based paint from shower frame. Once paint is removed, frame will be painted with a neutral colored primer.
- Door # 15 – Door and frame does not contain lead-based paint. No abatement is required.
- Door # 17 – No door to remove and replace. Instead remove all lead-based paint from door frame. Frame will be painted with a neutral colored primer.
- Door # 24 – Door will be removed. Lead-based paint will be removed from door frame and frame will be painted with neutral colored primer. Door will be replaced with pre-hung door unit.
- Door # 25 – No Door and frame does not contain lead based paint. No abatement is required.
- Doors # 26 and 27 - The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 28 – Correct door measurement is 6'11" X 3'
- Door # 29 – Correct door measurement is 7' X 3'
- Door # 32 – The door opening is 7' X 5'. There are two doors each measuring 7' X 30".
- Door # 33 – Correct door measurement is 7' X 3'
- Door # 34 – (Added Door) Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
- Door # 35 – (Added Door) Remove all lead-based paint from shower frame. Once paint is removed, paint frame with a neutral colored primer.

Corrections (Corrected Specific Site Conditions Page Attached)

- Latrine Shower frame is removed from Specific Site Conditions Page and addressed in the Door Scope of Work.

Remaining Building

- **Lead-based Paint Abatement (See Attachment 1)**

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

- Building surfaces with lead-based paint, with the exception of hand rails, firing range fan box, impact surfaces and friction surfaces, will be wet scraped and encapsulated with EPA approved elastomeric encapsulant;
 - Hand rails will have all lead-based paint removed and will then be painted with a neutral colored primer;
 - Firing Range fan box will have wood removed, properly disposed, and replaced with unpainted pressure treated lumber.
 - Deteriorated paint removed from building surface will be properly disposed;

- **Friction and Impact Surfaces**

- **Floors**

- Floors and stairs with lead-based paint will have lead-based paint removed. Once paint is visibly removed, floors will be HEPA vacuumed, wet washed, and sealed with KM-669 Acrylic Sealer or equivalent;

- **Doors and Frames**

- A Door-Scope of Work with map, door measurements, and specific details on abatement requirements for each door is attached (Attachment 1);
 - Doors will be replaced with pre-hung Steelcraft Commercial Replacement Door Units (Specifications Attached) or approved equal;
 - Doors shall be replaced with UL listed 90 minute standard metal, Steelcraft L18 and L16 Series Honeycomb Doors (Specifications Attached) or approved equal;
 - Contractor must submit product data for approval if different from doors or door frames in bid package;
 - Replacement doors and frames must meet all compliance and fire rating requirements mentioned in the attached specifications;

- **Exterior Doors**

- Exterior doors will be replaced with galvanized, 16 gage, honeycomb core insulated doors;
 - Hinges: As manufactured by Hagar or approved equal – Plain Bearing - Standard Weight 1279 NRP, 4 ½ X 4 ½ (Specifications Attached);
 - Threshold: As manufactured by National Guard Products or approved equal – 426E (Specifications Attached);
 - Weather Strip: As manufactured by National Guard Products or approved equal – 160VA (Specifications Attached);
 - Lever: As manufactured by Schlage or approved equal – D Series “Rhodes”, 626 finish, function ND60PD (Specification Attached);
 - Keying: All doors to be keyed alike;
 - Provide sealant per 07920 specification attached.

- **Interior Doors**

- Interior doors will be replaced with non-galvanized, 18 gage, honeycomb core insulated doors;
 - Hinges: As manufactured by Hagar or approved equal – Plain Bearing – Standard Weight 1279, 4 ½ X 4 ½ (Specification Attached);
 - Knob: As manufactured by Schlage or approved equal – A Series “Orbit”, 626 finish, function A10S (Specification Attached);
 - Provide sealant (caulking) per 07920 specification attached.

LEAD REMEDIATION SPECIFIC SITE CONDITIONS CHEROKEE ARMORY

These conditions must be reviewed and included in your bid in order for your firm to be considered responsive.

Scheduling and Access

The building will be split into two parts for the internal lead remediation of floors. The first section to be remediated will be the Stage Rooms, Indoor Firing Range, Drill Floor, and Restrooms. The second section to be remediated will be the remaining building. There will be a 10 day delay between the completion of the first section and the start of the second section. The lead-based paint abatement can occur at anytime. DEQ will require a schedule of planned activities with a timeline of start and finish dates to be reviewed and accepted by the City of Cherokee prior to start of work.

Rooms, other than indoor firing range (IFR), with lead contamination on floor

The Rental Area, Stage Area, Stage Storage, Gun Room, 30' X 30' area outside firing range door on Drill Floor, Downstairs Restrooms, FDC Room, Garage Area, Battalion Supply Room, Maintenance Room, 2nd Floor Supply Room and 2nd Floor Vault require appropriate cleaning and confirmation sampling to the level of the IFR. See Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges (40 ug/SF).

Lead Based Paint Contamination

1. Non-Friction and Non-Impact Surfaces - All overhead door frames, all window lintels, all down spout guards, Firing Range fan box, yellow column in Garage Bay, and white wall shower frame in latrine, contain lead based paint. All hand rails in the drill floor also contain lead-based paint. These surfaces will be abated appropriately. See Statement of Work and Lead-Based Paint Inspection Report for details.
2. Floors - Floors with lead-based paint consist of the Rental Area Floor, Stage Storage Floor, Gun Room Floor, Supply Room Floor, and Drill Floor Stairs. The lead-based paint on Drill Floor Stairs extends 18" onto Drill Floor from bottom step. These areas also contain high levels of lead dust and will be abated appropriately. See Statement of Work, Lead Wipe Results and Lead-Based Paint Inspection Report for details.
3. Doors and Frames - Doors and frames with lead-based paint consist of regular hinged doors and frames listed on the attached Cherokee Armory Door Measurements and Scope of Work (See Attachment 1). These surfaces will be abated appropriately. See Statement of Work, Door Scope of Work, and Lead-Based Paint Inspection Report for details.

General Housekeeping Requirements

All floors of the armory shall be HEPA vacuumed and mopped to ensure that any remaining lead contaminated dust has been removed. No sampling is required.

Soil Remediation Requirements

N/A – No soil contamination was found at this armory.

Location

The building address is:

Cherokee Armory
122 East 2nd Street
Cherokee, Oklahoma 73728

Available Utilities

Water: Yes

Electric: Yes

Cherokee Armory Door Measurements And Scope of Work

- Door measurements are listed as approximate Height X Width; Contractor to field verify.
 - All removed doors will be properly disposed.
 - All removed lead-based paint will be properly disposed.
 - Attached is a Cherokee armory Floor Plan with designated door numbers that correspond with the numbers on this Scope of Work.
-
1. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 2. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 3. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 78" X 30"
 4. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 4'
 5. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 6. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"
 7. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – ~~7' X 5'~~ (Pair of Doors) Each Door – 7' X 30"
 8. Vault door and frame does not contain lead-based paint. No abatement is required.

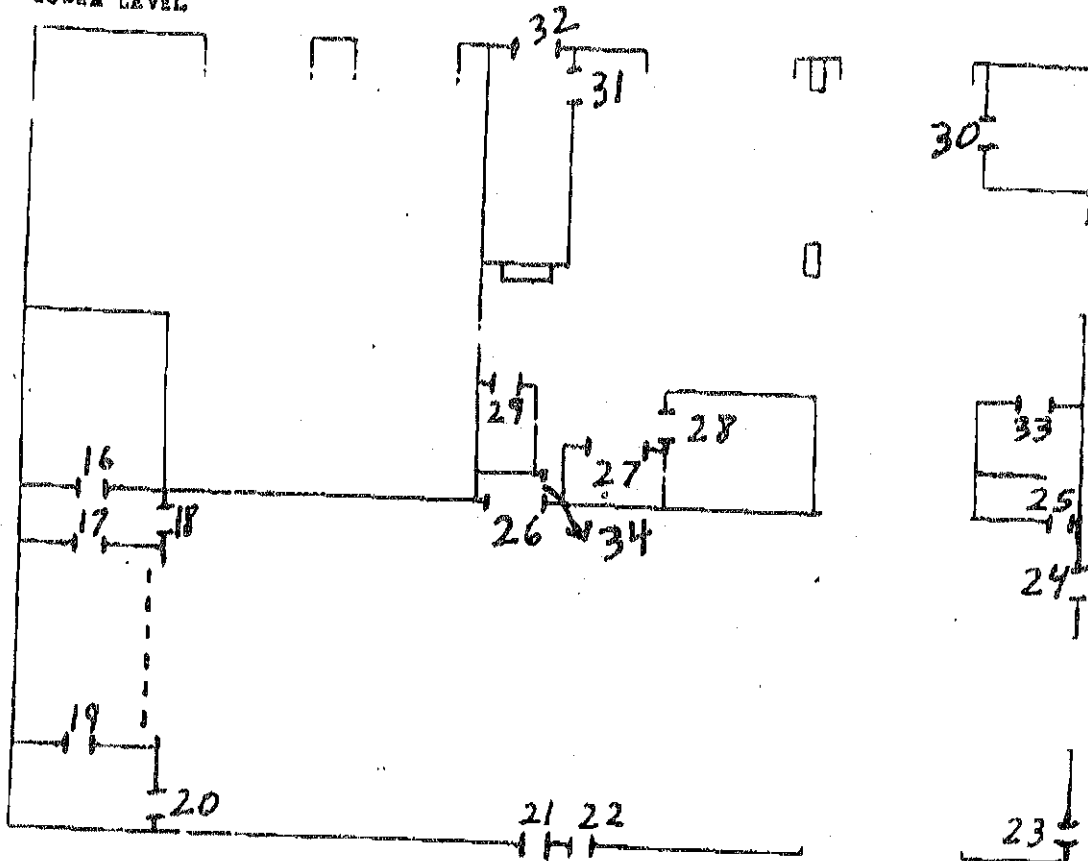
9. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
10. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
11. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
12. No door or frame. Doorway does not require any lead-based paint abatement.
~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
13. Remove all lead-based paint from shower frame. Once paint is removed, frame will be painted with a neutral colored primer. ~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
14. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
15. Door and frame does not contain lead-based paint. No abatement is required.
~~Remove indoor firing range door and frame and do not replace.~~
16. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
17. ~~Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'~~
18. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
19. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'

20. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
21. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
22. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
23. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer. °
24. Remove door. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer. Replace door with pre-hung door unit.
Door Measurements 6' 8" X 2' 8"
25. Frame does not contain lead-based paint. No abatement is required. Remove door. Remove all lead-based paint from door frame. Replace door with pre hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 80" X 32"
26. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Doors will open into drill floor.
Door Measurements – 7' X 5' (Pair of Doors) Each Door – 7' X 30"
27. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 5' (Pair of Doors) Each Door – 7' X 30"
28. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" 6' 11" X 3'
29. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 83" 7' X 3'
30. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
31. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"

32. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – ~~7' X 5'~~ (Pair of Doors) Each Door – 7' X 30"
33. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" 7' X 3'
34. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
35. Remove all lead-based paint from shower frame. Once paint is removed, paint frame with a neutral colored primer.

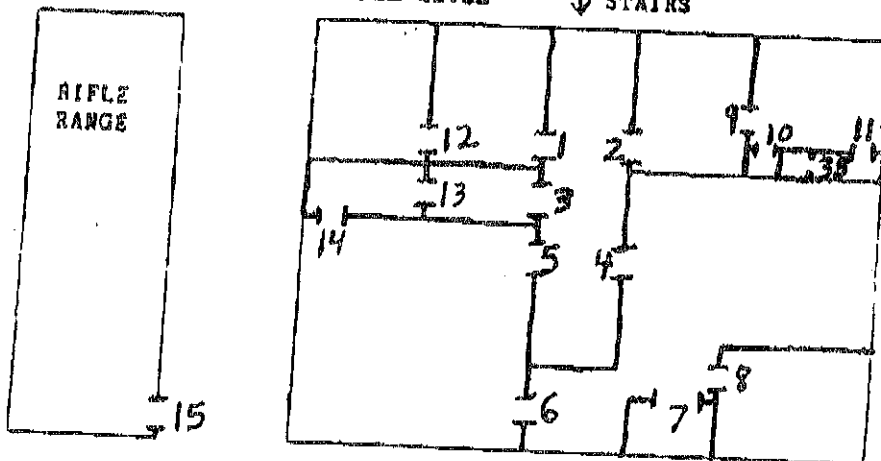
SECOND STREET

LOWER LEVEL



UPPER LEVEL

↓ STAIRS



CHEROKEE
ARMORY
1936

STATEMENT OF WORK

For

Remediation of Lead Contamination at Cherokee Armory

The Oklahoma Department of Environmental Quality (DEQ) is requesting bids from qualified bidders for remediation services at former National Guard armories in Oklahoma. This statement of work (SOW) describes the cleanup of lead contamination associated with indoor firing ranges (IFRs) and lead-based paint at former National Guard armories. 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 site visit and walk through will be held to give a better understanding of the site. Site specific conditions and sample results are attached for review (**Attachment 1**).

SPECIAL PROVISIONS:

1. Work Schedule: The Contractor shall schedule all work to be complete within thirty (30) calendar days after date of the written "Notice to Proceed".
 - a. 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 State and Federal regulations.
 - b. The contractor shall perform this work in such a manner as to cause a minimum of interruption to normal work being performed in the contract area.
 - c. Coordination of work areas shall be scheduled with DEQ.
 - d. Disposal of Removed Materials: All materials removed by the Contractor under this contract shall be disposed of in accordance with State and Federal regulations. DEQ will sign as generator, if necessary.

CONTRACTOR SHALL:

- Attend mandatory pre-bid meeting and site walk through;
- Posses a current lead-based paint license and have a certified lead-based paint supervisor in order to perform lead-based paint abatement;
- Send samples to a EPA accredited laboratory for analysis;
- Read Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges, November 3, 2006, Departments of the Army and Air Force, National Guard Bureau (**Attachment 4**), 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 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;
- Name of independent third-party firm that will be collecting the confirmation lead wipe samples;

LEAD REMEDIATION INSTRUCTIONS

Indoor Firing Range (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 being present;
 - When inside IFR wear appropriate personal protective equipment including full-face air purifying respirator with HEPA cartridges (See **Attachment 2**);
- Pre-remediation Removal
 - Decontaminate shelving, equipment, etc. and remove from IFR;
 - Decontaminate items determined by DEQ to be trash and dispose as non-hazardous waste;
 - Items such as acoustical tiles, carpet, or other porous materials shall be HEPA vacuumed, washed, and sampled for TCLP. Acoustical tile, if present, will have 3 – five part composite samples taken. If samples pass TCLP then properly dispose. If samples fail TCLP, crumble or shred materials, mix materials in concrete, sample concrete for TCLP, and properly dispose.
- Remediation
 - Containerize and remove from IFR, lead contaminated sand;
 - HEPA vacuum and wet wash walls, floor, ceiling, vent fan, etc.
 - Dispose lead contaminated sand, lead dust, wash water, and appropriate cleaning materials as hazardous waste or as appropriate;
- Post-remediation (See Confirmation Sampling Instructions – **Attachment 3**)
 - Perform independent third-party post remediation wipe sampling 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;
 - 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;
 - After surfaces are sealed, perform independent third-party 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;

Remaining Building

- **Lead-based Paint Abatement (See Attachment 1)**

Non-Friction and Non-Impact Surfaces

- Building surfaces with lead-based paint, with the exception of hand rails, impact surfaces and friction surfaces, will be wet scraped and encapsulated with EPA approved elastomeric encapsulant;
- Hand rails will have all lead-based paint removed and will then be painted with a neutral colored primer;
- Deteriorated paint removed from building surface will be properly disposed;

Friction and Impact Surfaces

Floors

- Floors and stairs with lead-based paint will have lead-based paint removed. Once paint is visibly removed, floors will be HEPA vacuumed, wet washed, and sealed with KM-669 Acrylic Sealer or equivalent;

Doors and Frames

- A Door-Scope of Work with map, door measurements, and specific details on abatement requirements for each door is attached (Attachment 1);
- Doors will be replaced with pre-hung Steelcraft Commercial Replacement Door Units (Specifications Attached) or approved equal;
- Doors shall be replaced with UL listed 90 minute standard metal, Steelcraft L18 and L16 Series Honeycomb Doors (Specifications Attached) or approved equal;
- Contractor must submit product data for approval if different from doors or door frames in bid package;
- Replacement doors and frames must meet all compliance and fire rating requirements mentioned in the attached specifications;

Exterior Doors

- Exterior doors will be replaced with galvanized, 16 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing - Standard Weight 1279 NRP, 4 ½ X 4 ½ (Specifications Attached);
- Threshold: As manufactured by National Guard Products or approved equal – 426E (Specifications Attached);
- Weather Strip: As manufactured by National Guard Products or approved equal – 160VA (Specifications Attached);
- Lever: As manufactured by Schlage or approved equal – D Series “Rhodes”, 626 finish, function ND60PD (Specification Attached);
- Keying: All doors to be keyed alike;
- Provide sealant per 07920 specification attached.

Interior Doors

- Interior doors will be replaced with non-galvanized, 18 gage, honeycomb core insulated doors;
- Hinges: As manufactured by Hagar or approved equal – Plain Bearing – Standard Weight 1279, 4 ½ X 4 ½ (Specification Attached);
- Knob: As manufactured by Schlage or approved equal – A Series “Orbit”, 626 finish, function A10S (Specification Attached);
- Provide sealant (caulking) per 07920 specification attached.

Clearance Sampling

- Once lead-based paint abatement is complete and after room floors are cleaned, third party post abatement clearance wipe sampling will be performed in these areas;
- If samples do not meet EPA and HUD standards for lead dust (40ug/SF for floors), areas shall be re-cleaned and re-sampled;

• **Lead Dust Remediation (See Attachment 1)**

- HEPA vacuum and wet wash room floors where lead contamination has been found;
- Remove dust from all equipment, shelving, trash, etc, and remove these items from room before remediation begins;...
- Dispose any materials, determined by the DEQ to be trash, as non-hazardous waste;
- Perform independent third-party post remediation wipe sampling to confirm that room floors with lead contamination have been appropriately remediated to 40 micrograms per square foot (ug/SF);
- Areas above 40 ug/SF shall be re-cleaned and re-tested until results are at or below 40 ug/SF;
- Wash water, lead dust, and appropriate cleaning materials shall be disposed as appropriate;

• **General Housekeeping**

- Perform general housekeeping, which includes HEPA vacuuming and moping the floors of the entire armory;
- Wash water, dust, and appropriate cleaning materials shall be disposed as appropriate;

Confirmation Sampling

- The contractor shall be responsible for acquiring independent third-party sampling. This shall be included in the contractors base bid;
- All confirmation and clearance wipe sampling done outside the indoor firing range will be performed after all initial abatement, remediation, and cleaning is complete;
- See Confirmation Sampling Instructions (**Attachment 3**);

FINAL REPORT

- Write final report including: summary of work, post-remediation sampling analytical data, waste manifests (if any), and photo documentation of work;

OWNER REPRESENTATIVE

Owner's Representative:

Dustin Davidson
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102
(405) 702-5119 (Office)
(405) 702-5101 (Fax)
E-Mail: Dustin.Davidson@deq.state.ok.us

Heather Mallory
Oklahoma Department of Environmental Quality
Land Protection Division
707 N. Robinson
Oklahoma City, OK 73102
(405) 702-5138 (Office)
(405) 702-5101 (Fax)
E-Mail: Heather.Mallory@deq.state.ok.us

ATTACHMENT 1

Site Information

Specific Site Conditions

Sample Results

Door Scope of Work Including Measurements and Specifications

SPECIFIC SITE CONDITIONS

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282

LEAD REMEDIATION SPECIFIC SITE CONDITIONS CHEROKEE ARMORY

These conditions must be reviewed and included in your bid in order for your firm to be considered responsive.

Rooms, other than indoor firing range (IFR), with documented lead contamination on floor

The Rental Area, Stage Area, Stage Storage, Gun Room, Downstairs Restrooms, FDC Room, Garage Area, Battalion Supply Room, Maintenance Room, 2nd Floor Supply Room and 2nd Floor Vault require appropriate cleaning and confirmation sampling to the level of the IFR. See Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges (40 ug/SF).

Lead Based Paint Contamination

1. Non-Friction and Non-Impact Surfaces - All overhead door frames, all down spouts, IFR fan box, yellow column in Garage Bay, and white wall shower frame in latrine, contain lead based paint. All hand rails in the drill floor also contain lead-based paint. These surfaces will be abated appropriately. See Statement of Work and Lead-Based Paint Inspection Report for details.
2. Floors - Floors with lead-based paint consist of the Rental Area Floor, Gun Room Floor, Supply Room Floor, and Drill Floor Stairs. These areas also contain high levels of lead dust and will be abated appropriately. See Statement of Work, Lead Wipe Results and Lead-Based Paint Inspection Report for details.
3. Doors and Frames - Doors and frames with lead-based paint consist of regular hinged doors and frames listed on the attached Cherokee Armory Door Measurements and Scope of Work (See Attachment 1). These surfaces will be abated appropriately. See Statement of Work, Door Scope of Work, and Lead-Based Paint Inspection Report for details.

General Housekeeping Requirements

All floors of the armory shall be HEPA vacuumed and mopped to ensure that any remaining lead contaminated dust has been removed. No sampling is required.

Soil Remediation Requirements

N/A - No soil contamination was found at this armory.

Location

The building address is:

Cherokee Armory
122 East 2nd Street
Cherokee, Oklahoma 73728

Available Utilities

Water: Yes

Electric: Yes



2

1. **Identify the main idea** of the passage.

13

Conclusions

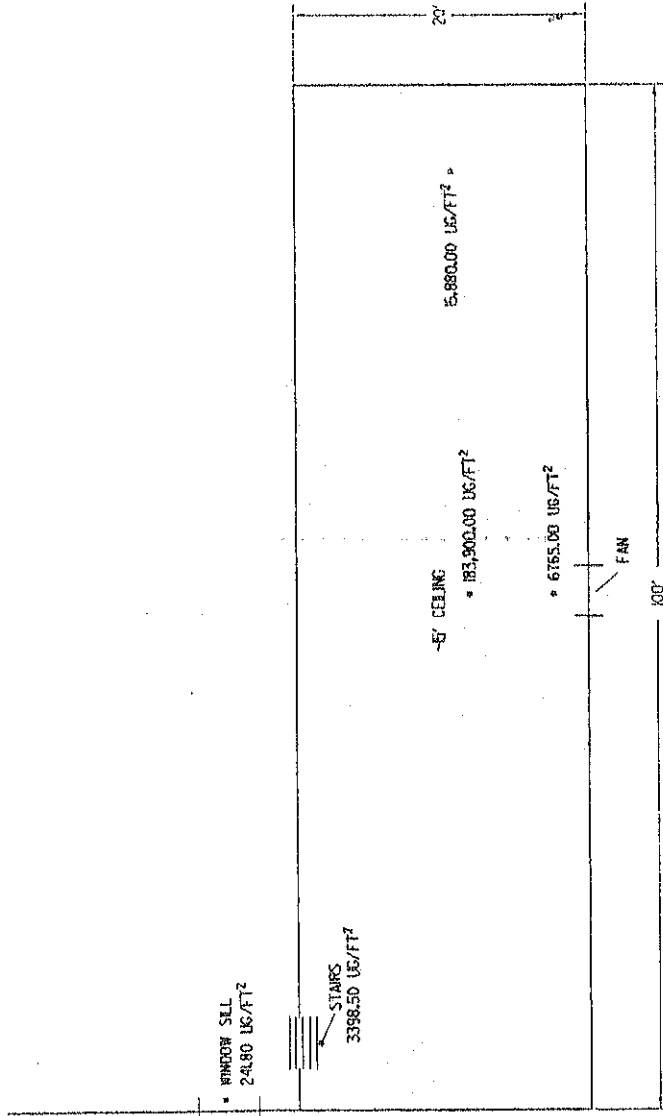
Abstract

Supplement 5 Approved by C



ALL MEASUREMENTS ARE APPROX.

3. SAMPLE CONCENTRATIONS ARE IN MICROGRAMS PER SQUARE FOOT (UG/FT²)



SAMPLE RESULTS

20

SUMMARY OF LEAD WIPE RESULTS

CHEROKEE ARMORY

ROOM	RESULTS
RENTAL AREA	527.45 ug/sq. Ft.
STAGE AREA	196.67 ug/sq. Ft.
STAGE STORAGE	343.08 ug/sq. Ft.
GUN ROOM	409.09 ug/sq. Ft.
RESTROOMS	103.66 ug/sq. Ft.
FDC ROOM	509.90 ug/sq. Ft.
GARAGE AREA	94.21 ug/sq. Ft.
BATTALION SUPPLY ROOM	643.71 ug/sq. Ft.
MAINTENANCE ROOM	227.27 ug/sq. Ft.
SUPPLY ROOM	239.12 ug/sq. Ft.
VAULT	1065.71 ug/sq. Ft.



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

Environmental Chemistry Analysis Report

Quantem Set ID: 148198
Date Received: 04/03/07
Received By: Teresa DeJarnett
Date Sampled:
Time Sampled:
Analyst: HS
Date of Report: 4/6/07

Client: Marshall Environmental Management, Inc.
1145 S.W. 74th Street, Ste. E-300
Oklahoma City, OK 73139

Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	K-DF-01	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
002	K-DF-02	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
003	K-DF-03	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
004	K-DF-04	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
005	K-RA-05	Wipe	Lead	527.45	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
006	K-SG-06	Wipe	Lead	196.67	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
007	K-ST-07	Wipe	Lead	343.08	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
008	K-GR-08	Wipe	Lead	409.09	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
009	K-RR-09	Wipe	Lead	103.66	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
010	K-FD-10	Wipe	Lead	509.90	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
011	K-GB-11	Wipe	Lead	94.21	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
012	K-BS-12	Wipe	Lead	643.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
013	K-MR-13	Wipe	Lead	227.27	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
014	K-AO-14	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
015	K-CD-15	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
016	K-SR-16	Wipe	Lead	239.12	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
017	K-VT-17	Wipe	Lead	1065.71	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
018	K-CR-18	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
019	K-LT-19	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	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 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.



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 148198
Date Received: 04/03/07
Received By: Teresa DeJarnett
Date Sampled:
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Client: Marshall Environmental Management, Inc.
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Oklahoma City, OK 73139

Acct. No.: A331

Project: Cherokee Armory
Location: Cherokee, Oklahoma
Project No.: 2201

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
020	K-CR-20	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
021	K-CO-21	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
022	K-HW-22	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
023	K-SP-23	Wipe	Lead	271.50	16.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
024	K-BB-24	Wipe	Lead	<48.00	48.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100
025	K-BB-25	Wipe	Lead	<144.00	144.00	ug/sq. Ft.	04/05/07 12:28	NIOSH 9100

Authorized Signature: Heather C. Seal
Heather C. Seal, 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 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.

QAQC Results

QA ID: 4919

Test: Lead

Date: 4/5/2007

Matrix: Wipe

Lab Number: 148198

Approved By: Heather C. Seal

Date Approved: 4/5/2007

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
FCV	225	247	275
CCV	225	248	275
ICV	22.5	22.5	27.5
RLVS	12.8	16.2	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 7	0.000	5369.000	5380.000	100.2	5760.000	107.3	6.8
MSW 9	0.000	5369.000	5463.000	101.8	5517.000	102.8	1.0
MSW 8	0.000	5369.000	5578.000	103.9	5185.000	96.6	7.3

Authorized Signature: Heather C. Seal

Heather C. Seal, Analyst

Marshall Environmental Management, Inc. 1145 SW 74th Street Suite E-300 Oklahoma City, OK 73139 Email: marshenv@swbell.net		TAT Standard Rush (405) 616-0401 (405) 972-0525		B ID: 280 Project Name: Cherokee Armory		
Location Address:				Invoice To:		
Name: Cherokee Armory				Company: MEM		
Company: N/A				Mailing Address: 275		
Mailing Address: Cherokee Oklahoma				Phone No: 275		
Contact Name: N/A				Fax No: 275		
PO Number: N/A				Email: 275		
Department: N/A				Phone Results		
				Fax Results		
				<input checked="" type="checkbox"/> Email Results		
Sample Number		Location/Description		Sample Type	Volume Area	Analysis Requested
3/22/07	K-DF-01	Drill Floor 10ft away from exit Door to Outside		Wipe	16 sq. in	Pb
"	K-DF-02	Drill Floor Middle of Room		Wipe	16 sq. in	Pb
"	K-DF-03	Drill Floor 10ft away from IFR Stairs		Wipe	16 sq. in	Pb
"	K-DF-04	Drill Floor C		Wipe	48 sq. in	Pb
"	K-RA-05	Rental Area C		Wipe	48 sq. in	Pb
"	K-SG-06	Stage Area C		Wipe	48 sq. in	Pb
"	K-ST-07	Stage Storage C		Wipe	48 sq. in	Pb
"	K-GR-08	Gun Room C		Wipe	48 sq. in	Pb
"	K-RR-09	Restrooms C		Wipe	48 sq. in	Pb
"	K-FD-10	FDC Room C		Wipe	48 sq. in	Pb
"	K-GB-11	Garage Area C		Wipe	48 sq. in	Pb
"	K-B5-12	Battalion Supply C		Wipe	48 sq. in	Pb
"	K-MR-13	Maintenance Room C		Wipe	48 sq. in	Pb
"	K-AS-14	Admin Office C 2nd floor		Wipe	48 sq. in	Pb
3/22/07	K-CD-15	CDRs Office C 2nd floor		Wipe	48 sq. in	Pb
Instructions/Special Requirements:						

Collected By (print): Bre Semrad	Date: 3/22/07 Time: 17:00	Collector's Signature: [Signature]	Date: 4/2/07 Time: 4:15 PM
Relinquished By: [Signature]	Date: 4/2/07 Time: 16:15	Receive By:	Date:
Relinquished By:	Date:	Receive By:	Date:
Relinquished By:	Date:	Receive By:	Date:
Method of Shipment:		Condition Upon Reception: Acceptable Unacceptable	

UNITED STATES

Marshall Environmental Management, Inc. 1145 SW 74th Street Suite E-300 Oklahoma City, OK 73139 Email: marshenv@swbell.net		TAT Standard Rush (405) 616-0401 (405) 972-0525	BID: 2201 Project Name: Cherokee Armory	
Location Address:		Invoice To:		
Name: Cherokee Armory		Company: NEM		
Company: N/A		Contact Name: Brice Semrad		
Mailing Address: Cherokee Oklahoma		Mailing Address:		
Contact Name: N/A		Phone No: 502 220		
PO Number: N/A		Fax No: 502 220		
Department: N/A		Email:		
Sample Number		Sample Type		
Date		Volume		
Location/Description		Area		
Analysis Requested				
3/22/07	K-SR-16 Supply Room C 2nd floor	Wipe	48 sq.in	Pb
"	K-UT-17 Vault C 2nd floor	Wipe	48 sq.in	Pb
"	K-CR-18 Classroom C 2nd floor	Wipe	48 sq.in	Pb
"	K-LT-19 Labrine / Utility C 2nd floor	Wipe	48 sq.in	Pb
"	K-CR-20 Chief's Office C 2nd floor	Wipe	48 sq.in	Pb
"	K-CO-21 Conference Room C 2nd floor	Wipe	48 sq.in	Pb
"	K-HJ-22 Hallway C 2nd floor	Wipe	48 sq.in	Pb
"	K-SP-23 OACD	Wipe	48 sq.in	Pb
"	K-BB-24 Blank	Wipe	48 sq.in	Pb
3/22/07	K-BB-25 Blank	Wipe	16 sq.in	Pb
Instructions/Special Requirements:				
Collected By (print):	Brice Semrad	Collector's Signature:	Brice Semrad	Date: 4/3/07
Relinquished By:	Brice Semrad	Receive By:	Brice Semrad	Time: 4:15 PM
Relinquished By:		Receive By:		Date:
Relinquished By:		Receive By:		Time:
Relinquished By:		Receive By:		Date:
Relinquished By:		Receive By:		Time:
Method of Shipment:		Condition Upon Reception: Acceptable Unacceptable		

**LEAD-BASED PAINT INSPECTION REPORT
FOR**

Cherokee Armory

Cherokee, Oklahoma

March 22, 2007

Services Provided for:

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

Certified Industrial Hygiene Services Provided By:

Marshall Environmental Management, Inc.
1145 SW 74th Street, E-300
Oklahoma City, OK 73139
(405) 616-0401

Executive Summary:

Sampling Methodology:

Lead based paint (LBP) testing was done to determine lead levels on painted structural building components at the Cherokee Armory. Each room of the Building was numbered on a floor plan that is provided in the Appendix. The front side of the Armory Building was marked "Side A" and going in a clockwise motion the remaining sides were categorized as Sides B, C, and D, respectively.

The building is a two-story structure constructed on a concrete slab foundation with an asphalt composite flat roof over the Office/Supply Areas and a metal pitched roof over the Drill Floor. Brick covers the sides of the Building. All of the windows are metal. Throughout the Building were concrete floors and windowsills. The roof was constructed with steel rafters and concrete decking with asphalt roof / metal.

The findings from the XRF testing indicated that there is lead-based paint in amounts greater than the EPA Standard for XRF readings or equal to 1.0 mg/cm² located on the Building components.

The following locations contain lead-based paint:

1. Interior and Exterior Doors and Door Frames
2. Overhead Doors and Frames the Building
3. Hand Rails/Stairs in the Drill Floor to the Stage
4. Garage Bay yellow columns in the area
5. Shower room door frame
6. IFR exhaust fan box
7. Outside Down Spouts
8. Outside Yellow curb strip

Please note that the following items were not tested in this inspection:

1. Structural Steel in the Drill Floor do to inaccessibility
2. Non-painted floors
3. Non-painted wood panels
4. Non-fixed Items on the property

CERTIFICATES

Department of Environmental Quality

MARSHALL ENVIRONMENTAL MANAGEMENT

This is to Certify That

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

FIRM

Certification # OKHEM11160

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

Issued on: 4/11/2007

Expires on: 3/31/2008



A. Todd

Division Director
Air Quality Division

Randall L. Ward

Environmental Programs Manager
Air Quality Division

ROOM LEGEND

<u>Site</u>	<u>Current Use</u>
1	Indoor Firing Range (IFR)
2	Rental Area on Stage
3	Stage
4	Stage Storage
5	Gun Room
6	Drill Floor
7	Battalion Supply
8	Closet
9	Maint Room
10	Restroom
11	FDC Room
12	Garage Bay
13	Stairs
14	Admin Office
15	CDR's Office
16	CDR's Latrine
17	Supply Room
18	Vault
19	Classroom
20	Latrine
21	Utility
22	Chief's Office
23	Conference Room
24	Upstairs Hallway
Blank	Outside of Building

SITE MAP

XRF READINGS

Cherokee Armory

LINE	COMPONENT	SUBSTRATE	SIZE	CONDITION	Color	Size	Room	Remarks	PHC	DI	PA
1									10.09 ± 0.00	1.54 ± 0.00	0.00 ± 0.00
2			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
3			CALIBRATE					Positive	1.10 ± 0.10	1.10 ± 0.10	0.70 ± 0.40
4			CALIBRATE					Positive	1.20 ± 0.10	1.20 ± 0.10	0.90 ± 0.50
5	WALL	BRICK	A	INTACT	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.32
6	WALL	BRICK	B	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.15	<LOD:0.15	<LOD:2.53
7	WALL	BRICK	C	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.26
8	WALL	BRICK	D	POOR	WHITE	2	RENTAL AREA	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.54
9	DOOR	WOOD	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.60 ± 1.20	2.60 ± 1.20	<LOD:6.15
10	DOOR FRAME	METAL	A	INTACT	GREEN	2	RENTAL AREA	Positive	2.80 ± 1.30	2.80 ± 1.30	<LOD:7.65
11	FLOOR	CONCRETE	LOWER	POOR	GREEN	2	RENTAL AREA	Positive	2.30 ± 1.00	2.30 ± 1.00	<LOD:6.90
12	WALL	BRICK	B	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.09
13	WALL	BRICK	C	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.30
14	WALL	BRICK	D	INTACT	BEIGE	3	STAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.60
15	WALL	BRICK	C	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.06
16	WALL	BRICK	D	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.41
17	WALL	BRICK	A	POOR	WHITE	4	STAGE STORAGE	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.95
18	DOOR	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	4.10 ± 2.70	4.10 ± 2.70	<LOD:8.85
19	DOOR FRAME	WOOD	A	INTACT	BROWN	4	STAGE STORAGE	Positive	3.30 ± 2.26	3.30 ± 2.26	<LOD:12.38
20	DOOR FRAME	METAL	B	INTACT	RED	5	GUN ROOM	Positive	4.50 ± 2.70	4.50 ± 2.70	<LOD:13.35
21	DOOR	WOOD	B	INTACT	RED	5	GUN ROOM	Positive	3.30 ± 2.09	3.30 ± 2.00	<LOD:9.60
22	WALL	BRICK	A	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.43
23	WALL	BRICK	B	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.09	<LOD:0.09	<LOD:2.23
24	WALL	BRICK	C	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.04	<LOD:0.04	<LOD:1.35
25	WALL	BRICK	D	INTACT	BEIGE	5	GUN ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.38
26	FLOOR	CONCRETE	LOWER	FAIR	BLUE	5	GUN ROOM	Positive	1.70 ± 0.60	1.70 ± 0.60	<LOD:3.75
27	FLOOR	CONCRETE	LOWER	POOR	GREEN	5	GUN ROOM	Positive	1.60 ± 0.60	1.60 ± 0.60	<LOD:3.75
28	HAND RAIL	METAL	C	FAIR	YELLOW	6	DRILL FLOOR	Positive	4.00 ± 2.40	4.00 ± 2.40	<LOD:12.60
29	STAIRS	CONCRETE	C	INTACT	BROWN	6	DRILL FLOOR	Positive	1.20 ± 0.20	1.20 ± 0.20	<LOD:1.35
30	WALL	BRICK	D	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.31	<LOD:0.31	<LOD:2.64
31	WALL	BRICK	D	INTACT	WHITE	6	DRILL FLOOR	Negative	<LOD:1.00	<LOD:1.00	<LOD:1.00
32	WALL	BRICK	A	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.26	<LOD:0.26	<LOD:2.34
33	WALL	BRICK	B	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.55
34	WALL	BRICK	C	INTACT	BROWN	6	DRILL FLOOR	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.29
35	DOOR	WOOD	D	INTACT	BROWN	6	DRILL FLOOR	Positive	1.60 ± 0.30	1.60 ± 0.30	1.80 ± 0.70
36	DOOR FRAME	METAL	D	INTACT	BROWN	6	DRILL FLOOR	Positive	3.20 ± 1.40	3.20 ± 1.40	<LOD:4.88
37	FLOOR STRIP	WOOD	LOWER	INTACT	BLACK	6	DRILL FLOOR	Negative	<LOD:0.04	<LOD:0.04	<LOD:1.99
38	FLOOR STRIP	WOOD	LOWER	INTACT	RED	6	DRILL FLOOR	Negative	<LOD:0.06	<LOD:0.06	<LOD:1.69
39	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD:0.10	<LOD:0.10	<LOD:2.66
40	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD:1.04	<LOD:0.06	<LOD:1.04

Cherokee Armory

Index	Component	Substrate	Side	Condition	Color	Src	Room	Results	PRC	PHI	PHK
41	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 2.54
42	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN SUPPLY	Negative	<LOD: 0.09	<LOD: 0.09	<LOD: 2.55
43	WALL	BRICK	A	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.03	<LOD: 0.03	<LOD: 2.66
44	WALL	BRICK	B	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.05
45	WALL	BRICK	C	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 2.63
46	WALL	BRICK	D	INTACT	WHITE	7	BATTALIAN CLOSET	Negative	<LOD: 0.20	<LOD: 0.20	<LOD: 2.21
47	WALL	WOOD	A	INTACT	WHITE	8	CLOSET	Negative	<LOD: 0.10	<LOD: 0.10	<LOD: 1.64
48	WALL	BRICK	B	INTACT	WHITE	8	CLOSET	Negative	<LOD: 0.08	<LOD: 0.08	<LOD: 2.29
49	WALL	BRICK	A	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.05	<LOD: 0.05	<LOD: 1.63
50	WALL	BRICK	B	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.21
51	WALL	BRICK	C	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.22	<LOD: 0.22	<LOD: 2.48
52	WALL	BRICK	D	INTACT	WHITE	9	MAINTENANCE RM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 1.35
53	FLOOR	CONCRETE	LOWER	POOR	BLUE	9	MAINTENANCE RM	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.37
54	DOOR	WOOD	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	2.40 ± 1.40	2.40 ± 1.40	<LOD: 4.65
55	DOOR FRAME	METAL	C	INTACT	WHITE	9	MAINTENANCE RM	Positive	3.00 ± 1.58	3.00 ± 1.58	<LOD: 7.80
56	WALL	BRICK	A	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.04	<LOD: 0.04	<LOD: 2.20
57	WALL	BRICK	B	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.39	<LOD: 0.39	<LOD: 2.17
58	WALL	BRICK	C	INTACT	WHITE	10	RESTROOM	Negative	0.11 ± 0.06	0.11 ± 0.06	<LOD: 1.30
59	WALL	BRICK	D	INTACT	WHITE	10	RESTROOM	Negative	<LOD: 0.05	<LOD: 0.05	<LOD: 2.17
60	FLOOR	CONCRETE	LOWER	POOR	BROWN	10	RESTROOM	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.63
61	FLOOR	CONCRETE	LOWER	POOR	BLUE	11	FDC ROOM	Negative	<LOD: 0.15	<LOD: 0.15	<LOD: 2.11
62	WALL	WALL BOARD	A	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.28	<LOD: 0.28	<LOD: 1.40
63	WALL	WALL BOARD	A	INTACT	WHITE	11	FDC ROOM	Negative	<LOD: 0.12	<LOD: 0.12	<LOD: 1.48
64	WALL	WALL BOARD	B	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.24	<LOD: 0.24	<LOD: 1.50
65	WALL	WALL BOARD	C	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.20	<LOD: 0.20	<LOD: 1.40
66	WALL	WALL BOARD	D	INTACT	BLUE	11	FDC ROOM	Negative	<LOD: 0.26	<LOD: 0.26	<LOD: 1.55
67	DOOR	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.10 ± 0.88	2.10 ± 0.88	3.18 ± 1.90
68	DOOR FRAME	WOOD	C	INTACT	BLUE	11	FDC ROOM	Positive	2.60 ± 0.78	2.60 ± 0.78	<LOD: 2.70
69	WALL	METAL	C	INTACT	BLUE	11	FDC ROOM	Positive	<LOD: 3.75	<LOD: 3.75	<LOD: 12.75
70	WALL	BRICK	A	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 1.29	<LOD: 1.29	<LOD: 1.29
71	WALL	BRICK	B	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 1.34
72	WALL	BRICK	C	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 1.15	<LOD: 0.30	<LOD: 1.15
73	WALL	BRICK	D	FAIR	WHITE	12	GARAGE BAY	Negative	<LOD: 0.21	<LOD: 0.21	<LOD: 2.25
74	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	2.70 ± 1.50	2.70 ± 1.50	<LOD: 10.95
75	COLUMN	CONCRETE		INTACT	YELLOW	12	GARAGE BAY	Positive	1.28 ± 0.10	1.28 ± 0.10	1.58 ± 0.90
76	OVERHEAD DOOR	WOOD	B	INTACT	WHITE	12	GARAGE BAY	Negative	<LOD: 0.13	<LOD: 0.13	<LOD: 1.52
77	OVERHEAD DR FRAME	METAL	B	INTACT	BROWN	12	GARAGE BAY	Positive	<LOD: 4.20	<LOD: 4.20	<LOD: 7.80
78	STAIRS	CONCRETE	LOWER	INTACT	GREY	13	STAIRS	Negative	<LOD: 0.03	<LOD: 0.03	<LOD: 2.44
79	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE DARK	13	STAIRS	Negative	<LOD: 0.27	<LOD: 0.27	<LOD: 2.06
80	STAIRS RAIL	CONCRETE	LOWER	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD: 0.06	<LOD: 0.06	<LOD: 2.01

Cherokee Armory

Item #	Description	Substrate	Size	Condition	Color	Site	Room	Results	PAC	HT	PAC
81	WALL	CONCRETE	A	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
82	WALL	CONCRETE	B	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.91
83	WALL	CONCRETE	C	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.08
84	WALL	CONCRETE	D	INTACT	BLUE LIGHT	13	STAIRS	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.09
85	DOOR FRAME	METAL	C	INTACT	BLUE	14	ADMIN OFFICE	Positive	2.90 ± 1.40	<LOD:7.95	<LOD:7.95
86	DOOR FRAME	METAL	C	INTACT	RED	16	LATRINE	Positive	2.70 ± 1.50	<LOD:7.95	<LOD:7.95
87	DOOR	WOOD	C	INTACT	RED	16	LATRINE	Positive	2.40 ± 0.80	2.90 ± 1.90	2.90 ± 1.90
88	WALL	CONCRETE	A	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.11	<LOD:0.11	<LOD:1.20
89	WALL	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.80
90	WALL	CONCRETE	D	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
91	WALL SHOWER	CONCRETE	B	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.07	<LOD:0.07	<LOD:1.92
92	WALL SHOWER	CONCRETE	C	INTACT	WHITE	16	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:0.90
93	WALL SHOWER FRAME	METAL	C	INTACT	WHITE	16	LATRINE	Positive	<LOD:3.75	<LOD:3.75	<LOD:7.55
94	DOOR	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	2.50 ± 1.30	2.50 ± 1.30	<LOD:6.60
95	DOOR FRAME	WOOD	C	INTACT	BLUE	15	CDRS OFFICE	Positive	3.00 ± 1.50	3.00 ± 1.50	<LOD:8.55
96	DOOR FRAME	METAL	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	3.00 ± 1.80	3.00 ± 1.80	<LOD:7.55
97	DOOR	WOOD	C	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.70 ± 0.70	1.70 ± 0.70	<LOD:2.40
98	WALL	BRICK	C	INTACT	BROWN	17	SUPPLY ROOM	Negative	<LOD:0.08	<LOD:0.08	<LOD:2.30
99	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.04	<LOD:0.04	<LOD:2.09
100	WALL	BRICK	B	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:2.30
101	WALL	BRICK	C	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.05	<LOD:0.05	<LOD:1.30
102	WALL	BRICK	D	INTACT	WHITE	17	SUPPLY ROOM	Negative	<LOD:0.18	<LOD:0.18	<LOD:1.96
103	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.20 ± 0.20	1.20 ± 0.20	<LOD:1.55
104	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Negative	0.90 ± 0.10	0.90 ± 0.10	1.00 ± 0.60
105	FLOOR	CONCRETE	LOWER	INTACT	BLUE	17	SUPPLY ROOM	Positive	1.30 ± 0.30	1.30 ± 0.30	<LOD:1.50
106	CABINET	WOOD	A	INTACT	BLUE	18	VAULT	Negative	<LOD:0.60	<LOD:0.60	<LOD:1.65
107	WALL	CONCRETE	B	INTACT	BLUE	18	VAULT	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.13
108	WALL	CONCRETE	C	INTACT	BLUE	18	VAULT	Negative	<LOD:0.07	<LOD:0.07	<LOD:2.57
109	WALL	CONCRETE	D	INTACT	BLUE	18	VAULT	Negative	<LOD:0.12	<LOD:0.12	<LOD:3.09
110	DOOR	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.40 ± 0.20	0.40 ± 0.20	<LOD:2.92
111	DOOR FRAME	METAL	C	INTACT	BLUE	18	VAULT	Negative	0.50 ± 0.30	0.50 ± 0.30	<LOD:3.45
112	WALL	BRICK	A	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.15
113	WALL	BRICK	B	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:3.08
114	WALL	BRICK	C	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.33
115	WALL	BRICK	D	INTACT	BLUE	19	CLASSROOM	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.23
116	WALL	CONCRETE	A	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.65
117	WALL	CONCRETE	B	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.20
118	WALL	CONCRETE	C	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:1.80
119	WALL	CONCRETE	D	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.03	<LOD:0.03	<LOD:2.31
120	WALL STAUL	WOOD	D	INTACT	WHITE	20	LATRINE	Negative	<LOD:0.13	<LOD:0.13	<LOD:1.90

Cherokee Armory

ID	Component	Substrate	Size	Condition	Color	Size	Room	Results	PH	TH	Chk
121	FLOOR	CONCRETE	LOWER	INTACT	BLUE	20	LATRINE	Negative	< LOD: 0.05	< LOD: 0.05	< LOD: 2.10
122	FLOOR	CONCRETE	LOWER	INTACT	BLUE	21	UTIL	Negative	0.09 ± 0.05	0.09 ± 0.05	< LOD: 1.31
123	WALL	CONCRETE	A	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.20
124	WALL	CONCRETE	B	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.25
125	WALL	CONCRETE	C	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.95
126	WALL	CONCRETE	D	INTACT	WHITE	21	UTIL	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.15
127	WALL	DRYWALL	A	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.76
128	WALL	DRYWALL	B	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.87
129	WALL	DRYWALL	C	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.84
130	WALL	DRYWALL	D	INTACT	BEIGE	22	CHIEF OFFICE,	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.67
131	WALL	DRYWALL	A	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
132	WALL	DRYWALL	B	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.72
133	WALL	DRYWALL	C	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.54
134	WALL	DRYWALL	D	INTACT	BEIGE	23	CONFERENC RM	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.57
135	WALL	CONCRETE	A	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.20	< LOD: 0.20	< LOD: 1.98
136	WALL	CONCRETE	C	INTACT	BLUE	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.65
137	FLOOR	CONCRETE	LOWER	INTACT	GREY	24	HALLWAY	Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 2.29
138	OVERHEAD DR FRAME	METAL	A	FAIR	WHITE	25		Positive	4.10 ± 2.60	< LOD: 1.95	4.10 ± 2.60
139	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.14	< LOD: 0.14	< LOD: 2.71
140	WINDOW SILL	CONCRETE	A	FAIR	WHITE	25		Negative	< LOD: 0.06	< LOD: 0.06	< LOD: 1.35
141	WINDOW SILL	CONCRETE	B	FAIR	WHITE	25		Negative	< LOD: 0.15	< LOD: 0.15	< LOD: 1.20
142	DOWN SPOUTS	METAL	B	POOR	WHITE	25		Positive	< LOD: 9.60	< LOD: 7.95	< LOD: 9.60
143	FR PAN BOX	WOOD	C	POOR	WHITE	25		Positive	3.90 ± 2.40	< LOD: 3.90	3.90 ± 2.40
144	OVERHEAD DR	METAL	A	INTACT	WHITE	25		Negative	< LOD: 0.05	< LOD: 0.03	< LOD: 1.01
145	OVERHEAD DR FRAME	METAL	A	INTACT	WHITE	25		Positive	5.60 ± 3.40	< LOD: 4.65	5.60 ± 3.40
146	CHUB STRIP	CONCRETE	B	INTACT	YELLOW	25		Positive	< LOD: 5.25	< LOD: 5.25	< LOD: 15.60
147	DOOR	METAL	C	INTACT	BEIGE	25		Negative	< LOD: 0.03	< LOD: 0.03	< LOD: 1.75
148	DOOR FRAME	METAL	C	INTACT	BEIGE	25		Positive	5.90 ± 3.30	< LOD: 2.10	5.90 ± 3.30
149		CALIBRATE						Positive	1.10 ± 0.10	1.10 ± 0.10	0.90 ± 0.40
150		CALIBRATE						Positive	1.70 ± 0.10	1.70 ± 0.10	0.90 ± 0.50
151		CALIBRATE						Positive	1.20 ± 0.20	1.20 ± 0.20	1.10 ± 0.70

Sample Number: 407472
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1430
Date Received: 10/13/2006
Date Completed: 11/22/2006
Collected By: JR
PWS ID:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-800-869-1400
Sample Receiving: (405) 702-1113
Report of Analysis by Metals

LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		56200.	MG/KG	11/06/06	6010
Lead (TCLP)		509000.	UG/L	11/06/06	6010
% Solids		99.84	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

EGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-1L

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

ANALYST 

Labs performing analysis on this Sample:
Metals

Sample Number: 407473
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1435
Date Received: 10/13/2006
Data Completed: 11/22/2006
Collected By: JR
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

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LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		35300.	MG/KG	11/06/06	6010
Lead (TCLP)		521000.	UG/L	11/06/06	6010
% Solids		99.93	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

LEGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-2R

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*
ANALYST 

Labs performing analysis on this Sample:
Metals

**DOOR SCOPE OF WORK INCLUDING MEASUREMENTS
AND SPECIFICATIONS**

Cherokee Armory Door Measurements And Scope of Work

- **Door measurements are listed as approximate Height X Width; Contractor to field verify.**
 - **All removed doors will be properly disposed.**
 - **All removed lead-based paint will be properly disposed.**
 - **Attached is a Cherokee armory Floor Plan with designated door numbers that correspond with the numbers on this Scope of Work.**
-
1. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 2. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 3. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 78" X 30"
 4. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 4'
 5. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 3'
 6. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 32"
 7. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Door Measurements – 7' X 5'
 8. Vault door and frame does not contain lead-based paint. No abatement is required.

9. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
10. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
11. Remove door. Remove all lead-based paint from door frame. Once paint is removed, paint frame with neutral colored primer.
12. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
13. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
14. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
15. Remove indoor firing range door and frame and do not replace.
16. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
17. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
18. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
19. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'
20. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.

Door Measurements – 7' X 3'

21. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
22. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
23. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
24. Remove all lead-based paint from original door frame. Once paint is removed, paint frame with neutral colored primer.
25. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 80" X 32"

26. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer. Doors will open into drill floor.
Door Measurements – 7' X 5'

27. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'

28. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" X 3'

29. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 83" X 3'

30. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 3'

31. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 7' X 32"

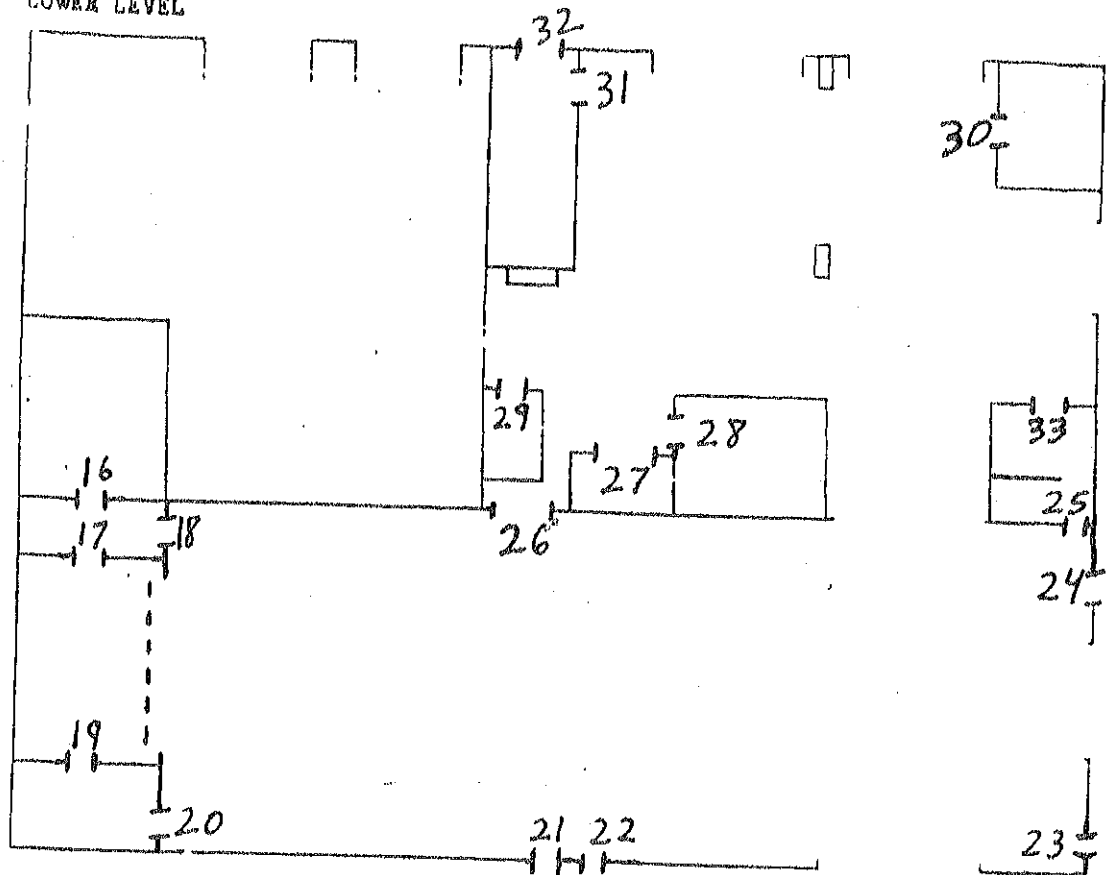
32. Remove doors. Remove all lead-based paint from door frame. Replace doors with pre-hung door unit. Original frame will be painted with a neutral colored primer.

Door Measurements – 7' X 5'

33. Remove door. Remove all lead-based paint from door frame. Replace door with pre-hung door unit. Original frame will be painted with a neutral colored primer.
Door Measurements – 82" X 3'

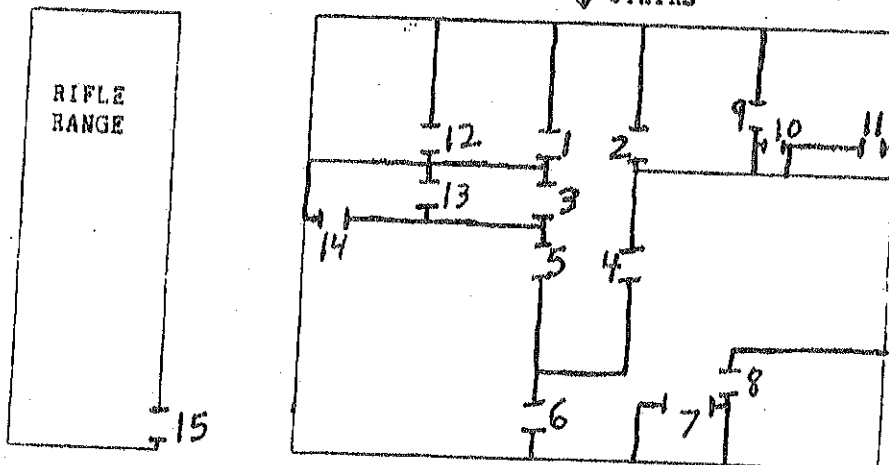
SECOND STREET

LOWER LEVEL



UPPER LEVEL

↓ STAIRS



RIFLE RANGE

CHEROKEE ARMORY
1936



Install a pre-hung

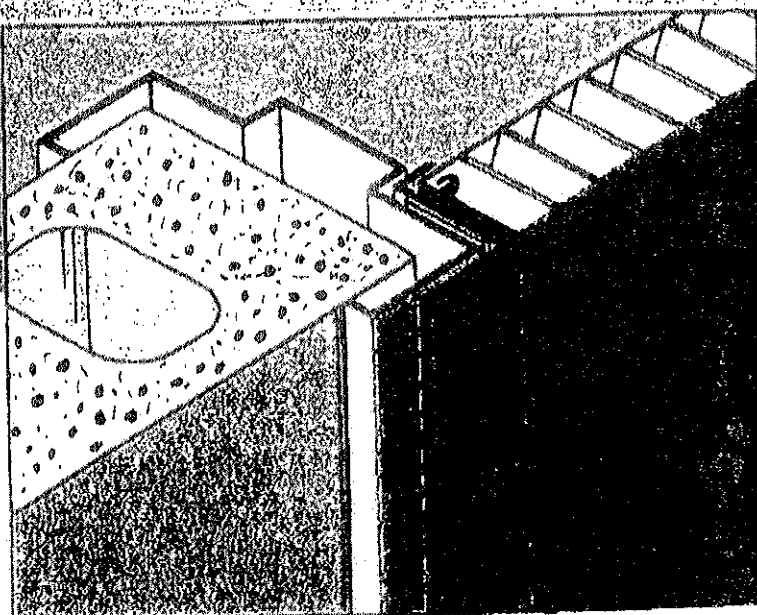


COMMERCIAL REPLACEMENT DOOR UNIT

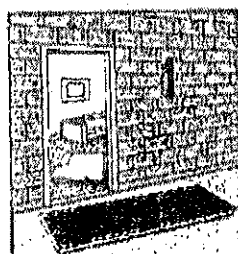
UL LISTED
1½ HR (B) LABEL
can be used in existing
non-listed or listed
steel frame.

New beauty
and security
for worn out doors.

The Steelcraft Commercial Replacement Unit is the only product of its kind specifically designed for the rehab market. Fits these nominal sizes: 2868, 3068, 3668, 3868, 4068, 2870, 3070, 3670, 3870, 4070 single, and 5468, 6068, 5470 and 6070 double doors.



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



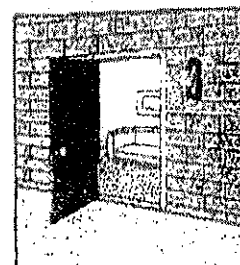
QUICK

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



'N EASY

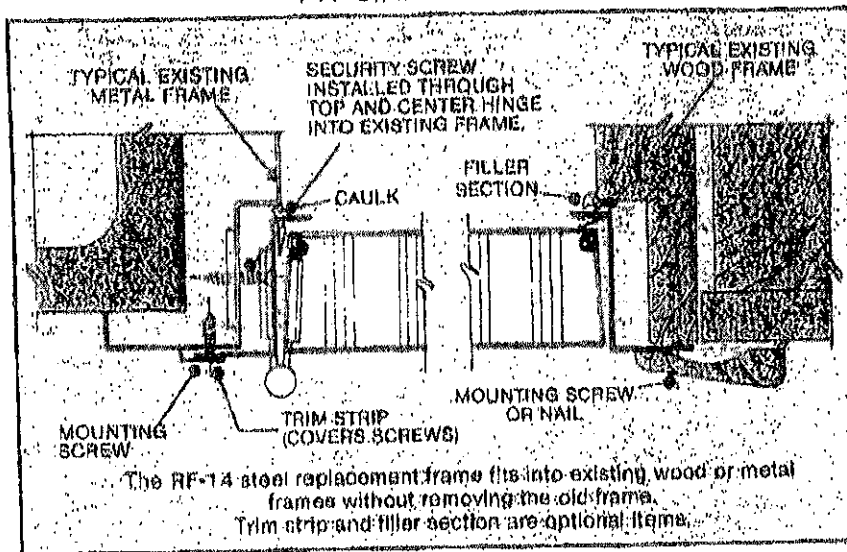
2. Set pre-hung unit into frame opening. Install mounting screws through face, cut banding and install security screws.



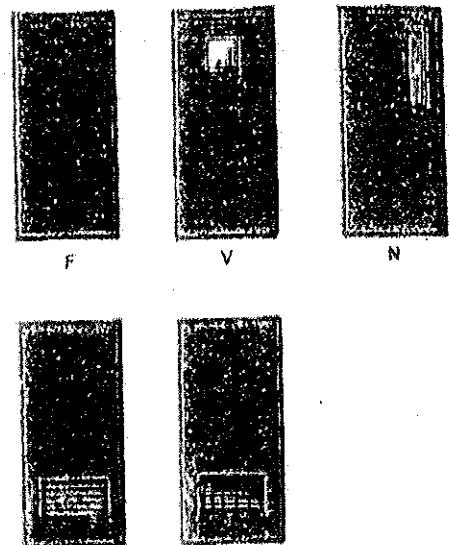
INSTALLATION

3. Mount hardware as required. Paint.

TYPICAL SECTION



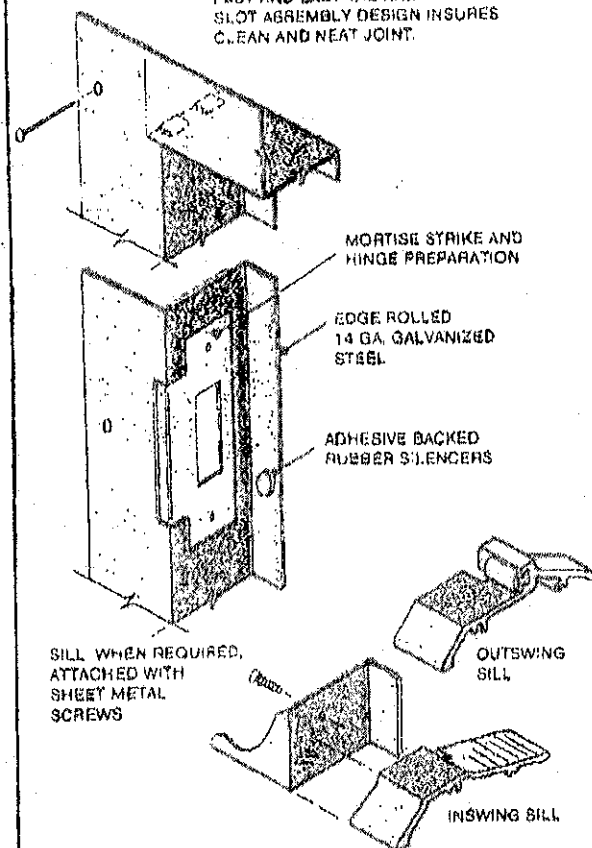
DESIGNS AND FINISHES AVAILABLE



LOUVERS

FRAME DETAIL

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



SPECIFICATIONS

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

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

Doors shall conform to the following:

Doors shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RL-18 (1 1/2" 18 ga. steel).

Doors shall be fabricated from cold rolled steel.

Doors shall have 1/8" bevel in 2" on hinge and lock edges.

Doors shall have vertical mechanical interlocking seams on hinge and lock edges with visible edge seams.

Doors shall be provided with top and bottom inverted steel channels spotwelded within the door.

Doors shall be reinforced, stiffened and sound deadened with impregnated kraft honeycomb core completely filling the inside of the door and laminated to the inside faces of panels.

Doors shall be mortised and adequately reinforced for all hardware.

Doors shall be phosphatized and receive one coat of baked-on prime paint.

Frames shall conform to the following:

Frames shall be as manufactured by Steelcraft, Cincinnati, Ohio, and designated as RF-14 (14 ga.).

Frames shall be accurately formed from galvanized steel.

Frames shall be furnished knocked down (KD). Corners shall have tabs for secure and easy interlocking of jambs to head at each corner.

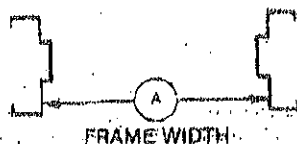
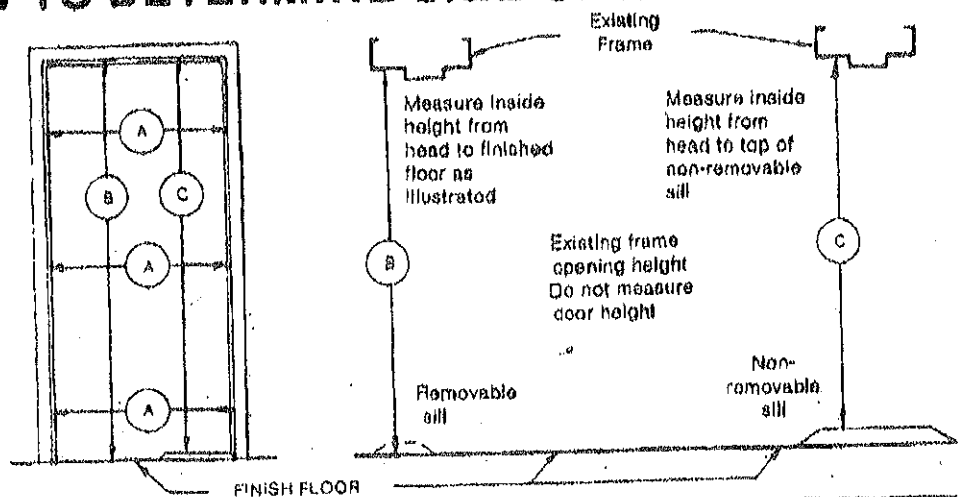
Frames shall be adequately reinforced for all hardware.

Frames shall be supplied with adhesive backed rubber bumpers; three per strike jamb, two per double door frame head.

Frames shall be phosphatized and receive one coat of baked-on prime paint.

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

HOW TO DETERMINE SIZE OF EXISTING FRAME



Measure in 3 places. Use narrowest dimension for ordering.

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

SIZE (Nominal)	FITS THESE EXISTING OPENINGS			
	A WIDTHS		B C HEIGHTS	
	MIN.	MAX.	MIN.	MAX.
2'8" x 6'8"	31 1/2"	32 1/2"	79 1/2"	80 1/2"
3'0" x 6'8"	36 1/2"	38 1/2"	79 1/2"	80 1/2"
3'8" x 6'8"	41 1/2"	42 1/2"	79 1/2"	80 1/2"
3'8" x 6'8"	43 1/2"	44 1/2"	79 1/2"	80 1/2"
4'0" x 6'8"	47 1/2"	48 1/2"	79 1/2"	80 1/2"
2'8" x 7'0"	31 1/2"	32 1/2"	83 1/2"	84 1/2"
3'0" x 7'0"	35 1/2"	36 1/2"	83 1/2"	84 1/2"
3'8" x 7'0"	41 1/2"	42 1/2"	83 1/2"	84 1/2"
3'8" x 7'0"	43 1/2"	44 1/2"	83 1/2"	84 1/2"
4'0" x 7'0"	47 1/2"	48 1/2"	83 1/2"	84 1/2"
5'4" x 6'8"	63 1/2"	64 1/2"	79 1/2"	80 1/2"
6'0" x 6'8"	71 1/2"	72 1/2"	79 1/2"	80 1/2"
5'4" x 7'0"	63 1/2"	64 1/2"	83 1/2"	84 1/2"
6'0" x 7'0"	71 1/2"	72 1/2"	83 1/2"	84 1/2"

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

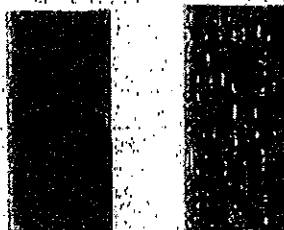
TO HAND A DOOR — FACE IT FROM THE OUTSIDE OR KEYSIDE

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



Steelcraft®

8017 Blue Ash Road Cincinnati, Ohio 45242 513/745-6400



FINISH PAINTED AND WOOD
GRAIN FINISHES

HARDWARE

Replacement Units shall be prepared for the following hardware:

Hinges:

1-1/2" pair of 4-1/2" x 4-1/2" x .134" template hinges

Lock and Strike:

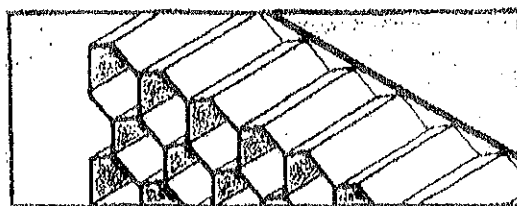
Government 164 (ANSI A115.2) cylindrical or Government 86 (ANSI A115.1) mortise lock with an ANSI A115.1 or 2 strike

Consult distributor for other hardware preparations.

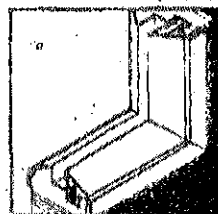
	NOMINAL SIZE	FRAME SIZE (FINISHED OPENING)		NET DOOR SIZE*	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE	286B	31"	79 1/4"	30-13/16"	79 1/4"
	306B	35"		34-13/16"	
	366B	41"		40-13/16"	
	386B	43"		42-13/16"	
	406B	47"		46-13/16"	
	2870	31"	83 1/4"	30-13/16"	82 1/4"
	3070	35"		34-13/16"	
	3670	41"		40-13/16"	
	3870	43"		42-13/16"	
	4070	47"		46-13/16"	
PAIR	546B	63"	79 1/4"	30-13/16" & 31-13/16"	78 1/4"
	606B	71"		34-13/16" & 35-13/16"	
	5470	63"	83 1/4"	30-13/16" & 31-13/16"	82 1/4"
	6070	71"		34-13/16" & 35-13/16"	

*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF.
CONSULT DISTRIBUTOR FOR OTHER SIZES.

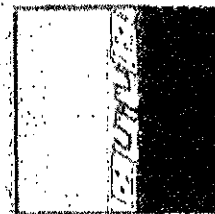
DOOR DETAILS



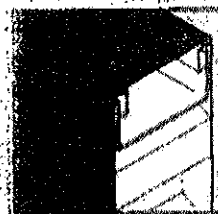
Full honeycomb core of phenolic resin-impregnated kraft paper reinforces the door every 1-inch, providing superior resistance to impact and assuring a flat surface.



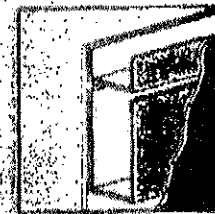
Aluminum glass trim
(snap-in.)



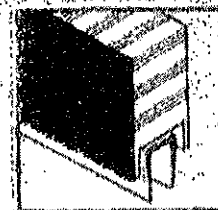
8-gage thick hinge
reinforcement.



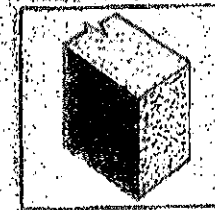
Snap-in steel top caps
for exterior openings.



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

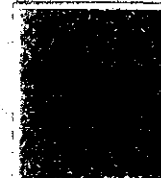


Door bottom with
double sweep when
required.



Insulated doors:
one pound polystyrene
core, 1 1/2 pound
polyurethane core
when required.

PAIRS OF DOORS

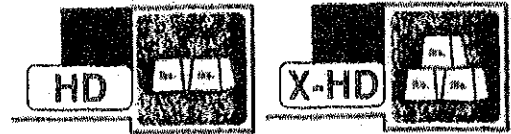


Designs shown may be combined for pairs of doors.
Pairs of doors consist of two leaves and a 14 gage steel "Z" astragal field mounted to inactive leaf of pair. Inactive leaf may be secured with flush bolts or surface bolts.

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

STEELCRAFT®

L18 AND L16-SERIES HONEYCOMB DOORS



L-SERIES DOORS



ABOUT THE PRODUCT:

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

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

FEATURES AND BENEFITS:

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

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

SPECIFICATION COMPLIANCE:

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

FIRE RATINGS:

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

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

MATERIAL:

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

¹ Usage frequency is based on ANSI A250.8-1998

² Reinforcements for galvannealed doors are also galvannealed

³ Commercial quality carbon steel

IR Security & Safety

Details are subject to change without prior notice.

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Printed in USA

Spec Manual
Rev. 5/2002

L1-1



ENL

G

G2/G4



FINISH: PAINTED AND WOOD
GRAIN FINISHES

HARDWARE

Replacement Units shall be prepared for the following hardware:

Hinges:

1-1/2" pair of 4-1/2" x 4-1/2" x 130 template hinges

Lock and Strike:

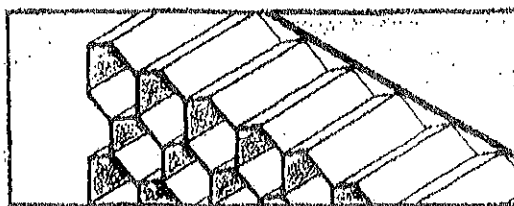
Government 164 (ANSI A115.2) cylindrical or Government 88 (ANSI A115.1) mortise lock with an ANSI A115.1 or 2 strike

Consult distributor for other hardware preparations.

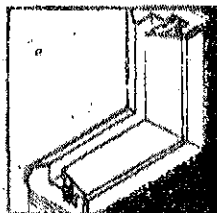
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		WIDTH	HEIGHT	WIDTH	HEIGHT
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	3868	41"		40-13/16"	
	3868	43"		42-13/16"	
	4068	47"		46-13/16"	
	2870	31"	83 1/4"	30-13/16"	82 1/4"
	3070	35"		34-13/16"	
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	3870	43"		42-13/16"	
	4070	47"		46-13/16"	
PAIR	5468	63"	79 1/4"	30-13/16" & 31-13/16"	78 3/4"
	6068	71"		34-13/16" & 35-13/16"	
	5470	63"	83 1/4"	30-13/16" & 31-13/16"	82 1/4"
	6070	71"		34-13/16" & 35-13/16"	

*FOR PAIRS OF DOORS INACTIVE LEAF IS 1" WIDER THAN ACTIVE LEAF.
CONSULT DISTRIBUTOR FOR OTHER SIZES.

DOOR DETAILS



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



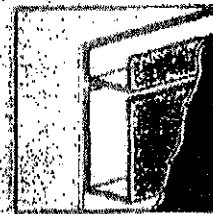
Aluminum glass trim
(3/8" x 1/2")



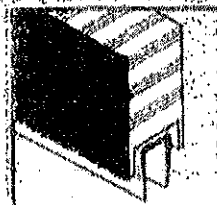
8-gauge thick hinge
reinforcement.



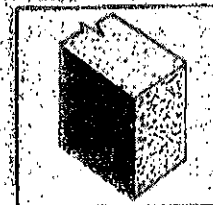
Snap-in steel top cap
for exterior openings.



Steel top and bottom
reinforcing channels
14-gauge closer rein-
forcement when
required.



Door bottom with
double sweep when
required.



Insulated doors:
one pound polystyrene
core, 1 1/2 pound
polyurethane core
when required.

PAIRS OF DOORS

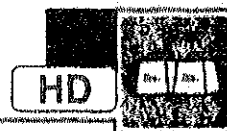


Designs shown may be com-
bined for pairs of doors.
Pairs of doors consist of two leaves
and a 14 ga. steel "Z" astragal field
mounted to inactive leaf of pair. Inactive
leaf may be secured with flush bolts or
surface bolts.

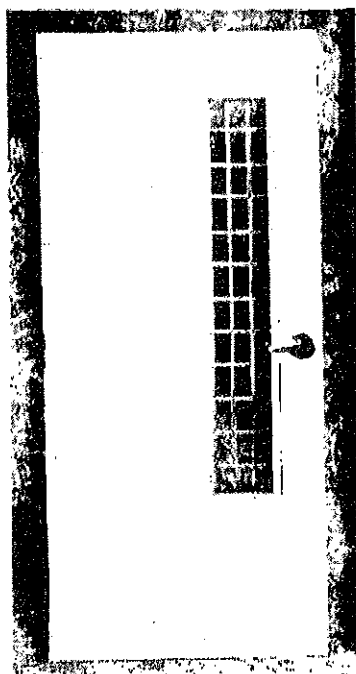
Note: For pairs of doors, right hand will be active, unless
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STEELCRAFT®

L18 AND L16-SERIES HONEYCOMB DOORS



L-SERIES DOORS



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

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

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

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2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-1997. Locations are in accordance with ANSI/DHI A115.

FIRE RATINGS:

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

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18 gage (1mm)	Interior & Exterior	Heavy duty	• 16 gage steel frames
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Galvannealed ²	Mainly Exterior	• Used in locations with high humidity and/or weather exposure	

MATERIAL:

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

¹ Usage frequency is based on ANSI A250.8-1998

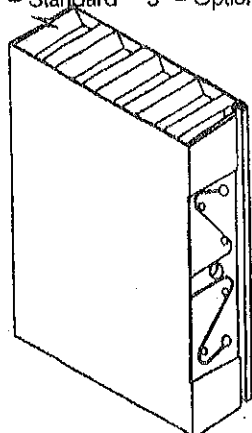
² Reinforcements for galvannealed doors are also galvannealed

³ Commercial quality carbon steel

IR Security & Safety

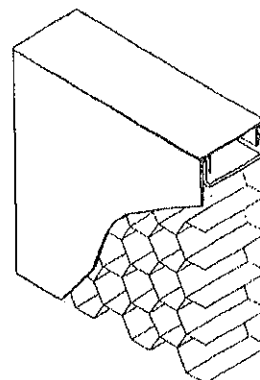
Details are subject to change without prior notice.

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

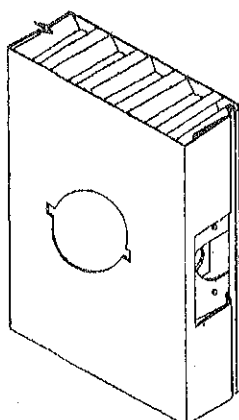


7 Gage Hinge Reinforcement

Optional Snap-In Top Cap

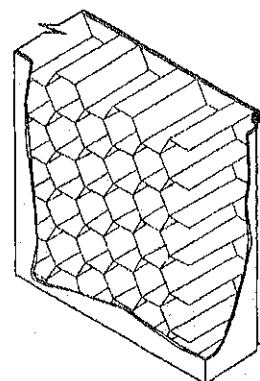


Lock Prep

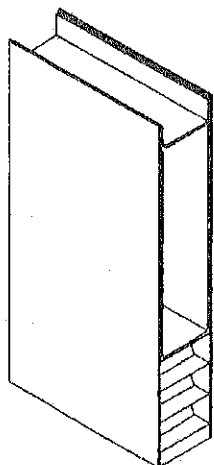


161 Cylindrical Lock shown

Rigid Honeycomb Core

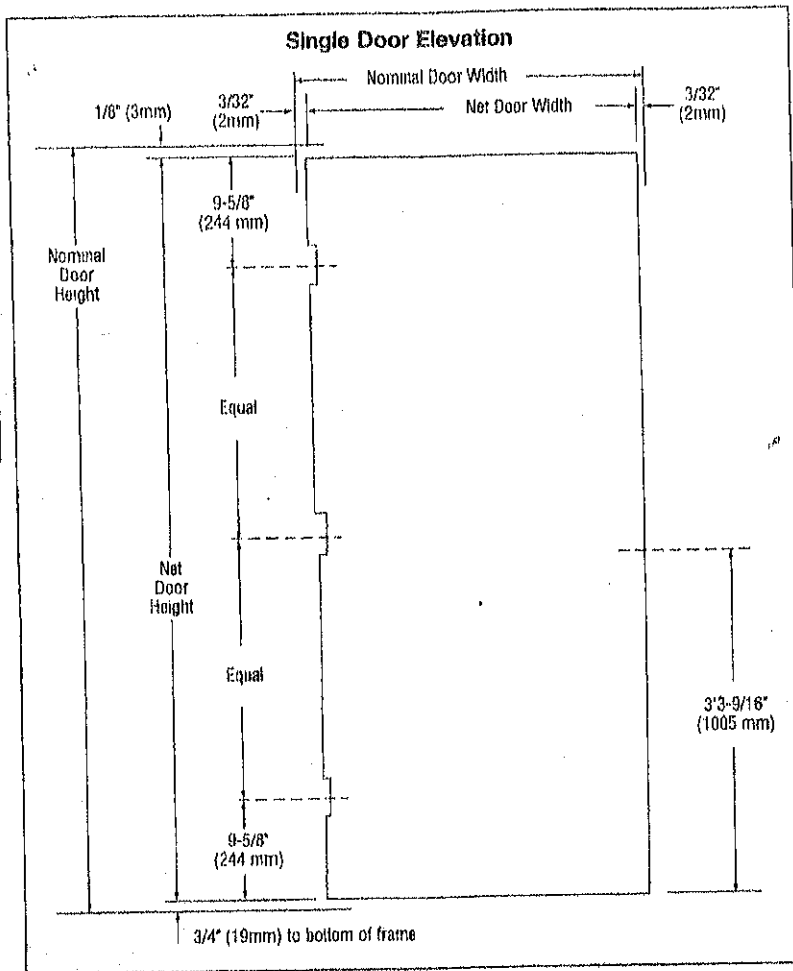


Optional 14 Gage Closer Reinforcement



GENERAL NOTES:

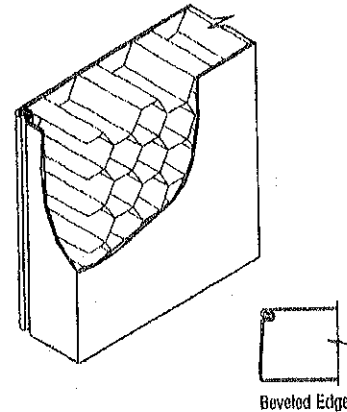
1. **Edge construction:**
 - Vertical edges (both hinge and lock) are beveled with a visible seam.
 - Top and bottom edges are closed with inverted 14 gage welded channels. Exterior applications require the addition of snap-in top caps to protect against the weather.
2. **Optional edge seams** available in the L-Series door construction are as follows:
 - **LF** – The mechanical edge seam is filled and finished prior to applying the factory primer.
 - **LW** – The mechanical edge seam is welded and finished prior to applying the factory primer.
3. **Optional cores** available in the L-Series door construction:
 - **Polystyrene** for exterior applications in extreme weather conditions.
 - **Polyurethane** for exterior applications in arctic weather conditions. Not Fire Rated.
4. **Standard hardware preparations:** standard mortised and reinforced for:
 - **Universal hinge preps** – 4½" (114mm) patented preparation which allows easy and quick field conversion from standard to heavy weight hinges.
 - **Locks** – A multitude of standard lock preps are available. The most commonly used with a 4¾" (124mm) strike are 161, 61L and 86.



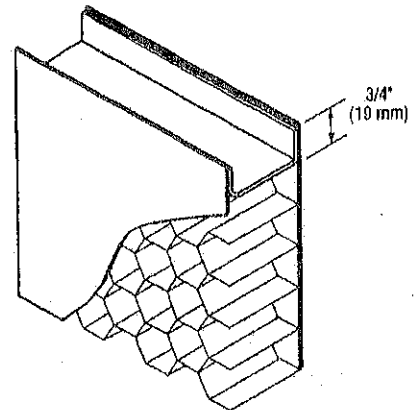
CONSTRUCTION NOTES:

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

Beveled Edge with Full Height Mechanical Interlock

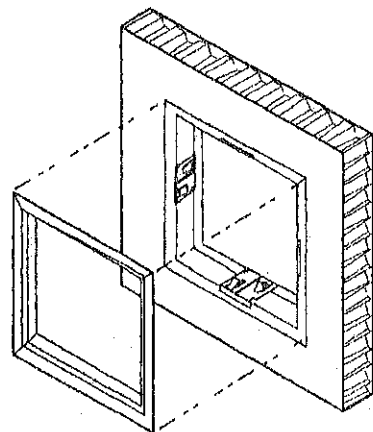


Inverted Top & Bottom Channels 14 Gage



Designer Trim Option

1/4" – Standard 1/2" – Optional



INSTALLATION:

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

DOOR EDGE APPLICATIONS:

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

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

CONVERSION CHART

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

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

DOUBLE DOOR APPLICATIONS:

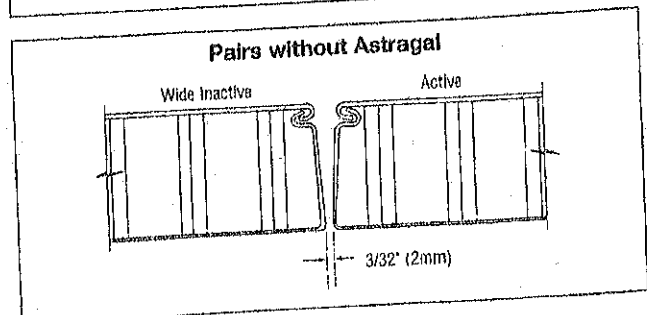
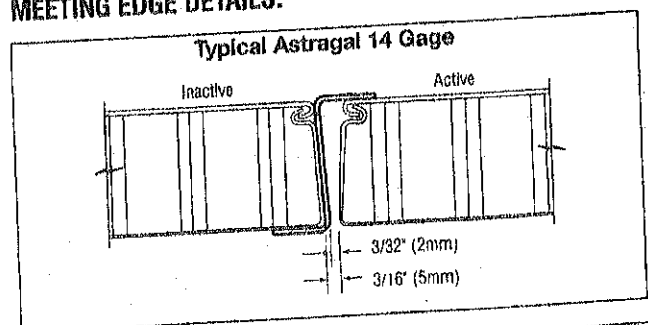
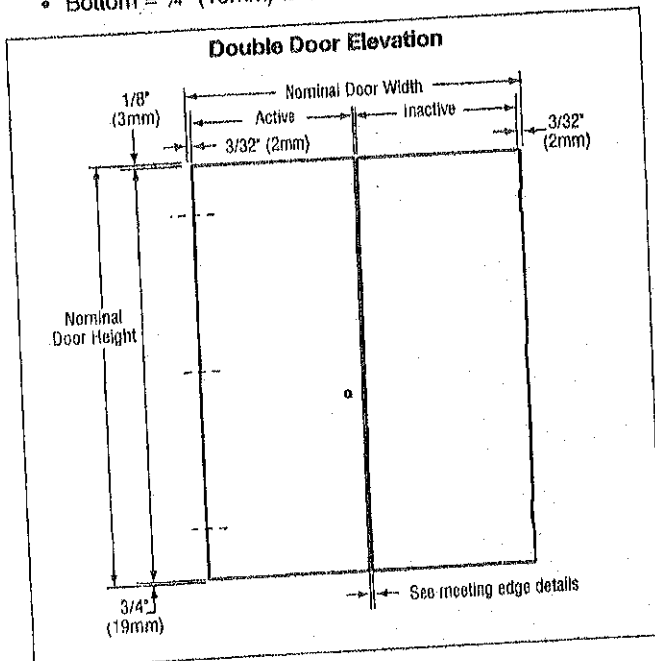
L-Series doors are available in double door elevations, with active and inactive leaves and an overlapping astragal.

- **Standard operating clearances (installed in frame):**
 - Head = $\frac{1}{8}$ " (3mm) to bottom of head or transom panel
 - Hinge side = $\frac{3}{32}$ " (2mm) to rabbet on jamb
 - Meeting edges = $\frac{3}{32}$ " (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
 - Bottom = $\frac{3}{4}$ " (19mm) to bottom of frame

Meeting edges:

- 14 Gage astragal is furnished loose for installation in the field by others.
- Overlapping astragal kits are available to convert an active leaf to an inactive leaf.
- When an astragal is not used, the width of the inactive leaf is increased $\frac{3}{32}$ " (2mm).
- **Hardware preparations:** the inactive leaf can be prepared for hardware as specified.

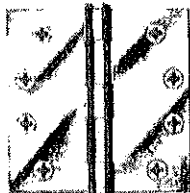
MEETING EDGE DETAILS:



Architectural Hinges

Full Mortise

Five Knuckle



Plain Bearing - Standard Weight

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

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

- 1279** Steel with Steel pin
- ANSI A8133

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

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

Five Knuckle



Plain Bearing - Standard Weight - Wide Throw

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

1191 Wide Throw

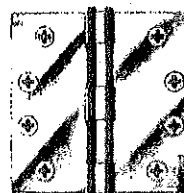
- Brass with Stainless Steel pin
- ANSI A2133
Stainless Steel with Stainless Steel pin
- ANSI A5133

1279 Wide Throw

- Steel with Steel pin
- ANSI A8133

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

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



Concealed Bearing - Standard Weight

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

- CB1191** Stainless Steel with Stainless Steel pin
- ANSI A5112

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

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



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CONVERSION CHART

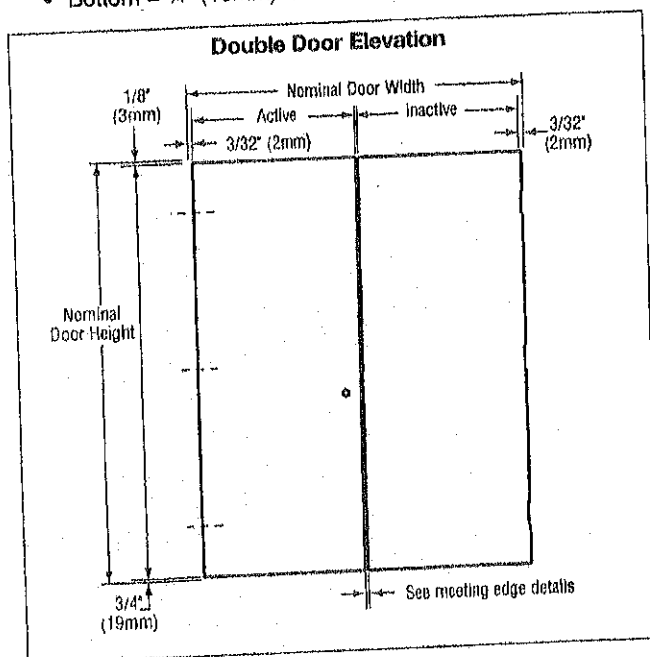
ANSI A250.8 (SDI 100) *Recommended Specification for Standard Steel Doors and Frames*.

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LF16	3	2	Seamless	L-Series with epoxy filled edge seams
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DOUBLE DOOR APPLICATIONS:

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

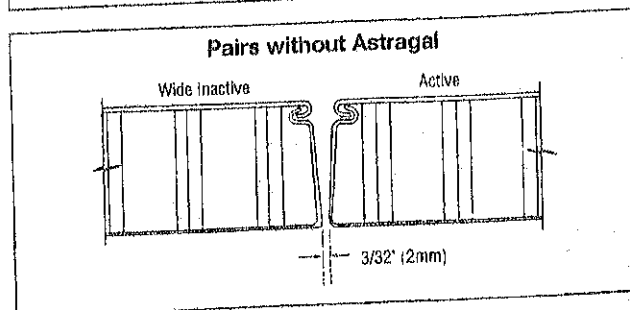
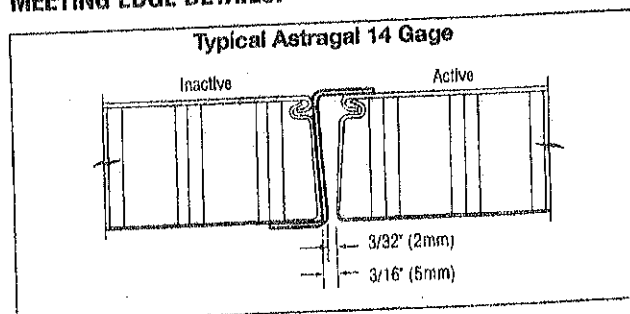
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 - Hinge side = $\frac{3}{32}$ " (2mm) to rabbet on jamb
 - Meeting edges = $\frac{3}{32}$ " (2mm) with or without astragal. For openings without an astragal, a wide inactive leaf is used.
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Meeting edges:

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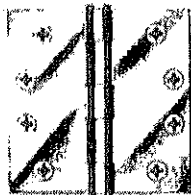
MEETING EDGE DETAILS:



Architectural Hinges

Full Mortise

Five Knuckle



Plain Bearing - Standard Weight

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

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

- 1279** Steel with Steel pin
- ANSI A8133

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

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
2 x 2	51 x 51	0.083	4	-	3/4 x 8
2 1/2 x 2 1/2	64 x 64	0.089	6	-	9/4 x 8
3 x 3	76 x 76	0.097	6	-	1 x 9
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6 x 5	152 x 127	0.160	10	1/2 x 1/4-20	1 1/2 x 14
6 x 6	152 x 152	0.160	10	1/2 x 1/4-20	1 1/2 x 14

Five Knuckle



Plain Bearing - Standard Weight - Wide Throw

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

1191 Wide Throw

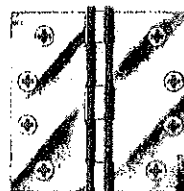
- Brass with Stainless Steel pin
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Stainless Steel with Stainless Steel pin
- ANSI A5133

1279 Wide Throw

- Steel with Steel pin
- ANSI A8133

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

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



Concealed Bearing - Standard Weight

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

- CB1191** Stainless Steel with Stainless Steel pin
- ANSI A5112

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

Hinge Size		Gauge of Metal	Hole Count	Screw Size	
Inches	mm			Machine	Wood
3 1/2 x 3 1/2	89 x 89	0.119	6	-	1 x 9
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6 x 6	152 x 152	0.160	10	-	1 1/2 x 14






Saddle Thresholds



All thresholds this page

MATERIALS & FINISHES

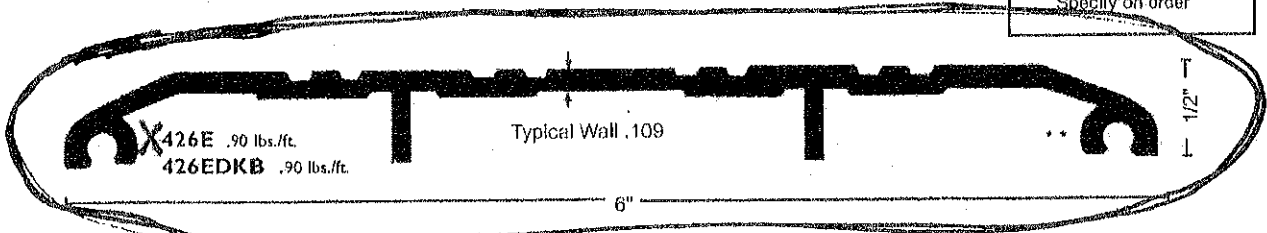
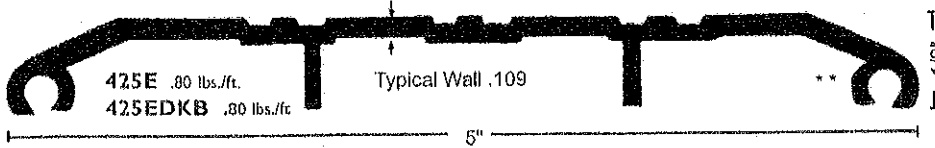
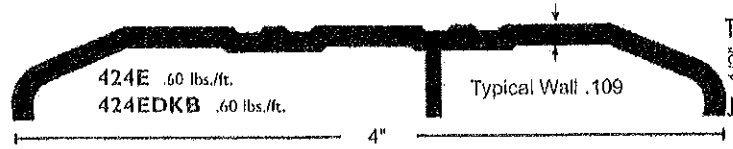
- Aluminum mill finish
- DKB - Aluminum dark bronze finish

Slip Resistant SIA Finish 

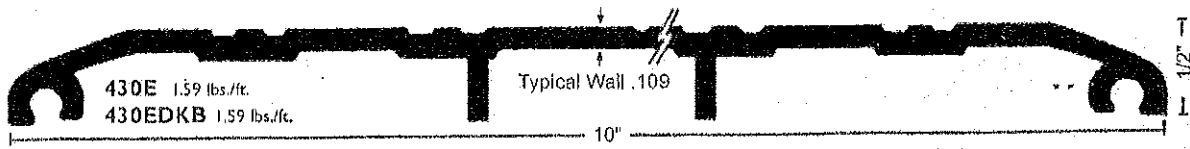
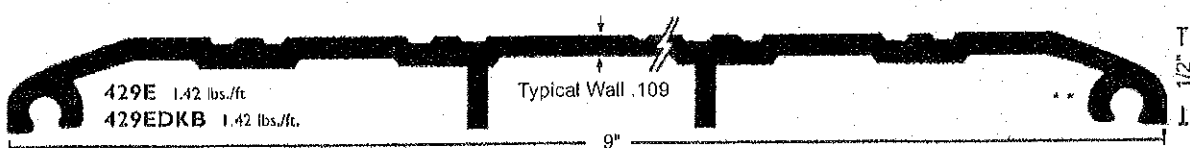
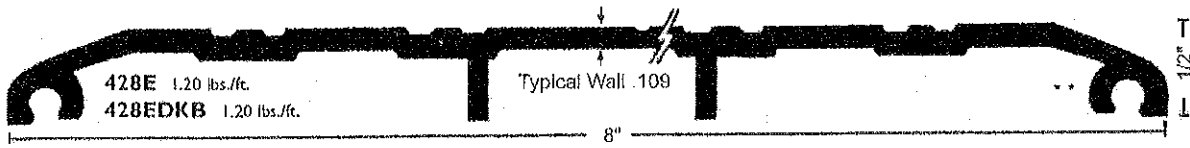
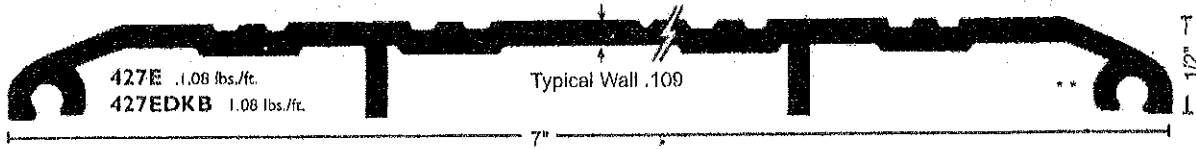
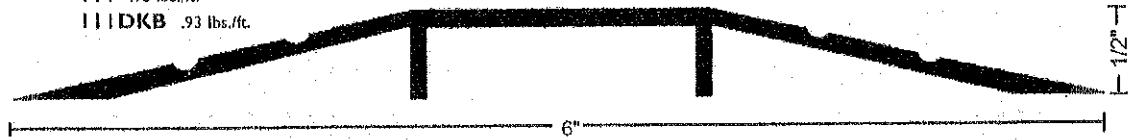
All thresholds are available with our slip resistant, non-skid finish for better traction. Suffix "SIA".



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



III .93 lbs./ft.
IIIDKB .93 lbs./ft.



NATIONAL GUARD PRODUCTS, INC.

Vinyl Seals

Properties:

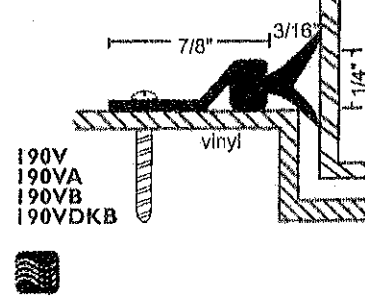
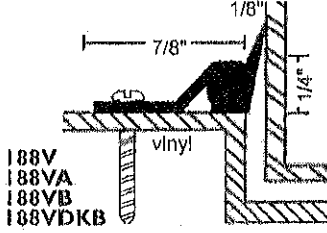
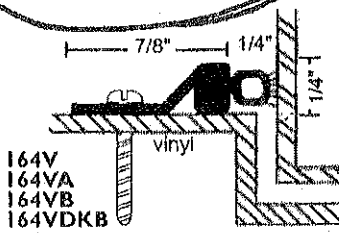
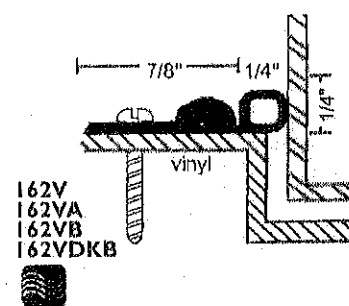
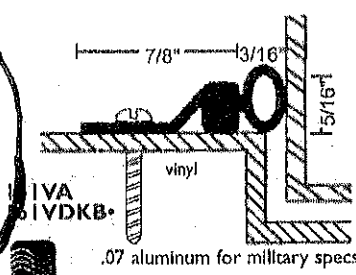
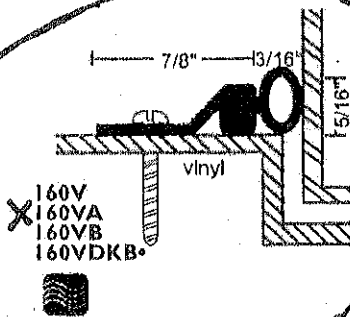
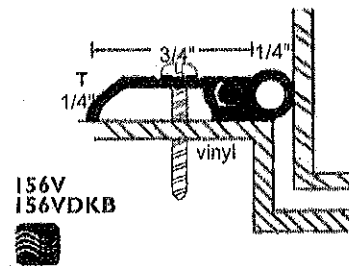
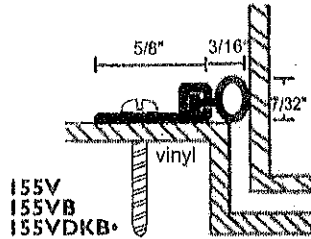
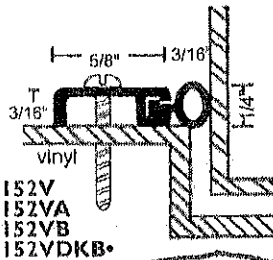
- Synthetic polymer: Polyvinyl Chloride
- Economical
- Flame resistant
- Moisture resistant
- Temperature range 0F to 140F
- Plasticizers evaporate with age and exposure to UV, Cold, Heat causing hardening, loss of memory, loss of resilience, cracking and crazing

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

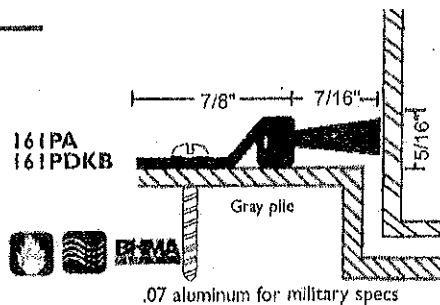
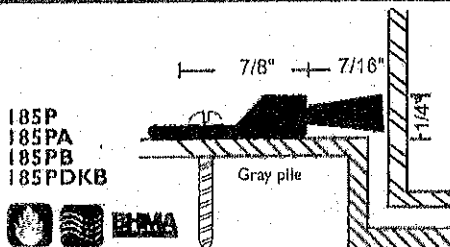


All vinyl seals this section

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



Pile Seals



Vinyl Perimeter Seals

Pile Seals

Specifications

Handing:

All D-Series lever locksets are non-handed.

Door Thickness:

1½" to 2½" (41mm-54mm) standard including Vandlgard® functions.

See accessories (Page 12) for spacers required for 1¾" doors.

Backsets:

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

Faceplate:

Brass, bronze or stainless steel. 1½" x 2¼" (29 mm x 57mm) square corner, beveled.

Lock Chassis:

Zinc plated for corrosion resistance.

Latch Bolt:

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

Exposed Trim:

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

Striker:

ANSI curved lip strike 1¼" x 4⅞" x 1⅜" lip to center standard. Optional strikes, lip lengths and ANSI strike box available. See page 11.

Cylinder & Keys:

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

Keying Options:

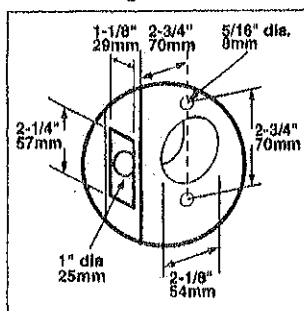
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying and construction keying.

Warranty:

Seven-year limited for all functions including Vandlgard®.

Door Preparation

Lever Designs



Certifications

ANSI

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

Federal

Meets FF-H-106C Series 161.

California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

All levers with returns comply; levers return to within ½" of door face.

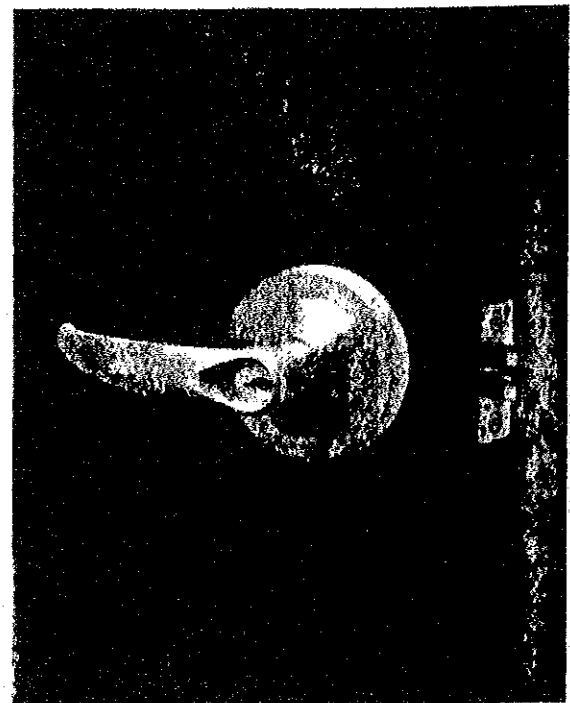
UL / cUL:

All locks listed for A label single doors, 4' x 8'.

Letter F and UL symbol on latch front indicate listing.

Electrified functions are UL19X Listed for single point locking applications.

UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.



D SERIES LEVERS

Functions

Non-Keyed Locks

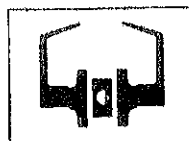
SCHLAGE ANSI

ND10S F75



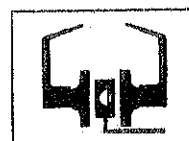
Passage Latch
Both levers always unlocked.

ND12D F89



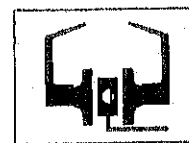
Exit Lock
Outside lever always fixed. Inside lever always unlocked.

ND12DEL



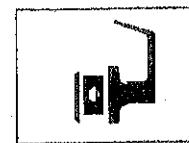
Electrically Locked (Fail Safe)
Outside lever continuously locked electrically. Unlocked by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.

ND12DEU



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

ND25D



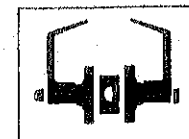
Exit Lock
Blank plate outside. Inside lever always unlocked.

ND40S F76



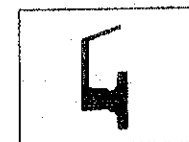
Bath/Bedroom Privacy Lock
Push-button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button.

ND44S



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

ND170



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

Keyed Locks

SCHLAGE ANSI

ND50PD F82



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

ND53PD F109



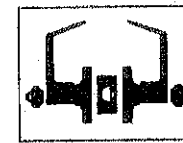
Entrance Lock*
Turn/push-button locking; pushing and turning button locks outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button locks outside lever until unlocked by key or by turning inside lever.

ND60PD F88



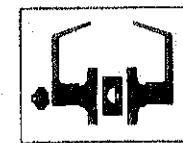
Vestibule/Classroom Security Lock*
Latch retracted by key from outside when outside lever is locked by key in inside lever. Inside lever is always unlocked.

ND66PD F91



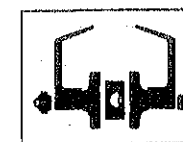
Store Lock*†
Key in either lever locks or unlocks both levers.

ND70PD F84



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

ND73PD F90



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

* Available functions for small format interchangeable core.

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

Specifications

Handing:

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

Door Thickness:

1 $\frac{3}{8}$ " to 1 $\frac{7}{8}$ " (35 mm to 48 mm) standard.

2" (51 mm) to 2 $\frac{1}{2}$ " (64 mm) optional extended inside.

Backset:

2 $\frac{3}{4}$ " (60 mm) standard. 2 $\frac{3}{4}$ " (70 mm), 3 $\frac{3}{4}$ " (95 mm) and 5" (127 mm) optional.

Front:

Steel. 1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ " square corner, beveled, for 2 $\frac{3}{4}$ " backset standard. Optional 1" square corner, 1" radius corner, and non-UL drive-in / round face. For availability with specific backsets, see page 6.

Lock Chassis:

Steel, zinc dichromate plated for corrosion resistance.

Latch Bolt:

Brass, chrome plated, $\frac{1}{2}$ " throw, deadlocking on keyed and exterior functions.

Exposed Trim:

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

Strike:

T-strike 1 $\frac{1}{8}$ " x 2 $\frac{3}{4}$ " (29 mm x 70 mm) x 1 $\frac{1}{8}$ " (29 mm) lip to center with box standard. Optional strikes, lip lengths and ANSI strike box available. See page 7.

Cylinder & Keys:

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

Residential: 6-pin C keyway, keyed 5-pin.

Keying Options:

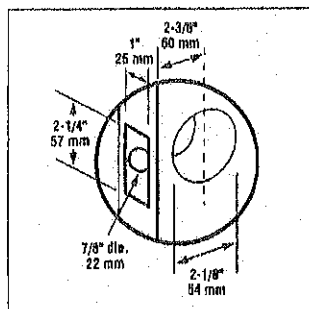
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying, and construction keying.

Warranty:

Commercial: three-year limited.

Residential: Full mechanical lifetime.

Door Preparation



Certifications

ANSI

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

Federal

Meets FF-H-106C.

California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

All levers with returns comply; levers return to within $\frac{1}{2}$ " of door face.

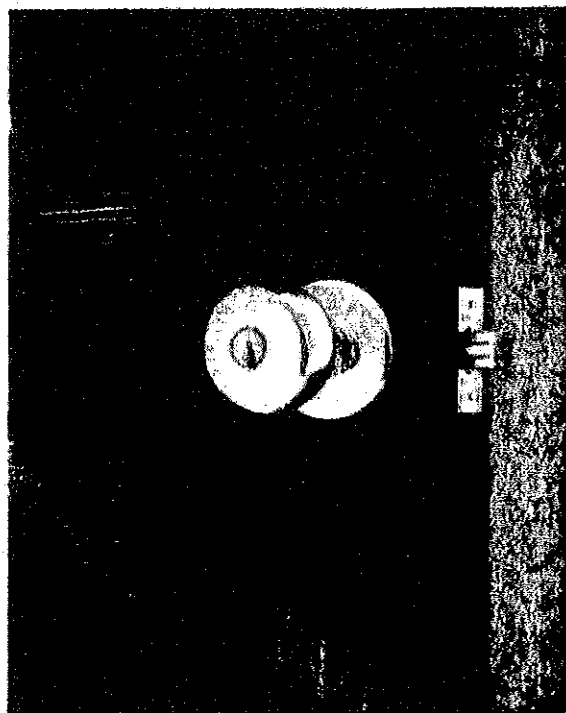
UL / ULC:

All locks listed for A label single doors, 4' x 8'.

Letter F and UL symbol on latch front indicate listing.

UL437 Listed locking cylinder optional: specify

Primus 20-500 Series cylinder.



Designs & Finishes



609

GEORGIAN

Symbol: GEO

Material: Wrought brass

Finishes: 605, 606,
609, 610,
625, 626



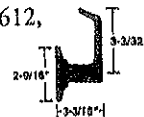
605

LEVON

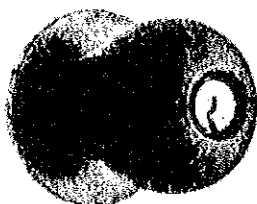
Symbol: LEV

Material: Pressure cast
zinc lever; wrought brass
or bronze rose

Finishes: 605, 612,
613, 626



8



613

ORBIT

Symbol: ORB

Material: Wrought brass
or bronze

Finishes: 605, 606, 609,
610, 611, 612, 613,
616, 625, 626



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

Finishes

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



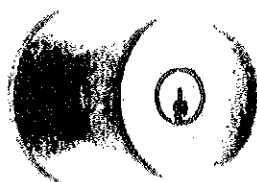
605

PLYMOUTH

Symbol: PLY

Material: Wrought brass,
bronze, or stainless steel

Finishes: 605, 606, 609, 610,
611, 612, 613, 616, 625,
626, 629, 630



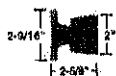
626

TULIP

Symbol: TUL

Material: Wrought brass

Finishes: 605, 606,
609, 610,
625, 626








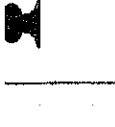
8

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


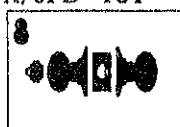



tions

156.2 Series 4000 Grade 2

Keyed Functions

ANSI	
F75	Passage Latch Both knobs always unlocked.
	
F76	Exit Lock Blank plate outside. Inside knob always unlocked. Specify door thickness, 1 3/8" or 1 3/4".
	
F77	Patio Lock Push-button locking. Turning inside knob or closing door releases button, preventing lock-out.
	
F79	Bath/Bedroom Privacy Lock Push-button locking. Can be opened from outside with small screwdriver. Turning inside knob or closing door releases button.
	
F79	Communicating Lock Turn-button in outer knob locks and unlocks knob and inside thumbturn.
	
F79	Single Dummy Trim Dummy trim for one side of door. Used for door pull or as matching inactive trim.
	

Keyed Functions

SCHLAGE	ANSI	
A53PD	F109	Entrance Lock Turn/push-button locking: pushing and turning button locks outside knob requiring use of key until button is manually unlocked. Push-button locking: pushing button locks outside knob until unlocked by key or by turning inside knob.
		
A70PD	F84	Classroom Lock Outside knob locked and unlocked by key. Inside knob always unlocked.
		
A79PD		Communicating Lock Locked or unlocked by key from outside. Blank plate inside.
		
A80PD	F86	Storeroom Lock Outside knob fixed. Entrance by key only. Inside knob always unlocked.
		
A85PD	F93	Hotel/Motel Lock Outside knob fixed. Entrance by key only. Push-button in inside knob activates visual occupancy indicator, allowing only emergency masterkey to operate. Rotation of inside spanner-button provides lock-out feature by keeping indicator thrown.
		

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

4. Wood Surfaces: Keep wood surfaces to be in contact with sealants free of splinters and sawdust or other loose particles.
- B. Do not add liquids, solvents, or powders to the sealant. Mix multi-component elastomeric sealants in accordance with manufacturer's instructions.

3.2 INSTALLATION

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

	<u>Minimum</u>	<u>Maximum</u>
a) For metal, glass, or other nonporous surfaces:		
(1) 1/4 inch (6 mm) (minimum)	1/4 inch (6 mm)	1/4 inch (6 mm)
(2) Over 1/4 inch (6 mm)	1/2 of width	Equal to width
b) For wood, concrete, masonry, or stone:		
(1) 1/4 inch (6 mm) (minimum)	1/4 inch (6 mm)	1/4 inch (6 mm)
(2) Over 1/4 inch (6 mm) to 1/2 inch (13 mm)	1/4 inch (6 mm)	Equal to width
(3) Over 1/2 inch (13 mm) to 2 inch (50 mm)	1/2 inch (50 mm)	5/8 inch (16 mm)
(4) Over 2 inch (50 mm)	(As recommended by sealant mfr.)	
 2. Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is not required on metal surfaces.
- B. Masking Tape: Place masking tape on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Remove masking tape within 10 minutes after joint has been filled and tooled.
- C. Immediately prime prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.
- D. Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.
- E. Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Make sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Apply sealer over the sealant when and as specified by the sealant manufacturer.
- F. Thresholds: Place double band of sealant under and along all sides of all exterior thresholds.

END OF SECTION 07920

ATTACHMENT 2

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.**

nance, Cleaning and Conversion

5, Appendix 13, requires an information and training program for **all** to lead above the action level **or** who may suffer skin or eye irritation from must inform the employees of the specific hazards associated with their work tive measures which can be taken, the danger of lead to their bodies oductive systems), and their rights under the standard. In addition you must le to all employees, including those exposed below the action level, a copy its appendices. This training program shall be repeated annually for leanup operations.

all ensure that each individual employee is informed of the following:

of the standard and its appendices.

nature of operations that could result in exposure to lead above the action

, proper selection, fitting, use, and limitations of respirators.

and a description of medical surveillance program.

rinking are prohibited in lead contaminated areas.

l smoking materials shall not be permitted in contaminated areas.

must wash their hands and other exposed skin whenever they leave the work

it of Health,

ing controls and work practices associated with the individual's job

onal Guard

of any compliance plan in effect.

s to employees that chelating agents should not routinely be used to remove

on

odies and should not be used at all except under the direction of a licensed

I

Areas Outside IFR with Elevated Lead Dust on Floor

1. A 3 section by 3 section grid system shall be used. Samples shall not be collected on all one section or end of a grid. A total of 3 samples shall be collected per 3 section by 3 section grid.
 - Each floor surface less than 50 feet in length shall be divided into a 3 section by 3 section grid. (Figure 1 and Figure 2)
 - Each floor surface more than 50 feet in length shall be divided in half and a 3 section by 3 section grid shall be established on each half. (Figure 3 and Figure 4)
2. Sample results in excess of 40 ug/SF are considered to have failed. If a sample fails, the entire 3 section by 3 section grid shall be re-cleaned and re-sampled.
3. DEQ reserves the right to take additional confirmation samples.

Figure 1. ACCEPTABLE FOR SURFACES LESS THAN 50 FEET

Wipe Sample		
	Wipe Sample	
		Wipe Sample

Figure 2. NOT ACCEPTABLE FOR SURFACES LESS THAN 50 FEET

Wipe Sample	<u>OR</u> Wipe Sample	Wipe Sample
Wipe Sample		
Wipe Sample		

Figure 3. **ACCEPTABLE FOR SURFACES GREATER THAN 50 FEET**

Wipe Sample					Wipe Sample
	Wipe Sample		Wipe Sample		
		Wipe Sample		Wipe Sample	

Surface Center

Figure 4. **NOT ACCEPTABLE FOR SURFACES GREATER THAN 50 FEET**

				Wipe Sample	
Wipe Sample	Wipe Sample	Wipe Sample		Wipe Sample	
				Wipe Sample	

Surface Center

ATTACHMENT 4

Guidelines for Rehabilitation and Conversion of Indoor Firing Ranges

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

*NG Pam 420-15

Facilities Engineering

Guidelines and Procedures for Rehabilitation and
Conversion of Indoor Firing Ranges

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

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

Official:

GEORGE R. BROCK
Chief, Plans and Policy Division

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

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

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

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

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

Distribution. A.

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- 1-1. Purpose
- 1-2. References
- 1-3. Explanation of abbreviations and terms
- 1-4. Policy and Procedures
- 1-5. Goal
- 1-6. Deviation

Chapter 2

Health and Medical Aspects

- 2-1. Health Effects
- 2-2. Medical Surveillance for Occupational Exposure to Lead (Pb)
- 2-3. Air Monitoring

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

- 2-4. Wipe Sampling Protocol and Media
- 2-5. Personal Protection Equipment

Chapter 3

Education, Maintenance, Cleaning and Conversion

- 3-1. Worker Education
- 3-2. Range Cleaning Instructions
- 3-3. Cleaning Stored Contaminated Equipment
- 3-4. Contaminated Sand and Lead Waste
- 3-5. Range Rehabilitation
- 3-6. Conversion of Indoor Firing Ranges

Appendixes

- A. References
- B. Protocol for Collecting Wipe Samples
- C. Sampling Strategy for Collection of Wipe Samples

Glossary

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 ($\mu\text{g}/\text{ft}^2$) (40 micrograms in the case of child exposure). The sampling strategy, which is the amount and location of wipe samples to be collected, is provided in Appendix C.

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

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

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

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

1-5. Goal

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

1-6. Deviation

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

Chapter 2**Health and Medical Aspects****2-1. Health Effects**

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

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

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

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

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

2-3. Air Monitoring

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

2-4. Wipe Sampling Protocol and Media

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

2-5. Personal Protective Equipment

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

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

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

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

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

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

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

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

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

Chapter 3 Education, Maintenance, Cleaning and Conversion

3-1. Worker Education

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

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

- (1) The content of the standard and its appendices.
- (2) The specific nature of operations that could result in exposure to lead above the action level.
- (3) The purpose, proper selection, fitting, use and limitations of respirators.
- (4) The purpose and a description of medical surveillance program.
- (5) Eating and drinking are prohibited in lead contaminated areas.
- (6) Smoking and smoking materials will not be permitted in contaminated areas.
- (7) Soldiers and ARNG employees must wash their hands and other exposed skin whenever they leave

the work area.

- (8) The engineering controls and work practices associated with the individual's job assignment.
- (9) The contents of any compliance plan in effect.
- (10) Instructions to soldiers and ARNG employees that chelating agents should not routinely be used to

remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

3-2. Range Cleaning Instructions

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

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

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

d. Prohibited methods include:

(1) Wet cleaning using high-pressure systems, since this method may embed the lead into the substratum and generate large quantities of hazardous waste.

(2) Dry sweeping is not permitted.

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

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

(1) Clean the steel bullet trap, areas in front of and behind the bullet trap, and the steel bullet trap plate(s), after removing the sand (if applicable).

(2) Clean the ceiling, floors, lights, baffles, retrieval system, heating system(s), and ventilation duct(s).

(3) Vacuum and remove acoustical material. *Painting over this material is not recommended.*

(4) Clean the floor the last, starting at the bullet trap and ending behind the firing line.

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

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

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

(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/ft²) 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/ft², if any sample is above 200 ug/ft², the range is not considered clean, the range will need to be re-washed until clearance samples are below 200 ug/ft².
- k. The regional industrial hygienist will do quality assurance sampling as needed.
- l. After obtaining clearance, the walls of the range will be coated with a sealant (Not Paint), which is smooth, wood floors will receive a coat of deck enamel or urethane, concrete floors will be sealed with deck enamel. After sealing, floors will be tiled or covered with linoleum.
- m. As a variety of conditions exist in ranges, unique situations may arise and specific written guidance from the Regional Industrial Hygiene Office may be required.
- n. All personnel involved in the decontamination/conversion of IFRs as a minimum will be provided with the following personal protective equipment.
 - (1). Full Face air purifying respirator with HEPA cartridges. The requirements outline in 29 CFR 1910.134, must be met prior to placing workers in respiratory protection.
 - (2). Individuals will be provided personal protective equipment as required per paragraph 2-5, this pamphlet.
- o. Any conversion must be supervised by a person certified to perform inspections, evaluations, and determinations of IFRs IAW with OSHA standards, other nationally accepted standards, and accepted IH practices for maintenance, cleaning, conversion, ventilation, and air sampling of IFRs. All work shall be according to current industry engineering standards under the control of the State Construction and Facilities Management Officer. Cleaning must recognize that there likely will be "background" lead presence in the readiness center totally independent of the existence of an indoor range and that the method of cleaning is less important than achieving the goal of less than 200 micrograms (40 micrograms in the case of child exposure).
- p. After conversion, lead testing shall continue on an annual basis to verify that no lead migration from the substrate is occurring.

Appendix A
References

Section I
Required Publications

There are no entries in this section

Section II
Related Publications

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

AR 11-34
The Respiratory Protection Program

AR 40-5
Preventive Medicine

DODI 6055.5
Industrial Hygiene and Occupational Health

DOD 6055.5-M
Occupational Medical Surveillance Manual

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

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

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

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

NGR 420-10
Construction and Facilities Management Office Operations

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

Section III
Prescribed Forms

There are no entries in this section

Section IV
Referenced Forms

There are no entries in this section

Appendix B
Protocol for Collecting Wipe Samples

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

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

B-3. Wipe Samples

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

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

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

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

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

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

Appendix C
Sampling Strategy for Collection of Wipe Samples

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

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

Glossary

Section I Abbreviations

ARNG
Army National Guard

CFR
Code of Federal Regulations

HEPA
High Efficiency Particulate Air

IFR
Indoor Firing Range

NIOSH
National Institute for Occupational Safety and Health

OSHA
Occupational Safety and Health Administration

ug/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 be 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.

3 November 2006

NGP 420-15

Section III
Special Abbreviations and Terms

This section contains no entries

SECTION 3

Cherokee Photos



Photo: 1) Drill Room Pre Remediation



Photo: 2) Drill Room Pre Remediation



Photo: 3) Drill Room Pre Remediation



Photo: 4) Drill Room Post Clearance



Photo: 5) Garage Bay Pre Remediation



Photo: 6) Garage Bay Pre Remediation



Photo: 7) Garage Bay Post Clearance



Photo: 8) Garage Bay Post Clearance



Photo: 9) Garage Bay Post Clearance



Photo: 10) Downspout/Oh Door Frame Pre Remediation



Photo: 11) Door Frame Pre Remediation



Photo: 12) Finished Downspout



Photo: 13) Finished Door Frame



Photo: Finished Door Frame



Photo: 14) Stage Area Pre Remediation



Photo: 15) Stage Area Post Clearance



Photo: 16) Storage Area Pre Remediation



Photo: 17) Gun Room Pre Remediation



Photo: 18) Rental Area Pre Remediation



Photo: 19) Gun Room Post Clearance

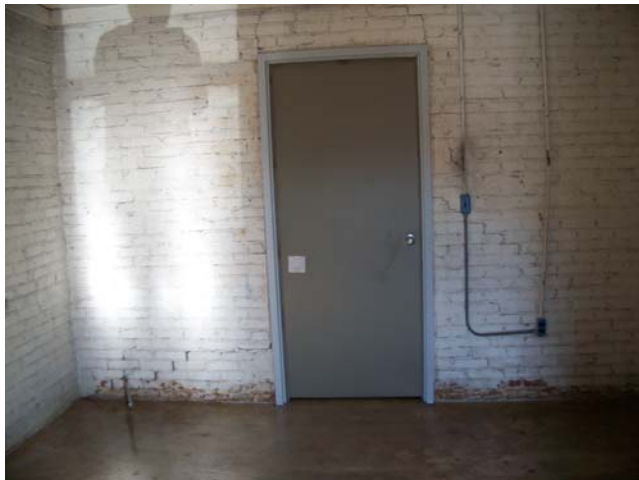


Photo: 20) Rental Area Post Clearance



Photo: 21) Stage Area Post Clearance



Photo: 22) Storage Area Post Clearance



Photo: 23) IFR Post Clearance



Photo: 24) IFR Post Clearance



Photo: 25) Stairwell to 2nd Floor Post General Housekeeping



Photo: 26) Upstairs Pre Remediation



Photo: 27) Supply Room Pre Remediation



Photo: 28)



Photo: 29) Upstairs Pre Remediation



Photo: 30) Classroom Pre Remediation



Photo: 31)upstairs Office Space Pre Remediation



Photo: 32) Upstairs Post Clearance



Photo: 33) Office space post clearance



Photo: 34) upstairs Post Clearance



Photo: 35)Supply Room Post Clearance



Photo: 36) Class Room Post Clearance



Photo: 37) CDRS Office Latrine Post Clearance



Photo: 38) Misc. Doors and Frames



Photo: 39) Misc. Doors and Frames



Photo: 40) Misc. Doors and Frames



Photo: 41) Misc. Doors and Frames



Photo: 42) Misc. Doors and Frames



Photo: 43) IFR Framing Pre Remediation



Photo: 44) IFR Framing Post Clearance



Photo: 45) Stairwell to IFR Post Clearance

SECTION 4

Cherokee Clearance Testing and Report

LEAD DUST CLEARANCE INSPECTION

Cherokee National Guard Armory

Cherokee, OK 73728

Performed By:

**King Consultants, Inc.
(ODEQ License No. OKFIRM13074)
1205 E. 46th Street
Lubbock, TX 79404**

Prepared For:

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

Date of Final Clearance:

January 24, 2009

Monte Scammahorn

Oklahoma Licensed

Lead-based Paint Risk Assessor

(ODEQ License No. OKRASR13225)

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Introduction:

King Consultants, Inc. was retained to perform leaded dust clearance services at the Cherokee National Guard Armory in Cherokee, OK 73728, an Oklahoma Department of Environmental Quality project. This service was required following lead-based paint removal and specialized cleaning performed at the property by Crystal Creek Environmental Solutions, Inc., as prescribed by the inspection and dust sampling on this property, provided by Marshall Environmental Services. Monte Scammahorn, a licensed lead-based paint risk assessor (ODEQ Certification #OKRASR13225) from King Consultants, Inc. (ODEQ Certification #OKFIRM13074) conducted the visual and analytical clearance. This clearance was conducted using the Army National Guard (ARNG) and Air National Guard (ANG) leaded dust action level of 200 $\mu\text{g}/\text{ft}^2$ prior to surface sealing. After surface sealing, a limit of 40 $\mu\text{g}/\text{ft}^2$ was required for clearance.

Property Information:

The property consists of one two-story building with a large drill room and stage area with a maintenance bay on the first floor, an office area on the second floor, and a lower level indoor firing range (IFR). The building was built in the 1930's with concrete walls and metal exterior doors. The windows of the building are metal, and the floors are concrete, some of which are painted. Walls throughout the building consist of concrete and drywall with some wood trim and doors.

Contractor's Scope of Work:

According to the Department of Environmental Quality, with guidance from the inspection and dust sampling, the following components required treatment by the contractor prior to clearance:

- Leaded dust levels on Firing Range (IFR) and other floors
- Remove lead-based paint from interior door frames
- Dust limits met prior to (200 $\mu\text{g}/\text{ft}^2$), and after (40 $\mu\text{g}/\text{ft}^2$), surface sealing; all areas final limit 40 $\mu\text{g}/\text{ft}^2$
- Clear south half and upstairs prior to beginning maintenance bay

Findings:

Based on the following events, this property has passed leaded dust hazard clearance:

On Thursday, November 6, 2008 a visual inspection was conducted to verify the removal of all paint from door frames originally containing lead-based paint, the cleaning of floor surfaces, and no paint chips, settled dust, or debris were found on the first floor (minus maintenance bay) and the lower firing range. Floor samples were collected in these areas (see room legend). These samples were sent to Quantem Laboratories, LLC, a NLLAP certified laboratory, for analysis. All samples passed clearance, with the exception of the following:

- Sample #CNGA-01 above action level, located on the floor inside entry to IFR

- Sample #CNGA-02 above action level, located on the floor of IFR
- Sample #CNGA-03 above action level, located on the floor of IFR
- Sample #CNGA-04 above action level, located on the floor of IFR
- Sample #CNGA-05 above action level, located on the floor of IFR
- Sample #CNGA-06 above action level, located on the floor of IFR
- Sample #CNGA-07 above action level, located on the north wall of IFR
- Sample #CNGA-08B above action level, located on the east wall, north end of IFR
- Sample #CNGA-09 above final clearance limit, located on the east wall of IFR
- Sample #CNGA-10 above final clearance limit, located on the west wall of IFR
- Sample #CNGA-16 above final clearance limit, located on the center of IFR ceiling
- Sample #CNGA-18 above action level, located on north end of IFR ceiling
- Sample #CNGA-19 above final clearance limit, located on floor of stage north storage room
- Sample #CNGA-20 above action level, located on floor of stage north storage room
- Sample #CNGA-21 above final clearance limit, located on floor of stage north storage room
- Sample #CNGA-25 above final clearance limit, located on floor of stage south Rental Area
- Sample #CNGA-26 above final clearance limit, located on floor of stage south Rental Area

These results were reported to the contractor, and re-cleaning was required.

On Friday, November 21, 2008 the previously-failed areas, along with the entire IFR area, were found to be free of paint chips, dust, and debris and were sampled. These samples were sent to the laboratory for analysis. All samples passed clearance, with the exception of the following:

- Sample #CNGA-101 thru -106 above the action level, located on the floor of the IFR
- Samples #CNGA-107 above the action level, located on the north wall of the IFR
- Sample #CNGA-108 above the action level, located on the west wall, north end of the IFR
- Sample #CNGA-109 above the action level, located on the east wall, north end of the IFR
- Sample #CNGA-117 above the action level, located on the ceiling of the IFR
- Sample #CNGA-118 above the action level, located on the ceiling of the IFR
- Sample #CNGA-119 above the final clearance limit, located on the ceiling of the north end of IFR
- Sample #CNGA-124 above the final clearance limit, located on the floor at the doorway of the south stage storage room

On Tuesday, December 5, 2008 the failed areas above were re-sampled. The samples were sent to the laboratory for analysis. These samples passed the final clearance standard, with the exception of the following:

- Sample #CNGA-201 and -202 above the final clearance limit, located on the floor of the second floor CDR Office doorways
- Sample #CNGA-215 above the final clearance limit, located on the floor at the doorway between the stairwell and drill floor

- Sample #CNGA-219 above the final clearance limit, located on the floor of the north stage storage room
- Sample #CNGA-222 above the final clearance limit, located on the floor of the IFR
- Sample #CNGA-224 above the final clearance limit, located on the floor of the IFR
- Sample #CNGA-225 above the action level, located on the north end of the floor of the IFR
- Sample #CNGA-226 and -227 above the action level, located on the north wall of the IFR
- Sample #CNGA-229 above the action level, located on the west wall, north end of the IFR
- Sample #CNGA-234 above the final clearance limit, located on the north end of the ceiling of the IFR
- Sample #CNGA-235 above the final clearance limit, located on the north end of the ceiling of the IFR

On Wednesday, December 17, 2008 the south half and second floor of the building was tested again. Prior to these samples, the floor of the supply room on the second floor and all IFR surfaces were sealed. These samples passed the final clearance standard, with the exception of the following:

- Sample #CNGA-301 above the final clearance limit, located on the floor of the southwest room on the second floor
- Sample #CNGA-307 above the final clearance limit, located on the floor at the doorway between the stairwell and drill floor
- Sample #CNGA-321 above the final clearance limit, located on the west wall, north end of the IFR

On Monday, December 29, 2008 the south half and second floor of the building was tested again after the IFR surfaces were sealed again. These samples passed the final clearance standard (see room legend). This concludes the clearance of the south half and second floor of the building.

On Wednesday, January 14, 2009 the north stairwell and maintenance bay area of the building was sampled for leaded dust. These samples passed the final clearance limit, with the exception of the following:

- Sample #CNGA-503 above final clearance limit, located in the east storage room of the maintenance bay (FDC Room)
- Sample #CNGA-504 above final clearance limit, located in the east storage room of the maintenance bay (FDC Room)
- Sample #CNGA-509 above the action level, located in the south Maintenance Room of the maintenance bay
- Sample #CNGA-510 above final clearance limit, located in the south Maintenance Room of the maintenance bay
- Sample #CNGA-513 above final clearance limit, located in the Oil Room of the maintenance bay

On Wednesday, January 21, 2009 the failed rooms in the maintenance bay area were re-sampled. These samples passed the final clearance limit, with the exception of the following:

- Sample #CNGA-602 above final clearance limit, located in north storage room (FDC Room) of the maintenance bay

On Saturday, January 24, 2009 the failed room was re-sampled. These samples passed the final clearance limit. This concludes the clearance sampling of this building.

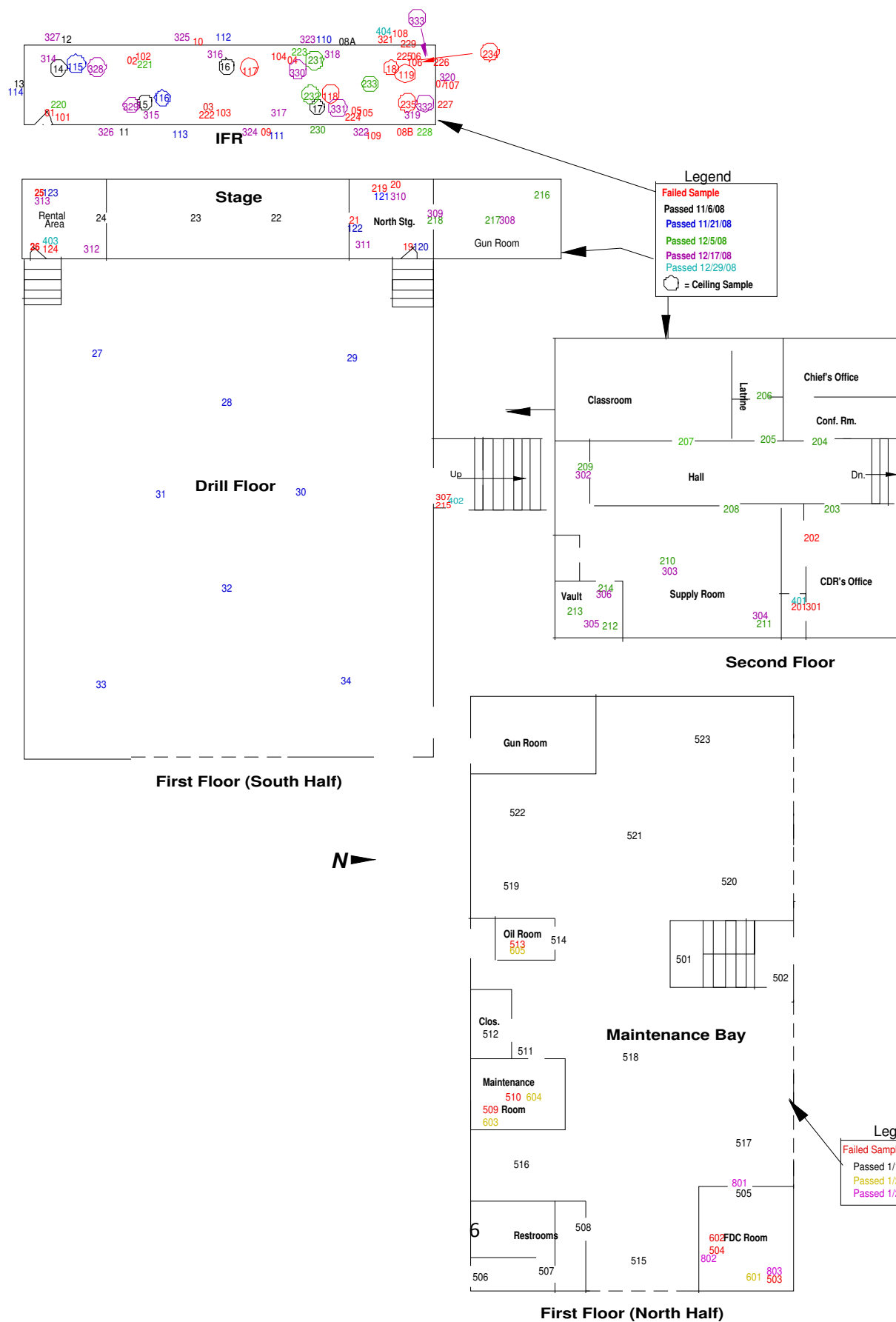
Appendix A contains a room legend with sample locations. Appendix B contains laboratory analysis reports. Appendix C contains lead-based paint certifications.

Conclusion:

As of January 24, 2009, this property is currently free of lead-based paint hazards, as adequate cleaning and sealing has been accomplished, based on the original lead-based paint inspection and leaded dust sampling. While surface seals can deteriorate over time, the action level set by the Army and Air National Guards were met prior to sealing, so high levels of leaded dust should never result from such deterioration. Sampling methods were utilized as found in testing of housing and child-occupied facilities according to HUD Guidelines.

**ROOM LEGEND/
SAMPLING LOCATIONS**

Room Legend Sampling Locations Cherokee Armory



LABORATORY ANALYSIS REPORTS



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167517
Date Received: 11/07/08
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/10/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory Clearance
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-01	Wipe	Lead	1336.50	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
002	CNGA-02	Wipe	Lead	922.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
003	CNGA-03	Wipe	Lead	480.12	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
004	CNGA-04	Wipe	Lead	378.36	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
005	CNGA-05	Wipe	Lead	3573.80	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
006	CNGA-06	Wipe	Lead	11030.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
007	CNGA-07	Wipe	Lead	362.40	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
008	CNGA-08A	Wipe	Lead	17.42	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
009	CNGA-09	Wipe	Lead	42.53	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
010	CNGA-10	Wipe	Lead	40.56	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
011	CNGA-11	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / 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.



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167517
Date Received: 11/07/08
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/10/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory Clearance
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
012	CNGA-12	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
013	CNGA-13	Wipe	Lead	17.20	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
014	CNGA-14	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
015	CNGA-15	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
016	CNGA-16	Wipe	Lead	47.76	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
017	CNGA-17	Wipe	Lead	27.48	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
018	CNGA-18	Wipe	Lead	1216.45	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
019	CNGA-19	Wipe	Lead	195.20	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
020	CNGA-20	Wipe	Lead	269.71	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
021	CNGA-21	Wipe	Lead	121.19	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
022	CNGA-22	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / 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.

Page 2 of 4



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

Environmental Chemistry Analysis Report

QUANTEM Set ID: 167517
Date Received: 11/07/08
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/10/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory Clearance
Location: Cherokee, OK

Project No.: N/A

AIHA ID: 101352

QUANTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
023	CNGA-23	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
024	CNGA-24	Wipe	Lead	27.46	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
025	CNGA-25	Wipe	Lead	43.93	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
026	CNGA-26	Wipe	Lead	177.20	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
027	CNGA-27	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
028	CNGA-28	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
029	CNGA-29	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
030	CNGA-30	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
031	CNGA-31	Wipe	Lead	16.77	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
032	CNGA-32	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
033	CNGA-33	Wipe	Lead	22.63	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100

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

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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167517
Date Received: 11/07/08
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/10/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory Clearance
Location: Cherokee, OK

Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
034	CNGA-34	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
035	CNGA-35	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
036	CNGA-36	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
037	CNGA-37	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100
038	CNGA-8B	Wipe	Lead	2594.45	16.00	ug/sq. Ft.	11/10/08 10:25	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, Analyst

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

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

QAQC Results

QA ID: 6396
Test: Lead

Date: 11/10/2008
Matrix: Wipe

Lab Number: 167517
Approved By: Eric Caves
Date Approved: 11/10/2008

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	225	251	275
FCV	225	250	275
ICV	22.5	23.2	27.5
RLVS	12.8	14.9	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW D	0.000	5369.000	5247.000	97.7	5162.000	96.1	1.6
MSW 2	0.000	5369.000	5314.000	99.0	5439.000	101.3	2.3
MSW 1	0.000	5369.000	5309.000	98.9	5419.000	100.9	2.1

Authorized Signature: _____



Eric Caves, Analyst



Lead Chain-of-Custody

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(800) 822-1850 (405) 755-7272 Fax: (405) 755-2058
www.quantem.com

Page 1 of 3

This Box for Lab Use Only
Lab No. 167517
Accept ☒ Reject ☐

Company Name: King Consultants Project Name: Cherokee National Guard Army Clearance
Project Location: Cherokee, OK Acct #: _____ Project Number: _____

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNGA-01	See Notes	1	C	Pb	mg / cm ²	A - Soil
CNGA-02		1	C		ug / cu ft	B - Paint Chips
CNGA-03		1	C		ug / sq ft	C - Surface / Dust Wipes
CNGA-04		1	C		mg / l	D - Bulk Miscellaneous
CNGA-05		1	C		mg / kg	E - Air Cassette
CNGA-06		1	C		PPM	F - Other (SPECIFY)
CNGA-07		1	C			
CNGA-08A		1	C			
CNGA-09		1	C			
CNGA-10		1	C			
CNGA-11		1	C			
CNGA-12		1	C			
CNGA-13		1	C			
CNGA-14		1	C			
CNGA-15		1	C			

LEGAL DOCUMENT Please Print Legibly

TURNAROUND TIME

Same Day ☐
24 Hour ☒
3-Day ☐
5-day ☐

CONTACT INFORMATION

Name Monte Scammon
Phone (580) 574-2652
Report Results VIA (CHOOSE ONE):
FAX ☐
Quantem WebSite ☒
E-Mail ☐

Signature of Monte Scammon Date 11/28/10 Time 1:10 Sampled By MS

Saturday FedEx Shipping - CALL TO SCHEDULE * Changed Sample # to 8A per Monte.
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'

Revision May 2006



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167890
Date Received: 11/24/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/24/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: CCES Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-101	Wipe	Lead	235.41	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
002	CNGA-102	Wipe	Lead	307.01	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
003	CNGA-103	Wipe	Lead	2724.45	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
004	CNGA-104	Wipe	Lead	567.70	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
005	CNGA-105	Wipe	Lead	1691.30	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
006	CNGA-106	Wipe	Lead	1005.20	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
007	CNGA-107	Wipe	Lead	365.26	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
008	CNGA-108	Wipe	Lead	418.78	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
009	CNGA-109	Wipe	Lead	1091.20	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
010	CNGA-110	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
011	CNGA-111	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / 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.



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167890
Date Received: 11/24/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/24/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: CCES Cherokee Nat'l Guard Armory

Location: Cherokee, OK

Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
012	CNGA-112	Wipe	Lead	27.24	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
013	CNGA-113	Wipe	Lead	31.33	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
014	CNGA-114	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
015	CNGA-115	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
016	CNGA-116	Wipe	Lead	17.03	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
017	CNGA-117	Wipe	Lead	895.70	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
018	CNGA-118	Wipe	Lead	1599.75	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
019	CNGA-119	Wipe	Lead	80.34	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
020	CNGA-120	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
021	CNGA-121	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
022	CNGA-122	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100

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

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Page 2 of 3



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 167890
Date Received: 11/24/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 11/24/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: CCES Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
023	CNGA-123	Wipe	Lead	38.57	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
024	CNGA-124	Wipe	Lead	66.24	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
025	CNGA-125	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
026	CNGA-126	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100
027	CNGA-127	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	11/24/08 13:15	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, Analyst

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

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Page 3 of 3

QAQC Results

QA ID: 6430
Test: Lead

Date: 11/24/2008
Matrix: Wipe

Lab Number: 167890
Approved By: Eric Caves
Date Approved: 11/24/2008

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

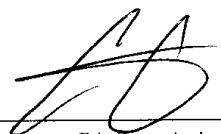
Standard	Low Limit	Obtained	High Limit
CCV	225	246	275
FCV	225	240	275
ICV	22.5	24.7	27.5
RLVS	12.8	16.1	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 9	0.000	5369.000	4940.000	92.0	5097.000	94.9	3.1
MSW 7	0.000	5369.000	4842.000	90.2	5273.000	98.2	8.5
MSW 6	0.000	5369.000	5584.000	104.0	5437.000	101.3	2.7
MSW 8	0.000	5369.000	5147.000	95.9	5206.000	97.0	1.1

Authorized Signature: _____



Eric Caves, Analyst





Lead Chain-of-Custody

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

Page 2 of 2

This Box To Lab Use Only
Lab No. 167890
Accept
Reject

Company Name: King Consultants
Project Location: Cherokee, OK
Project Name: CCE's Cherokee Nat'l Guard Armory
Acct #:
Project Number:
Project Name: CCE's Cherokee Nat'l Guard Armory

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNGA-116	Sealant	1	C	Pb	mg / cm ²	A - Soil
CNGA-117		1	C		ug / cu m	B - Paint Chips
CNGA-118		1	C		ug / sq ft	C - Surface / Dust Wipes
CNGA-119		1	C		mg / l	D - Bulk Miscellaneous
CNGA-120		1	C		PPM	E - Air Cassette
CNGA-121		1	C			F - Other (SPECIFY)
CNGA-122		1	C			
CNGA-123		1	C			
CNGA-124		1	C			
CNGA-125		1	C			
CNGA-126		1	C			
CNGA-127		1	C			

TURNAROUND TIME
<input checked="" type="checkbox"/> Same Day
<input type="checkbox"/> 24 Hour
<input type="checkbox"/> 3-Day
<input type="checkbox"/> 5-day

CONTACT INFORMATION
Name: Monte Sammons
Phone: Report Results Via (CHOOSE ONE): <input type="checkbox"/> FAX <input checked="" type="checkbox"/> Quantem WebSite <input type="checkbox"/> E-Mail

LEGAL DOCUMENT
Please Print Legibly

Shipping By:
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'



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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 168154
Date Received: 12/08/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/8/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-201	Wipe	Lead	133.29	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
002	CNGA-202	Wipe	Lead	42.46	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
003	CNGA-203	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
004	CNGA-204	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
005	CNGA-205	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
006	CNGA-206	Wipe	Lead	16.64	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
007	CNGA-207	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
008	CNGA-208	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
009	CNGA-209	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
010	CNGA-210	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
011	CNGA-211	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / 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.

Page 1 of 4



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 168154
Date Received: 12/08/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/8/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee National Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
012	CNGA-212	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
013	CNGA-213	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
014	CNGA-214	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
015	CNGA-215	Wipe	Lead	64.62	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
016	CNGA-216	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
017	CNGA-217	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
018	CNGA-218	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
019	CNGA-219	Wipe	Lead	168.68	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
020	CNGA-220	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
021	CNGA-221	Wipe	Lead	33.44	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
022	CNGA-222	Wipe	Lead	43.72	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100

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

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Page 2 of 4



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

Environmental Chemistry Analysis Report

QuanTEM Set ID: 168154
Date Received: 12/08/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/8/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee National Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuanTEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
023	CNGA-223	Wipe	Lead	28.31	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
024	CNGA-224	Wipe	Lead	166.75	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
025	CNGA-225	Wipe	Lead	254.77	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
026	CNGA-226	Wipe	Lead	203.93	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
027	CNGA-227	Wipe	Lead	356.44	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
028	CNGA-228	Wipe	Lead	38.57	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
029	CNGA-229	Wipe	Lead	6239.60	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
030	CNGA-230	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
031	CNGA-231	Wipe	Lead	32.59	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
032	CNGA-232	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
033	CNGA-233	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100

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

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Page 3 of 4



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

Environmental Chemistry Analysis Report

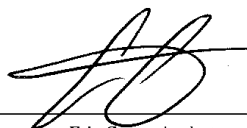
QuantEM Set ID: 168154
Date Received: 12/08/08
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/8/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee National Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
034	CNGA-234	Wipe	Lead	73.22	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
035	CNGA-235	Wipe	Lead	49.66	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
036	CNGA-236	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
037	CNGA-237	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100
038	CNGA-238	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/08/08 11:30	EPA 3051 / NIOSH 9100

Authorized Signature: _____



Eric Caves, Analyst

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

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Page 4 of 4

QAQC Results

QA ID: 6455
Test: Lead

Date: 12/8/2008
Matrix: Wipe

Lab Number: 168154
Approved By: Eric Caves
Date Approved: 12/8/2008

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

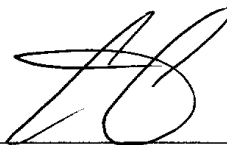
Standard	Low Limit	Obtained	High Limit
CCV	225	241	275
FCV	225	239	275
ICV	22.5	24.1	27.5
RLVS	12.8	16.4	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 7	0.000	5369.000	5848.000	108.9	5584.000	104.0	4.6
MSW 8	0.000	5369.000	5491.000	102.3	5628.000	104.8	2.5

Authorized Signature: _____



Eric Caves, Analyst



Lead Chain-of-Custody

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

Page 13 of 13

This Box for Lab Use Only
Lab No. 708134
Accept ☒ Reject ☐

Company Name: King Consultants
Project Location: Cherokee, OK
Project Name: Cherokee National Guard Armory
Project Number:

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNCA-201	See Notes	1	C	Pb	mg / cu m	A - Soil
CNCA-202		1	C		ug / sq ft	B - Paint Chips
CNCA-203		1	C		mg / l	C - Surface / Dust Wipes
CNCA-204		1	C		mg / kg	D - Bulk Miscellaneous
CNCA-205		1	C		WM %	E - Air Cassette
CNCA-206		1	C		PPM	F - Other (SPECIFY)
CNCA-207		1	C			
CNCA-208		1	C			
CNCA-209		1	C			
CNCA-210		1	C			
CNCA-211		1	C			
CNCA-212		1	C			
CNCA-213		1	C			
CNCA-214		1	C			
CNCA-215		1	C			

TURNAROUND TIME
☒ Same Day
☒ 24 Hour *Wed 12/4/08*
☐ 3-Day
☐ 5-day

CONTACT INFORMATION
Name: Monte Sammons
Phone: (580) 574-2652
Report Results Via (CHOOSE ONE)
☐ FAX
☒ Quantem WebSite
☐ E-Mail

Signature: Monte Sammons
Date: 12-4-08
Time: 12:00 PM
Sampled By: [Signature]
Date: 12-8-08
Time: 5:00 PM

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'



Lead Chain-of-Custody

2033 Heritage Park Drive, Oklahoma City, OK 73120-7602
(800) 822-1650 (405) 755-7272 Fax: (405) 755-2058
www.quantem.com

Page 23 of 23

This Box for Lab Use Only
Lab No. 768154
Accept _____ Reject _____

Company Name: King Consultants Acct # _____ Project Name: Cherokee Natl Guard Armory
Project Location: Cherokee, OK Project Number: _____

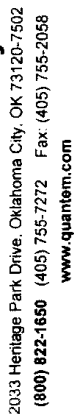
Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNGA-216	See Notes	1	C	Pb	mg / cm ²	A - Soil
CNGA-217		1	C		ug / cu ft	B - Paint Chips
CNGA-218		1	C		ug / sq ft	C - Surface / Dust Wipes
CNGA-219		1	C		mg / l	D - Bulk Miscellaneous
CNGA-220		1	C		mg / kg	E - Air Cassette
CNGA-221		1	C		PPM	F - Other (SPECIFY)
CNGA-222		1	C			
CNGA-223		1	C			
CNGA-224		1	C			
CNGA-225		1	C			
CNGA-226		1	C			
CNGA-227		1	C			
CNGA-228		1	C			
CNGA-229		1	C			
CNGA-230		1	C			

TURNAROUND TIME
<input checked="" type="checkbox"/> Same Day
<input type="checkbox"/> 24 Hour
<input type="checkbox"/> 3-Day
<input type="checkbox"/> 5-day

CONTACT INFORMATION
Name: <u>Monte Samway</u>
Phone: <u>(580) 574-2652</u>
Report Results Via (CHOOSE ONE): <input type="checkbox"/> FAX: <u>_____</u> <input type="checkbox"/> Quantem WebSite <input type="checkbox"/> E-Mail: <u>_____</u>

Signature	Date	Time	Use Sample
<u>Monte Samway</u>	<u>12/4/07</u>	<u>9:47a</u>	<u>12-808-508-2mg</u>

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'



This Box for Lab Use Only

Lab No. HO 8154

Accept ☒ Reject ☐

Company Name: King Consultants Acct #: _____ Project Name: Cherokee National Guard Armory

Project Location: Cherokee, OK Project Number: _____

Project Name:

Project Number:

**LEGAL DOCUMENT
Please Print Legibly**

TURNAROUND TIME	
<input checked="" type="checkbox"/>	Same Day
<input type="checkbox"/>	24 Hour
<input type="checkbox"/>	3-day
<input type="checkbox"/>	5-day

CONTACT INFORMATION

Name	Marite Scandlyn
Phone	(580) 574-2652
Report Results VIA (CHOOSE ONE)	
<input type="checkbox"/> FAX <input checked="" type="checkbox"/> QuantEM WebSite <input type="checkbox"/> E-Mail	

[illegible]

Handy Property	Date Recd	Received By	Date Recd	Sampled By
Mrs. Leonard	12-08-98	[Signature]	9-07-98	[Signature]
	Date Recd	Sampled By	Date Recd	
	12-08-98	[Signature]	9-07-98	

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for **Saturday FedEx** only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'

Revision, May 2006



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 168455
Date Received: 12/19/08
Received By: Eric Caves
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/19/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-301	Wipe	Lead	94.56	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
002	CNGA-302	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
003	CNGA-303	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
004	CNGA-304	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
005	CNGA-305	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
006	CNGA-306	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
007	CNGA-307	Wipe	Lead	49.08	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
008	CNGA-308	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
009	CNGA-309	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
010	CNGA-310	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
011	CNGA-311	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / 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.

Page 1 of 4



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

Environmental Chemistry Analysis Report

Quantem Set ID: 168455
Date Received: 12/19/08
Received By: Eric Caves
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/19/2008

Client: King Consultants, Inc.
 1205 E. 46th St.
 Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
012	CNGA-312	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
013	CNGA-313	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
014	CNGA-314	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
015	CNGA-315	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
016	CNGA-316	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
017	CNGA-317	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
018	CNGA-318	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
019	CNGA-319	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
020	CNGA-320	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
021	CNGA-321	Wipe	Lead	111.97	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
022	CNGA-322	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100

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

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Page 2 of 4



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 168455
Date Received: 12/19/08
Received By: Eric Caves
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/19/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
023	CNGA-323	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
024	CNGA-324	Wipe	Lead	20.03	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
025	CNGA-325	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
026	CNGA-326	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
027	CNGA-327	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
028	CNGA-328	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
029	CNGA-329	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
030	CNGA-330	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
031	CNGA-331	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
032	CNGA-332	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
033	CNGA-333	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100

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

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Page 3 of 4



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 168455
Date Received: 12/19/08
Received By: Eric Caves
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/19/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
034	CNGA-334	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
035	CNGA-335	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100
036	CNGA-336	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/19/08 13:15	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, Analyst

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

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Page 4 of 4

QAQC Results

QA ID: 6492
Test: Lead

Date: 12/19/2008
Matrix: Wipe

Lab Number: 168455
Approved By: Eric Caves
Date Approved: 12/19/2008

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

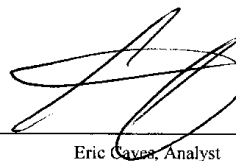
Standard	Low Limit	Obtained	High Limit
CCV	225	238	275
FCV	225	242	275
ICV	22.5	24.2	27.5
RLVS	12.8	15.7	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 1	0.000	5369.000	5172.000	96.3	5032.000	93.7	2.7
MSW 2	0.000	5369.000	5325.000	99.2	5528.000	103.0	3.7

Authorized Signature: _____



Eric Caves, Analyst



Lead Chain-of-Custody

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Page 1 of 3

Company Name: King Consultants
Project Location: Cherokee, OK

Project Name: Cherokee Nat'l Guard Armory
Acct #: _____
Project Number: _____

Lab No: 168455

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNGA-301	See Notes					A - Soil
CNGA-302						B - Paint Chips
CNGA-303						C - Surface Dust/Air
CNGA-304						D - Bulk Miscellaneous
CNGA-305						E - Air Cassette
CNGA-306						F - Other (SPECIFY)
CNGA-307						
CNGA-308						
CNGA-309						
CNGA-310						
CNGA-311						
CNGA-312						
CNGA-313						
CNGA-314						
CNGA-315						

LEGAL DOCUMENT

Please Print Legibly

TURNAROUND TIME

Sample Day

☒ 24 Hour

3-day

5-day

CONTACT INFORMATION

Name: Monte Scamora
Phone: (580) 574-652

Report Results Via: ☒ FAX ☐ Email ☐ Other

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave. Oklahoma City, OK 73117
Mark Package: HOLD FOR SATURDAY PICKUP

Monte Scamora 12-17-08 12:00 PM 12/18/08 9:45 AM 12/18/08 12:00 PM



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 168627
Date Received: 12/29/08
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 12/29/2008

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee Natl Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-401	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/29/08 15:15	EPA 3051 / NIOSH 9100
002	CNGA-402	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/29/08 15:15	EPA 3051 / NIOSH 9100
003	CNGA-403	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/29/08 15:15	EPA 3051 / NIOSH 9100
004	CNGA-404	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/29/08 15:15	EPA 3051 / NIOSH 9100
005	CNGA-40	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	12/29/08 15:15	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, 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.

Page 1 of 1

Supplemental Report QAQC Results

QA ID: 6511
Test: Lead

Date: 12/29/2008
Matrix: Wipe

Lab Number: 168627
Approved By: Eric Caves
Date Approved: 12/29/2008

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	225	242	275
FCV	225	242	275
ICV	22.5	23.8	27.5
RLVS	12.8	18.1	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 2	0.000	5369.000	4999.000	93.1	4969.000	92.5	0.6

Authorized Signature: _____



Eric Caves, Analyst



Lead Chain-of-Custody

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Page 1 of 1

The Box for Lab Use Only
Lab No. 168627
Accepted _____ Rejected _____

Company Name: King Consultants Project Name: Cherokee Nat'l Guard Armory
Project Location: Cherokee, OK Acct #: _____ Project Number: _____

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
1	CNGA-401	1	C	Pb	mg / cm ²	A - Soil
2	CNGA-402	1	C		ug / cu ft	B - Paint Chips
3	CNGA-403	1	C		mg / sq ft	C - Surface / Dust Wipes
4	CNGA-404	1	C		mg / kg	D - Bulk Miscellaneous
5	CNGA-405	1	C		W %	E - Air Cassette
					PPM	F - Other (SPECIFY)

LEGAL DOCUMENT

Please Print Legibly

TURNAROUND TIME

☒ Same Day
☐ 24 Hour
☐ 3-Day
☐ 5-day

CONTACT INFORMATION

Name: Monty
Phone: 580-574-2651
Report Results Via (CHOOSE ONE):
☒ FAX
☐ Quantem WebSite
☐ E-Mail

Signature of Monty Date 12/29/08 Time 1:15
Signature of Quantem Date 12/29/08 Time 1:15
Signature of Quantem Date 12/29/08 Time 1:15

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'



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

Environmental Chemistry Analysis Report

Quantem Set ID: 169062
Date Received: 01/16/09
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 1/16/2009

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee Nat'l Guard Armory

Location: Cherokee, OK

Project No.: N/A

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-501	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
002	CNGA-502	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
003	CNGA-503	Wipe	Lead	71.70	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
004	CNGA-504	Wipe	Lead	411.18	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
005	CNGA-505	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
006	CNGA-506	Wipe	Lead	19.60	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
007	CNGA-507	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
008	CNGA-508	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
009	CNGA-509	Wipe	Lead	4125.70	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
010	CNGA-510	Wipe	Lead	43.85	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
011	CNGA-511	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / 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.



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Environmental Chemistry Analysis Report

Quantem Set ID: 169062
Date Received: 01/16/09
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 1/16/2009

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
012	CNGA-512	Wipe	Lead	25.74	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
013	CNGA-513	Wipe	Lead	126.36	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
014	CNGA-514	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
015	CNGA-515	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
016	CNGA-516	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
017	CNGA-517	Wipe	Lead	24.91	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
018	CNGA-518	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
019	CNGA-519	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
020	CNGA-520	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
021	CNGA-521	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
022	CNGA-522	Wipe	Lead	17.83	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / 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.



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Environmental Chemistry Analysis Report

Quantem Set ID: 169062
Date Received: 01/16/09
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 1/16/2009

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404
Acct. No.: B588
Project: Cherokee Nat'l Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
023	CNGA-523	Wipe	Lead	20.05	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
024	CNGA-524	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100
025	CNGA-525	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/16/09 12:40	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, 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.

Page 3 of 3

Supplemental Report QAQC Results

QA ID: 6549
Test: Lead

Date: 1/16/2009
Matrix: Wipe

Lab Number: 169062
Approved By: Eric Caves
Date Approved: 1/16/2009

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	225	247	275
FCV	225	246	275
ICV	22.5	26	27.5
RLVS	12.8	16.5	19.2

Duplicate Data:

Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 9	0.000	5369.000	5105.000	95.1	5547.000	103.3	8.3
MSW 2	0.000	5369.000	5317.000	99.0	5165.000	96.2	2.9

Authorized Signature: _____



Eric Caves, Analyst



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Page 1 of 2

This Box for Lab Use Only
Lab No. 169062
Accept ☒ Reject ☐

Company Name: King Consultants Project Name: Cherokee Nat'l Guard Armory
Project Location: Cherokee, OK Project Number: _____
Acct #: _____

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNLA-501	See Notes	1	C	Pb	mg / cu m	A - Soil
CNLA-502		1	C		ug / sq ft	B - Paint Chips
CNLA-503		1	C		mg / l	C - Surface / Dust Wipes
CNLA-504		1	C		mg / kg	D - Bulk Miscellaneous
CNLA-505		1	C		VA %	E - Air Cassette
CNLA-506		1	C		PPM	F - Other (SPECIFY)
CNLA-507		1	C			
CNLA-508		1	C			
CNLA-509		1	C			
CNLA-510		1	C			
CNLA-511		1	C			
CNLA-512		1	C			
CNLA-513		1	C			
CNLA-514		1	C			
CNLA-515		1	C			

TURNAROUND TIME
<input checked="" type="checkbox"/> Same Day
<input type="checkbox"/> 24 Hour
<input type="checkbox"/> 3-Day
<input type="checkbox"/> 5-day

CONTACT INFORMATION
Name: <u>Monte Scammon</u>
Phone: <u>(580) 574-2652</u>
Report Results VIA (CHOOSE ONE): <input checked="" type="checkbox"/> FAX <input type="checkbox"/> Quantem WebSite <input type="checkbox"/> E-Mail

Signature	Date	Time	Sampled By
<u>Monte Scammon</u>	<u>1-15-09</u>	<u>7:40 AM</u>	<u>MS</u>

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave. Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'



Lead Chain-of-Custody

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(800) 822-1650 (405) 755-7272 Fax: (405) 755-2058
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Page 2 of 2

This Box for Lab Use Only
Lab No. 169062
Accept: _____ Reject: _____

Company Name: King Consultants
Project Location: Cherokee, OK

Project Name: Cherokee Nat'l Guard Armory
Project Number: _____

Accl # _____

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested	Sample Matrix Codes
CNGA-576	See Notes	1 C	1 C	Pb	mg / cm ²	A - Soil
CNGA-577		1 C	1 C		mg / cu ft	B - Paint Chips
CNGA-578		1 C	1 C		mg / sq ft	C - Surface / Dust Wipes
CNGA-579		1 C	1 C		mg / l	D - Bulk Miscellaneous
CNGA-580		1 C	1 C		mg / kg	E - Air Cassette
CNGA-581		1 C	1 C		WT %	F - Other (SPECIFY)
CNGA-582		1 C	1 C		PPM	
CNGA-583		1 C	1 C			
CNGA-584		1 C	1 C			
CNGA-585		1 C	1 C			

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TURNAROUND TIME
☒ Same Day
☐ 24 Hour
☐ 3-Day
☐ 5-day

CONTACT INFORMATION
Name: Monte Scamman
Phone: (580) 574-2652
Report Results Via (CHOOSE ONE)
☐ FAX
☒ Quantem WebSite
E-Mail: _____

Prepared By: Monte Scamman Date: 1-15-09/1645 Time: 1:16:09
Reviewed By: John Q. Gosh Date: 1-16-09 Time: 7:19
Sampled By: MMG

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'

Revision May 2006



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 169189
Date Received: 01/22/09
Received By: Sherrie Leftwich
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 1/22/2009

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee Natl Guard Armory
Location: Cherokee, OK
Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-601	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100
002	CNGA-602	Wipe	Lead	134.82	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100
003	CNGA-603	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100
004	CNGA-604	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100
005	CNGA-605	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100
006	CNGA-606	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/22/09 13:00	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, 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.

Page 1 of 1

Supplemental Report QAQC Results

QA ID: 6560
Test: Lead

Date: 1/22/2009
Matrix: Wipe

Lab Number: 169189
Approved By: Eric Caves
Date Approved: 1/22/2009

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	225	259	275
FCV	225	258	275
ICV	22.5	23.6	27.5
RLVS	12.8	17.8	19.2

Duplicate Data:

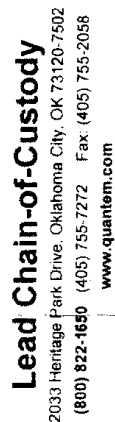
Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 2	0.000	5369.000	5313.000	99.0	5335.000	99.4	0.4

Authorized Signature: _____



Eric Caves, Analyst



page 1 of 1

Lab No. 169189

Company Name: King Consultants Cherokee

Accl #

Project Name: Cherokee Nat'l Guard Army

Sample Number	Sample Description	Volume of Area	Sample Matrix	Analysis	Units Requested						Sample Matrix Codes	
					PPM	MA %	mg / kg	mg / ft ²	ug / sq. ft.	ug / cu. M.	mg / cm ³	
CNGA-601	See Notes	1	C	✓					✓			A - Soil
CNGA-602	✓	1	C	✓					✓			B - Paint Chips
CNGA-603	✓	1	C	✓					✓			C - Surface / Dust Wipes
CNGA-604	✓	1	C	✓					✓			D - Bulk Miscellaneous
CNGA-605	✓	1	C	✓					✓			E - Air Cassette
CNGA-606	↓	1	C	✓					✓			F - Other (SPECIFY)

Turnaround Time	CONTACT INFORMATION
<input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hour <input type="checkbox"/> 3-Day <input type="checkbox"/> 5-day	Name <u>Monte Scamhorn</u> Phone <u>(580) 574-2652</u> Report Results VIA (CHOOSE ONE) <input type="checkbox"/> FAX <input checked="" type="checkbox"/> QuantEM Website E-Mail:

Sampled By	Date	Time	Location
<u>Monte Scamhorn</u>	<u>12-19-99</u>	<u>1700</u>	<u>SE</u>

Swiftwind 112269 9:45-10:09 mg

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for Saturday FedEx only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'

Revision: May 2006



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

Environmental Chemistry Analysis Report

QuantEM Set ID: 169381
Date Received: 01/29/09
Received By: Barbara Holder
Date Sampled:
Time Sampled:
Analyst: EC
Date of Report: 1/30/2009

Client: King Consultants, Inc.
1205 E. 46th St.
Lubbock, TX 79404

Acct. No.: B588

Project: Cherokee Nat'l Guard

Location: N/A

Project No.: N/A

AIHA ID: 101352

QuantEM ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	CNGA-801	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/30/09 13:15	EPA 3051 / NIOSH 9100
002	CNGA-802	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/30/09 13:15	EPA 3051 / NIOSH 9100
003	CNGA-803	Wipe	Lead	<16.00	16.00	ug/sq. Ft.	01/30/09 13:15	EPA 3051 / NIOSH 9100

Authorized Signature: _____

Eric Caves, 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.

Page 1 of 1

Supplemental Report QAQC Results

QA ID: 6578
Test: Lead

Date: 1/30/2009
Matrix: Wipe

Lab Number: 169381
Approved By: Eric Caves
Date Approved: 1/30/2009

Notes:

Blank Data:

Type of Blank	Blank Value
Initial	0
Continuing	0
Final	0

Standards Data:

Standard	Low Limit	Obtained	High Limit
CCV	225	254	275
FCV	225	252	275
ICV	22.5	24.6	27.5
RLVS	12.8	16.5	19.2

Duplicate Data:

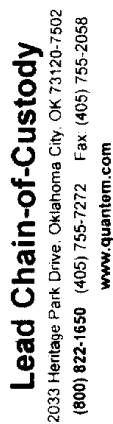
Recovery Data:

Sample Number	Result	Spike Level	Result + Spike	% Recovery	Dup. Result + Spike	% Dup. Recovery	% Spike RPD
MSW 2	0.000	5369.000	5474.000	102.0	5215.000	97.1	4.8

Authorized Signature: _____



Eric Caves, Analyst



Page 1 of 1

Company Name: King Consultants
Project Location:
Acct #:
Project Name: Cherokee Natl Guard
Project Number:

Project Number:

**LEGAL DOCUMENT
Please Print Legibly**

[illegible]

Saturday FedEx Shipping - CALL TO SCHEDULE
Use this address for **Saturday FedEx** only: 4220 N. Santa Fe Ave., Oklahoma City, OK 73105-8517
Mark Package 'HOLD FOR SATURDAY PICKUP'

Revision: May 2006

SAMPLE SUMMARY TABLE

TABLE 1: SAMPLE SUMMARY
Cherokee National Guard Armory Building
Cherokee, OK
(Single Samples)

<i>Sample ID</i>	<i>Location</i>	<i>Result ($\mu\text{g}/\text{ft}^2$)</i>	<i>Fail Action Level (200 $\mu\text{g}/\text{ft}^2$)</i>	<i>Fail Final Limit (40 $\mu\text{g}/\text{ft}^2$)</i>	<i>Pass All Clearance</i>
November 6, 2008					
CNGA-01	IFR Floor South End	1336.50	X	X	
CNGA-02	IFR Floor South End	922.00	X	X	
CNGA-03	IFR Floor Middle	480.12	X	X	
CNGA-04	IFR Floor Middle	378.36	X	X	
CNGA-05	IFR Floor North End	3573.80	X	X	
CNGA-06	IFR Floor North End	11030.00	X	X	
CNGA-07	IFR North Wall	362.40	X	X	
CNGA-08A	IFR West Wall, North End	17.42			X
CNGA-08B	IFR East Wall, North End	42.53		X	
CNGA-09	IFR East Wall	40.56		X	
CNGA-10	IFR West Wall	<16.00			X
CNGA-11	IFR East Wall, South End	<16.00			X
CNGA-12	IFR West Wall, South End	<16.00			X
CNGA-13	IFR South Wall	17.20			X
CNGA-14	IFR Ceiling, South End	<16.00			X
CNGA-15	IFR Ceiling	<16.00			X
CNGA-16	IFR Ceiling	47.76		X	
CNGA-17	IFR Ceiling	27.48			X
CNGA-18	IFR Ceiling, North End	1216.45	X	X	
CNGA-19	Stage North Storage Floor (Doorway)	195.20		X	
CNGA-20	Stage North Storage Floor	269.71	X	X	
CNGA-21	Stage North Storage Floor (Doorway)	121.19		X	
CNGA-22	Stage Floor	<16.00			X
CNGA-23	Stage Floor	<16.00			X
CNGA-24	Rental Area Floor (Doorway)	27.46			X
CNGA-25	Rental Area Floor	43.93		X	
CNGA-26	Rental Area Floor (Doorway)	177.20		X	
CNGA-27	Drill Room Floor SW	<16.00			X
CNGA-28	Drill Room Floor W	<16.00			X
CNGA-29	Drill Room Floor NW	<16.00			X
CNGA-30	Drill Room Floor Middle	16.77			X
CNGA-31	Drill Room Floor Middle	<16.00			X
CNGA-32	Drill Room Floor E	22.63			X
CNGA-33	Drill Room Floor SE	<16.00			X
CNGA-34	Drill Room Floor NE	<16.00			X

Sample ID	Location	Result ($\mu\text{g}/\text{ft}^2$)	Fail Action Level (200 $\mu\text{g}/\text{ft}^2$)	Fail Final Limit (40 $\mu\text{g}/\text{ft}^2$)	Pass All Clearance
CNGA-35	Blind Sample	<16.00			X
CNGA-36	Blind Sample	<16.00			X
CNGA-37	Blind Sample	<16.00			X
November 21, 2008 (before sealing)					
CNGA-101	IFR Floor (South End)	235.41	X	X	
CNGA-102	IFR Floor	307.01	X	X	
CNGA-103	IFR Floor	2724.45	X	X	
CNGA-104	IFR Floor	567.70	X	X	
CNGA-105	IFR Floor	1691.30	X	X	
CNGA-106	IFR Floor (North End)	1005.20	X	X	
CNGA-107	IFR North Wall	365.264	X	X	
CNGA-108	IFR West Wall, North End	418.78	X	X	
CNGA-109	IFR East Wall, North End	1091.20	X	X	
CNGA-110	IFR West Wall	<16.00			X
CNGA-111	IFR East Wall	<16.00			X
CNGA-112	IFR West Wall	27.24			X
CNGA-113	IFR East Wall	31.33			X
CNGA-114	IFR South Wall	<16.00			X
CNGA-115	IFR Ceiling, South End	<16.00			X
CNGA-116	IFR Ceiling	17.03			X
CNGA-117	IFR Ceiling	895.70	X	X	
CNGA-118	IFR Ceiling	1599.75	X	X	
CNGA-119	IFR Ceiling, North End	80.34		X	
CNGA-120	Stage North Storage Floor (Doorway)	<16.00			X
CNGA-121	Stage North Storage Floor	<16.00			X
CNGA-122	Stage North Storage Floor (Doorway)	<16.00			X
CNGA-123	Stage Rental Area Floor	38.57			X
CNGA-124	Stage Rental Area Floor (Doorway)	66.24		X	
CNGA-125	Blind Sample	<16.00			X
CNGA-126	Blind Sample	<16.00			X
CNGA-127	Blind Sample	<16.00			X
December 5, 2008 (before sealing)					
CNGA-201	2 nd Fl. NE Bathroom Floor (Doorways)	133.29		X	
CNGA-202	2 nd Fl. CDR Office Closet Floor (Doorway)	42.46		X	
CNGA-203	2 nd Fl. CDR Office Floor (Doorway)	<16.00			X
CNGA-204	2 nd Fl. Conference Rm. Floor (Doorway)	<16.00			X

Sample ID	Location	Result ($\mu\text{g}/\text{ft}^2$)	Fail Action Level (200 $\mu\text{g}/\text{ft}^2$)	Fail Final Limit (40 $\mu\text{g}/\text{ft}^2$)	Pass All Clearance
CNGA-205	2 nd Fl. Latrine Entry Floor (Doorway)	<16.00			X
CNGA-206	2 nd Fl. Latrine Floor (Doorway)	16.64			X
CNGA-207	2 nd Fl. Classroom Floor (Doorway)	<16.00			X
CNGA-208	2 nd Fl. Supply Room Floor (N. Doorway)	<16.00			X
CNGA-209	2 nd Fl. Supply Room Floor (S. Doorway)	<16.00			X
CNGA-210	2 nd Fl. Supply Room Floor	<16.00			X
CNGA-211	2 nd Fl. Supply Room Floor	<16.00			X
CNGA-212	2 nd Fl. Vault Floor	<16.00			X
CNGA-213	2 nd Fl. Vault Floor	<16.00			X
CNGA-214	2 nd Fl. Vault Floor (Doorway)	<16.00			X
CNGA-215	1 st Fl. Doorway Floor Between Stairs & Drill Floor	64.62			X
CNGA-216	Gun Room Floor	<16.00			X
CNGA-217	Gun Room Floor	<16.00			X
CNGA-218	Gun Room Floor (Doorway)	<16.00			X
CNGA-219	Stage North Storage Floor	168.68		X	
CNGA-220	IFR Entry Floor	<16.00			X
CNGA-221	IFR Floor	33.44			X
CNGA-222	IFR Floor	43.72		X	
CNGA-223	IFR Floor	28.31			X
CNGA-224	IFR Floor	166.75		X	
CNGA-225	IFR Floor	254.77	X	X	
CNGA-226	IFR North Wall	203.93	X	X	
CNGA-227	IFR North Wall	356.44	X	X	
CNGA-228	IFR East Wall, North End	38.57			X
CNGA-229	IFR West Wall, North End	6239.60	X	X	
CNGA-230	IFR East Wall	<16.00			X
CNGA-231	IFR Ceiling	32.59			X
CNGA-232	IFR Ceiling	<16.00			X
CNGA-233	IFR Ceiling	<16.00			X
CNGA-234	IFR Ceiling North End	73.22		X	
CNGA-235	IFR Ceiling North End	49.66		X	
CNGA-236	Blind Sample	<16.00			X
CNGA-237	Blind Sample	<16.00			X
CNGA-238	Blind Sample	<16.00			X
December 16, 2008 (After Sealing)					
CNGA-301	2 nd Fl. NE CDR Office Floor (Restroom Doorways)	94.56		X	
CNGA-302	2 nd Fl. Supply Rm. Floor (S. Doorway)	<16.00			X

Sample ID	Location	Result ($\mu\text{g}/\text{ft}^2$)	Fail Action Level ($200 \mu\text{g}/\text{ft}^2$)	Fail Final Limit ($40 \mu\text{g}/\text{ft}^2$)	Pass All Clearance
CNGA-303	2 nd Fl. Supply Room Floor	<16.00			X
CNGA-304	2 nd Fl. Supply Room Floor	<16.00			X
CNGA-305	2 nd Fl. Vault Floor	<16.00			X
CNGA-306	2 nd Fl. Vault Floor (Doorway)	<16.00			X
CNGA-307	Floor Between Stairs & Drill Floor (Doorways)	49.08		X	
CNGA-308	Gun Room Floor	<16.00			X
CNGA-309	Gun Room Floor (Doorway)	<16.00			X
CNGA-310	Stage North Storage Floor	<16.00			X
CNGA-311	Stage North Storage Floor	<16.00			X
CNGA-312	Stage Rental Area Floor	<16.00			X
CNGA-313	Stage Rental Area Floor	<16.00			X
CNGA-314	IFR Floor, South End	<16.00			X
CNGA-315	IFR Floor	<16.00			X
CNGA-316	IFR Floor	<16.00			X
CNGA-317	IFR Floor	<16.00			X
CNGA-318	IFR Floor	<16.00			X
CNGA-319	IFR Floor	<16.00			X
CNGA-320	IFR North Wall	<16.00			X
CNGA-321	IFR West Wall, North End	111.97		X	
CNGA-322	IFR East Wall, North End	<16.00			X
CNGA-323	IFR West Wall	<16.00			X
CNGA-324	IFR East Wall	20.04			X
CNGA-325	IFR West Wall	<16.00			X
CNGA-326	IFR East Wall	<16.00			X
CNGA-327	IFR West Wall	<16.00			X
CNGA-328	IFR Ceiling, South End	<16.00			X
CNGA-329	IFR Ceiling	<16.00			X
CNGA-330	IFR Ceiling	<16.00			X
CNGA-331	IFR Ceiling	<16.00			X
CNGA-332	IFR Ceiling, North End	<16.00			X
CNGA-333	IFR Ceiling, North End	<16.00			X
CNGA-334	Blind Sample	<16.00			X
CNGA-335	Blind Sample	<16.00			X
CNGA-336	Blind Sample	<16.00			X
December 26, 2008 (After 2nd Sealing)					
CNGA-401	2 nd Fl. CDR Office RR Floor	<16.00			X
CNGA-402	1 st Fl. Doorway Floor Between Stairs & Drill Floor	<16.00			X
CNGA-403	Stage Rental Area Floor (Doorway)	<16.00			X
CNGA-404	IFR West Wall, North End	<16.00			X

Sample ID	Location	Result ($\mu\text{g}/\text{ft}^2$)	Fail Action Level (200 $\mu\text{g}/\text{ft}^2$)	Fail Final Limit (40 $\mu\text{g}/\text{ft}^2$)	Pass All Clearance
CNGA-405	Blind Sample	<16.00			X
January 14, 2009					
CNGA-501	North Stairwell Floor	<16.00			X
CNGA-502	1 st Fl. North Landing Doorway Floor	<16.00			X
CNGA-503	FDC Room Floor	71.70		X	
CNGA-504	FDC Room Floor	411.18	X	X	
CNGA-505	FDC Room Floor (Doorway)	<16.00			X
CNGA-506	Restroom S. Doorway Floor	19.60			X
CNGA-507	Restroom Middle Doorway Floor	<16.00			X
CNGA-508	Restroom N. Doorway Floor	<16.00			X
CNGA-509	Maintenance Room Floor	4125.70	X	X	
CNGA-510	Maintenance Room Floor	43.85		X	
CNGA-511	Maintenance Room/ Closet Doorways Floor	<16.00			X
CNGA-512	Closet Floor	25.74			X
CNGA-513	Oil Room Floor	126.36		X	
CNGA-514	Oil Room Doorway Floor	<16.00			X
CNGA-515	Maintenance Bay Floor, East End	<16.00			X
CNGA-516	Maintenance Bay Floor, Southeast	<16.00			X
CNGA-517	Maintenance Bay Floor, Northeast	24.91			X
CNGA-518	Maintenance Bay Floor, Center	<16.00			X
CNGA-519	Maintenance Bay Floor, North	<16.00			X
CNGA-520	Maintenance Bay Floor, South	<16.00			X
CNGA-521	Maintenance Bay Floor, West	<16.00			X
CNGA-522	Maintenance Bay Floor, Southwest	17.83			X
CNGA-523	Maintenance Bay Floor, West	20.05			X
CNGA-524	Blind Sample	<16.00			X
CNGA-525	Blind Sample	<16.00			X
January 21, 2009					
CNGA-601	FDC Room Floor	<16.00			X
CNGA-602	FDC Room Floor	134.82		X	
CNGA-603	Maintenance Room Floor	<16.00			X
CNGA-604	Maintenance Room Floor	<16.00			X
CNGA-605	Oil Room Floor	<16.00			X
CNGA-606	Blind Sample	<16.00			X
January 24, 2009					
CNGA-801	FDC Room Floor (Doorway)	<16.00			X
CNGA-802	FDC Room Floor	<16.00			X
CNGA-803	FDC Room Floor	<16.00			X

APPENDIX D

CERTIFICATIONS

Department of Environmental Quality

This is to Certify That

MONTE SCAMMAHORN

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

INSPECTOR/RISK ASSESSOR

Certification #: OKRASR13225

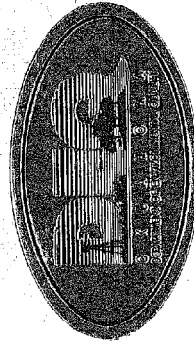
This certificate is valid from the date of issuance and expires as prescribed by law.

Issued on: 4/3/2008

Expires on: 3/31/2009

A. Todd

Division Director
Air Quality Division



Randall Z. Ward

Environmental Programs Manager
Air Quality Division

Department of Environmental Quality

This is to Certify That

KING CONSULTANTS INC

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

FIRM

Certification #: OKFIRM13074

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

Issued on: 4/3/2008

Expires on: 3/31/2009

A. Todd

Division Director
Air Quality Division



Randall T. Ward

Environmental Programs Manager
Air Quality Division

Environmental Testing Inc. 488-2400

4619 N. Santa Fe, OKC, OK 73118 - (405) 488-2400 - (405) 488-2404 fax

Analytical Report

Report Date: 11/11/2008
Order # 2008110038
Project # 08-160

Laboratory Certificate # 7211

Client: **Mr. Michael Jenkinson**
Crystal Creek Environmental Solutions
1401 Cornell Parkway
Oklahoma City, OK 73127

Project: Cherokee

Analytical Results

Client Sample ID: Concrete # 1 (Drum)

ETI ID: 1

Sample Collected : 10/29/2008 @ 13:00

Matrix: Solids

Parameter

TCLP Lead

Result

<0.1

Units

mg/L

Analyzed On

11/06/2008 05:32:53 PM

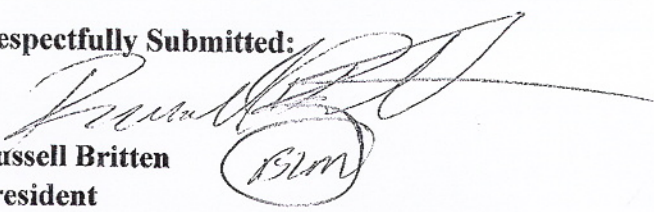
Analyst

JS

Method

200.7

Respectfully Submitted:


Russell Britten
President

Unless ETI receives prior notification, all sample material not consumed in analysis will be retained for a period of 30 days before disposal.

Order #: 2008110038

Page 1 of 2

Quality Control Report

Report Date: 11/11/2008
Order #: 2008110038

4619 N. Santa Fe, OKC, OK 73118 - (405) 488-2400 - (405) 488-2404 fax

Laboratory Certificate # 7211

Quality Control

Solids

Blank

Parameter	QC Value	Units	ETI ID
TCLP Lead	<0.01	mg/L	1

Duplicate

Parameter	QC Value	Units	ETI ID
TCLP Lead	0.0	% dif.	1

LCS

Parameter	QC Value	Units	ETI ID
TCLP Lead	101	% rec.	1

Matrix Spike

Parameter	QC Value	Units	ETI ID
TCLP Lead	100	% rec.	1

Matrix Spike Dup

Parameter	QC Value	Units	ETI ID
TCLP Lead	102	% rec.	1

E = Estimated Value (above linear range)
M = Out of Control Due to Matrix Effect
D = Surrogate or Matrix Spike Diluted Out
Q = Outside of QC Limits on Both Original and Rerun
C = Possible Laboratory Contamination
* = Out of Control

J = Estimated Value (below linear range)
*TA = Lab ID: 9412
*OL = Lab ID: 8306
*SM = Lab ID: 9940

Environmental Testing Inc. 488-2400

4619 N. Santa Fe, OKC, OK 73118 - (405) 488-2400 - (405) 488-2404 fax

Analytical Report

Report Date: 12/01/2008
Order #: 2008120001
Project #: 08-160

Laboratory Certificate # 7211

Client: Mr. Michael Jenkinson
Crystal Creek Environmental Solutions
1401 Cornell Parkway
Oklahoma City, OK 73127

Project: Cherokee

Analytical Results

Client Sample ID: Tank Double Filtered

ETI ID: 1

Sample Collected : 11/26/2008 @ 08:30

Matrix: Aqueous

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Analyzed On</u>	<u>Analyst</u>	<u>Method</u>
Lead	0.80	mg/L	12/01/2008 01:48:58 PM	JS	200.7

Respectfully Submitted:


Russell Bratten

President

Unless ETI receives prior notification, all sample material not consumed in analysis will be retained for a period of 30 days before disposal.

Order #: 2008120001

Page 1 of 2

Quality Control

Aqueous

Blank

Parameter	QC Value	Units	ETI ID
Lead	<0.01	mg/L	1

Duplicate

Parameter	QC Value	Units	ETI ID
Lead	0.5	% dif.	1

LCS

Parameter	QC Value	Units	ETI ID
Lead	92	% rec.	1

Matrix Spike

Parameter	QC Value	Units	ETI ID
Lead	M	% rec.	1

Matrix Spike Dup

Parameter	QC Value	Units	ETI ID
Lead	M	% rec.	1

E = Estimated Value (above linear range)
M = Out of Control Due to Matrix Effect
D = Surrogate or Matrix Spike Diluted Out
Q = Outside of QC Limits on Both Original and Rerun
C = Possible Laboratory Contamination
* = Out of Control

J = Estimated Value (below linear range)
*TA = Lab ID: 9412
*OL = Lab ID: 8306
*SM = Lab ID: 9940

HI

SAMPLE SERIES #: 4007200

DUE DATE:

[illegible]

SECTION 5

Waste Manifest

SECTIONS OF OKLAHOMA
H STREET
CITY, OK 73128

STAL CREEK ENVIRONMENTAL
RNELL PARKWAY SUITE 100
MA CITY OK 73108

SITE	TICKET	GRID	WEIGHMASTER
06	624544		
DATE IN	DATE OUT	TIME IN	TIME OUT
01/06/09	01/06/09	10:11	10:11
REFERENCE		ORIGIN	
08-447			

Manual Gross Wt. 61540 LB
Manual Tare Wt. 9420 LB
Inbound - Charge ticket

Net Weight	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
52120	LB	EA SPECIAL WASTE DRUMS EACH PROCESSING FEE				

I the OKC limits? Yes No. I understand
of a waste manifest is a criminal offense
I am this information is true. I also
contains no unauthorized hazardous waste
ATE OF OK
HEROKEE ARMORY

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



WASTE CONNECTIONS INC.
Connect with the Future®

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

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

No. 031579

Section I

GENERATOR (Generator completes all of section I)

a. Generator Name: ODEQ b. Generating Location: Cherokee Agency
c. Address: 707 N. Robinson d. Address: 122 E. 2nd St.
OKC, OK 73101 Cherokee, OK
e. Phone No.: 702-5119 f. Phone No.: _____
If owner of the generating facility differs from the generator, provide:
g. Owner's Name: Boston Davidson (Rep) h. Owner's Phone No.: _____

i. WC WASTE CODE:

--	--	--	--	--	--	--	--

08-447 Containers: _____
j. Description of Waste: Sand & Portland Cement k. Quantity:

--	--	--	--	--

 Units:

--

 No. 7 TYPE: DM

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

Generator Authorized Agent Name: Michael J. Lissner, P.E. Signature: [Signature] Shipment Date: 010609

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

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

Section II

TRANSPORTER (Generator completes a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I

a. Name: Bay State Great Earth Sol.
b. Address: 1401 Cornell Parkway
OKC, OK 73105
c. Driver Name/Title: Jimmy Boul-Bell
d. Phone No.: 942-2235 e. Truck No.: _____
f. Vehicle License No./State: _____
Acknowledgement of Receipt of Materials:
g. Driver Signature: [Signature] Shipment Date: 010609

TRANSPORTER II

h. Name: _____
i. Address: _____
j. Driver Name/Title: _____
k. Phone No.: _____ l. Truck No.: _____
m. Vehicle License No./State: _____
Acknowledgement of Receipt of Materials:
n. Driver Signature: _____ Shipment Date:

--	--	--	--	--

Section III

DESTINATION (Generator completes a-d, destination site completes e-f.)

a. Site Name: WCI c. Phone No.: (405) 745-3002
b. Physical Address: 7606 SW 15th d. Mailing Address: _____
OKC, OK 73128
e. Discrepancy Indication Space: _____
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date: 010609 06/02/15

Section IV

ASBESTOS (Generator complete a-d, f, g, Shipper * completes e.)

a. Shippers's* Name: _____ b. Shippers's* Phone No.: _____
c. Shippers's* Address: _____
d. Shippers's* Special Handling Instructions and additional information: _____

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

WASTE CONNECTIONS, INC.**FACSIMILE TRANSMITTAL SHEET**

To: Bryan Barney From: Dorina J. Pentecost, CHMM
Company: WCI Date: December 31, 2008
Fax Number 405.216.8428 Total Pages: 1
cc: Oklahoma City Landfill Fax Number: 405.745.3611

SPECIAL WASTE APPROVALGenerator: State of OK/Cherokee ArmoryCustomer: Crystal Creek Environmental SolutionsDisposal Facility: Oklahoma City LandfillApproval Number: OKCL-08-447 Approval Date: December 31, 2008Expiration Date: February 28, 2009 Note: Disposal frequency is one-time.

Waste Types/Instructions:

Lead Contaminated Soil Stabilized with Portland Cement from decommissioning of firing range.Basis for non-hazardous determination is Process Knowledge and TCLP-Pb.Anticipated volume is approximately 7 drums.Approval By: *Dorina J. Pentecost*

Review and approval of waste is based upon a submitted documentation from generator/customer. Approval is granted subject to the enforcement of the following conditions:

1. Loads may be randomly inspected upon receipt at the landfill to conform with Special Waste Profile.
2. This material must be properly contained, bagged, or tarped prior to and during shipment and disposal.
3. The customer must contact the respective landfill to schedule the waste shipment prior to disposal.

DONNA J. PENTECOST, CHMM - ENVIRONMENTAL COMPLIANCE SUPERVISOR
PHONE: 248.547.6649 / FAX: 248.547.8561

M. J. in Kinson

949-5482

STANDARD IRON AND METAL CO., INC.

Phone 232-4216 - 1501 East Reno
OKLAHOMA CITY, OKLAHOMA

Date 2-20-9

Lic. No. 44 9806

Customer's Name John

Address 1401 N. Cornell Parkway OKC OK 73108

Commodity Iron

8700

lbs. Gross

6880

lbs. Tare

lbs. Net @ 250

Per cwt. Price 450

☒ Driver on

☐ Driver off

Weigher

516529

Payment
Received

PAID
STANDARD
IRON & METAL
CO

CY

1826

[Signature]



B & B SANITATION
A WASTE CONNECTIONS COMPANY
PO BOX 169
MENO OK 73760-0169
DISTRICT NO - 5010

CRYSTAL CREEK
1401 CORNELL PARKWAY
OKC OK 73108

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ACCOUNT NO. 5010-422557
INVOICE NO. 763951
STATEMENT DATE 02/01/09
DUE DATE 02/20/09
BILLING PERIOD 01/01/09 - 01/31/09

FOR ASSISTANCE
OFFICE 580-776-2255
OR
TOLL FREE 800-375-2342

INVOICE STATEMENT

Date	Description	Amount
	SERVICE LOCATION	CRYSTAL CREEK
	ACCT #422557	122 E. 2ND
01/02/09	30YD ROLLOFF SERVICE	1 @ \$335.00, 224711
01/02/09	DISPOSAL	3.79 @ \$0.00, 825614
01/16/09	30YD ROLLOFF SERVICE	1 @ \$335.00, 226030
01/16/09	DISPOSAL	1.85 @ \$0.00, 825712
	TOTAL CHARGE	335.00
	BALANCE DUE	335.00

08-160

FEB 03 2009

BY: _____

Please remit to the address below and return your remit stub with your payment
or look on the reverse side to learn about on-line bill pay.

6

Sample Number: 407473
Project Code: LP-ARM
Agency Number:
Date Collected: 10/12/2006
Time Collected: 1435
Date Received: 10/13/2006
Date Completed: 11/22/2006
Collected By: JR
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ENVIRONMENTAL LABORATORY
707 N. ROBINSON
OKLAHOMA CITY
OKLAHOMA, 73102-6010
General Inquiries: 1-800-869-1400
Sample Receiving: (405) 702-1113
Report of Analysis by Metals

LAND PROTECTION DIVISION
HEATHER MALLORY

CC:FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		35300.	MG/KG	11/06/06	6010
Lead (TCLP)		521000.	UG/L	11/06/06	6010
% Solids		99.93	%	11/20/06	CLP 05.3

SOURCE: CHEROKEE ARMORY
PROGRAM:
COUNTY: ALFALFA CITY: CHEROKEE

LEGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR-2R

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*

ANALYST 

Labs performing analysis on this Sample:
Metals

LEAD MAINTENANCE PLAN

**MAINTENANCE PLAN
FORMER CHEROKEE ARMORY
CHEROKEE, OKLAHOMA**

The Armory located at 122 E 2nd Street, Cherokee, 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 March 22, 2007, indicated that there was asbestos, lead-based paint, and lead dust in the building. Remediation activities at the Affected Property included abatement of asbestos, lead-based paint, and lead dust. The remedy was completed on March 4, 2009. The following maintenance plan is to be completed by the owner of the Affected Property. DEQ recommends inspection of remediated areas every 5 years. During site inspections the owner should note any signs of disrepair or improper maintenance. Continuing operation, maintenance and monitoring should include:

1. Firing Range (IFR) – Walls, floor and ceiling of indoor firing range were cleaned and sealed with acrylic sealant to remediate surfaces below 40µg/SF for lead. These surfaces need to be resealed if acrylic sealant shows signs of deterioration, damage, or flaking.
2. All window lintels, all overhead door frames, and all down spouts guards were scrapped and encapsulated with lead-based paint encapsulant. These surfaces need to be re-encapsulated if lead-based paint encapsulant shows signs of deterioration, damage, or flaking.
3. The IFR fan box and the column in Garage Bay were scrapped and encapsulated with lead-based paint encapsulant. These surfaces need to be re-encapsulated if lead-based paint encapsulant shows signs of deterioration, damage, or flaking. See Attachment 2 for Cherokee Armory Floor Plan Map.
4. The floors of the Rental Area, Stage Storage, Gun Room, 2nd Floor Supply Room and Drill Floor stairs were cleaned and sealed with acrylic sealant to remediate surfaces below 40µg/SF for lead. The drill floor stairs extends 18” onto Drill Floor from bottom step. These surfaces need to be resealed if acrylic sealant shows signs of deterioration, damage, or flaking. See Attachment 2 for Cherokee Armory Floor Plan Map.

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

If you have any questions or concerns feel free to contact me at (405) 702-5115.

Sincerely,

A handwritten signature in black ink that reads "Dustin Davidson". The signature is written in a cursive, flowing style.

Dustin Davidson
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:

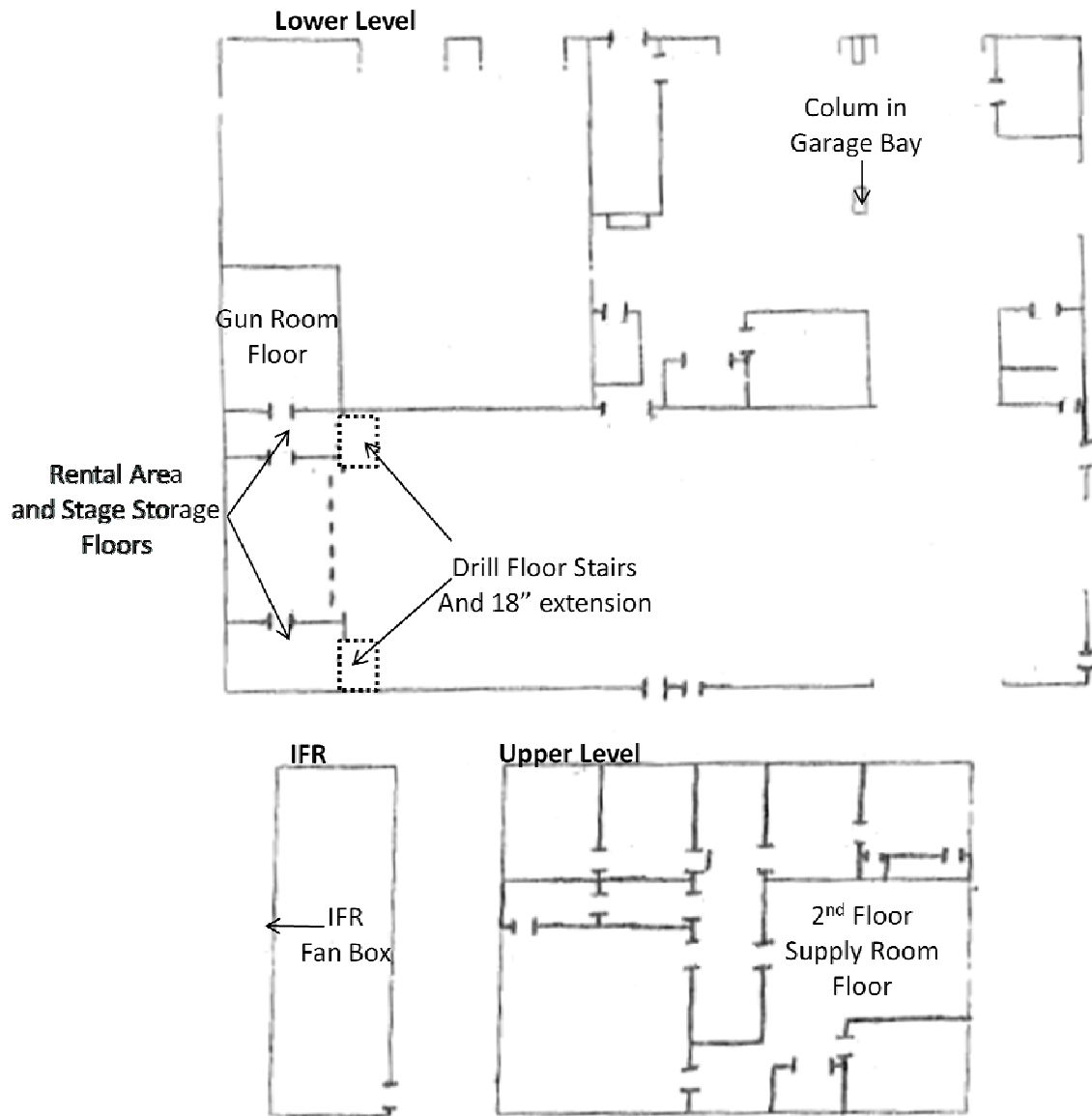
- a. No residential use of the property by children age 6 or under. Residential use is defined as having a child present at the Affected Property for more than sixteen (16) hours within one twenty four (24) hour period.
- b. The indoor firing range should not be used as a child occupied facility. Child occupied facilities include, but are not limited to, day-care centers, preschools, and kindergarten classrooms where a child under 6 spends at least 6 hours per week.

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

ATTACHMENT 2

Floor Plan Map

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



ATTACHMENT 3

DEQ Approved Sealants and Encapsulants List

Acrylic Sealant approved by DEQ

KM-669 Acrylic

Lead-Based Paint Encapsulants approved by DEQ

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