



ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Las Cruces Armory (IFR)
249 Armory Road
Las Cruces, NM 88007

10510 Superfortress Avenue, Suite C, Mather, CA (916) 854-1491

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491



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DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

21 February 2013

ARNG-CSG-IHSW

MEMORANDUM THRU New Mexico Army National Guard, ATTN: **Non-Responsive** (OHN), 600 Wyoming Blvd NE, Albuquerque, NM 87123-1038

FOR Commander, Las Cruces Armory 249 N. Armory Rd, Las Cruces, NM 88007

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Las Cruces Armory, 249 N. Armory Rd, Las Cruces, NM conducted on 10 September 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Las Cruces Armory 249 N. Armory Rd., Las Cruces, NM on 10 SEP 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Ensure annual and monthly fire extinguisher checks are maintained on the tag found on the extinguisher and they are current. (para. 4.10) (RAC 4)

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSW) for the Las Cruces Armory, 249 N. Armory Rd, Las Cruces, NM conducted on 10 September 2012.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at

Non-Responsive

Non-Responsive

FDR
2

NGB, IHSW, CIV
Industrial Hygiene



Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Las Cruces Armory Converted IFR, NM

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/INCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMLCA-091012-3.2 <input type="checkbox"/>	The floor where the former bullet trap was located was found to contain lead in excess of 40 µg/ft².	Las Cruces Converted Indoor Firing Range	3	1. Clean the floors of the IFR to a level of less than 40 µg/ft² following the guidance in the attached SOPs. 2. Remove the supply and exhaust ventilation fans and associated ductwork as outlined in the IHSW SOP for Armory Cleanup. 3. Perform post cleanup wipe sampling to ensure lead levels are within the criterion outlined in the IHSW SOP for Armory Cleanup.					IHSW SOP - Lead, 29 CFR 1910.1025(h)(1)

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ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

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IH ASSISTANCE VISIT

**New Mexico Army National Guard
Las Cruces Armory Indoor Firing Range
249 Armory Road
Las Cruces, New Mexico 88007**

November 15, 2012

Prepared for:

**Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655**

Prepared by:

Non-Responsive

Industrial Hygiene Technician

Reviewed by:

Non-Responsive

Industrial Hygiene Program Manager

Project # AL127214

640 EAST WILMINGTON AVENUE SALT LAKE CITY, UT 84106

TELEPHONE: 801-466-2223

FAX: 801-466-9616

E-MAIL: IHI@IHI-ENV.COM

SALT LAKE CITY

EMERYVILLE

PHOENIX

DENVER

SEATTLE

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May, 2018

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Released by National Guard Bureau
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EXECUTIVE SUMMARY

On September 10, 2012, **Non-Responsive** of IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the New Mexico Army National Guard Indoor Firing Range (IFR) located at 249 Armory Road, Las Cruces, New Mexico 88007. The primary point of contact for information gathered during this survey was **Non-Responsive** (575) 474-2426 **Non-Responsive**.

The objectives of this IH Assistance Visit were to determine if the firing range is operational or converted, and to determine if the range and adjacent spaces are contaminated with lead residues above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

Significant findings for this IH Assistance Visit can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix E of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On September 10, 2012, **Non-Responsive** of IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the New Mexico Army National Guard Indoor Firing Range (IFR) located at 249 Armory Road, Las Cruces, New Mexico 88007. The primary point of contact for information gathered during this survey was **Non-Responsive** (575) 474-242 **Non-Responsive**

1.1 Objectives

The objectives of this IH Assistance Visit were to determine if the firing range is operational or converted and to determine if the range and adjacent spaces are contaminated with lead residues above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

1.2 Scope of Work

To achieve the above objective at this facility, the visit included

- an evaluation of the status of the firing range;
- lead surface wipe sampling from the firing range, adjacent spaces, and any areas where weapons are cleaned; and
- a report of findings.

2.0 METHODS

2.1 Lead Wipe Sampling

Lead wipe samples were collected on floor surfaces in the IFR at the former firing line, mid-range, and the bullet trap locations. Additional lead wipe samples were collected at the firing range entryway and on the drill hall floor. Lead Wipe™ brand wipes were used with 100-square-centimeter disposal templates. The wipes used conform to American Society for Testing and Materials E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratories for analysis, using NIOSH Method 7300.

The results of the lead wipe samples are presented in Table 1 - Lead Wipe Sample Results in Appendix B. The laboratory analytical reports are attached in Appendix C.

2.2 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs.
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

3.0 FINDINGS

3.1 Range Status and Description

The IFR at this armory is now decommissioned and is now being used for storage. The POC is unsure when it was decommissioned. . Caged storage areas exist along the north and south walls. All associated duct work and air-handling units are still in place. It appears as if all walls in the former IFR were painted when it was converted to storage. The walls are constructed of concrete masonry units and the floors consist of poured concrete. The ceilings appear to consist of painted metal sheeting throughout the former IFR.

Occasionally, civilians use the drill hall for shows and auction-like events. The Sheriff's Academy also uses an area of the armory daily. Weapons are cleaned quarterly on the drill hall floor.

3.2 Wipe Sampling Results

The laboratory analytical results indicate that one lead wipe sample collected on the floor in the former bullet trap area of the converted firing range was above the $40 \mu\text{g}/\text{ft}^2$ standard outlined in the IHSW Standard Operating Procedure (SOP) for Armory Cleanup. The lead concentration was $54 \mu\text{g}/\text{ft}^2$ on the floor area tested.

Table 1 in Appendix B contains the complete list of the sample results and the laboratory analytical reports are included in Appendix C. A drawing identifying all sample locations is included in Appendix D.

4.0 RECOMMENDATIONS

1. Clean the floors of the IFR to a level of less than $40 \mu\text{g}/\text{ft}^2$ following the guidance in the attached SOPs.
2. Remove the supply and exhaust ventilation fans and associated ductwork as outlined in the IHSW SOP for Armory Cleanup.
3. Perform post cleanup wipe sampling to ensure lead levels are within the criterion outlined in the IHSW SOP for Armory Cleanup.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, IHI's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. IHI assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of IHI, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

November 15, 2012

Date

Industrial Hygiene Program Manager

7.0 TECHNICAL ASSISTANCE

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist if the operations change, or the personnel are incapable of following the recommendations.

Appendix A

References

AR 385-10, *The Army Safety Program*

Title 29, *Code of Federal Regulations (CFR)*, 2011, revision Part 1910, *Occupational Safety and Health Standards*

NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*

IHSW, *Standard Operating Procedure for Armory Cleanup & Follow-up Housekeeping Recommendations*

APPENDIX B

Table 1 – Lead Wipe Sample Results

Las Cruces IFR - Lead Wipe Sample Results

Lead Wipe Sample Results

Sample Number	Collection Date	Location	Result $\mu\text{g}/\text{ft}^2$
6187-01	9/10/2012	Firing Lane, Floor	<23
6187-02	9/10/2012	Firing Range Midpoint, Floor	<23
6187-03	9/10/2012	Firing Range Bullet Trap, Floor	54
6187-04	9/10/2012	Firing Range Bullet Trap, Wall	<23
6187-05	9/10/2012	Firing Range Midpoint, Wall	<23
6187-06	9/10/2012	Firing Range Entry, Floor	<23
6187-07	9/10/2012	Drill Hall Floor, West	<23
6187-08	9/10/2012	Drill Hall Floor, Center	<23
6187-09	9/10/2012	Drill Hall Floor, East	<23

APPENDIX C**Laboratories Analytical Results - Lead**



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ANALYTICAL REPORT

Report Date: September 19, 2012

Non-Responsive

IHI Environmental
640 East Wilmington Avenue
Salt Lake City, UT 84106

Phone: (801) 466-2223

Fax: (801) 466-9616

Non-Responsive

Workorder: **34-1225683**

Client Project ID: 12U-I6187/Las Cruces IFR

Purchase Order: 12U-I6187

Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 6187-01		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683001		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012
			Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-02		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683002		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012
			Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-03		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683003		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012
			Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	5.8	54	2.5

Sample ID: 6187-04		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683004		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012
			Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

ADDRESS: 960 West LeVoy Drive, Salt Lake City, Utah, USA 84123 PHONE: +1 801 266 7700 FAX: +1 801 268 9992

ALS GROUP USA, CORP.

Part of the ALS Laboratory Group

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Environmental

www.alsglobal.com

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ANALYTICAL REPORT

Workorder: **34-1225683**
Client Project ID: 12U-I6187/Las Cruces IFR
Purchase Order: 12U-I6187
Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 6187-05		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683005		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012 Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-06		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683006		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012 Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-07		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683007		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012 Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-08		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683008		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012 Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6187-09		Media: Lead Dust Wipe	Collected: 09/10/2012
Lab ID: 1225683009		Sampling Location: Las Cruces IFR	Received: 09/12/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/14/2012 Analyzed: 09/18/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Comments

Quality Control: NIOSH 7300 Mod. - (HBN: 93952)

Baby wipes were used as the media for the QC samples in HBN 93663 as they appeared to most closely resemble the samples of unknown wipe type for the field samples in HBN 93663.



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ANALYTICAL REPORT

Workorder: **34-1225683**
Client Project ID: 12U-I6187/Las Cruces IFR
Purchase Order: 12U-I6187
Project Manager: **Non-Responsive**

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	AClass (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwlabservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/insideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	AClass (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	AClass (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

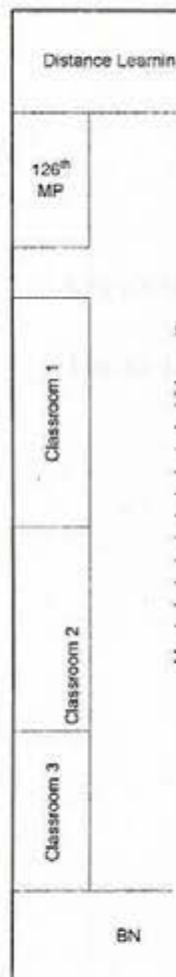
APPENDIX D

Drawing: Location of Lead Wipe Sample Locations



ENVIRONMENTAL
640 E. Wilmington Ave.
Salt Lake City, UT 84108
801.486.2023
http://www.ihiconsultants.com

New Mexico Army National Guard
Las Cruces Indoor Firing Range
249 North Armory Road
Las Cruces, New Mexico
Lead Wipe Sample Locations



Locations and Numbers

Location
SE area Drill Hall Floor
NE area Drill Hall Floor
Center Drill Hall Floor
SW area Drill Hall Floor
NW area Drill Hall Floor
POC's Desk
Kitchen Counter
Maintenance Bay
Vault Floor

1 cm



PROJECT No: 12U-I6187
SHEET: 1 of 1
DRAWN BY: Keith
DATE: 09-17-2012
REVISED BY:
DATE:
REVIEWED BY:



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS Las Cruces Armory Converted IFR, NM

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
CLOSED <input type="checkbox"/> NMLCA-091012- 3.2 <input type="checkbox"/>	The floor where the former bullet trap was located was found to contain lead in excess of 40 µg/ft².	Las Cruces Converted Indoor Firing Range		1. Clean the floors of the IFR to a level of less than 40 µg/ft² following the guidance in the attached SOPs. 2. Remove the supply and exhaust ventilation fans and associated ductwork as outlined in the IHSW SOP for Armory Cleanup. 3. Perform post cleanup wipe sampling to ensure lead levels are within the criterion outlined in the IHSW SOP for Armory Cleanup.					IHSW SOP - Lead, 29 CFR 1910.1025(h)(1)

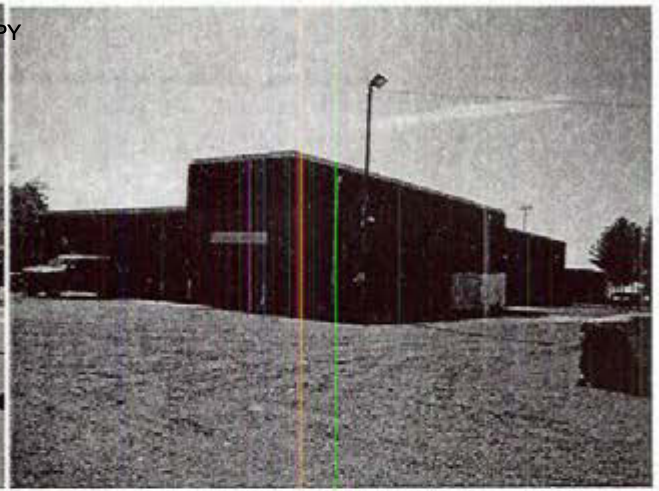
APPENDIX F

Photo Log

BEST AVAILABLE COPY



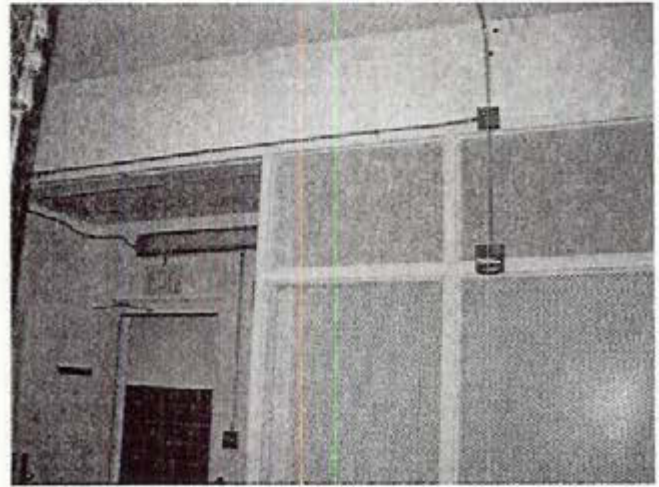
Photograph 1
Las Cruces, WY Armory, Front, Exterior



Photograph 2
Las Cruces, WY Armory, Rear, Exterior



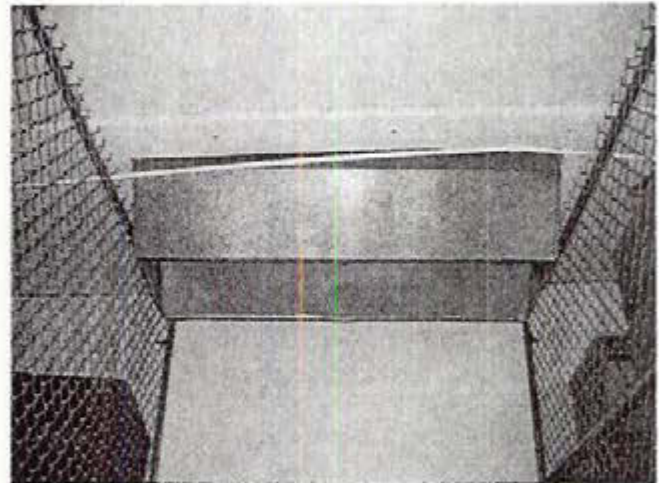
Photograph 3
Former Firing Lanes and midrange



Photograph 4
Former Firing Lane Ventilation



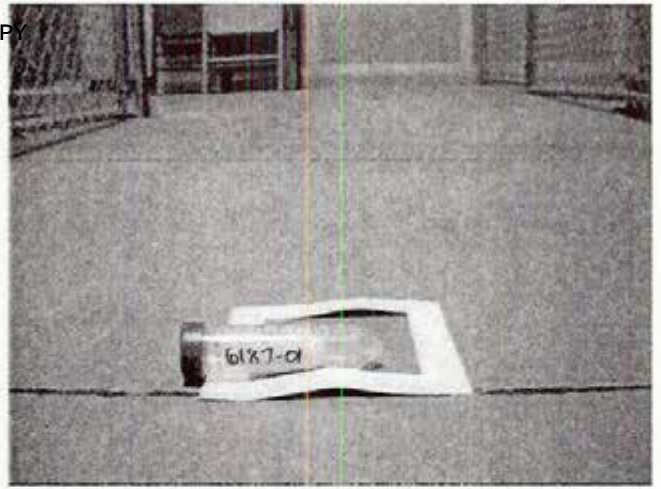
Photograph 5
Former Midrange and Bullet Trap Area



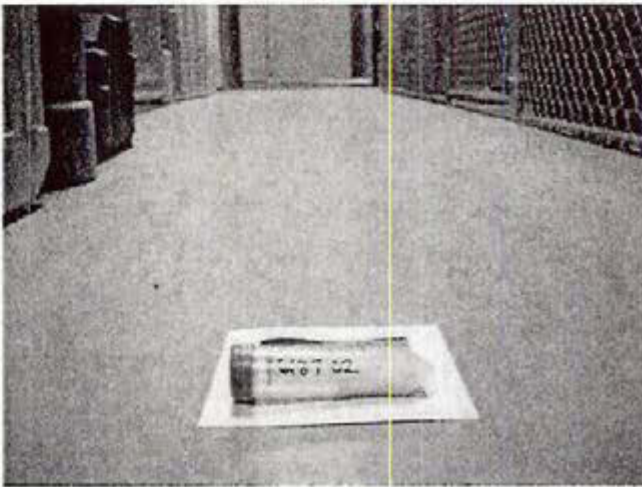
Photograph 6
Former Bullet Trap Ventilation



Photograph 7
General View of the Drill Hall



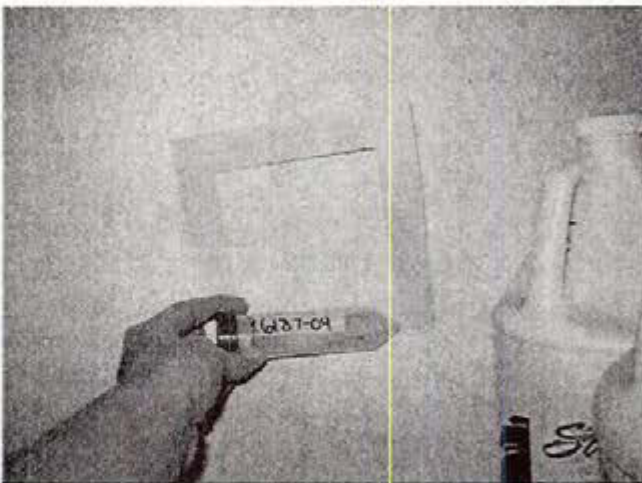
Photograph 8
Location of lead wipe sample number 6187-01



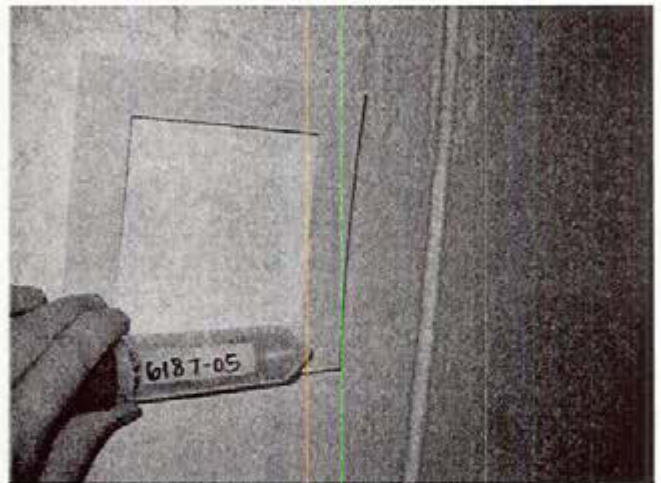
Photograph 9
Location of lead wipe sample number 6187-02



Photograph 10
Location of lead wipe sample number 6187-03



Photograph 11
Location of lead wipe sample number 6187-04



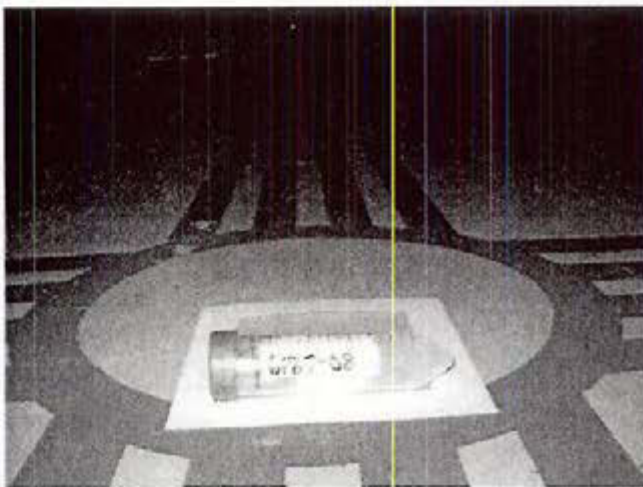
Photograph 12
Location of lead wipe sample number 6187-05



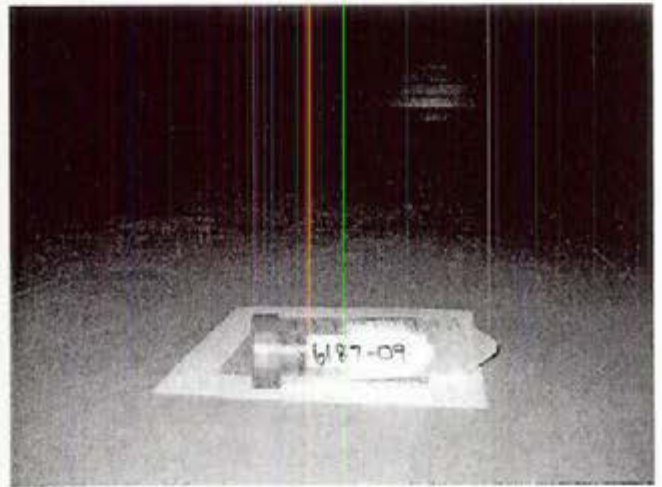
Photograph 13
Location of lead wipe sample number 6187-06



Photograph 14
Location of lead wipe sample number 6187-07



Photograph 15
Location of lead wipe sample number 6187-08



Photograph 15
Location of lead wipe sample number 6187-09

APPENDIX G

Field Notes

FACILITY INFORMATION

(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: **9/10/2012**
2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: **Non-Responsive** **IHI Environmental**
3. Facility Name and Brief Summary of Primary Activities Conducted at Facility:
Las Cruces Armory
4. Facility Address: **249 Armory Road, Las Cruces, NM 88007**
5. Primary Unit Assigned to Facility: **C CO - Non-Responsive HHC CO - Non-Responsive**
6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL): **126th MP CODC 3/140th AL**
7. Square Ft. Area of Facility: **~44,177 sq ft**
8. Work Schedule: **M-T/F 0700-1700**
9. Number of work bays: **1**
10. Equipment Density and Type: **None**
 - a. List Equipment Nomenclature Serviced or Maintained at Facility: **None**
 - b. List Total # for Each Nomenclature Serviced or Maintained at Facility: **None**
11. Total Number of Personnel: **44**
12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **16 AGR, 22 Sheriff's Academy**
13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **6 State Personnel**
14. Total Number of Personnel Enrolled in the Hearing Conservation Program: **0**

15. Total Number of Personnel Enrolled in the Respiratory Protection Program: 0

16. Total Number of Personnel Enrolled in the Medical Surveillance Program: 0

17. Total Number of Personnel Enrolled in the Vision Program: 0

18. Facility Commander: **Non-Responsive**

a. Email address, Commercial Telephone Number and Unit Assigned to:
N/A

19. Safety Officer: **Non-Responsive**

a. Email Address, Commercial Telephone Number and Unit Assigned to:
N/A

20. Facility Telephone Number: 575 647 2401

APPENDIX H

SOP for Armory Cleanup & Follow-up Housekeeping Recommendations

Lead

CLEANUP & FOLLOW-UP HOUSEKEEPING
RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Waste water containers.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
- a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

SOP FOR ARMORY CLEANUP

1. General.

1.1 Objective.

1.1.1. The purpose of this SOP (Standard Operating Procedure) is once a lead dust hazard has been identified and excess exists, how to lower the level of lead dust to afford a safe building, which is clean enough for all personnel exposed to this potential hazard.

1.2 Description of An Armory.

1.2.1 Armories provide a space for units to support and train soldiers.

1.2.2 The facility is utilized by Army National Guard (ARNG) family members, usually in a recreational or festive setting. This may include all members and all ages of a given family.

1.2.3 The Armory can be used for community activities, which may include all age levels.

1.3 Responsibilities.

1.3.1 It is the ARNG specialty branches, e.g., Industrial Hygiene (IH), Occupational Health & Safety's, responsibility to notify occupants of any known health risk within their facility.

1.3.2 It is the building managers responsibility to warn any users of this facility about potential hazards by, e.g., verbal, written or warning signs.

1.3.3 The ultimate responsibility falls back on the TAG of each state.

2. Background.

2.1 IH Investigation.

the mother. The Center for Disease Control and Prevention considers levels above 10 ug/dl in children under 6 to be elevated BLLs.

3.3 Lead in Surface Dust.

3.3.1 There are no established standards for lead levels in dust within buildings other than those used by children under 6. The Environmental Protection Agency (EPA) along with Housing and Urban Development (HUD) floor dust lead level standard (which is currently 40 ug/ft²) does not apply to workplace surfaces, and would be impossible to maintain in many industrial facilities. (EPA 40 CFR Part 745)

3.3.1.1 The EPA interior windowsill standard is 250 ug/ft².

3.3.1.2 The EPA standard for window trough is 400 ug/ft².

3.3.2 OSHA cites a level of 200 ug/ft² as guidance to its own inspectors for evaluating the cleanliness of lunchroom and locker room surfaces that are supposed to be kept as clean as possible.

3.4 Lead in Paint.

3.4.1 EPA's standard for lead-based paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter (mg/cm²) or 0.5 percent (%) by weight or 5000 parts per million (ppm) by weight.

4. Indoor Firing Ranges (IFR).

4.1 Relevant Standards and Guidelines.

4.1.1 OSHA guidelines stated above (see 3.3.2) are the recommended working levels to achieve in an active IFR.

4.1.2 NGR 385-10 guideline reflects that of OSHA at 200 ug/ft² for lead dust on surfaces.

4.2 Maintenance and Cleaning.

4.2.1 Follow NGR 385-10, along with SOP found in All States Letter (Log Number P00-0059 along with All States Letter (Log Number P01-0075)

addressing Policy and Responsibilities for Inspection, Evaluation and Operation of ARNG Indoor Firing Ranges. Also, utilize AR 385-63 Range Safety.

4.2.2 Cross contamination is a concern where Armories and IFR's are co-located. Keeping an IFR dust level at 200 ug/ft² does not meet the 40 ug/ft² required on floor surfaces for children 6 and under. Tracking lead dust to other parts of the armory is a concern and should be addressed by the facilities manager and the range custodian.

5. Converted/Closed Indoor Firing Ranges.

5.1 Closed IFR.

5.1.1 Closed IFR's should be not utilized for anything, e.g. storage, office space or anything else. This should be a voided space with no entry. The IFR should have been cleaned to at least 200 ug/ft² before closure to prevent contamination via air stream or other means.

5.1.2 Should be locked and signage placed on entryway to warn personnel of lead contents.

5.2 Converted IFR-- NG PAM 385-16 "Guidelines for converting of IFR."

5.2.1 These spaces should have been cleaned and taken to lowest possible level, e.g. 0-40 ug/ft², and then the proper sealant applied, retested via wipe samples. The results should be below the pre-sealant sample results and as close to zero as possible.

5.2.2 The backstop and ventilation system should have been removed prior to cleaning of the range.

5.2.3 If all of this wasn't accomplished initially and you have high lead levels after this Baseline survey, or if it was accomplished, you need to talk to the original contractor who was responsible for the cleanup or get the area re-cleaned by a different contractor. Converted IFR's have to meet certain criteria before they can be changed into something that will be utilized for an office, storage, or something else where contamination to an individual may occur.

6. Armory Cleanup.

6.1 High Test Result.

6.1.1 If the public utilizes your facility and the results came back above 40 ug/ft² you are responsible for cleaning this area and adjoining areas to meet the 40 ug/ft² or less.

6.1.1.1 Unless you can guarantee no children under the age of 7 will come into your facility.

6.1.1.2 Unless your state public health has other guidance, e.g., post signage to warn personnel who are pregnant or of child bearing age, or under the age of 7 y/o.

6.1.1.3 Signs stating "No smoking, drinking or eating, application of make-up without washing of hands prior to activity."

6.2 Cleaning of Building. Before proceeding into the cleanup mode, first, discuss with your Environmental office what procedures they would recommend and then coordinate your efforts with local agencies, if warranted.

6.2.1 The building, and dusty materials and equipment in it should be cleaned one time to reach the dust lead levels appropriate for the function of this facility, e.g., used by full-time personnel only, utilized by adults or children 7 y/o, or order children only, or utilized by pregnant individuals and/or children under the age of 7. NOTE: This type cleaning implies that this is not a facility that has an active Indoor Firing Range. For facilities with active ranges, these facilities should be monitored with wipe samples taken over the drill floor area by the Range Custodian quarterly, to ascertain the level of lead is at the required level for your particular facility and situation.

6.2.1.1 This cleanup can be accomplished using a HEPA vacuum (a very tedious and long operation) and then by utilizing a wet method with "Spic n Span" or something equivalent to this detergent - using wet rags to wipe down surfaces and mops soaked in this solution to do floor area. NOTE: Personal protective gloves, rubber boots or protective disposable shoe/boot covers should be used during this procedure and personnel's

clothing should be washed separately from their families, if they have young children at home. Personnel should wash their hands after performing this operation to assure lead contaminants are not ingested.

6.2.1.2 Frequent changing out of the water used is vital. Disposal of this hazardous waste water and rags/mop heads, Personal Protective Equipment (PPE), etc., should be coordinated with your Environmental office.

6.2.2 Clean all ductwork where lead was found. EPA has a protocol specifically for replacing or cleaning lead in dust form in HVAC systems. EPA Office of Pollution Prevention and Toxics, "*Reducing Lead Hazards When Remodeling Your Home*" www.epa.gov/opptintr/lead/rpamph.pdf.

6.2.3 Continue to enforce good housekeeping and hygiene practices. These measures make good sense to minimize exposures to any toxic chemicals in the workplace.

6.2.4 Provide lead awareness training to the general workforce and any occupants of your facility.

NOTE: Before you start any new procedures or practices be aware of the local city and state regulations in your area.

Summary of Recommendations for NMARNG IFR, Las Cruces, New Mexico

4.0 RECOMMENDATIONS

1. Improve housekeeping practices within the armory and assure after each weapons cleaning episode the area(s) are cleaned using the SOP included in this report.
2. Clean the floors of the IFR to a level of less than $40 \mu\text{g}/\text{ft}^2$ following the guidance in the attached SOPs.
3. Remove the supply and exhaust ventilation fans and associated ductwork as outlined in the IHSW SOP for Armory Cleanup.
4. Perform post cleanup wipe sampling to ensure lead levels are within the criterion outlined in the IHSW SOP for Armory Cleanup.

14 OCT 14



ARMY NATIONAL GUARD INDUSTRIAL HYGIENE - SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Las Cruces Armory Indoor Firing Range (IFR)

249 N. Armory Road
Las Cruces, NM 88007

10510 Superfortress Avenue, Suite C, Mather, CA 95655

(916) 854-1494



DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

7 OCT 2015

MEMORANDUM THRU New Mexico Army National Guard, ATTN: (SOHM), 600 Wyoming Blvd, NE, Albuquerque, NM 87123

Non-Responsive

FOR Commander, 613th FSC, Las Cruces Armory Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 88007

SUBJECT: Executive Summary for a Site Assistant Visit (IHSAV) Evaluation of Las Cruces Armory, Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 87123, conducted on 14 OCT 2014.

1. References.

a. ARNG-CSG All States Memorandum, SUBJECT: Possible Lead Dust Hazard in Army National Guard (ARNG) Readiness Centers, dated 23 September 2015.

b. Conducting Industrial Hygienist Report, attached.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit (IHSAV) was conducted at the Las Cruces Armory, Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 87123, conducted on 14 OCT 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations within the attached Industrial Hygiene report. However, IHSW concurs with the observations and findings within the attached report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. Attached industrial hygiene report.

4. General Observations.

a. Personnel interviews indicate the space identified as an IFR within the facility was never operational. As noted by the conducting industrial hygienist, the ventilation systems, firing lines, lighting and bullet stop have either been removed or were never installed. Given the definitions for IFR spaces provided within the ARNG-CSG All States Memorandum, recommend the classification for this IFR space be carried as a Closed IFR. Note, the NM ARNG command closed this and several other IFR

SUBJECT: Executive Summary for a Site Assistant Visit (IHS AV) Evaluation of Las Cruces Armory, Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 87123, conducted on 14 OCT 2014.

spaces within the state until assessments to identify potential elevated lead levels and to employ control measures to ensure occupant health and property integrity/serviceability as necessary.

b. The observations and data collected during this evaluation indicate the elevated lead particulate levels are attributed from multiple factors arising from maintenance and/or weapons cleaning activities.

c. The HHC and the 126th MP were identified as co-tenant occupancies during this IHS AV.

5. **Commendable.** The facility was generally clean and orderly throughout.

6. **Observations / Recommendations.**

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Wipe sampling collected from within the space identified as an IFR returned with elevated ($> 40 \text{ ug/ft}^2$) lead levels. Although the lead levels reported for the other areas of the facility are Below Detection limits (BDL), the levels observed do raise concerns regarding the origin and activities generating the lead. It's presumed the lead is introduced to the facility by weapons cleaning and/or maintenance related activities. **(RAC 3)**

(1) Medical Surveillance.

(a) It is important for the State Occupational Health, or Medical Service Corp, determine the medical surveillance requirements based on occupancy type and occupancy responsibilities, i.e. administrative personnel, state maintenance workers, contract personnel, civilian population, and personnel who maintain or support IFR operations.

(2) Occupant Notifications. It is important for the State ARNG make appropriate notifications to all occupants outlining the potential hazards, measures persons must take to ensure their health, and to outline the State ARNG's plan to remediate (abate), if necessary, the elevated lead levels within the facility as required by Federal, State, and local laws, regulations, and requirements. At the minimum, the following occupancy groups should be included within the notifications: AGR, IDT personnel, state employees, contract employees, youth program personnel, and all civilians. Note, the attached report may provide co-tenant organizations for inclusion of notifications. Documentation of notifications should be maintained by the facility command for future reference. (reference 29 CFR 1910.1025 as a resource guide)

b. Although this IHS AV's focus was to evaluate the IFR area, the other area wipe samples collected returned results below the 40 ug/ft^2 threshold. Prevention efforts should continue to ensure the workplace is as free as practical from lead. **(RAC NOT ASSIGNED)**

(1) Recommend continued cleaning within the administrative offices, kitchen, and

SUBJECT: Executive Summary for a Site Assistant Visit (IHSAV) Evaluation of Las Cruces Armory, Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 87123, conducted on 14 OCT 2014.

communal areas to maintain lead particulate concentrations below the ARNG standard of 40ug/ft². Utilize the enclosed Clean-up SOP as a guide to assist with the prevention efforts. Ensure personnel clean-up area(s) and tables after weapons cleaning activities. Tables used for weapons cleaning should be marked, "For Weapons Cleaning Only," when utilized as such. (DODI 6055.01 Appendix to Enclosure 4, date 14 OCT 2014)

7. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

(1) Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

(2) Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

(3) Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

(4) Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

(5) The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

8. Hazard Assessment/Job Safety Analysis (JSA).

a. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes within the facility. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

b. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

SUBJECT: Executive Summary for a Site Assistant Visit (IHS AV) Evaluation of Las Cruces Armory, Indoor Firing Range (IFR), 249 N. Armory Road, Las Cruces, NM 87123, conducted on 14 OCT 2014.

c. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

d. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

e. We have not provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this IHS AV.

f. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

9. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

10. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

11. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at **Non-Responsive**

Non-Responsive

NGB, IHSW, CIV
Regional Industrial
Hygiene Manager



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS LAS CRUCES IFR, NEW MEXICO 88007

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMLC/IFR-10142014-3.0	Wipe samples collected in other areas of the facility returned results below the 40 ug/ft ² threshold.	Facility	RAC NOT ASSIGNED	Recommend continued cleaning within the administrative offices, kitchen, and communal areas to maintain lead particulate concentrations below the ARNG standard of 40ug/ft ² . Utilize the enclosed Clean-up SOP as a guide to assist with the prevention efforts. Ensure personnel clean-up area(s) and tables after weapons cleaning activities. Tables used for weapons cleaning should be marked, "For Weapons Cleaning Only," when utilized as such.					DODI 6055.01 Appendix to Enclosure 4, dated 14 OCT 2014
NMLC/IFR-10142014-3.1	Wipe sampling collected from within the space identified as an IFR returned with elevated (> 40 ug/ft ²) lead levels.	IFR	3	Occupational Safety and Health Administration (OSHA) standard for lead; 1910.1025 (h)(1) require that all surfaces shall be maintained as free as practicable of accumulations of lead. Any area that exceeds 40 ug/ft ² should be thoroughly decontaminated. Utilize Clean-Up SOP provided in this report for future cleaning episodes.					Occupational Safety and Health Administration (OSHA) standard for lead; 1910.1025 (h)(1)

Indoor Firing Range

Decontamination and Cleaning Protocol

(Periodic Cleaning and Conversion)

1. Ensuring that all procedures listed below comply with all federal, state, and local regulation. Consult with the Regional Industrial Hygiene Office and the States Environmental Office for future guidance.

2. Ventilation System

The range ventilation system must be in operation during all cleaning activities. If no ventilation system is available all doors and windows must keep sealed to prevent contamination of other areas.

3. Materials

- I. A High Efficiency Particulate Air (HEPA) filtered vacuum system is the preferred method of cleanup. If a HEPA vacuum cannot be obtained a wet method, detailed below, should be utilized. **A high-pressured water system or dry sweeping may not be used.**
- II. A cleaning solution containing detergent and water is recommended. New solutions of detergent and water should be mixed frequently.
- III. Two containers should be used; one for wetting the applicator (rags, sponge, mop) and the other for rinsing once the dust has been wiped from the surfaces.

- IV. Wastewater in containers can be left to evaporate. Any waste left in the buckets and applicators should be disposed of as hazardous waste. Consult the Environmental Office for appropriate disposal instructions.
- V. Personnel responsible for decontamination of the range and stored items be provided with a full face air purifying respirator with a N100 filter or HEPA filter cartridge providing that all requirements for placing employees in respiratory protection have been met as detailed in 29 1910.134. Employees should be provided with protective coveralls with hood and shoe covers (i.e. Tyvex TM full body suite). If cotton coveralls are provided then the employer must provide for laundering of protective clothing. Protective clothing should not be taken home. Prior to leaving the area, personnel should thoroughly HEPA vacuum the clothing to prevent lead dust from leaving the area. Work and street clothing should not be stored together.

4. Order of Cleaning

- I. A progression of cleaning from top to bottom and from behind the steel backstop to the firing line should be used. All surface areas in the range must be cleaned. Stored items must be decontaminated prior to removal.
- II. After removing the sand/or the steel backstop, areas in front of and behind the bullet trap, along with the steel backstop plates should be cleaned.
- III. The ceilings, lights, baffles, retrieval system, heating system, and ventilation ducts should be cleaned.

- IV. Acoustical material should be vacuumed and removed instead of being painted over. A toxic Characteristic Leaching Procedure (TCLP) test may be used for acoustical material to determine if the material needs to be classified as hazardous and disposed of according to it. The Environmental Office should be contacted regarding this testing.
- V. The floor should be the last surface cleaned starting at the bullet trap and ending behind the firing line, to include the plenum area. Concrete floors should be sealed with deck enamel, or lead paint sealant.
- VI. All walls should be painted, preferably with a lead sealant paint, which will help prevent any leaching of lead after covering.
- VII. Following the wet cleaning of the area and after all surfaces have been allowed to dry thoroughly, a HEPA vacuum should be used on all surfaces, until no dust or residue can be seen. A thorough inspection to detect surface lead dust should be made following cleanup.
- VIII. The Regional Industrial Hygiene Office should be contacted for clearance sampling and to approve the range for converted use.

5. Decontamination of Stored Items

- I. All stored items must be decontaminated before removing from the range, stored equipment next to the bullet trap and firing line should be decontaminated first.

- II. A HEPA vacuum or wet cleaning method should be used. Every attempt should be made to clean the item before disposing as hazardous waste to reduce cost and waste.
- III. Porous items such as canvas tents or other fabrics may be laundered at companies, which specialize in industrial laundry services. Office partitions and carpeting present during firing should be considered grossly contaminated and disposed of as hazardous waste. Consult the Environmental Office before removing and disposing of items.

6. Medical Surveillance

A pre-placement medical examination is required for all individuals involved with range cleanup operations.

7. Air Monitoring

Worker breathing zone air samples must be collected during range cleanup to ensure that workers are not overexposed and to evaluate clean-up procedures.

8. Hazard Training

A training program must be instituted for all individuals who are subject to exposure to lead at or above the action levels, or for whom the possibility of skin or eye irritations exists. This training should be provided for all personnel currently involved in range cleanup operations, at least annually. As required by 29 CFR 1910.1025(I)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

NEW MEXICO ARMY NATIONAL GUARD
LAS CRUCES CONVERTED INDOOR FIRING RANGE

249 N Armory Rd
Las Cruces, NM 88007
(576) 647 2404



Submitted to:

Non-Responsive

National Guard Bureau
Southwest Region Industrial Hygiene Office
10510 Superfortress Avenue
Suite C
Mather, CA 95655

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INDUSTRIAL HYGIENE ASSISTANCE VISIT LAS CRUCES ARMORY LAS CRUCES, NEW MEXICO



1.0 Introduction and Background

1.1. This report summarizes the results of the Industrial Hygiene (IH) Site Assistant Visit (SAV) conducted at the Las Cruces Armory in Las Cruces, New Mexico on October 14, 2014. The Army National Guard Industrial Hygiene Southwest (ARNG-IHSW) requested Aloha World to visit the Las Cruces Armory to follow-up and evaluate potential high lead. This IH SAV also includes interviews with **Non-Responsive** regarding industrial hygiene issues as well as any change in operations in the work area that might affect the workers health and safety. **Non-Responsive** from Aloha World completed this survey.

1.2. The following sections will provide details on how the IH Survey was conducted. A drawing showing the facility layout and sampling locations is included as Attachment D. The most stringent OSHA, ARNG, Corps of Engineers (COE), American National Standards Institute (ANSI), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and Design Guide standards in effect at the time of the survey were used to assess the workplace.

1.3. The Las Cruces Armory has 22 full time guard members and 300 guardsmen and women on drill weekend. This armory was constructed in the early 1990's. This armory has offices used for administrative purposes and also contains a drill floor, arms room, classrooms, industrial kitchen, storage and a weight room. Preventive maintenance service is done at this site on drill weekend. The majority of any maintenance is done at FMS 2, located adjacent to the armory.

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**Industrial Hygiene Survey
Las Cruces Armory**

1.4 There is a Converted Indoor Firing Range (CIFR) in this facility. The ventilation system, firing lines, lighting and bullet stop have all been removed. The firing range was added to the armory at the time of construction in the early 1990's. However, the space has never been used as a firing range. Lead samples were taken in the the drill hall and the supply room/CIFR. Lead wipe samples results could not be obtained from the time of conversion.

2.0 Survey Procedures and Equipment Used

Lead wipe samples were collected on dusty horizontal floor surfaces in the facility including but not limited to the drill floor and the CIFR area (vault, storage). "Ghost Wipe" brand wipes was used with a 16 square inch template. The wipes used conform to American Standards for Testing Materials E1792-96A, *Standard Specification for Wipe Sampling Materials for Lead in Surface Dust*. The collected wipe samples were placed in clean, labeled centrifuge tubes. Samples were submitted to Reservoir Environmental Services, Inc for analysis via Flame Atomic Absorption, USEPA Method SW846 3050B. Laboratory results are listed in micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$). Copies of the raw analytical data are presented in **Appendix D**.

Samples were submitted to Reservoir Environmental Services, Inc, Denver, Colorado, for analysis via Flame Atomic Absorption.

3.0. Findings and Recommendations

3.1. Lead wipe sampling- Analytical results from the lead wipe sampling obtained from the armory are found in Table 3.1.A. A graphical and written representation of sampling locations can be found in **Appendix D** along with analytical reports. Photographs were taken of each sample point and are presented in **Appendix C**. There are currently no standards that dictate what a safe level of lead is from a wipe sample. Lead sampling results can be compared to the protocol outlined in the U.S. Department of Housing and Urban Development's (HUD's) *Guidelines For The Evaluation And Control Of Lead-Based Paint Hazards In Housing*, June 1997. HUD currently recommends an exposure limit of $40 \mu\text{g}/\text{ft}^2$. This guideline was established to prevent lead exposure to children in domestic homes, along with females who are pregnant. Areas that have levels that exceed $40 \mu\text{g}/\text{ft}^2$ should be thoroughly cleaned and employees that may come into contact with those areas should be properly trained in the hazards of lead exposure.

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Industrial Hygiene Survey
Las Cruces Armory

**Table 3.1.A.
Lead Wipe**

Sample ID	AREA	Photo #	Result ug/ft2
101114-1	Control	NA	BDL
101114-2	North drill hall	2	BDL
101114-3	Center drill hall	3	BDL
101114-4	South drill hall	4	BDL
101114-5	West drill hall	5	BDL
101114-6	East drill hall	6	BDL
101114-7	North CFR	7	66.4
101114-8	Center CFR	8	BDL
101114-9	South CFR	9	33.6
101114-10	West CFR	10	46.4
101114-11	East CFR	11	BDL

BDL= Below Detection Limits

ug/ ft2= Micrograms per Square Foot

NOTE: Adequate continuous cleaning of working environment should be continued throughout the armory, especially in the supply/vault area. Please utilize the attached SOP and general information paper provided for cleaning procedures.

Recommendation: Dry sweeping should be restricted in areas where accumulations of dust are present to prevent toxic metals on surfaces from becoming airborne. The cleaning of loose material from horizontal surfaces should be conducted with HIEPA (High Efficiency Particulate Air) vacuums and/or wet mopping. Any area that exceeds 40 ug/ft 2 should be thoroughly decontaminated.

3.2. Operational Changes Noted- None found.

3.3. Physical Safety and Condition of Facility- A physical walk through of the facility was conducted. Overall, housekeeping was found to be in above average condition.

This early 1990's building is of concrete block and brick construction. No water leakage was detected. They have had previous issues with the roof leaking but it has recently been fixed by the Department of Military Affairs (DMA).

A fire evacuation plan was posted throughout the armory.

The fire extinguishers within this facility are part of the fire suppression available and should be tested annually and inspected monthly. NFPA 10, 27-3.4.1 addresses alarm systems and 29 CFR 1910.157 addresses inspection requirements for fire extinguishers. Annual inspections should be accomplished by a qualified organization, e.g., fire department, and checked and documented monthly by the facilities personnel. The fire extinguishers were found to be current on annual and monthly inspections. A fire alarm system is in place and per **Non-Responsive** working order.

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**Industrial Hygiene Survey
Las Cruces Armory**

3.4 Recurring Events: We were unable to obtain any previous surveys for this armory.

4.0 Industrial Hygienist Certification/Project Limitations

All Industrial Hygiene Assessment techniques and tests used in the Industrial Hygiene survey of the Army National Guard Armories were reviewed by **Non-Responsive** Industrial Hygiene Southwest, National Guard Bureau at (916) 854-1492

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, Aloha World's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. Aloha World assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of Aloha World, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since Aloha World is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action

5.0 Technical Assistance For technical assistance regarding information found in this report or The performed survey, please contact **Non-Responsive** of the Southwest Regional Industrial Hygiene Office, (916) 854-1491. Contact the State Safety, State Industrial Hygiene and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Non-Responsive IH Tech
Aloha World

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**Industrial Hygiene Survey
Las Cruces Armory**

Appendix A

References

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23 Edition, 1998.

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices for 1998.

American National Standards Institute (ANSI)/Illuminating Engineering Society (IES), Industrial Lighting 1991.

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment 1998.

AR 40-5, Preventative Medicine, 15 October 1990.

AR 385-10, The Army Safety Program, 23 May 1988.

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems, May 1984.

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation, 27 August 1991.

National Safety Council, Fundamentals of Industrial Hygiene, 4~ edition, 1996.

NOR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

TB MED 503, The Army Industrial Hygiene Program, February 1985.

TG022, US Army Environmental Hygiene Agency (USAEHA), Industrial Hygiene Evaluation Guide, October 1975

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 1998, revision Part 1910, Occupational Safety and Health Standards

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Industrial Hygiene Survey
Las Cruces Armory

Recommendations

1. Occupational Safety and Health Administration (OSHA) standard for lead; 1910.1025 (h) (1) require that all surfaces shall be maintained as free as practicable of accumulations of lead. Dry sweeping should be restricted in areas where accumulations of dust are present to prevent toxic metals on surfaces from becoming airborne. The cleaning of loose material from horizontal surfaces should be conducted with HEPA (High Efficiency Particulate Air) vacuums and/or wet mopping. Any area that exceeds 40 ug/ ft² should be thoroughly decontaminated.

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Photo Log



Photo #1 – Las Cruces Armory



Photo #2- North drill hall wipe



Photo #3- Center drill hall wipe



Photo #4- South drill hall wipe



Photo #5 –West drill hall wipe



Photo #6 – East drill hall wipe

Photo Log

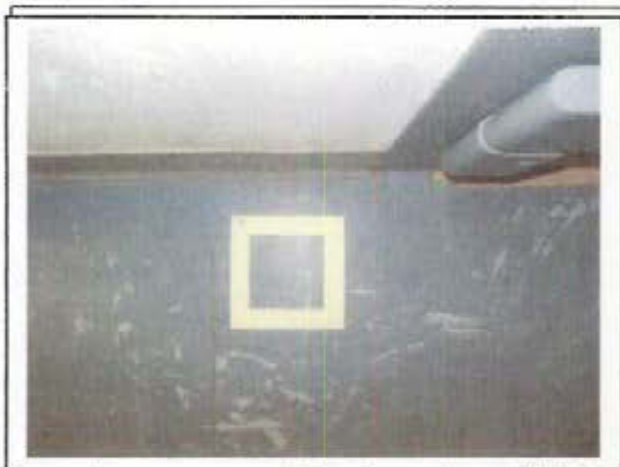


Photo #7 – North CIFR wipe

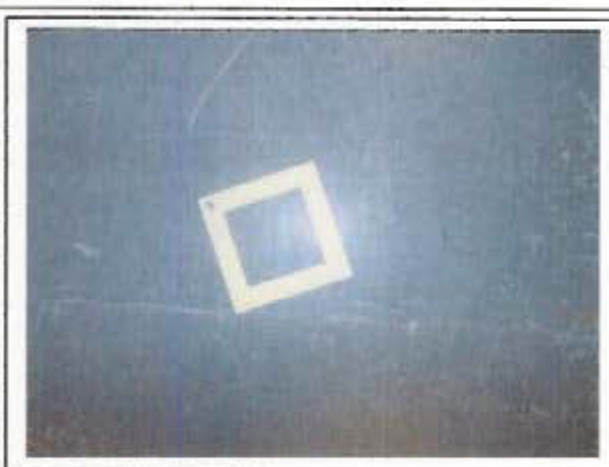


Photo #8- Center CIFR wipe



Photo #9 – South CIFR wipe



Photo #10 – West CIFR wipe



Photo #11 –East CIFR wipe



Photo #12 –Drill Hall

Photo Log



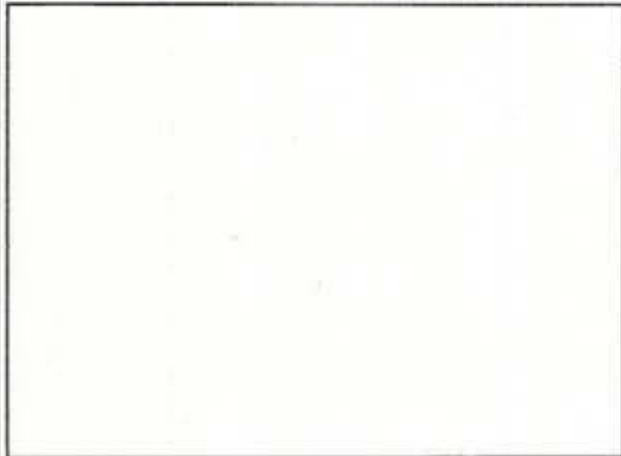
Photo #13 – Maintenance bay



Photo #14-Janitorial closet



Photo #15 – SDS



RESERVOIRS ENVIRONMENTAL, INC.
5801 Logan St., Suite 100
Denver CO 80216

TABLE ANALYSIS: LEAD BY WIPE SAMPLING

RES Job Number: **RES 303545-1**
Client: **Aloha World**
Client Project Number / P.O.: **101114**
Client Project Description: **Las Cruces Armory**
Date Samples Received: **October 21, 2014**
Analysis Type: **USEPA SW846 3050B / AA (7420)**
Turnaround: **3-5 Day**
Date Samples Analyzed: **October 23, 2014**

Client ID Number	Lab ID Number	Sample Area (sq.ft.)	LEAD (µg)	Reporting Limit (µg/ft ²)	LEAD CONCENTRATION (µg/ft ²)
101114-1 Bathroom	EM 1280820	0.11	BRL	22.7	BRL
101114-2 North Drill Hall	EM 1280821	0.11	BRL	22.7	BRL
101114-3 Center Drill Hall	EM 1280822	0.11	BRL	22.7	BRL
101114-4 South Drill Hall	EM 1280823	0.11	BRL	22.7	BRL
101114-5 West Drill Hall	EM 1280824	0.11	BRL	22.7	BRL
101114-6 East Drill Hall	EM 1280825	0.11	BRL	22.7	BRL
101114-7 North CIFR	EM 1280826	0.11	7.3	22.7	66.4
101114-8 Center CIFR	EM 1280827	0.11	BRL	22.7	BRL
101114-9 South CIFR	EM 1280828	0.11	3.7	22.7	33.6
101114-10 West CIFR	EM 1280829	0.11	5.1	22.7	46.4
101114-11 East CIFR	EM 1280830	0.11	BRL	22.7	BRL

*Calculations Based On A 1 sq.ft. Sample Area Unless Otherwise Noted

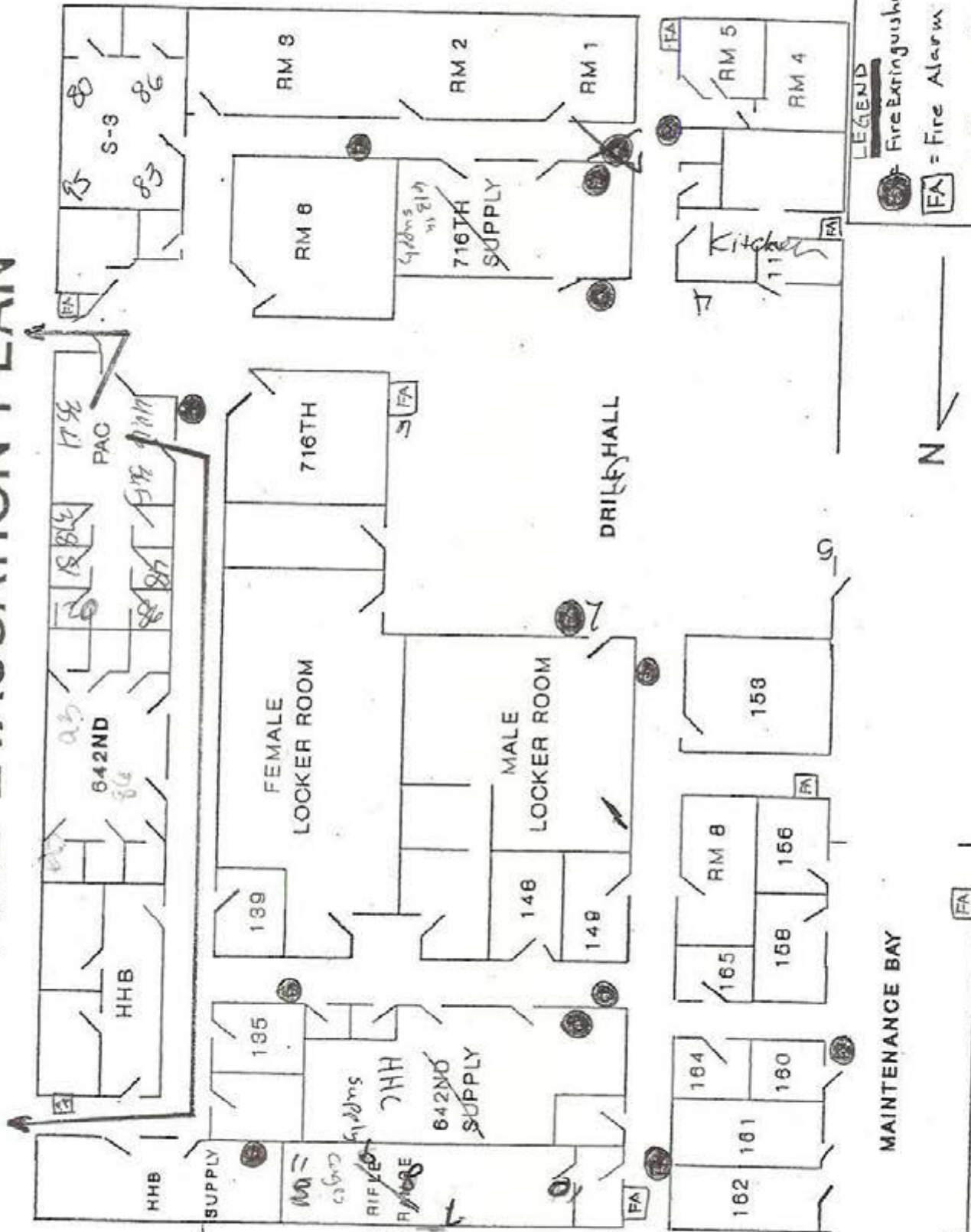
* Unless otherwise noted all quality control samples performed within specifications established by the laboratory.

BRL = Below Reporting Limit

Data QA

Non-Responsive

FIRE EVACUATION PLAN





Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
LAS CRUCES IFR, NEW MEXICO 88007

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
<input type="checkbox"/> NMLC/IFR-10142014-3.0	Wipe samples collected in other areas of the facility returned results below the 40 ug/ft ² threshold.	Facility	RAC NOT ASSIGNED	Recommend continued cleaning within the administrative offices, kitchen, and communal areas to maintain lead particulate concentrations below the ARNG standard of 40ug/ft ² . Utilize the enclosed Clean-up SOP as a guide to assist with the prevention efforts. Ensure personnel clean-up area(s) and tables after weapons cleaning activities. Tables used for weapons cleaning should be marked, "For Weapons Cleaning Only," when utilized as such.					DODI 6055.01 Appendix to Enclosure 4, date 14 OCT 2014
<input type="checkbox"/> NMLC/IFR-10142014-3.1	Wipe sampling collected from within the space identified as an IFR returned with elevated (> 40 ug/ft ²) lead levels.	IFR	3	Occupational Safety and Health Administration (OSHA) standard for lead, 1910.1025 (h)(1) require that all surfaces shall be maintained as free as practicable of accumulations of lead. Any area that exceeds 40 ug/ft ² should be thoroughly decontaminated. Utilize Clean-Up SOP provided in this report for future cleaning episodes.					Occupational Safety and Health Administration (OSHA) standard for lead: 1910.1025 (h)(1)

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ARMY NATIONAL GUARD INDUSTRIAL HYGIENE - SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Lordsburg Armory

720 East 2nd Street
Lordsburg, NM 88045

14 Jan 2012

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491



DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

1 February 2012

MEMORANDUM THRU New Mexico Army National Guard, Deputy State Surgeon (DSS), 47
Bataan Blvd., Santa Fe, NM 87505

FOR Commander, Lordsburg Armory 720 E. 2nd Street, Lordsburg, NM 88045

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) and Indoor
Firing Range Lead Dust Follow-Up for the Lordsburg Armory, 720 E. 2nd Street, Lordsburg, NM
conducted on 28 July 2011.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW), an Industrial Hygiene
Site Assistance Visit and Indoor Firing Range Lead Dust Follow-Up was conducted at the
Lordsburg Armory 720 E. 2nd Street, Lordsburg, NM 88045 on 28 July 2011.

b. The findings and recommendations in this Executive Summary are controlling and
supersede all recommendations in the contractor report (reference Attachment II). However,
IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources:
Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and
AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not
imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable. None mentioned.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and
observations made within the attached contractors report. The paragraphs are numbered to

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHS AV) and Indoor Firing Range Lead Dust Follow-Up for the Lordsburg Armory, 720 E. 2nd Street, Lordsburg, NM conducted on 28 July 2011.

Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

8. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

9. For additional information please contact the undersigned at (916) 804-1707 or via email at

Non-Responsive
[Redacted]

Non-Responsive
[Redacted]

NGB, IHSW, CIV
Industrial Hygiene

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

FY 2011 Lordsburg Armory Site Assistant Visit (SAV) Follow-Up Lead Wipe Sampling

1.0 INTRODUCTION

On July 28th, 2011, [Non-Responsive] Certified Industrial Hygienist (CIH): Certified Hazardous Materials Manager (CHMM), and [Non-Responsive] Senior Industrial Hygiene Technician, both of Armor Environmental Services, Inc (Armor), conducted a FY 2011 Follow-Up Armory Site Assistant Visit Lead Wipes inspection and sample collection (F/U Lead Wipe Survey) at the Army National Guard (ARNG) Armory located at 720 E. 2nd Street, N.M. 88045. The primary and local points of contact (POC) for information gathered during this F/U Lead Wipe Survey were [Non-Responsive] NMANG, NC Occupational Health Program, New Mexico Army National Guard, Phone: 505-271-7179; e-mail: [Non-Responsive] 700 South Pearl Street, Deming, NM 88040; Phone: 505-474-2640; or Sheriff Saturnino Madero, Hidalgo County Sheriff Department, 720 East 2nd Street, Lordsburg N.M. 88045; e-mail: [Non-Responsive] Phone: 575-542-3833.

SCOPE OF VISIT

The FY 2011 Follow-Up Armory Lead Wipes sampling was conducted at the direction of the National Guard Bureau Southwest Regional Industrial Hygiene Office, 10150 Superfortress Ave. Ste C, and Mather CA. 95655.

SAV purposes were to:

1. Conduct follow-up Armory SAV inspections and conduct lead wipe sampling of surfaces that either by virtue of historical and/or present uses, had the potential for elevated levels of residual lead contamination. Included in this task were inspections and lead wipe sample collection from locations previously identified as having elevated surface lead levels;
2. Conduct interviews to determine the status of the armory's indoor firing range with regards to its usage. Where on site are weapons broken-down or cleaned? Who uses the armory? As well as its occupancy; and civilian access/public usage of the facility;
3. Inspect each armory and report potential or physical hazards observed; and,
4. Deploy Radon Monitor: RADTRAK SN 4829070 @ 11:15 MCT in D. Justice's office (Appendix 1, photo # 1).

3.0 FACILITY DESCRIPTION

The Lordsburg armory's (Appendix, photo # 2) construction date was unknown. It is 1 storey with brick exterior; slab concrete floor.

According to Sheriff [Non-Responsive] the Hidalgo County Sheriff's Department has occupied the armory beginning sometime in 2006. At which time the indoor firing range (IFR) was empty, and appeared as it did at the time of this site visit. He further stated that items in storage in the former IFR were removed and relocated elsewhere [Non-Responsive] prior to its occupancy by the Hidalgo County Sheriff's Department: and that

the IFR Appendix 1, photo # 3) has been used for storage and as a vehicle maintenance shop since then. Information was not available as to whether or not the IFR was ever closed following NGP 420-15, "*Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*".

Deputies reportedly clean their weapons in the drill hall's north east corner once yearly after returning from the range: and the cleaned weapons are stored in the vault/supply room on site.

A schematic of the armory's layout is enclosed as Appendix 2.

4.0 BUILDING OCCUPANCY/USES

The armory is occupied by Hidalgo County Sheriff's 11 full time and 1 part time civilian employees. NM ARNG reportedly uses the armory, and Special Operations by the NM ARNG is anticipated to begin in 12/2011.

Civilian activities in the armory occur weekly when personnel attend state training sessions, and also when it is rented to the general public for weddings and other civic activities.

5.0 SURVEY PROCEEDURES

Ghost Wipe sample media were used for sample collection. Wipe sampling was accomplished following the American Standard for Testing and Materials (ASTM) E1792-96A, "Standard Specification for Wipe Sampling Materials for Lead in Surface Dust" protocol. A 12 X 12 inch square paper template was used to collect each sample, after which it was discarded: and a new unused similar template used to collect each additional sample.

Each collected wipe sample was placed in a clean zip-lock bag, and shipped via FedEx to Galson Laboratories (Galson), East Syracuse, NY (www.galsonlabs.com) for analysis for its lead content utilizing the modified NIOSH 9102/SW846 6010 B/C; ICP; GHOSTW.

For the purposes of this survey, the 200 $\mu\text{g}/\text{ft}^2$ standard was applied to all lead wipe sample locations within this armory: and 40 $\mu\text{g}/\text{ft}^2$ for break rooms, floor surfaces or any area that the public might possibly use for non-military functions.

Some former IFR occupied spaces provide direct access into drill halls or indoor walkways: so some samples were collected at these locations to indicate whether or not elevated surface lead levels exist in each, or were being inadvertently transported into, or out of either location.

Lead wipe samples were collected from the following horizontal surfaces:

- Lordsburg-01: IFR floor-S.S.E corner (Appendix 1, photo # 4):
- Lordsburg-02: IFR floor-Center (Appendix 1, photo # 5):
- Lordsburg-03: IFR floor-exit/entry to drill hall (Appendix 1, photo # 6);
- Lordsburg-04: Composite- lunch room (Appendix 1, photo # 7);
- Lordsburg-05: Composite-Former kitchen.

- Lordsburg-06: Drill hall floor-N.E. corner (Appendix 1, photo # 11);
 Lordsburg-07: Drill hall-S.E. quadrant (Appendix 1, photo # 10);
 Lordsburg-08: Drill hall floor-Approximate center (Appendix 1, photo # 9);
 Lordsburg-09: Drill hall floor-entry/exit to hallway (Appendix 1, photo # 8);

6.0 OBSERVATIONS

Unusually heavy dust loading was not observed on horizontal surfaces in the spaces inspected inside the Lordsburg armory. No health and/or safety infractions were noted or observed.

7.0 FINDINGS and RECOMMENDATIONS

a. Laboratory Report

Laboratory results of samples collected from horizontal surfaces in the Lordsburg Armory are enclosed as Appendix 3 and summarized in Table 1 below. Surface lead levels are reported in $\mu\text{g}/\text{ft}^2$.

Table1: Summarized Laboratory report: Horizontal Surfaces Lead Concentration: Lordsburg Armory, NM

Sample I.D.	Sample Locations	Lead
Pb-Blank # 3	Blank	<10
Lordsburg-01	IFR floor-S.S.E corner	<23
Lordsburg-02	IFR floor-Center	<23
Lordsburg-03	IFR floor-Exit/entry to drill hall	<23
Lordsburg-04	Composite- Lunch room	<23
Lordsburg-05	Composite-Former kitchen	<23
Lordsburg-06	Drill hall floor-N.N.E. corner	25
Lordsburg-07	Drill hall-S.E. quadrant	25
Lordsburg-08	Drill hall floor-Approximate center	50
Lordsburg-09	Drill hall floor-Entry/exit to hallway	34

As can be seen in Table 1, the laboratory analytical report identified lead concentrations that were less than the $200 \mu\text{g}/\text{ft}^2$ clearance criteria outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*; however surface lead concentrations on the drill hall floor at its approximate center exceeded HUD's $40 \mu\text{g}/\text{ft}^2$ criteria that IHSW applied surface locations outside of the converted IFR that the public might possibly use for non-military functions

b. Recommendations

- Post appropriate Lead Hazard Warning signs at armory entrance(s). The signs must inform building occupants of the presence of elevated lead levels here, and of the dangers of exposure to lead.

- Comply with OSHA's 29 CFR 1926.62/1926.62, and applicable State of New Mexico regulations. For all other location in the immediate vicinity of the former IFR. Use a high efficiency particulate air (HEPA) vacuum, followed by a Wet Method (wet-wiping and or wet mopping) to remove surface lead contamination, and collect surface sample at each location to ensure that residual lead levels is less than 200 $\mu\text{g}/\text{ft}^2$. These cleaning and sample collection methods should be repeated during routine housekeeping duties to further lower lead dust levels to the desired level. See Attachment for SOP For Armory Cleanup.
- Ensure that services are compliant with the state of N.M. and Federal Agencies as required.
- Note that 29 CFR 1910.1025 Appendix A identifies lead as a highly toxic metal. Lead is a cumulative poison that can enter the body by ingestion (eating) or by inhalation.
- Do not dry sweep or dry wipe surfaces in the drill hall.

8.0 TECHNICAL ASSISTANCE

For technical assistance regarding information found in this report, please contact:

Non-Responsive

Industrial Hygienist

NGB, IHSW

1050 Superfortress Ave., Ste C,
Mather, CA 95655

Non-Responsive

Fax: 916-290-0177



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

ARNG Lordsburg Armory

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
Lordsburg- NM 072811- Executive Summary	Weapons are being cleaned throughout the Armory, on floor, on tables, etc.	Armory	3	Weapons should be cleaned on surfaces, e.g. tables, desks that are designated "for weapons cleaning only" and all surfaces should be cleaned after this event is completed.					General Duty Clause 5(a)(1)
Lordsburg- NM 072811-7.0	The lead dust levels exceeded the recommended level of 40 µg/ft2.	IFR ENTRY /EXIT	3	Housekeeping Practices need to be improved as evident by the migration of lead dust throughout the facility. Utilize the SOP for Armory Clean-up where ever the lead levels are over the recommended level of 40 µg/ft2.					29 CFR 1910.1025 NG PAM 420-15



Photo # 1



Photo # 2



Photo # 3



Photo # 4



Photo # 5



Photo # 6



Photo # 7

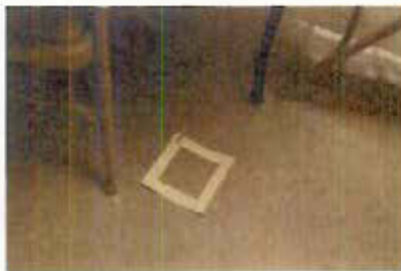


Photo # 8

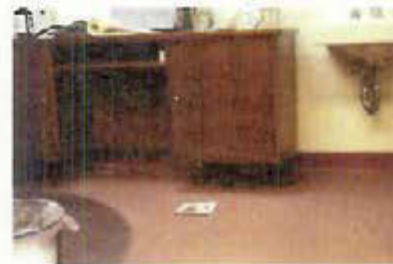


Photo # 9



Photo # 10

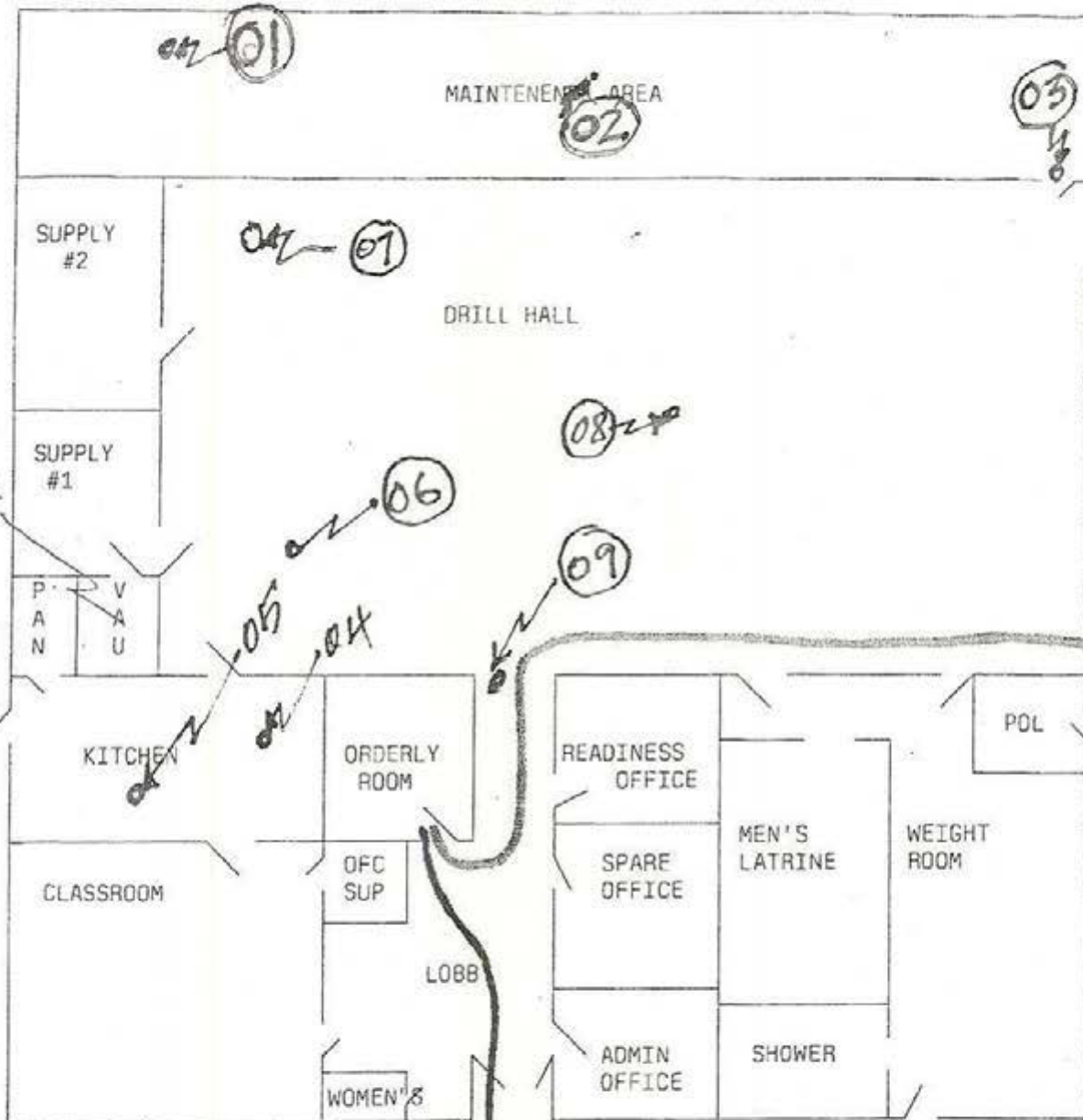


Photo # 11



Photo # 12

EMERGENCY EVACUATION ROUTE



Primary Route

Secondary Route

Handwritten notes and signatures at the bottom right of the page, including "HSGO 159 SS/EX/CA", "160 Centre", "165 En/EX", and "E 20/13 S91".



Non-Responsive

August 08, 2011

Armor Environmental Services, Inc.
4448 Inverrary Blvd.
Fort Lauderdale, FL 33319

DOH ELAP# 11626

Account# 18228

Login# L245683

Non-Responsive

Enclosed are the analytical results for the samples received by our laboratory on August 01, 2011. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Please contact John Bailey at (888) 432-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Non-Responsive

Laboratory Director

Enclosure(s)



LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client : Armor Environmental Services, Inc.
Site : Lordsburg Armory
Project No. : Utah NM Lead Wipes
Date Sampled : 28-JUL-11
Date Received : 01-AUG-11
Date Analyzed : 03-AUG-11
Report ID : 702108

Account No.: 18228
Login No. : L245683

Lead

Sample ID	Lab ID	Area ft2	Total ug	Conc ug/ft2
LORDSBURG-01	L245683-1	0.111104	<10	<90
LORDSBURG-02	L245683-2	0.111104	<10	<90
LORDSBURG-03	L245683-3	0.111104	<10	<90
LORDSBURG-04	L245683-4	0.111104	<10	<90
LORDSBURG-05	L245683-5	0.111104	<10	<90
LORDSBURG-06	L245683-6	0.111104	<10	<90
LORDSBURG-07	L245683-7	0.111104	<10	<90
LORDSBURG-08	L245683-8	0.111104	<10	<90
LORDSBURG-09	L245683-9	0.111104	<10	<90

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 10. ug

Analytical Method : mod. NIOSH 9102/SW846 6010C;ICP;GHOSTW

OSHA PEL (TWA) : NA

Collection Media : Ghost

Submitted by: CRI

Approved by : crd

Date : 05-AUG-11 NYS DOH # : 11626

Non-Responsive

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	



LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
 East Syracuse, NY 13057
 (315) 432-5227
 FAX: (315) 437-0571
 www.galsonlabs.com

Client Name : Armor Environmental Services, Inc.
 Site : Lordsburg Armory
 Project No. : Utah NM Lead Wipes

Date Sampled : 28-JUL-11 Account No.: 18228
 Date Received: 01-AUG-11 Login No. : L245683
 Date Analyzed: 03-AUG-11

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

1245683 (Report ID: 702108):

Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.

SOPs: MT-SOP-9(14), im-mwvghost(10)

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

Report To*: **Armor Environmental Services, Inc**
 4448 Inverrary Blvd
 Fort Lauderdale, FL 33319

Invoice To*: **Armor Environmental Services, Inc**
 4448 Inverrary Blvd
 Fort Lauderdale, FL 33319

Check if change of address ☐ yes ☒ no
 New Client? ☐ yes ☒ no

GALSON LABORATORIES
 6601 Kirkville Rd
 East Syracuse, NY 13057
 Tel: 315-432-5227
 Fax: 888-432-5227
 Fax: 315-437-0571
 www.galsonlabs.com

Phone No.: [Redacted]
 Fax No.: [Redacted]
 Site Name: **LEEDS-BURG ARMORY** Project: **Utah**

Non-Responsive

y: LL & [Redacted]

☐ Samples submitted using the FreePumpLoan™ Program

☐ Samples submitted using the FreeSamplingBadges™ Program

Client Account No.: Customer

Purchase Order No.: 0018228

Credit Card: ☐ Credit Card on File

☐ Will Phone in Credit Card Information

Email Results To:

Email Address:

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV
☐ Cal OSHA ☒ Other (please specify)

Metals Technique
 Required
 ICAP or ICPIMS
 (Additional Cost)

Method Reference*

Analysis Requested*

Sample Units
 (L, ml, min,
 in2, cm2, ft2)

Sample Volume,
 Sample Time,
 or Sample Area*

Collection Medium

Date Sampled

Sample Identification*

HUD

NIOSH 9102/SW84-6

Surface Lead

16 in2

Ghost wipes

7/28/11

LEEDS-BURG-01

02

03

04

05

06

07

08

09

For Hexavalent Chromium: process must be listed for each sample submitted (eg., welding, plating, painting, etc.):*

For Crystalline Silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*

List description of industry or process/interferences present in sampling area:

Comments:

Chain of Custody

Relinquished by

Received by LA

Samples received after 3pm will be considered as next days but

Page 1 of

Report To: Armor Environmental Services, Inc. 4448 Inverrary Blvd Fort Lauderdale, FL 33319		Invoice To: Armor Environmental Services, Inc. 4448 Inverrary Blvd Fort Lauderdale, FL 33319	
Phone No: [Redacted] Fax No: [Redacted]		Phone No: [Redacted] Fax No: [Redacted]	
Site Name: <i>LEEDSBURG AIRWAY</i>		Project: <i>Ulah</i>	
<input type="checkbox"/> Samples submitted using the FreePumpLoan™ Program Client Account No.: Customer Purchase Order No.: 0018226		<input type="checkbox"/> Samples submitted using the FreeSamplingLoops™ Program	
Credit Card: <input type="checkbox"/> Credit Card on File <input type="checkbox"/> Will Phone in Credit Card Information		Please indicate which OEL this data will be used for: <input type="checkbox"/> OSHA PEL <input type="checkbox"/> Cal OSHA <input type="checkbox"/> ACGIH TLV <input checked="" type="checkbox"/> Other (please specify)	
Need Results By*: <input checked="" type="checkbox"/> 5 Business Days <input type="checkbox"/> 4 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> Next Day by 6pm <input type="checkbox"/> Next Day by Noon <input type="checkbox"/> Same Day		Sample Identification* LEEDSBURG-01 -02 -03 -04 -05 -06 -07 -08 -09	
Date Sampled: 7/28/11		Sample Units: (L, ml, min., in2, cm2, ft2) 16 IN ²	
Collection Medium: Ghost wipes		Analysis Requested*: Surface Lead	
Method Reference*:		Method Reference*: NIOSH 9102/SW84-6	
Metals Technique Required, ICAP or IC-PMS* (Additional Cost):		Metals Technique Required, ICAP or IC-PMS* (Additional Cost): HUD	

For Hexavalent Chromium: process must be listed for each sample submitted (eg., welding, plating, painting, etc.):

For Crystalline Silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite):

List description of industry or process/interferences present in sampling area:

Comments:

Chain of Custody

Relinquished by:

Received by LAB:

Samples received

Page 1 of 1



Environmental Hazards Services, L.L.C.

7469 Whitepine Rd
Richmond, VA 23237

Telephone: 800.347.4010

Wipe Metals Analysis Report

Client: Galson Laboratories
6601 Kirkville Rd
East Syracuse, NY 13057

Report Number: 11-08-03239

Received Date: 08/23/2011

Analyzed Date: 08/24/2011

Reported Date: 08/24/2011

Project/Test Address: L245683

Client Number:

200869

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample Number	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
11-08-03239-001	LORDSBURG-01	Lead (Pb)	0.111104	<2.50	<23	
11-08-03239-002	LORDSBURG-02	Lead (Pb)	0.111104	<2.50	<23	
11-08-03239-003	LORDSBURG-03	Lead (Pb)	0.111104	<2.50	<23	
11-08-03239-004	LORDSBURG-04	Lead (Pb)	0.111104	<2.50	<23	
11-08-03239-005	LORDSBURG-05	Lead (Pb)	0.111104	<2.50	<23	
11-08-03239-006	LORDSBURG-06	Lead (Pb)	0.111104	2.78	25	
11-08-03239-007	LORDSBURG-07	Lead (Pb)	0.111104	2.82	25	
11-08-03239-008	LORDSBURG-08	Lead (Pb)	0.111104	5.55	50	
11-08-03239-009	LORDSBURG-09	Lead (Pb)	0.111104	3.73	34	

Environmental Hazards Services, L.L.C

Client Number: 200869
Project/Test Address: L245683

Report Number: 11-08-03239

Sample Narratives:

Analyst: **Non-Responsive**
Method: NIOSH 7300M

Non-Responsive

Reviewed By Authorized Signa

QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contains less than the reporting limit for each particular metal, based on a 50mL volume.
The reporting limit for Mercury is 0.10ug and 2.5ug for all other metals.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. If the report does not contain the result for a field blank, it is due to the fact that the client did not include a field blank with their samples. EHS sample results do not reflect blank correction. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714.

Legend	ug = microgram	ug/ft ² = micrograms per square foot
	mL = milliliter	ft ² = square foot

010042



EHS Laboratories

Environmental Hazardous Services, LLC
www.leadlab.com 7469 Whitepine Rd
(800) 347-4040 Richmond, VA 23237
(804) 276-4907 (fax) 23237

Lead Chain-of-Custody

11-08-03239



Due Date:
08/25/2011
(Thursday)
E

City/State/Zip
E. Syracuse NY 13057

Address:
6601 Kirkville Rd

Company Name:
Galson Labs

Acct. Number:

E-mail:

Fax: (

Phone () 888-432-5227

Project Name / Testing Address: L245683

City/State (Required):

Purchase Order Number: 18228

Certification Number:

* Do wipe samples submitted meet ASTM E1792 requirements? ☒ Yes ☐ No

Turn Around Time (TAT)
☒ 1-Day ☐ 3-Day
Results to by 8/25-8/26
☐ Same Day (Must Call Ahead)
☐ Weekend (Must Call Ahead)
If no TAT is specified, sample(s) will be processed and charged as 3-Day TAT.

Sample Type	Sample ID	Collection Location (LR, KT, LTFBR, RTRBR, etc.)	Surface Type	Area Length X Width in inches (Provide paint chip area only if repainting in place)	Paint Chip		Air		Comments
					% Kd	Flow Rate (L/min)	Total Time (minutes)	Volume (Total Liters)	
Single Dust Wipe = DW	LORDSBURG-01	0% HNO3/4% HCL-50mL Final Volume	PR = Family Room	F = Front	0 = Basement				
Paint Chip = PC	LORDSBURG-02		LR = Living Room	R = Rear	KT = Kitchen				
Composite Soil = CS	LORDSBURG-03		DN = Den	LT = Left	BA = Bath				
	LORDSBURG-04		DR = Dining Room	RT = Right	BR = Bedroom				
	LORDSBURG-05		I = (st. fl)	2 = 2nd fl					
	LORDSBURG-06								
	LORDSBURG-07								
	LORDSBURG-08								
	LORDSBURG-09								

Surface Type for Dust Wipe
FL = Floor
CP = Carpet
SL = Window Sill
WW = Window Well

Abbreviations
F = Front
R = Rear
LT = Left
RT = Right
2 = 2nd fl
0 = Basement
KT = Kitchen
BA = Bath
BR = Bedroom

Sample Type
Single Dust Wipe = DW
Paint Chip = PC
Composite Soil = CS

No.	Sample Type	Date Collected	Client Sample ID	Collection Location (LR, KT, LTFBR, RTRBR, etc.)	Surface Type	Area Length X Width in inches (Provide paint chip area only if repainting in place)	Paint Chip % Kd	Flow Rate (L/min)	Air Total Time (minutes)	Volume (Total Liters)	Comments
1	DW	7/28/2011	LORDSBURG-01	0% HNO3/4% HCL-50mL Final Volume		.111104ft2 X					need LOQ at 40ug/ft2
2	DW	7/28/2011	LORDSBURG-02			.111104ft2 X					for all samples in set
3	DW	7/23/2011	LORDSBURG-03			.111104ft2 X					
4	DW	7/23/2011	LORDSBURG-04			.111104ft2 X					
5	DW	7/23/2011	LORDSBURG-05			.111104ft2 X					
6	DW	7/23/2011	LORDSBURG-06			.111104ft2 X					
7	DW	7/23/2011	LORDSBURG-07			.111104ft2 X					
8	DW	7/23/2011	LORDSBURG-08			.111104ft2 X					
9	DW	7/23/2011	LORDSBURG-09			.111104ft2 X					
10											

Non-Responsive

Signature

Signature

Date/Time: 8/22/2011 @ 1500

Date/Time: 8/23/11

Report To: Armor Environmental Services, Inc. 4448 Inverrary Blvd Fort Lauderdale, FL 33319		Invoice To: Armor Environmental Services, Inc. 4448 Inverrary Blvd Fort Lauderdale, FL 33319	
Phone No.: 954-578-7401 Fax No.: 954-572-3136		Phone No.: 954-578-7401 Fax/Email: 954-572-3136	
Site Name: <u>Leadsburg Army</u> Project: <u>Utah</u> Lead Wipes		Sampled By: <u>LL & DL</u>	

<input type="checkbox"/> Check if change of address <input type="checkbox"/> New Client?	<input type="checkbox"/> Samples submitted using the FreePumpLoan™ Program Client Account No.: Customer Purchase Order No.: 0018228	<input type="checkbox"/> Samples submitted using the FreeSamplingBadges™ Program.
Credit Card: <input type="checkbox"/> Credit Card on File <input type="checkbox"/> Will Phone in Credit Card information	Email Results: <u>[Redacted]</u> Email Address: <u>[Redacted]</u>	Please indicate which OEL this data will be used for: <input type="checkbox"/> OSHA PEL <input type="checkbox"/> Cal OSHA <input type="checkbox"/> ACGIH TLV <input checked="" type="checkbox"/> Other (please specify)

Need Results By:	(surcharge)	Sample Identification*	Date Sampled	Collection Medium	Sample Volume, Sample Time, or Sample Area*	Sample Units (L, ml, min, in ² , cm ² , ft ²)	Analysis Requested*	Method Reference*	Metals Technique Required, ICAP or ICPMs (Additional Cost)
<input checked="" type="checkbox"/> 5 Business Days	0%	0005BVRG-01	7/28/11	Ghost wipes	16 IN ²	μg/FT ²	Surface Lead	NIOSH 9102/SW84-6	AUD
<input type="checkbox"/> 4 Business Days	35%	-02							
<input type="checkbox"/> 3 Business Days	50%	-03							
<input type="checkbox"/> 2 Business Days	75%	-04							
<input type="checkbox"/> Next Day by 8pm	100%	-05							
<input type="checkbox"/> Next Day by Noon	150%	-06							
<input type="checkbox"/> Same Day	200%	-07							
		-08							
		-09							

For Hexavalent Chromium: process must be listed for each sample submitted (eg., welding, plating, painting, etc.):

For Crystalline Silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite):

List description of industry or process/interferences present in sampling area:

Comments:

Chain of Custody

Relinquished by:

Received by LAB:

Samples received after 4pm will be considered as next day's business.

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

SOP FOR ARMORY CLEANUP

1. General.

1.1 Objective.

1.1.1. The purpose of this SOP (Standard Operating Procedure) is once a lead dust hazard has been identified and excess exists, how to lower the level of lead dust to afford a safe building, which is clean enough for all personnel exposed to this potential hazard.

1.2 Description of An Armory.

1.2.1 Armories provide a space for units to support and train soldiers.

1.2.2 The facility is utilized by Army National Guard (ARNG) family members, usually in a recreational or festive setting. This may include all members and all ages of a given family.

1.2.3 The Armory can be used for community activities, which may include all age levels.

1.3 Responsibilities.

1.3.1 It is the ARNG specialty branches, e.g., Industrial Hygiene (IH), Occupational Health & Safety's, responsibility to notify occupants of any known health risk within their facility.

1.3.2 It is the building managers responsibility to warn any users of this facility about potential hazards by, e.g., verbal, written or warning signs.

1.3.3 The ultimate responsibility falls back on the TAG of each state.

2. Background.

2.1 IH Investigation.

SOP FOR ARMORY CLEANUP

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1.3.3 The ultimate responsibility falls back on the TAG of each state.

2. Background.

2.1 IH Investigation.

2.1.1 The IH community found unexpectedly high levels of lead dust during a normal IH investigation (survey) in an armory that had an Indoor Firing Range (IFR) within it. Wipe samples were taken in another armory without an IFR, only to find that this armory had higher than expected levels of lead dust, also.

2.1.2 Each ARNG Regional Industrial Hygienist has planned to survey all their armories spearheaded by the Midwest regional office, to determine the magnitude of these findings.

2.1.3 About 2/3rds of the armories tested so far, did not have "a clean bill of health". Now the IH community will attempt to discern where the contamination is coming from and also, give guidance on how to deal with these contaminant.

2.1.4 Air sampling of the armories tested have shown very low levels of lead dust in the breathing area. Dust wipe samples have varied in quantities present but have exceeded the EPA's floor standard and the ARNG IFR guidelines.

3. Relevant Standards and Guidelines.

3.1 Airborne Lead.

3.1.1 The Occupational Safety and Health Administrations (OSHA) Permissible Exposure Level (PEL) for airborne lead is **50 micrograms per cubic meter (ug/m3)**, averaged over an 8-hour work shift. The OSHA action level is 30 ug/m3.

3.2 Blood Lead Level (BLL).

3.2.1 OSHA requires that personnel who are exposed to airborne lead above the PEL be offered medical surveillance that includes blood lead level monitoring. Personnel with total **BLL above 50 micrograms per deciliter (ug/dl)** of blood are required to be removed from occupational lead exposures until the BLL drops back to 40.

3.2.2 Women who may become pregnant who are exposed to lead should consult with their physician. Fetal and newborn BLLs are similar to those of

the mother. The Center for Disease Control and Prevention considers levels above 10 ug/dl in children under 6 to be elevated BLLs.

3.3 Lead in Surface Dust.

3.3.1 There are no established standards for lead levels in dust within buildings other than those used by children under 6. The Environmental Protection Agency (EPA) along with Housing and Urban Development (HUD) floor dust lead level standard (which is currently 40 ug/ft²) does not apply to workplace surfaces, and would be impossible to maintain in many industrial facilities. (EPA 40 CFR Part 745)

3.3.1.1 The EPA interior windowsill standard is 250 ug/ft².

3.3.1.2 The EPA standard for window trough is 400 ug/ft².

3.3.2 OSHA cites a level of 200 ug/ft² as guidance to its own inspectors for evaluating the cleanliness of lunchroom and locker room surfaces that are supposed to be kept as clean as possible.

3.4 Lead in Paint.

3.4.1 EPA's standard for lead-based paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter (mg/cm²) or 0.5 percent (%) by weight or 5000 parts per million (ppm) by weight.

4. Indoor Firing Ranges (IFR).

4.1 Relevant Standards and Guidelines.

4.1.1 OSHA guidelines stated above (see 3.3.2) are the recommended working levels to achieve in an active IFR.

4.1.2 NGR 385-10 guideline reflects that of OSHA at 200 ug/ft² for lead dust on surfaces.

4.2 Maintenance and Cleaning.

4.2.1 Follow NGR 385-10, along with SOP found in All States Letter (Log Number P00-0059 along with All States Letter (Log Number P01-0075)

addressing Policy and Responsibilities for Inspection, Evaluation and Operation of ARNG Indoor Firing Ranges. Also, utilize AR 385-63 Range Safety.

4.2.2 Cross contamination is a concern where Armories and IFR's are co-located. Keeping an IFR dust level at 200 ug/ft² does not meet the 40 ug/ft² required on floor surfaces for children 6 and under. Tracking lead dust to other parts of the armory is a concern and should be addressed by the facilities manager and the range custodian.

5. Converted/Closed Indoor Firing Ranges.

addressing Policy and Responsibilities for Inspection, Evaluation and Operation of ARNG Indoor Firing Ranges. Also, utilize AR 385-63 Range Safety.

4.2.2 Cross contamination is a concern where Armories and IFR's are co-located. Keeping an IFR dust level at 200 ug/ft² does not meet the 40 ug/ft² required on floor surfaces for children 6 and under. Tracking lead dust to other parts of the armory is a concern and should be addressed by the facilities manager and the range custodian.

5. Converted/Closed Indoor Firing Ranges.

5.1 Closed IFR.

5.1.1 Closed IFR's should be not utilized for anything, e.g. storage, office space or anything else. This should be a voided space with no entry. The IFR should have been cleaned to at least 200 ug/ft² before closure to prevent contamination via air stream or other means.

5.1.2 Should be locked and signage placed on entryway to warn personnel of lead contents.

5.2 Converted IFR— NG PAM 385-16 "Guidelines for converting of IFR."

5.2.1 These spaces should have been cleaned and taken to lowest possible level, e.g. 0-40 ug/ft², and then the proper sealant applied, retested via wipe samples. The results should be below the pre-sealant sample results and as close to zero as possible.

5.2.2 The backstop and ventilation system should have been removed prior to cleaning of the range.

5.2.3 If all of this wasn't accomplished initially and you have high lead levels after this Baseline survey, or if it was accomplished, you need to talk to the original contractor who was responsible for the cleanup or get the area re-cleaned by a different contractor. Converted IFR's have to meet certain criteria before they can be changed into something that will be utilized for an office, storage, or something else where contamination to an individual may occur.

Armory Cleanup.

6.1 High Test Result.

6.1.1 If the public utilizes your facility and the results came back above 40 ug/ft² you are responsible for cleaning this area and adjoining areas to meet the 40 ug/ft² or less.

6.1.1.1 Unless you can guarantee no children under the age of 7 will come into your facility.

6.1.1.2 Unless your state public health has other guidance, e.g., post signage to warn personnel who are pregnant or of child bearing age, or under the age of 7 y/o.

6.1.1.3 Signs stating "No smoking, drinking or eating, application of make-up without washing of hands prior to activity."

6.2 Cleaning of Building. Before proceeding into the cleanup mode, first, discuss with your Environmental office what procedures they would recommend and then coordinate your efforts with local agencies, if warranted.

6.2.1 The building, and dusty materials and equipment in it should be cleaned one time to reach the dust lead levels appropriate for the function of this facility, e.g., used by full-time personnel only, utilized by adults or children 7 y/o, or order children only, or utilized by pregnant individuals and/or children under the age of 7. NOTE: This type cleaning implies that this is not a facility that has an active Indoor Firing Range. For facilities with active ranges, these facilities should be monitored with wipe samples taken over the drill floor area by the Range Custodian quarterly, to ascertain the level of lead is at the required level for your particular facility and situation.

6.2.1.1 This cleanup can be accomplished using a HEPA vacuum (a very tedious and long operation) and then by utilizing a wet method with "Spic n Span" or something equivalent to this detergent - using wet rags to wipe down surfaces and mops soaked in this solution to do floor area. NOTE: Personal protective gloves, rubber boots or protective disposable shoe/boot covers should be used during this procedure and personnel's

clothing should be washed separately from their families, if they have young children at home. Personnel should wash their hands after performing this operation to assure lead contaminants are not ingested.

6.2.1.2 Frequent changing out of the water used is vital. Disposal of this hazardous waste water and rags/mop heads, Personal Protective Equipment (PPE), etc., should be coordinated with your Environmental office.

6.2.2 Clean all ductwork where lead was found. EPA has a protocol specifically for replacing or cleaning lead in dust form in HVAC systems. EPA Office of Pollution Prevention and Toxics, "*Reducing Lead Hazards When Remodeling Your Home*" www.epa.gov/opptintr/lead/rrpamph.pdf.

6.2.3 Continue to enforce good housekeeping and hygiene practices. These measures make good sense to minimize exposures to any toxic chemicals in the workplace.

6.2.4 Provide lead awareness training to the general workforce and any occupants of your facility.

NOTE: Before you start any new procedures or practices be aware of the local city and state regulations in your area.

Photo #151 7/28/11
Caldenberg NM.

Army National Guard Armory Surveys Checklist

(To Be Included In Report)

Five lead wipe samples collected from drill floor (take samples from dusty horizontal floor surfaces)	*
Are any weapons cleaned in the facility, if yes where are they cleaned? <i>YES</i> <i>CLEANED IN DEPUTIES OFFICE (FORMERLY THE KITCHEN)</i>	* WEAPONS CLEANED BY DEPUTIES AFTER RETURNING FROM RANGE. OCCURS 1 YEAR. - NE CORNER OF DRILL HALL.
Additional lead wipe samples taken from 25% of the rest of the building - (on floor areas only)	*
Is there a converted indoor firing range? If so collect additional wipe samples IAW the SIOW. <i>YES</i>	Non-Responsive <i>Facility occupied by NTH Hidalgo County Sheriff's Office beginning sometime 2006. At which time IFR was empty and appeared as is 7/28/11 site visit.</i>
Is there any peeling paint? Take bulk sample if able.	<i>Non-Responsive</i>
Are there any signs of water damage or mold?	* CONTENTS WERE ITEMS IN STORAGE. ALL REMOVED BY <i>Non-Responsive</i> THEN USED AS VEHICLE STORAGE.
Any suspected ACM? Where and what condition is it in. Bulk sample if able.	Maintenance shop, & storage of miscellaneous items. 1 UNIT SUPPLY.
Quality of housekeeping	* Room on 9/16. USED BY Sheriff's Office to store weapons, supply Room stores evidence info.
HVAC maintenance plan in place?	
Overall condition of HVAC system	
Obtained CO2, Temp, RH monitoring	
HAZMAT inventory on hand (make copies for the report), MSDS available for all materials.	
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	

Fire alarm in working condition - -not usually in place in older armories	
Fire extinguishers in place and properly identified and mounted	
Evidence of monthly fire extinguisher inspections	
Annual fire extinguisher inspections tags current	
Are eye wash stations available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	
Egress routes accessible and properly marked - -noted on <u>Fire Evacuation Plan</u>	
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	
Any Photo labs	
Any hazardous noise sources	
Light levels checked throughout building	
Breaker panels properly labeled with no exposed wiring	
Check building occupancy - 11/21 & 1 P.T. All employed by Sheriff's Office. How many military personnel, how many civilian personnel	Facility Occupied by Hidalgo County Sheriff's Office. Use as an Admin Building.
Any civilian activities in armory (cub scouts, classes, day care, parties etc)	* Civilian Activities, TRAINING OTHER STATE/Federal & Local Agencies Occupied 7 days/week. 1 PER
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Max occupancy is 11/24 HOUR. BUILT WORK.

RENTOR
WARDENS & OTHER
AS CIVIC ACTIVITIES ~ 2-3x
YEAR

NM ARNG DOES OCCUPY/USE FACILITY.
ANTICIPATED SPECIAL OPERATIONS PLANNED
TO BEGIN SOMETIME

Obtain two lead air samples	Upon Request Only
Take photos of outside of building, all sample points and any pertinent hazards or concerns.	*
Name of Armory, POC, phone #, address and organizations in Armory	* NM ARNG CONTACT Non-Responsive Non-Responsive 700 S. Pearl St, Deming NM 88030
(Add Checklist to Report)	(Add Checklist to Report)

SPEARIE'S Office: POC

Email:

Non-Responsive



SFC Jacob Madrid

Readiness NCO
Det 1.613th PSC (IN)



700 South Pearl Street
Deming, NM 88030
Jacob.Madrid@us.army.mil

Office: (505)474-2640
Comm: (575)546-9813
Fax: (505)474-2642

Plot #151 - Lordsburg Artery N.A.

11-2

Drill Hall

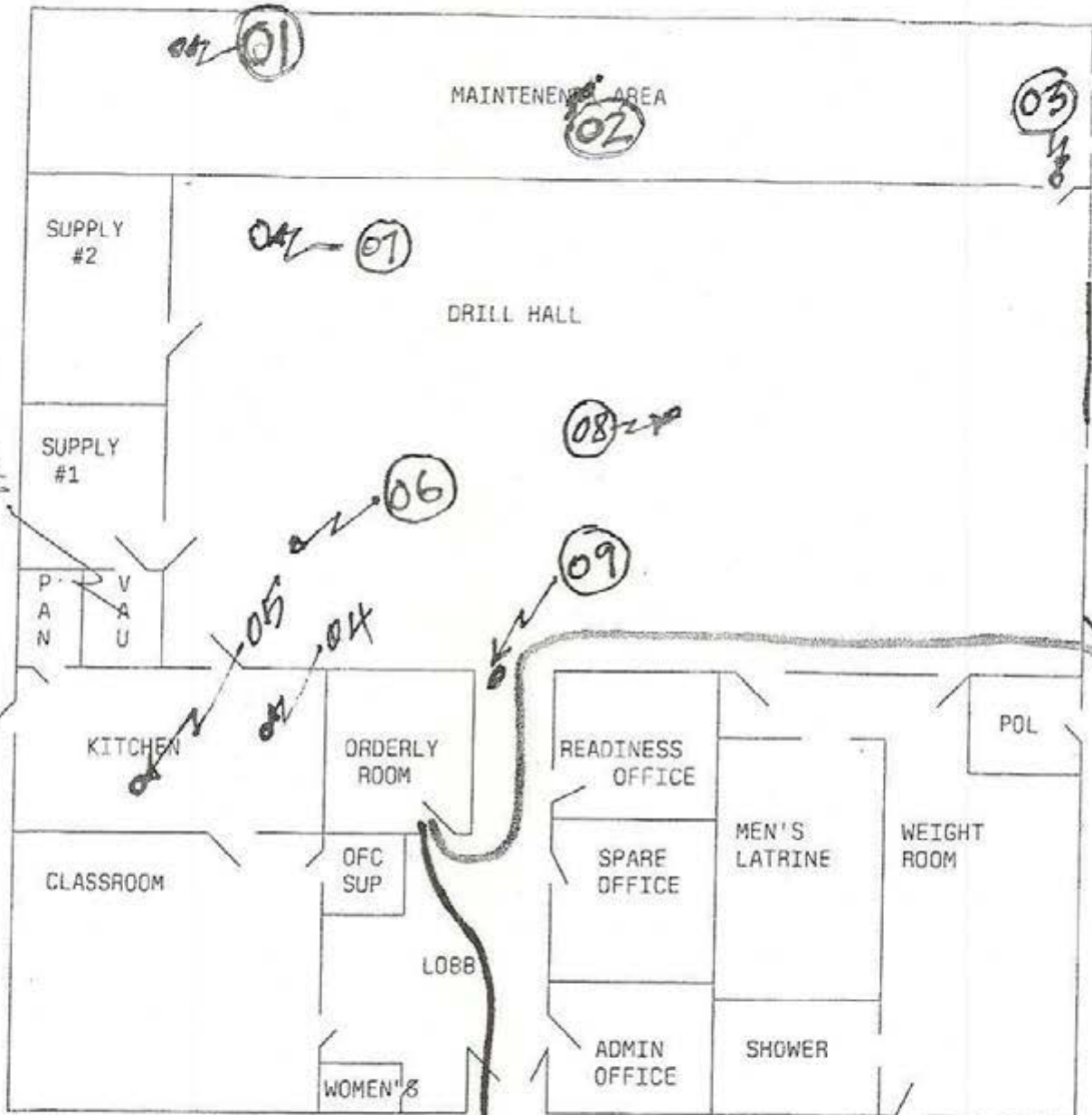
	Samples	Photo	Location
	01	159	SE corner
	02	160	Centre
	03	155	EX / EN
Livingston	04	166	
Formally Kit	05	167	
Drill Hall	06	168	NNE
	07	169	SE
	08	170	Centre
	09	171	EN / EX

Passive Radon monitor Start date 10:47 UGT.

SD

7/28/11

EMERGENCY EVACUATION ROUTE



Primary Route

Secondary Route

Handwritten notes and signatures at the bottom right of the page, including "HSGO 159 SS/EX/2", "160 center 2", "165 En/EX 3", and "2nd Lt. HSGO".



**ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST**

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

**Industrial Hygiene Site
Assistance Visit**

**Lordsburg Armory
Indoor Firing Range (IFR)
720 East 2nd Street
Lordsburg, NM 88045**

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (915) 854-1494

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494



BEST AVAILABLE COPY
DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

29 MAR 2014

MEMORANDUM THRU **Non-Responsive** SOHM, 600 Wyoming Blvd, NE, Albuquerque, NM 87123

FOR Commander, Lordsburg Armory Indoor Firing Range (IFR) 720 East 2nd Street Lordsburg, NM 88045

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for Lordsburg Armory Indoor Firing Range (IFR) 720 East 2nd Street Lordsburg, NM 88045 on 18 MAR 2014.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Lordsburg Armory Indoor Firing Range (IFR) 720 East 2nd Street Lordsburg, NM 88045 on 18 MAR 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility personnel were helpful during this IHSAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Continue good housekeeping practices throughout this facility. Follow Armory Clean-up SOP attached to this SAV. (para. 3.2) (NO RAC)

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Lordsburg Armory Indoor Firing Range (IFR) 720 East 2nd Street Lordsburg, NM 88045 on 18 MAR 2014.

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Lordsburg Armory Indoor Firing Range (IFR) 720 East 2nd Street Lordsburg, NM 88045 on 18 MAR 2014.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at

Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on.**
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

EXECUTIVE SUMMARY

On March 18, 2014, [Non-Responsive] E, CSP, of IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the New Mexico Army National Guard Armory Indoor Firing Range located at 720 East 2nd Street, Lordsburg, New Mexico 88045. The primary point of contact for information gathered during this survey was [Non-Responsive] (575) 542-3833, [Non-Responsive]

Note: Since this armory is occupied by the sheriff's department, this report should be sent to [Non-Responsive] New Mexico Army National Guard, Occupational Health Program Manager, (505) 271-7179, [Non-Responsive]

The objectives of this IH Assistance Visit were to determine whether the firing range was operational or had been converted, and to determine if the range and adjacent spaces were contaminated with lead residues above the limits outlined in the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On March 18, 2014 **Non-Responsive** PE, CSP, of IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the New Mexico Army National Guard Armory Indoor Firing Range (IFR) located at 720 East 2nd Street, Lordsburg, New Mexico 88045.

The primary point of contact for information gathered during this survey was **Non-Responsive**

Non-Responsive Non-Responsive

Note: Since this armory is occupied by the sheriff's department, this report should be sent to

Non-Responsive New Mexico Army National Guard, Occupational Health Program Manager, (505) 271-7179 **Non-Responsive**

1.1 Objectives

The objectives of this IH Assistance Visit were to determine if the firing range was operational or converted, and to determine if the range and adjacent spaces were contaminated with lead residues above the limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the IHSW Standard Operating Procedure (SOP) for *Armory Cleanup & Follow-up Housekeeping*.

1.2 Scope of Work

To achieve the above objectives at this facility, the visit included the following:

- evaluate the status of the firing range;
- collect lead surface wipe samples from the firing range, adjacent spaces, and any areas where weapons are cleaned; and
- provide a report of findings.

2.0 METHODS

2.1 Lead Wipe Sampling

Lead wipe samples were collected on floor surfaces in the IFR at the former firing line, mid-range, and the bullet trap locations. Additional lead wipe samples were collected from wall surfaces and on the entryway floor. Lead Wipe™ brand wipes were used within a 100-square-centimeter template. The wipes used conform to American Society for Testing and Materials E1792, *Standard Specification for Wipe Sampling Materials for Lead in Surface Dust*. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Environmental for analysis, using National Institute for

Occupational Safety and Health (NIOSH) Method 7300. See **Appendix D** for sample locations and **Appendix C** for laboratory results.

The Mather, California, office of Industrial Hygiene Southwest has developed a Standard Operating Procedure (SOP) for lead, which is a blend of OSHA, HUD, and Army regulations. Essentially, this SOP sets forth a criterion of 40 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. Additionally, a 200- $\mu\text{g}/\text{ft}^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where general public access is not expected.

2.2 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs;
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

3.0 FINDINGS

3.1 Range Status and Description

The Lordsburg Armory is owned by the New Mexico Army National Guard; however, it is no longer occupied by military members, but is now used by the Hidalgo County Sheriff's Department. The armory has offices used for administrative purposes, a training area, drill hall, supply rooms and a vault area, restrooms, a weight room, and a former IFR that is now used as a maintenance and storage area.

The IFR at this armory was decommissioned as an active firing range and the armory has been occupied by the Sheriff's Department since approximately 2007. The walls of this former IFR are constructed of painted concrete masonry units. The ceiling is composed of exposed, painted corrugated steel roof decking with steel truss members and purlins. The floor is painted concrete, except for the former bullet trap area, where the floor is exposed concrete. There are two heating air ducts located in the northwest wall near the entrance to the former IFR. There is an exhaust fan in the east ceiling level in this former IFR. It could not be determined if this exhaust fan was original to this IFR or if was added at a later date. There are eight banks of light fixtures mounted along the ceiling level. The bullet trap has been removed and there is a rolling access door on the west wall.

There are no civilian activities at this armory other than the day-to-day work of the Sheriff's Department. The Sheriff's Department occasionally cleans weapons in Supply Room #2. This IFR is considered a converted range.

3.2 Lead Wipe Sampling Results

The laboratory analytical results indicate that the lead concentrations on all of the wipe samples were below the 40- $\mu\text{g}/\text{ft}^2$ standard outlined in the IHSW SOP for Armory Cleanup.

Table 1 in Appendix B contains the complete list of the sample results, and the laboratory analytical reports are included in Appendix C. A drawing identifying all sample locations is included in Appendix D. All of the findings of this visit are outlined in the Industrial Hygiene Southwest – Violation Inventory Log, which is located in Appendix E.

4.0 RECOMMENDATION

None

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the

uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, IHI's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. IHI assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of IHI, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

March 26, 2014
Date

Industrial Hygiene Program Manager

7.0 TECHNICAL ASSISTANCE

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist if the operations change, or the personnel are incapable of following the recommendations.

APPENDIX B

Table 1 – Lead Wipe Sample Results

Table 1

Former IFR - Lead Wipe Results

Former NMARNG Armory
Lordsburg, New Mexico

Lead Wipe Sample Results

Sample Number	Collection Date	Location	Result $\mu\text{g}/\text{ft}^2$
161-01	3/18/2014	Former Firing Lane Floor	<12
161-02	3/18/2014	Former Mid Range Floor	<12
161-03	3/18/2014	Former Bullet Trap Floor	14
161-04	3/18/2014	South West Wall Between the Former Firing Lanes and Mid-Range	<12
161-05	3/18/2014	North East Wall Between the Former Mid-Range and the Former Bullet Trap Area	<12
161-06	3/18/2014	Entryway to Former IFR - Floor	13
161-07	3/18/2014	South West Drill Hall - Floor	12
161-08	3/18/2014	North West Drill Hall - Floor	<12
161-09	3/18/2014	Center Drill Hall - Floor	<12
161-10	3/18/2014	Field Blank	<12

APPENDIX C
Laboratory Analytical Report - Lead



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ANALYTICAL REPORT

Report Date: March 25, 2014**Non-Responsive**THE Environmental
640 East Wilmington Avenue
Salt Lake City, UT 84106

Phone: (801) 466-2223

Fax: (801) 466-9616

Non-ResponsiveWorkorder: **34-1408390**

Client Project ID: AL147161

Purchase Order: AL147161

Project Manager: **Non-Responsive**

Analytical Results

Sample ID: <u>161-01</u>		Collected: 03/18/2014	
Lab ID: 1408390001		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

Sample ID: <u>161-02</u>		Collected: 03/18/2014	
Lab ID: 1408390002		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

Sample ID: <u>161-03</u>		Collected: 03/18/2014	
Lab ID: 1408390003		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.5	14	1.3

Sample ID: <u>161-04</u>		Collected: 03/18/2014	
Lab ID: 1408390004		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992

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Environmental

www.alsglobal.com

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ANALYTICAL REPORT

Workorder: 34-1408390
Client Project ID: AL147161
Purchase Order: AL147161
Project Manager: Non-Response

Analytical Results

Sample ID: 161-05		Collected: 03/18/2014	
Lab ID: 1408390005		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

Sample ID: 161-06		Collected: 03/18/2014	
Lab ID: 1408390006		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.4	13	1.3

Sample ID: 161-07		Collected: 03/18/2014	
Lab ID: 1408390007		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.3	12	1.3

Sample ID: 161-08		Collected: 03/18/2014	
Lab ID: 1408390008		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

Sample ID: 161-09		Collected: 03/18/2014	
Lab ID: 1408390009		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3

Sample ID: 161-10		Collected: 03/18/2014	
Lab ID: 1408390010		Received: 03/24/2014	
Method: NIOSH 7300 Mod.		Media: Lead Dust Wipe	
		Sampling Parameter: Area 100 cm ²	
		Prepared: 03/25/2014	
		Analyzed: 03/25/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<12	1.3



ANALYTICAL REPORT

Workorder: 34-1408390
Client Project ID: AL147161
Purchase Order: AL147161
Project Manager: Non-Responsive

Report Authorization

Method	Analyst	Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levooy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alsit.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACCLASS (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwlabservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACCLASS (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACCLASS (ISO 17025)	ADE-1420	http://www.aiclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< This testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

APPENDIX D

Drawing: Location of Lead Wipe Sample Locations

APPENDIX E
IHSW Violation Log



Industrial Hygiene Southwest

Violation Inventory LogLOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
New Mexico Army National Guard Indoor Firing Range, Lordsburg, New Mexico

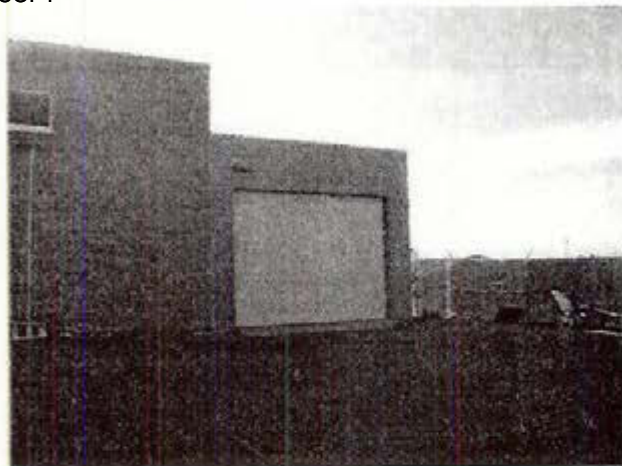
CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
CLOSED <input type="checkbox"/>									
NMIFR-031814- 3.2 <input type="checkbox"/>	The analytical results for lead on the interior of the converted IFR were all below the 40 $\mu\text{g}/\text{ft}^2$ criteria outlined in the IHSW SOP for Lead.	Converted Indoor Firing Range	No RAC	Continue good housekeeping practices					IHSW SOP Lead

APPENDIX F

Photo Log



Photograph 1
General View of the former New Mexico Army
National Guard Armory – Lordsburg New
Mexico



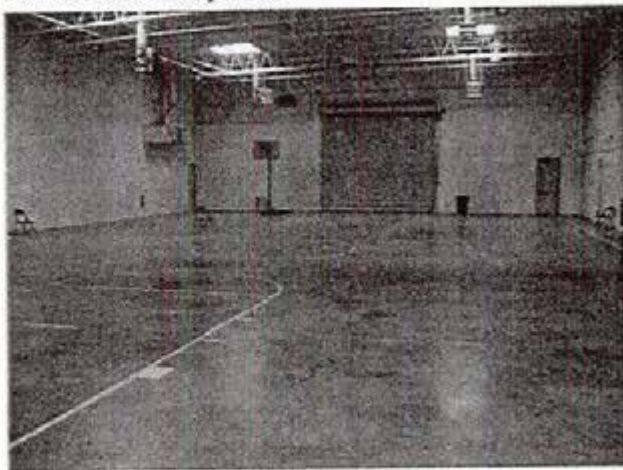
Photograph 2
General View of the former Indoor Firing Range
as viewed from the west



Photograph 3
General view of the former Indoor Firing Range
as viewed from the former firing lanes to the
former bullet trap area



Photograph 4
General view of the former Indoor Firing Range
as viewed from the former bullet trap area to the
former firing lanes



Photograph 5
General view of the former drill hall floor



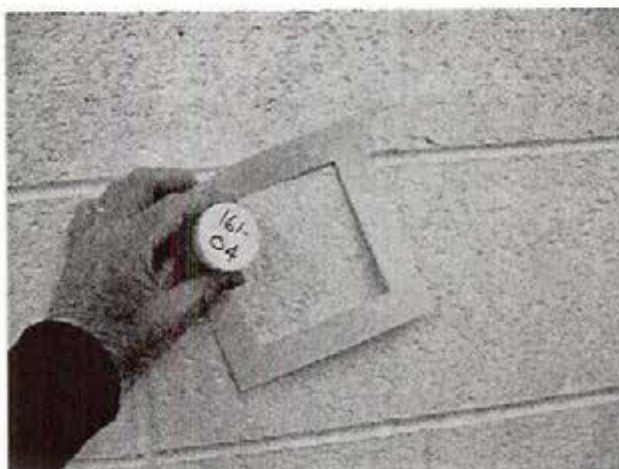
Photograph 6
Location of lead wipe sample number 161-01



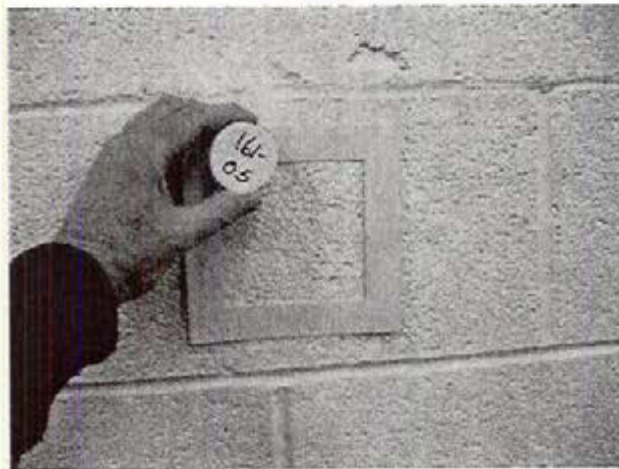
Photograph 7
Location of lead wipe sample number 161-02



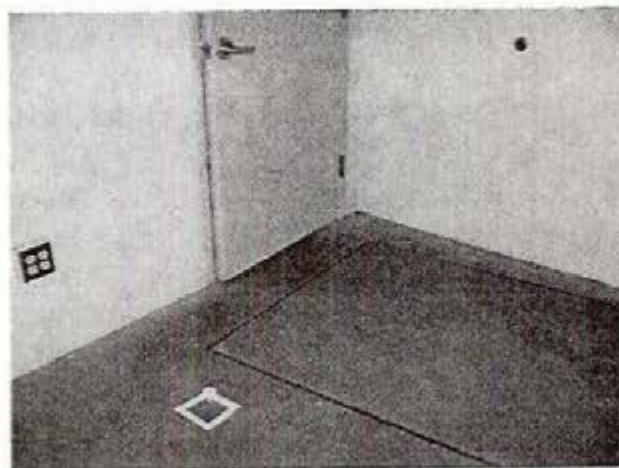
Photograph 8
Location of lead wipe sample number 161-03



Photograph 9
Location of lead wipe sample number 161-04



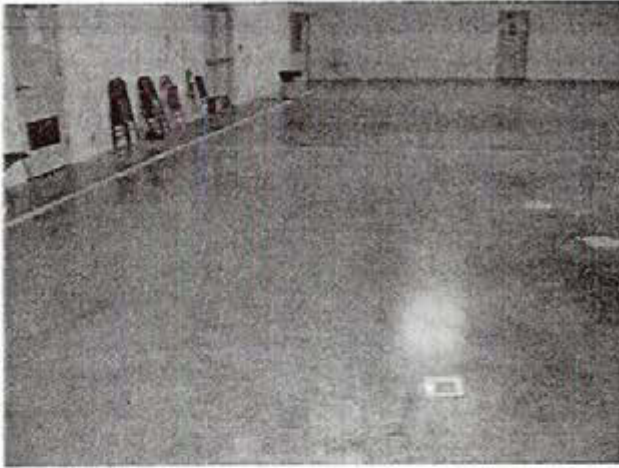
Photograph 10
Location of lead wipe sample number 161-05



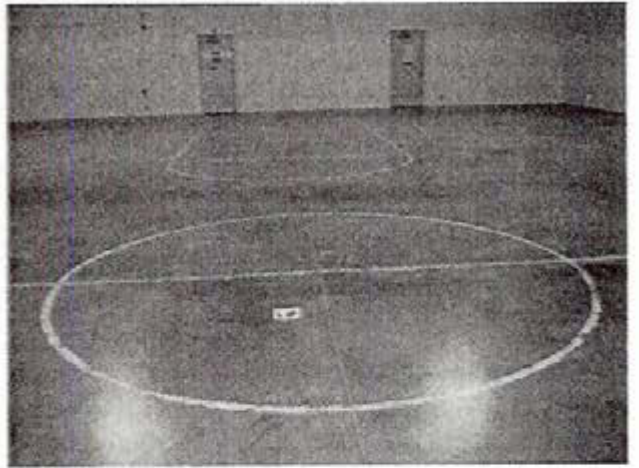
Photograph 11
Location of lead wipe sample number 161-06



Photograph 12
Location of lead wipe sample number 161-07



Photograph 13
Location of lead wipe sample number 161-08



Photograph 14
Location of lead wipe sample number 161-09

APPENDIX G

Field Notes

FACILITY INFORMATION

(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: March 18, 2014
2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: **Non-Responsive** HI Environmental
3. Facility Name and Brief Summary of Primary Activities Conducted at Facility:
Lordsburg Armory – now being used by the Hidalgo Sheriff's Department
4. Facility Address: 720 East 2nd Street, Lordsburg, NM 88045
5. Primary Unit Assigned to Facility: None
6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL): Hidalgo Sheriff's Department
7. Square Ft. Area of Facility: approximately 10,000 sq. ft
8. Work Schedule: 0700 – 1700; Monday through Friday
9. Number of work bays: N/A
10. Equipment Density and Type: N/A
 - a. List Equipment Nomenclature Serviced or Maintained at Facility: N/A
 - b. List Total # for Each Nomenclature Serviced or Maintained at Facility: N/A
11. Total Number of Personnel: N/A
12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): N/A
13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): N/A
14. Total Number of Personnel Enrolled in the Hearing Conservation Program: N/A

APPENDIX H

Recommendations

Summary of Recommendations for NMARNG Lordsburg Indoor Firing Range

RECOMMENDATION

There are no recommendations for the Lordsburg, New Mexico Indoor Firing Range as all lead wipe sample results were below the IHSW criteria.

APPENDIX A

References

AR 385-10, *The Army Safety Program*

Title 29, *Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards*

NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*

IHSW, *Standard Operating Procedure for Armory Cleanup & Follow-up Housekeeping Recommendations*



ARMY NATIONAL GUARD INDUSTRIAL HYGIENE – SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Lordsburg Armory
720 East 2nd Street
Lordsburg, NM 88045

10510 Superfortress Avenue, Suite C, Mather, CA 95655

(916) 854-1491



DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

6 December 2012

MEMORANDUM THRU New Mexico Army National Guard, Deputy State Surgeon (DSS), 600 Wyoming Blvd NE, Albuquerque, New Mexico 87123

FOR Commander, Lordsburg Armory 720 East 2nd Street, Lordsburg, NM 88045

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSV) for the Lordsburg Armory 720 East 2nd Street, Lordsburg, New Mexico conducted on 10 August 2012.

1. **References.** See survey report.

2. **General.**

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Lordsburg Armory 720 East 2nd St., Lordsburg, NM on 10 AUG 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. **Findings.** See survey report.

4. **Commendable.**

a. The facility personnel were helpful during this SAV.

5. **Observations / Recommendations.**

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Inspect all fire extinguishers monthly. Ensure fire department inspects extinguishers annually for functionality. (para. 4.10) (RAC 3)

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Lordsburg Armory 720 East 2nd Street, Lordsburg, New Mexico conducted on 10 August 2012.

b. Locate the asbestos survey for this building or contract to have a licensed firm to perform an asbestos survey and assessment. This should be part of the NM ARNG Asbestos Management Plan with awareness training being provided to facility personnel and workers. (para. 4.4) (RAC 3)

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Lordsburg Armory 720 East 2nd Street, Lordsburg, New Mexico conducted on 10 August 2012.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at

Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene



Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Lordsburg Armory, Lordsburg, New Mexico

CONTROL NUMBER <input type="checkbox"/> CLOSED	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/INCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMMA-081012-4.4 <input type="checkbox"/>	An asbestos survey could not be located during this IH Assistance Visit	Lordsburg Armory	3	Either locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.					Recommended Practice
NMMA-081012-4.4 <input type="checkbox"/>	Personnel have not been provided with asbestos awareness training.	Lordsburg Armory	4	Based on the findings of this survey, provide awareness training to assigned personnel for the specific types of asbestos in this Armory.					Recommended Practice
NMMA-081012-4.10 <input type="checkbox"/>	Fire extinguishers have not been inspected monthly.	Lordsburg Armory	4	Inspect all fire extinguishers monthly.					29 CFR 1910.157 (e) (2) & (3) and NFPA-10-2007, Para 7.2.1.2 & 7.3.1.1.1
NMMA-081012-4.10 <input type="checkbox"/>	The GFCI outlet in the women's bathroom was not tripping between 5 and 7ma.	Lordsburg Armory	4	Contract an electrician to properly wire the GFCI outlet in the women's restroom.					NFPA 70, Article 210-8

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ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
- 2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

BEST AVAILABLE COPY



IH ASSISTANCE VISIT

**New Mexico Army National Guard
Lordsburg Armory
720 East 2nd Street
Lordsburg, New Mexico 88045**

November 15, 2012

Prepared for:

**Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655**

Prepared by:

Non-Responsive

Industrial Hygiene Technician

Reviewed by:

Non-Responsive

Project #AL127211

640 EAST WILMINGTON AVENUE SALT LAKE CITY, UT 84106

TELEPHONE: 801-466-2223

FAX: 801-466-9616

E-MAIL: IHI@IHI-ENV.COM

SALT LAKE CITY

EMERYVILLE

PHOENIX

DENVER

SEATTLE

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EXECUTIVE SUMMARY

On August 10, 2012, **Non-Responsive** of IHI Environmental (IHI), conducted an IH Assistance Visit at the Lordsburg Armory in Lordsburg, New Mexico. The primary point of contact for information gathered during this survey was **Non-Responsive** (505) 271-7179,

Non-Responsive

The objectives of this IH Assistance Visit were to perform the following activities:

- collect lead wipe samples;
- evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- evaluate the condition of the Heating, Ventilation, and Air-Conditioning system, and collect indoor air quality data;
- review hazardous material storage and use procedures;
- review safety training and record keeping;
- perform a ventilation survey on the kitchen stove hood (if present);
- perform a noise survey on the kitchen appliances; and
- conduct a safety walk-through evaluation and note any existing safety hazards.

Significant findings for this IH Assistance Visit can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix K of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On August 10, 201 [Non-Responsive] IHI Environmental (IHI), conducted an IH Assistance Visit at the Lordsburg Armory located at 720 East 2nd Street, Lordsburg, New Mexico 88045.

The primary point of contact for information gathered during this survey was [Non-Responsive]

[Non-Responsive] (505) 271-7179

[Non-Responsive]

1.1 Objectives

Evaluate the occupational environment of the administrative areas in the armory to determine the presence of operational health and safety risks, and make recommendations for corrective actions or follow-up work to manage those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- collect lead wipe samples;
- evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- review hazardous material storage and use procedures;
- review safety training, and record keeping;
- perform a ventilation survey on the kitchen stove hood (if present);
- perform a noise survey on the kitchen appliances; and
- conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

Although the Lordsburg Armory is still owned by the New Mexico Army National Guard, it is no longer occupied by members of the New Mexico Army National Guard, but is now used by the Hidalgo County Sheriff's Department. The armory has offices used for administrative purposes, a training area, drill hall, supply rooms and a vault area, restrooms, a weight room, and a former IFR that is now used as a maintenance area. There are no civilian activities at this armory other than the day-to-day work of the Sheriff's Department. The Sheriff's Department occasionally cleans weapons in Supply Room #2.

3.0 METHODS AND APPLICABLE REGULATIONS AND STANDARDS

3.1 Lead Wipe Sampling

Lead residue (dust) wipe samples were collected on horizontal surfaces, such as the drill floor, kitchen, administrative areas, and indoor firing ranges (where present) to determine housekeeping standards. Lead Wipe™ brand wipes were used with a 100-square-centimeter template. The wipes used conform to American Society for Testing and Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratories for analysis, using National Institute for Occupational Safety and Health (NIOSH) Method 7300. See Appendix I for sample locations and Appendix J for laboratory results.

The Mather, California, office of Industrial Hygiene Southwest has developed a Standard Operating Procedure (SOP) for lead, which is a blend of Occupational Safety and Health Administration (OSHA), U.S. Department of Housing and Urban Development (HUD), and Army regulations. Essentially, this SOP sets forth a criterion of 40 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. A 200- $\mu\text{g}/\text{ft}^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where the general public is not expected to visit.

3.2 Painted Surface Evaluation

The interior of the armory was visually inspected for peeling paint on the walls and ceilings.

3.3 Moisture Intrusion and Limited Visual Fungal Growth Evaluation

The interior of the armory was visually inspected for signs of moisture intrusion that could result in fungal growth. Any signs of moisture intrusion (e.g., discoloration, staining, blistering) were noted and documented on a drawing for a follow-up evaluation.

3.4 Asbestos Management

Armory personnel were asked if an asbestos survey and assessment had been conducted and whether there was a written Operations and Maintenance Program for the facility. IHI also reviewed any asbestos awareness training records.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The heating, ventilation, and air-conditioning (HVAC) systems that serve the armory were evaluated. This evaluation consisted of a visual inspection of the system to note any obvious problems, and a review of the facility maintenance plan, if one was available.

Carbon dioxide (CO₂), temperature, and relative humidity were measured throughout the armory using a TSI Model 8762 IAQ-Calc™ Monitor. The unit was calibrated before use with certified zero gas and 1,000-ppm CO₂ span gas. See Appendix E for IAQ data.

Carbon dioxide is a normal constituent of exhaled breath and is commonly measured as a screening tool to evaluate whether adequate fresh, outdoor air is being provided. If typical CO₂ levels within a building are maintained at or less than 1,000 ppm, with appropriate temperature and humidity levels, complaints about indoor air quality should be minimal (American Society for Testing and Materials (ASTM) – International D6245-12, Using Indoor Carbon Dioxide Concentrations to Evaluate Indoor Air Quality). If a building exceeds this guideline, it should not be interpreted as an unhealthy or hazardous situation. An elevated CO₂ level is only an indication that the amount of outside air being brought into a building may be inadequate or poorly distributed and further investigation may be warranted.

In building areas where there are potential sources of CO₂ other than exhaled breath, the guidelines above cannot be used. The OSHA standard for CO₂ should be used in these instances. The OSHA standard is an eight-hour time-weighted average (TWA) of 5,000 ppm with a short-term 15-minute average limit of 30,000 ppm.

3.6 Hazard Communication and Hazardous Material Storage

The armory's chemical inventory and Material Safety Data Sheet (MSDS) file was reviewed. Chemical storage areas, i.e., flammable storage cabinets/rooms, were also inspected.

3.7 Safety Training and Record Keeping

A review of safety training programs and documentation was performed to determine if the armory's site-specific training programs and annual documentation were current.

3.8 Kitchen Ventilation Survey

Duct velocity measurements were collected on the facility's kitchen exhaust hoods (when present) using a TSI VelociCalc, Model 8345.

The 2011 National Fire Protection Association Standard 96, Section 8.2.1.1, requires exhaust fan ducts used in commercial cooking equipment to have a duct velocity of not less than 500 feet per minute (fpm).

3.9 Kitchen Appliance Sound-Level Measurements

Sound-pressure levels of the kitchen appliances (when present) were measured using a Sound Level Meter in the dBA and dBC ranges, with the meter set on slow response.

DD Forms 2214 are provided in Appendix M.

3.10 General Safety Walk-Through

A limited Fire Life Safety Code walk-through evaluation of the armory was performed to:

- document the presence of a fire alarm,
- determine if fire extinguishers are properly mounted and current on their monthly and annual inspections,
- determine if eyewash station inspections are current, and
- document any fire or safety hazards in the armory.

3.11 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
TSI IAQ Calc™	8732	02100504	03/19/2012

The calibration certificates for these instruments are attached in Appendix H.

3.12 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs.
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Analytical results for lead wipe sampling indicate all locations were below the analytical criterion outlined in the IHSW SOP. See Appendix I for a data table and a drawing showing sample locations and Appendix J for the laboratory reports. Photographs were taken of each sampling point and are presented in Appendix C.

Recommendation

None

4.2 Painted Surface Evaluation

No peeling or damaged paint was observed at this armory.

Recommendation

None

4.3 Moisture Intrusion and Limited Visual Fungal Growth Evaluation

Visual evidence of water damage, moisture intrusion, of fungal growth was not observed in this armory.

Recommendation

None

4.4 Asbestos Management

An asbestos survey could not be located during this visit. Personnel have not been provided with asbestos awareness training.

Recommendations

1. Locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.
2. Once asbestos-containing materials have been identified and assessed, provide awareness training to assigned personnel for the specific material types and locations of asbestos in this armory.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The drill hall is heated by gas units located on the drill hall ceiling and cooled by swamp coolers. The office areas are heated and cooled by roof-mounted units. Personnel reported the room temperatures are within their comfort level.

The average outdoor CO₂ concentration at the time of the survey was 325 ppm. The highest CO₂ concentration measured inside the building was 645 ppm, which should not result in indoor air quality complaints.

Air temperatures ranged from 72.8 to 73.9°F and relative humidity was between 38 and 40 percent in the office areas during the testing period. Air temperatures were within the recommended comfort range of 68-75°F and the relative humidity was within the recommended comfort range of between 30 and 60 percent for the office areas. Air temperatures ranged from 90.1 to 92.4°F and relative humidity was 20 percent in the drill hall, maintenance, and weight room during the testing period. Air temperatures were above the recommended comfort range of 68-75°F and the relative humidity was below the

recommended comfort range of between 30 and 60 percent in the drill hall, maintenance area, and weight room because the large bay doors were open.

Low relative humidity is common in New Mexico during the majority of the year. Humidity levels above 60 percent can result in proliferation of bacteria and fungi, while levels below 30 percent can cause dryness in the eyes, skin, and mucous membranes.

A local HVAC company maintains all HVAC units in the armory.

Recommendation

None

4.6 Hazard Communication and Hazardous Material Storage

4.6.1 Hazardous Materials Inventory and Material Safety Data Sheets (MSDS)

All building maintenance products are stored in an outside shed. Since this building is not occupied by members of the New Mexico Army National Guard, an evaluation of the MSDS files or the chemical inventory was not accomplished.

Recommendation

None

4.6.2 Flammable Storage Cabinets

There are no flammable storage cabinets located in this armory.

Recommendation

None

4.7 Safety Training and Record Keeping

No safety training documentation exists at this armory since it is occupied by the Hidalgo Sheriff's Department.

Recommendation

None

4.8 Kitchen Ventilation Survey

There is no industrial kitchen at this facility.

Recommendation

None

4.9 Kitchen Appliance Sound-Level Measurements

There is no industrial kitchen at this facility.

Recommendation

None

4.10 General Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. There is a fire alarm in this facility maintained by a local fire alarm company.
3. Fire extinguishers are strategically located throughout the armory. All extinguishers were current on their annual but not on monthly inspections.
4. There are no eyewash stations in this facility and no chemical use that would require one.
5. Fire evacuation routes are posted in most rooms of this armory.
6. Electrical panel boxes were inspected and were found to contain no exposed wiring or openings in the panel.
7. GFCI outlets were checked for proper wiring. The outlet in the women's restroom did not trip at 7ma.

Recommendations

1. Ensure all extinguishers are inspected monthly.
2. Repair or replace the GFCI outlet in the women's restroom.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be

construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, IHI's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. IHI assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of IHI, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

Manager

November 15, 2012

Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office at 916-804-1707.

Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices
- American National Standards Institute (ANSI)/Illuminating Engineering Society (IES), Industrial Lighting.
- American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment
- AR 40-5, Preventative Medicine
- AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process
- AR 385-10, The Army Safety Program
- Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems
- DA PAM 40-ERG, Ergonomics
- DA PAM 40-501, Hearing Conservation.
- National Safety Council, Fundamentals of Industrial Hygiene
- NOR 385-10, Army National Guard Safety and Occupational Health Program
- TB MED 503, The Army Industrial Hygiene Program
- TG022, US Army Environmental Hygiene Agency (USAEHA), Industrial Hygiene Evaluation Guide
- TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997
- Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD-1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).



Photograph 1
Lordsburg Armory, Front, Exterior



Photograph 2
Lordsburg Armory, Rear, Exterior



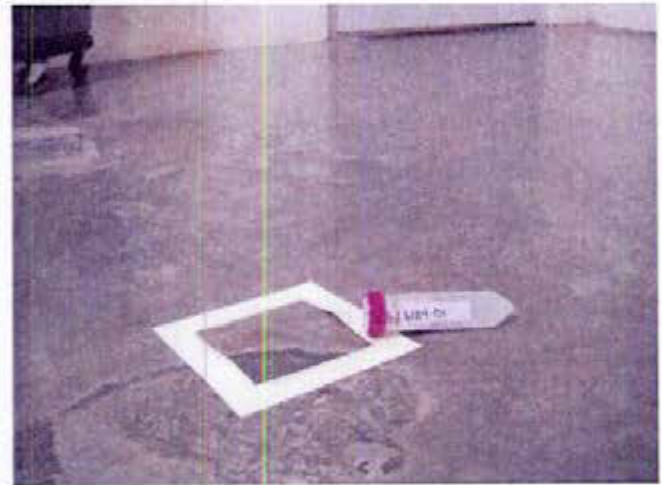
Photograph 3
Lordsburg Armory, Drill Hall



Photograph 4
Lordsburg Armory, Former IFR



Photograph 5
Lordsburg Armory, Current Occupants –
Sheriff's Department



Photograph 6
Location of lead wipe sample number 6184-01



Photograph 7
Location of lead wipe sample number 6184-02



Photograph 8
Location of lead wipe sample number 6184-03



Photograph 9
Location of lead wipe sample number 6184-04



Photograph 10
Location of lead wipe sample number 6184-05



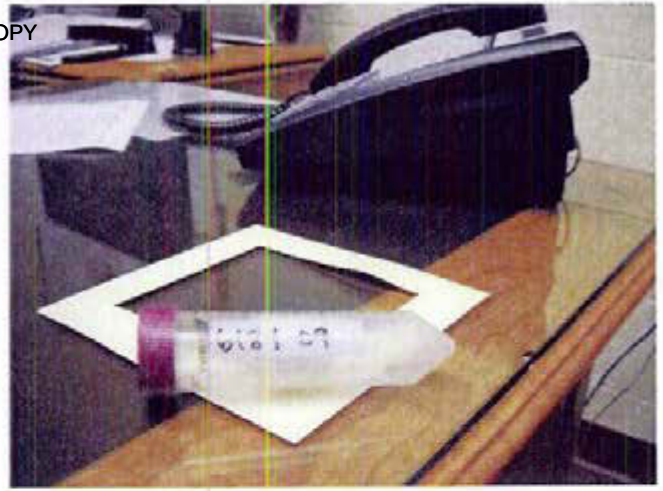
Photograph 11
Location of lead wipe sample number 6184-06



Photograph 12
Location of lead wipe sample number 6184-07



Photograph 13
Location of lead wipe sample number 6184-08



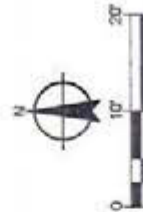
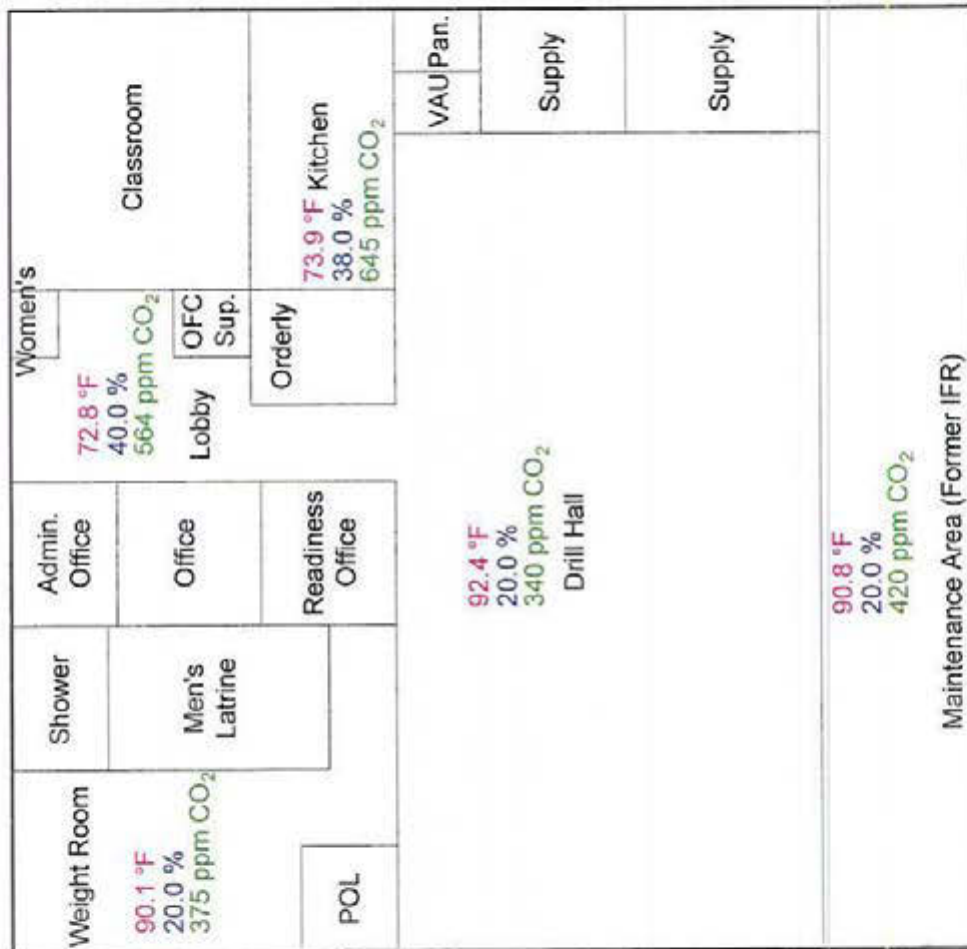
Photograph 14
Location of lead wipe sample number 6184-09

Outdoor Measurements

95.9 °F
21.0 %
325 ppr

Explanation

70.0 °F Air Temperature (°F)
30.0% Relative Humidity (%)
100 ppm Carbon Dioxide (ppm)



New Mexico National Guard
Lordsburg Armory
720 East 2nd Street
Lordsburg, New Mexico

Indoor Air Quality Sample Locations

PROJECT No:	12U-16184
SHEET NO:	2 of 3
DRAWN BY:	Keith
DATE:	08-17-2012
REVIEWED BY:	
DATE:	

Army National Guard Armory Survey (To Be Included In Report)

12U-I6184
Former Lordsburg, NM
Armory

Five lead wipe samples collected from drill floor (take samples from dusty horizontal floor surfaces)	yes.	
Are any weapons cleaned in the facility, if yes where are they cleaned?	Shurif weapons occasionally in Supply #2	
Additional lead wipe samples taken from 25% of the rest of the building - (on floor areas only)	yes.	
Is there a converted indoor firing range? If so collect additional wipe samples IAW the SOW.	yes. 2 wipe samples	
Is there any peeling paint? Take bulk sample if able.	NO.	
Are there any signs of water damage or mold?	No.	
Any suspected ACM? Where and what condition is it in. Bulk sample if able.	unsure.	
Quality of housekeeping	good	
HVAC maintenance plan in place?	local service	
Overall condition of HVAC system	good: Roof Mounted Refrigerated gas gym - swamp coolers & gas units	
Obtained CO2, Temp, RH monitoring	yes	
HAZMAT inventory on hand (make copies for the report), MSDS available for all materials.	located outside ↓	
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.		

Fire alarm in working condition - -not usually in place in older armories	local company DMCO yearly checks yes.	
Fire extinguishers in place and properly identified and mounted	only annually ↓	
Evidence of monthly fire extinguisher inspections		
Annual fire extinguisher inspections tags current	yes	
Are eye wash stations available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A	
Egress routes accessible and properly marked - -noted on <u>Fire Evacuation Plan</u>	yes	
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	N/A	
Any Photo labs	none	
Any hazardous noise sources	no.	
Light levels checked throughout building	no.	
Breaker panels properly labeled with no exposed wiring	good	
Check building occupancy 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?		
Any civilian activities in armory (club scouts, classes, day care, parties etc)		
Obtain two lead air samples	On IHSW Request Only	

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A	
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A	
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	yes.	
<u>Take photos</u> of outside of building, all sample points and any pertinent hazards or concerns.	yes.	
Name of Armory, POC, phone #, address and organizations in Armory (Add Checklist to Report)	Non-Responsive 720 E. 2nd Street Lordsburg, NM 88045 (Add Checklist to Report)	

FACILITY INFORMATION
(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: **8/10/2012**
2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit **Non-Responsive** **IHI Environmental**
3. Facility Name and Brief Summary of Primary Activities Conducted at Facility: **Lordsburg Armory – now being used by the Hidalgo Sheriff's Department**
4. Facility Address: **720 East 2nd Street, Lordsburg, NM 88045**
5. Primary Unit Assigned to Facility: **None**
6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL): **Hidalgo Sheriff's Department**
7. Square Ft. Area of Facility: **approximately 10,000 sq. ft**
8. Work Schedule: **0600 – 1630; Monday through Friday**
9. Number of work bays: **N/A**
10. Equipment Density and Type: **N/A**
 - a. List Equipment Nomenclature Serviced or Maintained at Facility: **N/A**
 - b. List Total # for Each Nomenclature Serviced or Maintained at Facility: **N/A**
11. Total Number of Personnel: **N/A**
12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **N/A**
13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **N/A**
14. Total Number of Personnel Enrolled in the Hearing Conservation Program: **N/A**

FACILITY INFORMATION
(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: **8/10/2012**
2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: **Non-Responsive HI Environmental**
3. Facility Name and Brief Summary of Primary Activities Conducted at Facility: **Lordsburg Armory – now being used by the Hidalgo Sheriff's Department**
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 - b. List Total # for Each Nomenclature Serviced or Maintained at Facility: **N/A**
11. Total Number of Personnel: **N/A**
12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **N/A**
13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **N/A**
14. Total Number of Personnel Enrolled in the Hearing Conservation Program: **N/A**

15. Total Number of Personnel Enrolled in the Respiratory Protection Program: **N/A**
16. Total Number of Personnel Enrolled in the Medical Surveillance Program: **N/A**
17. Total Number of Personnel Enrolled in the Vision Program: **N/A**
18. Facility Commander: **N/A**
 - a. Email address, Commercial Telephone Number and Unit Assigned to:
19. Safety Officer: **N/A**
 - a. Email Address, Commercial Telephone Number and Unit Assigned to:
20. Facility Telephone Number: **575 542 3833**

TSI Serial No. 02100504

Calibration Standard Multi-Gas Calibration Bench #127

Released by National Guard Bureau
Page 992 of 1628



CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8732 TSI Serial No. 02100504

Description IAQ Meter with CO2

Calibration Standard Multi-Gas Calibration Bench #127

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Difference	Error Compared to Tolerance		
			Tolerance Limit-	0	Tolerance Limit+
5001 PPM	5895 PPM	17.9 %		*	X
3000 PPM	3762 PPM	25.4 %		*	X
1000 PPM	1243 PPM	243 PPM		*	X
500 PPM	614 PPM	114 PPM		*	X
0 PPM	-15 PPM	-15 PPM		*	X
<div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ***** AS FOUND DATA ***** (INITIAL CALIBRATION CHECK) </div>					
<div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p style="text-align: right;">Tolerance Limits:</p> <p>CO2: 50PPM or 3% of reading</p> </div>					

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. Furthermore, all test and calibration data supplied by TSI has been obtained using standards whose accuracies are traceable to the National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. Calibration procedures for this instrument comply with MIL-STD-45662A. The accuracy of the calibration facilities is greater than a ratio of 1:1 with respect to the accuracy specifications of the instrument being calibrated.

Applicable Test Report	Report Number	Date Last Verified
DC Voltage	E002415	06-21-11
Barometric Pressure	E001992	04-08-11
Pure Nitrogen	UT-230	03-02-12
CO2 1000 PPM in N2	EB0013815	01-21-10
CO2 5000 PPM in N2	EB0020543	02-01-12

Non-Responsive

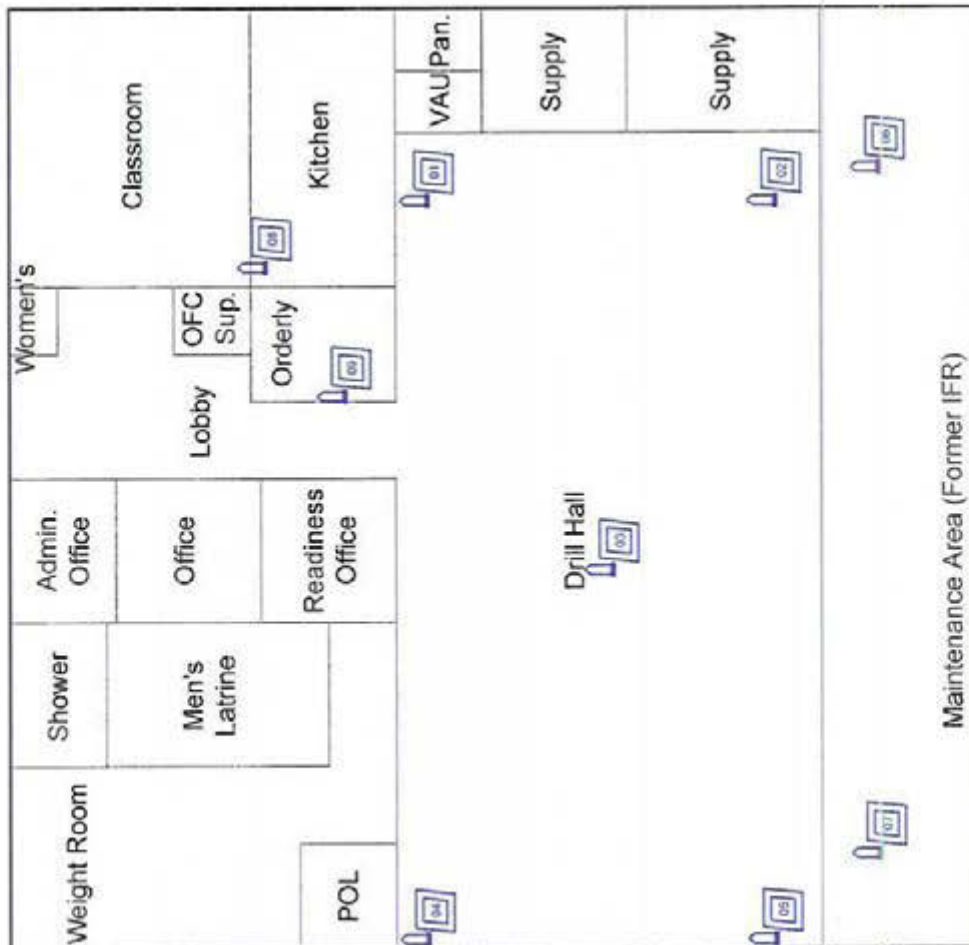
☐ Final

Mar 19, 2012

Function Check

Calibration Date

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 800-874-2811 651-490-2874 FAX: 651-490-2121 www.tsi.com



Explanation



Lead Wipe Sample Locations and Numbers

Lead Wipe Location		
Sample Number	Sample Name	Location
01	6184-01	NE area Drill Hall
02	6184-02	SE area Drill Hall
03	6184-03	Center Drill Hall
04	6184-04	NW area Drill Hall
05	6184-05	SW area Drill Hall
06	6184-06	Former IFR East Floor
07	6184-07	Former IFR West Floor
08	6184-08	Kitchen Counter
09	6184-09	POC's Desk

NOTE: All Wipe Sample Sizes are 100 cm²



New Mexico National Guard
Lordsburg Armory
720 East 2nd Street
Lordsburg, New Mexico

Lead Wipe Sample Locations

PROJECT No: 12UJ6184
SHEET NO: 1 of 3
DRAWN BY: Keith
DATE: 08-17-2012
REVIEWED BY:
DATE:

IHI
SERVIRON MENTAL
640 E. Washington Ave.
Salt Lake City, UT 84106
801-455-2223
ihs@ihs-mv.com

Lordsburg Armory - Lead Wipe and Paint Chip Sample Results**Lead Wipe Sample Results**

Sample Number	Collection Date	Location	Result $\mu\text{g}/\text{ft}^2$
6184-01	8/10/2012	NE Area of Drill Floor	<23
6184-02	8/10/2012	SE Area of Drill Floor	<23
6184-03	8/10/2012	Center of Drill Floor	<23
6184-04	8/10/2012	NW Area of Drill Floor	<23
6184-05	8/10/2012	SW Area of Drill Floor	<23
6184-06	8/10/2012	Former IFR, East Floor	<23
6184-07	8/10/2012	Former IFR, West Floor	<23
6184-08	8/10/2012	Kitchen Counter	<23
6184-09	8/10/2012	POC's Desk	<23



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ANALYTICAL REPORT

Report Date: August 15, 2012

Non-Responsive

IHI Environmental
640 East Wilmington Avenue
Salt Lake City, UT 84106

Phone: (801) 466-2223

Fax: (801) 466-9616

Non-Responsive

Workorder: 34-1222312

Client Project ID: 12U-16184/Armory-Lordsburg,
NM

Purchase Order: 12U-6184

Project Manager: Non-Responsive

Analytical Results

Sample ID: 6184-01		Media: Lead Dust Wipe		Collected: 08/07/2012	
Lab ID: 1222312001		Sampling Location: Armory-Lordsburg, NM		Received: 08/10/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 08/14/2012	
				Analyzed: 08/14/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: 6184-02		Media: Lead Dust Wipe		Collected: 08/07/2012	
Lab ID: 1222312002		Sampling Location: Armory-Lordsburg, NM		Received: 08/10/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 08/14/2012	
				Analyzed: 08/14/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: 6184-03		Media: Lead Dust Wipe		Collected: 08/07/2012	
Lab ID: 1222312003		Sampling Location: Armory-Lordsburg, NM		Received: 08/10/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 08/14/2012	
				Analyzed: 08/14/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: 6184-04		Media: Lead Dust Wipe		Collected: 08/07/2012	
Lab ID: 1222312004		Sampling Location: Armory-Lordsburg, NM		Received: 08/10/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 08/14/2012	
				Analyzed: 08/14/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, USA 84123 | PHONE +1 801 266 7700 | FAX +1 801 268 9992
ALS GROUP USA, CORP. Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

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May, 2018

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FOIA Requested Record #J-15-0085 (NM)
Released by National Guard Bureau IHREP-V10.9
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ANALYTICAL REPORT

Workorder: **34-122312**
Client Project ID: 12U-I6184/Armory-Lordsburg, NM
Purchase Order: 12U-6184
Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 6184-05		Media: Lead Dust Wipe	Collected: 08/07/2012
Lab ID: 1222312005		Sampling Location: Armory-Lordsburg, NM	Received: 08/10/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 08/14/2012 Analyzed: 08/14/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6184-06		Media: Lead Dust Wipe	Collected: 08/07/2012
Lab ID: 1222312006		Sampling Location: Armory-Lordsburg, NM	Received: 08/10/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 08/14/2012 Analyzed: 08/14/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6184-07		Media: Lead Dust Wipe	Collected: 08/07/2012
Lab ID: 1222312007		Sampling Location: Armory-Lordsburg, NM	Received: 08/10/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 08/14/2012 Analyzed: 08/14/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6184-08		Media: Lead Dust Wipe	Collected: 08/07/2012
Lab ID: 1222312008		Sampling Location: Armory-Lordsburg, NM	Received: 08/10/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 08/14/2012 Analyzed: 08/14/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6184-09		Media: Lead Dust Wipe	Collected: 08/07/2012
Lab ID: 1222312009		Sampling Location: Armory-Lordsburg, NM	Received: 08/10/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 08/14/2012 Analyzed: 08/14/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive



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ANALYTICAL REPORT

Workorder: **34-1222312**
Client Project ID: 12U-16184/Armory-Lordsburg,
NM
Purchase Order: 12U-6184
Project Manager: **Non-Responsive**

laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACCLASS (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwlabservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/Regulatory/Water.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACCLASS (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACCLASS (ISO 17025)	ADE-1420	http://www.aiclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Lordsburg Armory, Lordsburg, New Mexico

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMILA-081012-4.4 <input type="checkbox"/>	An asbestos survey could not be located during this IH Assistance Visit.	Lordsburg Armory	3	Either locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.					Recommended Practice
NMILA-081012-4.4 <input type="checkbox"/>	Personnel have not been provided with asbestos awareness training.	Lordsburg Armory	4	Based on the findings of this survey, provide awareness training to assigned personnel for the specific types of asbestos in this Armory.					Recommended Practice
NMILA-081012-4.10 <input type="checkbox"/>	Fire extinguishers have not been inspected monthly.	Lordsburg Armory	4	Inspect all fire extinguishers monthly.					29 CFR 1910.157 (e) (2) & (3) and NFPA-10-2007, Para 7.2.1.2 & 7.3.1.1.1
NMILA-081012-4.10 <input type="checkbox"/>	The GFCI outlet in the women's bathroom was not tripping between 5 and 7ma.	Lordsburg Armory	4	Contract an electrician to properly wire the GFCI outlet in the women's restroom.					NFPA 70, Article 210-8

Summary of Recommendations for NMARNG Armory, Lordsburg, NM

4.4 Asbestos Management

1. Locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.
2. Once asbestos-containing materials have been identified and assessed, provide awareness training to assigned personnel for the specific material types and locations of asbestos in this armory.

4.10 General Safety Walk-Through

1. Ensure all extinguishers are inspected monthly.
2. Repair or replace the GFCI outlet in the women's restroom



ARMY NATIONAL GUARD INDUSTRIAL HYGIENE - SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Portales Armory
109 Airport Road
Portales, NM 88130

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491



BEST AVAILABLE COPY
DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

8 November 2012

MEMORANDUM THRU New Mexico Army National Guard, Occupational Health Nurse (OHN), 600 Wyoming Blvd NE, Albuquerque, NM 87123

FOR Commander Portales Armory 109 Airport Road, Portales, New Mexico 88130

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Portales Armory 109 Airport Road, Portales, NM conducted on 11 July 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Portales Armory 109 Airport Rd, Portales, NM on 11 JUL 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Continue good housekeeping practice and clean after every episode of weapons cleaning to prevent migration of lead dust. (No RAC)

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Portales Armory 109 Airport Road, Portales, NM conducted on 11 July 2012.

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Portales Armory 109 Airport Road, Portales, NM conducted on 11 July 2012.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at

Non-Responsive

Non-Responsive

FOR

NGB, IHSW, CIV
Industrial Hygiene



NATIONAL GUARD BUREAU
111 SOUTH GEORGE MASON DRIVE
ARLINGTON VA 22204-1382

02 NOV 2012

ARNG-CSG-P

MEMORANDUM FOR **Non-Responsive** The Adjutant General of New Mexico, 47
Bataan Blvd., Santa Fe, NM 87505-4695

SUBJECT: Executive Summary for the Industrial Hygiene Survey of Portales Armory at
109 Airport Road, Portales, NM 11 JUL 2012.

1. Purpose. Industrial Hygiene Southwest Region contracted to have an Annual Industrial Hygiene (IH) survey conducted which would identify, assess, and make recommendations for the reduction or elimination of potential health hazards present in the workplace. This EXSUM provides the most critical recommendations which need to be addressed promptly. The IH Report contains additional findings and recommendations which should be addressed as funding and manpower permit.

2. Findings.

a. The Armory had the following high risk level findings:

1. There were no Risk Assessment Code(s) (RAC 1 or RAC 2) identified during this Industrial Hygiene Survey.

b. The full IH report contains information which can be used in correcting deficiencies, establishing priorities and developing suspense dates.

c. Some locations were not evaluated during this visit. However, additional IH services can be requested to monitor them for potential health hazards when operations are ongoing.

3. Recommendations. A risk assessment code (RAC) has been assigned to each health hazard identified in the report. Each type of RAC (health, safety, ergonomic) uses slightly different matrices to determine the overall severity, however a RAC 1 should be considered Critical; a RAC 2 is Serious. Follow all recommendations made in the attached IH survey report, the Violation Log as well as the following recommendations.

a. No RAC 1, or RAC 2 hazard(s) were identified at this facility.

ARNG-CSG-P

SUBJECT: Executive Summary for the Industrial Hygiene Survey of Portales Armory
NM on 11 JUL 2012.

4. The technical point of contact is **Non-Responsive** at (775) 771-3956. For follow up information, contact the Occupational Health & Safety Office, **Non-Responsive** **Non-Responsive** at (602) 267-2577..

Non-Responsive

Chief, Industrial Hygiene

CF

Chief, Occupational Health (CPT Tina Williams)

DSS, **Non-Responsive** Fairview Dr, Carson City, NV 89701

CFMO, **Non-Responsive** 460 Fairview Dr, Carson City, NV 89701

ASO, **Non-Responsive** 20,000 Army Aviation Dr, Reno, NV 89506

CF w/encl

OHN, **Non-Responsive** 2460 Fairview Dr, Carson City, NV 89701

Facility Supervisor, **Non-Responsive** 20,000 Army Aviation Dr, Reno, NV 89506



Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Portales Armory, NM

CONTROL NUMBER <input type="checkbox"/> CLOSED	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMPA-071112- Exec. Summary	Potential for lead dust from future weapons storage/cleaning within armory proper.	Armory	None	Continue good housekeeping practices and also clean after any future weapons cleaning episode.					Prudent Industrial Hygiene Practices, NGB, OSHA Regulations

BEST AVAILABLE COPY

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

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IH ASSISTANCE VISIT

**New Mexico Portales Armory
109 Airport Road
Portales, New Mexico 88130**

October 30, 2012

Prepared for:

**Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655**

Non-Responsive

Industrial Hygienist

Reviewed by:

Non-Responsive

IH Services Group Manager

Project #AL127201

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EXECUTIVE SUMMARY

On July 11, 2012, **Non-Responsive** MPH, an Industrial Hygienist with IHI Environmental (IHI), conducted an IH Assistance Visit at the former Portales Armory, which is currently the Roosevelt County Sheriff's office, located at 109 Airport Road, Portales, New Mexico 88130. The primary point of contact for information gathered during this survey was **Non-Responsive**

Non-Responsive

The objectives of this survey were to determine whether a firing range is present and operational or converted into another functional space; furthermore, the survey included collection of lead dust wipe samples throughout the entire facility in order to determine the presence of any potential lead contamination above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

A firing range was never present at the facility. Lead wipe sampling results revealed detectable levels of lead in the evidence room (former gun vault); however, concentrations were below the recommended 200- $\mu\text{g}/\text{ft}^2$ criterion for cleanup.

Significant findings for this evaluation can be found in the Lead Wipe Sample Results Table located in Appendix B of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On July 11, 2012, **Non-Responsive** MPH, an Industrial Hygienist with IHI Environmental (IHI), conducted an IH Assistance Visit at the former Portales Armory, which is currently the Roosevelt County Sheriff's office, located at 109 Airport Road, Portales, New Mexico 88130. The primary point of contact for information gathered during this survey was **Non-Responsive**

Non-Responsive

1.1 Objectives

The objectives of this IH Assistance Visit were to determine whether a firing range is present and operational or converted into another functional space; furthermore, the survey included collecting lead dust wipe samples throughout the entire facility in order to determine the presence of any potential lead contamination above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

1.2 Scope of Work

To achieve the above objective at this facility, the visit included the following:

- verify the presence and determine the status of an indoor firing range;
- collecting lead surface wipe samples throughout the facility, including, but not limited to, the firing range, adjacent spaces, and any areas where weapons are cleaned, common spaces.

2.0 PROCESS DESCRIPTION

The Roosevelt County Sheriff's office has 11 full-time deputies, four transport officers, five members in the Reserve Deputy Program, and one full-time administrative assistant, in addition to the Sheriff. The Roosevelt County Sheriff's office has administrative offices, a gym (former drill floor), a weight training room (the former armory supply room), an evidence room (former gun vault), storage rooms, locker room, and a kitchen.

The officers at the Roosevelt County Sheriff's office clean their hand guns and perform other weapons maintenance on the conference table in the Deputy's Room.

3.0 METHODS AND APPLICABLE REGULATIONS AND STANDARDS

3.1 Lead Wipe Sampling

Lead residue (dust) wipe samples were collected on horizontal surfaces, such as the drill floor, kitchen, administrative areas, and indoor firing ranges (where present) to determine housekeeping standards. Lead Wipe™ brand wipes were used with a 100-square-centimeter template. The wipes used conform to American Standards for Testing Materials E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratories for analysis, using NIOSH Method 7300. See Appendix D for sample locations and Appendix C for laboratory results.

The Mather, California, office of Industrial Hygiene Southwest has developed a Standard Operating Procedure (SOP) for lead, which is a blend of OSHA, HUD, and Army regulations. Essentially, this SOP sets forth a criterion of 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. Additionally, a 200 $\mu\text{g}/\text{ft}^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where general public access is not expected.

3.2 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

IH Services Group Manager

October 30, 2012
Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office at 916-804-1707.

Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices
- American National Standards Institute (ANSI)/Illuminating Engineering Society (IES), Industrial Lighting.
- American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment
- AR 40-5, Preventative Medicine
- AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process
- AR 385-10, The Army Safety Program
- Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems
- DA PAM 40-ERG, Ergonomics
- DA PAM 40-501, Hearing Conservation.
- National Safety Council, Fundamentals of Industrial Hygiene
- NOR 385-10, Army National Guard Safety and Occupational Health Program
- TB MED 503, The Army Industrial Hygiene Program
- TG022, US Army Environmental Hygiene Agency (USAEHA), Industrial Hygiene Evaluation Guide
- TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997
- Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Lead Wipe Sample Results

Sample Number	Collection Date	Location	Result $\mu\text{g}/\text{ft}^2$
6173-1	7/11/2012	Drill floor S.E. area	<23
6173-2	7/11/2012	Drill floor N.E. area	<23
6173-3	7/11/2012	Drill floor S.W. area	<23
6173-4	7/11/2012	Drill floor N.W. area	<23
6173-5	7/11/2012	Drill floor Center area	<23
6173-6	7/11/2012	Kitchen, food preparation table	<23
6173-7	7/11/2012	Weight Training Room (former supply room)	<23
6173-8	7/11/2012	Evidence Room (former gun vault floor)	46
6173-9	7/11/2012	Deputy's Room	<23
6173-10	7/11/2012	Conference Room	<23
6173-11	7/11/2012	Field Blank	NA



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ANALYTICAL REPORT
Amended

Report Date: July 26, 2012

Non-Responsive

IHI Environmental
640 East Wilmington Avenue
Salt Lake City, UT 84106

Phone: (801) 466-2223

Fax: (801) 466-9616

mail: kouyoumji@ihi-env.com

Workorder: **34-1219953**

Client Project ID: 12U-I6173/Orem Armory
071712

Purchase Order: 12U-I6173

Project Manager: Paul Pope

Analytical Results

Sample ID: 6173-1		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953001		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-2		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953002		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-3		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953003		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-4		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953004		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

ADDRESS: 111 West LeVoy Drive Salt Lake City, Utah 84119 USA PHONE: (801) 466-2223 FAX: (801) 466-9616
ALS GROUP USA CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



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ANALYTICAL REPORT
Amended

Workorder: **34-1219953**
Client Project ID: 12U-I6173/Orem Armory
071712
Purchase Order: 12U-I6173
Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 6173-5		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953005		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-6		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953006		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-7		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953007		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6173-8		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953008		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	5.0	46	2.5	

Sample ID: 6173-9		Media: Lead Dust Wipe		Collected: 07/11/2012
Lab ID: 1219953009		Sampling Location: Portales, NM		Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 07/18/2012
				Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)	
Lead	<2.5	<23	2.5	



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ANALYTICAL REPORT
Amended

Workorder: **34-1219953**
Client Project ID: 12U-I6173/Orem Armory
071712
Purchase Order: 12U-I6173
Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 6173-10		Media: Lead Dust Wipe	Collected: 07/11/2012
Lab ID: 1219953010		Sampling Location: Portales, NM	Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²	Prepared: 07/18/2012
			Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6173-11(FB)		Media: Lead Dust Wipe	Collected: 07/11/2012
Lab ID: 1219953011		Sampling Location: Portales, NM	Received: 07/17/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area Not Applicable	Prepared: 07/18/2012
			Analyzed: 07/19/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	NA	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alsglobal.com
Web: www.als-slc.com



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Portales Armory, NM

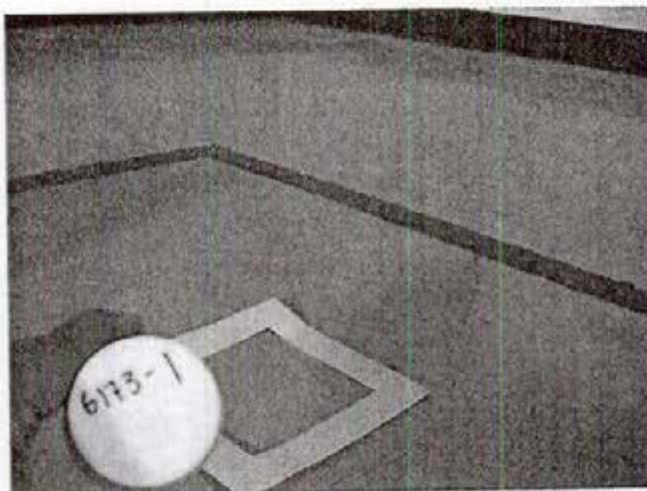
CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
CLOSED <input type="checkbox"/>									
NMPA-071112- Exec. Summary	Potential for lead dust from future weapons storage/cleaning within armory proper.	Armory	None	Continue good housekeeping practices and also clean after any future weapons cleaning episode.					Prudent Industrial Hygiene Practices, NGB, OSHA Regulations



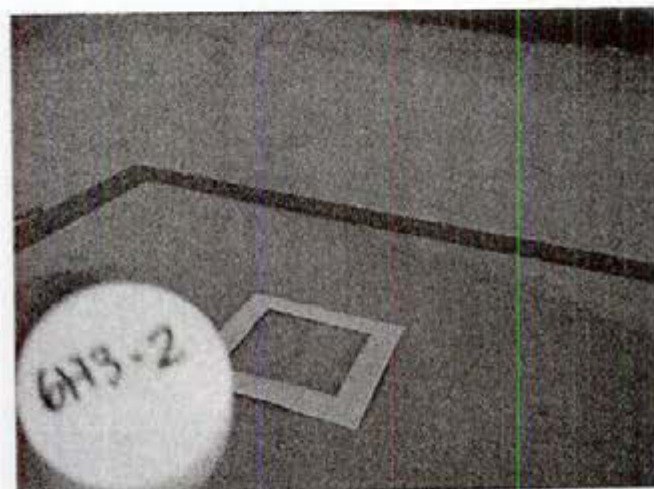
Photograph 1
Portales Armory, front, exterior view



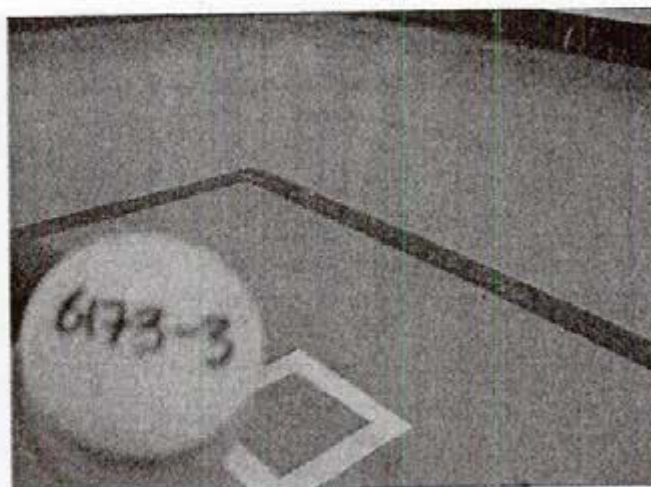
Photograph 2
Portales Armory, rear, exterior view



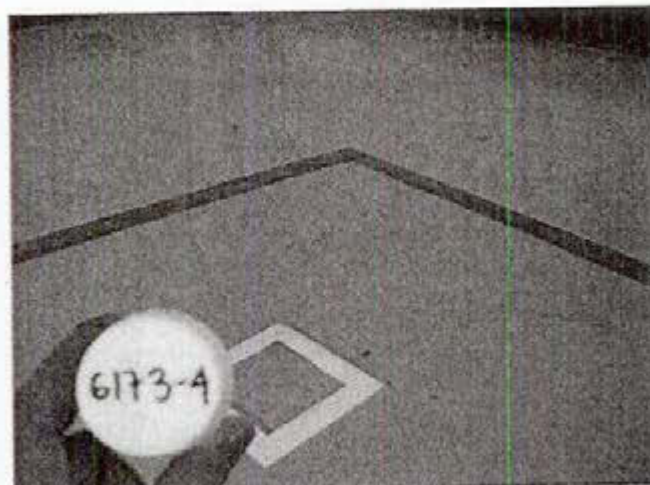
Photograph 3
Location of lead wipe sample 6173-1



Photograph 4
Location of lead wipe sample 6173-2



Photograph 5
Location of lead wipe sample 6173-3



Photograph 6
Location of lead wipe sample 6173-4

Portales (124-16173)

7/11/12

Portales Armory is no longer an armory...
it is the Roosevelt County Sheriff's office.

only wipe samples were collected from this facility

Evidence room used to be the old gun vault.
- there are confiscated weapons stored in this room... There may be lead found in wipe samples.

weapons maintenance is conducted on the conference table in the Deputy's room. Mostly hand guns. (Conducted by deputies currently)

wt training room | adjacent to evidence room used to be the old supply room...

There never was historically or currently a shooting range at this facility.



ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Rio Rancho Armory
4001 Northwest Loop
Rio Rancho, NM 87124

10510 Superfortress Avenue, Suite C, Mather, CA 95655

(916) 854-1491



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DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

22 January 2013

MEMORANDUM THRU New Mexico Army National Guard, **Non-Responsive** OHN), 600 Wyoming BLVD NE, Albuquerque, NM 87123-1038

FOR Commander, Rio Rancho Armory 4001 Northwest Loop, Rio Rancho, NM 87124

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Rio Rancho Armory 4001 Northwest Loop, Rio Rancho, NM conducted on 14 September 2012.

1. **References.** See survey report.

2. **General.**

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Rio Rancho Armory 4001 Northwest Loop, Rio Rancho, NM on 14 SEP 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. **Findings.** See survey report.

4. **Commendable.**

a. The facility personnel were helpful during this SAV.

5. **Observations / Recommendations.**

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Rio Rancho Armory 4001 Northwest Loop, Rio Rancho, NM conducted on 14 September 2012.

- a. Clean lead dust from horizontal areas identified in this report to have exceeded 40 ug/ft² of lead dust. Personnel should clean weapons in designated areas and on designated surfaces, e.g. tables, desks or floor surfaces. These areas should be cleaned after every episode and tables & desks should be marked for weapons cleaning only. (para. 4.1) (RAC 3)
- b. Improve housekeeping practices throughout the facility. Ensure personnel clean-up after themselves after each episode of weapons cleaning. Utilize the Clean-up SOP attached. (Executive Summary) (RAC 3)
- c. Asbestos survey should be accomplished for this facility. If accomplished, ensure a management program and awareness training is offered to facility and maintenance personnel. (para. 4.4) (RAC 3)
- d. Secure the oxygen cylinders so they cannot be tipped over and potentially become a missile hazard. (para. 4.10) (RAC 3)

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.
 2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.
 3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.
 4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.
 5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.
- b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSW) for the Rio Rancho Armory 4001 Northwest Loop, Rio Rancho, NM conducted on 14 September 2012.

- a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.
- b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.
- c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.
- d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.
- e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).
- f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at

Non-Responsive

Fok

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Rio Rancho Armory, Rio Rancho New Mexico

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
CLOSED <input type="checkbox"/> NMRRA-091412-4.1 <input type="checkbox"/>	Analytical results for lead wipe sampling indicate that the desktop in room 123, the classroom used for weapons cleaning, had a surface lead concentration of 77 $\mu\text{g}/\text{ft}^2$.	Room 123	3	Clean the horizontal surfaces in the classroom (Room 123) to reduce lead concentrations below the recommended level of 40 $\mu\text{g}/\text{ft}^2$.					IHSW SOP & 29 CFR 1910.1025 (h)(1)
NMRRA-091412-4.4 <input type="checkbox"/>	An asbestos survey could not be located during this IH Assistance Visit.	Rio Rancho Armory	3	Either locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.					1910.1001 (j)(3)(i)
NMRRA-091412-4.10 <input type="checkbox"/>	Annual fire extinguisher checks were not current	Rio Rancho Armory	4	Ensure that annual fire extinguisher maintenance inspections are current.					29 CFR 1910.157 (e)(3) 29
NMRRA-091412-4.10 <input type="checkbox"/>	Oxygen cylinders were not properly secured	Rio Rancho Armory	3	Secure the oxygen cylinders so they cannot be tipped over and present a missile hazard.					29 CFR 1910.253 (b)(2)(ii)
NMRRA-091412-4.10 <input type="checkbox"/>	The ground fault circuit interrupters (GFCIs) installed on the outlets within six feet of water sources in the kitchen did not interrupt the circuit when tested.	Kitchen	4	Repair or replace the GFCI located near the kitchen sink.					1910.303(b)(1) & NFPA 70, Article 210-8

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Indoor Firing Range
Decontamination and Cleaning Protocol
(Periodic Cleaning and Conversion)

1. Ensure that all procedures listed below comply with all federal, state, and local regulation. Consult with the Regional Industrial Hygiene Office and the State Environmental Office for further guidance.
2. **Ventilation System.**
 - i. The range ventilation system must be in operation during all cleaning activities. If no ventilation system is available all doors and windows must be kept sealed to prevent contamination of other areas.
3. **Materials:**
 - i. A High Efficiency Particulate Air (HEPA) filtered vacuum system is the preferred method of cleanup. In a HEPA vacuum cannot be obtained a wet method, detailed below, should be utilized. **A high-pressure water system or dry sweeping may not be used.**
 - ii. A cleaning solution containing detergent and water is recommended. New solutions of detergent and water should be mixed frequently.
 - iii. Two containers should be used; one for wetting the applicator (rags, sponge, mop) and the other for rinsing once the dust has been wiped from the surfaces.
 - iv. Wastewater in containers can be left to evaporate. Any waste left in the buckets and applicators should be disposed of as hazardous waste. **Consult the Environmental Office for appropriate disposal instructions.**
 - v. Personnel responsible for decontamination of the range and stored items should be provided with a full face air purifying respirator with a N100 filter or HEPA filter cartridge providing that all requirements for placing employees in respiratory protection have been met as detailed in 26 CFR 1910.134. Employees should be provided with protective coveralls with hood and shoe covers (i.e. Tyvex full-body

suit). Protective clothing should be hanged daily at the end of the shift and more frequently if the suit becomes grossly contaminated. If cotton coveralls are provided then the employer must provide for maintenance and laundering of protective clothing. Protective clothing should not be taken home and prior to leaving the work area, personnel should thoroughly HEPA vacuum the clothing to prevent lead dust from leaving the area. Work and street clothing should not be stored together.

4. Order of Cleaning:

- i. A progression of cleaning form top to bottom and from behind the steel backstop to the firing line should be used. All surface areas in the range must be cleaned. Stored items must be decontaminated prior to removal.
- ii. After removing the sand and/or the steel backstop, areas in front of and behind the bullet trap, along with the steel backstop plates should be cleaned.
- iii. The ceiling, lights, baffles, retrieval system, heating system, and ventilation ducts should be cleaned.
- iv. Acoustical material should be vacuumed instead of being painted over. A Toxic Characteristic Leaching Procedure (TCLP) may need to be used for acoustical material and the like, to determine if the material needs to be classified as hazardous and disposed of accordingly. The Environmental Office should be contacted regarding this testing.
- v. The floor should be the last surface cleaned starting at the bullet trap and ending behind the firing line, to include the plenum area. Concrete floors should be sealed with deck enamel, while linoleum, on the tile floor, should be waxed.
- vi. All walls should be painted, preferably with a sealant, which will help prevent any leaching of lead after covering.
- vii. Following the wet cleaning of the area and after all surfaces have been allowed to dry thoroughly, a HEPA vacuum

should be used on all surfaces, until no dust or residue can be seen. A thorough inspection to detect surface dust should be made following cleanup.

- viii. The Regional Industrial Hygiene Office should be contacted for clearance sampling and to approve the range for converted use.

5. Decontamination of Stored Items:

- i. All stored items must be decontaminated before removing from the range. Stored equipment next to the bullet trap and firing line should be decontaminated first.
- ii. A HEPA vacuum or wet cleaning method should be used. Every attempt should be made to clean the item before disposing as hazardous waste to reduce cost and waste.
- iii. Porous items such as canvas tents or other fabrics may be laundered at companies, which specialize in industrial laundry services. Office partitions and carpeting present during firing should be considered grossly contaminated and disposed of as hazardous waste. Consult the Environmental Office before removing and disposing of items.

6. Medical Surveillance.

- i. A pre-placement medical examination is required for all individuals involved with range cleanup operations.

7. Air Monitoring.

- i. Worker breathing zone air samples must be collected during range cleanup to ensure that workers are not overexposed and to evaluate clean-up procedures.

8. Hazard Training.

- i. A training program must be instituted for all individuals who are subject to exposure to lead at or above the action level, or for whom the possibility of skin or eye irritation exists. This training should be provided for all personnel currently involved in range cleanup operations, at least annually.

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IH ASSISTANCE VISIT

**New Mexico Army National Guard
Rio Rancho Armory
4001 Northwest Loop
Rio Rancho, New Mexico 87124**

December 31, 2012

Prepared for:

**Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655**

Prepared by:

Non-Responsive

Reviewed by:

Non-Responsive

Project No. AL127270

640 EAST WILMINGTON AVENUE

SALT LAKE CITY, UT 84106

TELEPHONE: 801-466-2223

FAX: 801-466-9616

E-MAIL: IHI@IHI-ENV.COM

SALT LAKE CITY

EMERYVILLE

PHOENIX

DENVER

SEATTLE

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EXECUTIVE SUMMARY

On September 14, 2012, **Non-Responsive** MPH, an Industrial Hygienist with IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the Rio Rancho Armory. The primary point of contact for information gathered during this survey was **Non-Responsive** **Non-Responsive** (505) 474-2343 **Non-Responsive**

The objectives of this IH Assistance Visit were to perform the following activities:

- collect lead wipe samples;
- evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- evaluate the condition of the Heating, Ventilation, and Air-Conditioning system, and collect indoor air quality data;
- review hazardous material storage and use procedures;
- review safety training and record keeping;
- perform a ventilation survey on the kitchen stove hood (if present);
- perform a noise survey on the kitchen appliances; and
- conduct a safety walk-through evaluation and note any existing safety hazards.

Significant findings for this IH Assistance Visit can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix K of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On September 14, 2012, **Non-Responsive** MPH, and Industrial Hygienist with IHI Environmental (IHI), conducted an Industrial Hygiene (IH) Assistance Visit at the Rio Rancho Armory located at 4011 Northwest Loop, Rio Rancho, New Mexico 87124. The primary point of contact for information gathered during this survey was **Non-Responsive** (05) 474-2343,

Non-Responsive

1.1 Objectives

The objectives of this visit were to evaluate the occupational environment of the administrative areas in the armory in order to determine the presence of operational health and safety risks, and make recommendations for corrective actions or follow-up work to manage those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- collect lead wipe samples;
- evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- review hazardous material storage and use procedures;
- review safety training, and record keeping;
- perform a ventilation survey on the kitchen stove hood (if present);
- perform a noise survey on the kitchen appliances; and
- conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Rio Rancho Armory has 26 full-time military guard members, one civilian full-time employee, and two part-time civilian employees. The armory houses administrative offices, training facilities, a drill floor, storage rooms, a locker room, and a kitchen. The organizations assigned to this armory are 111th Brigade Headquarters, 1116th Transportation Company, 919th Military Police Detachment, 920th Engineering Detachment, Alpha

Company, 1-200th Infantry Company, and Headquarters for the Recruit Sustainment Program. Civilian activities in this armory include family support for military employees. Army National Guard members occasionally use the drill hall and available classrooms (currently classroom 123) as a staging area for weapons maintenance, including cleaning guns.

The armory's housekeeping is maintained by the military staff and the maintenance of the building systems is performed by the Department of Military Affairs, Maintenance Division, when requested.

3.0 METHODS AND APPLICABLE REGULATIONS AND STANDARDS

3.1 Lead Wipe Sampling

Lead residue (dust) wipe samples were collected on horizontal surfaces such as the drill floor, kitchen, and administrative areas to determine housekeeping standards. Lead Wipe™ brand wipes were used with a 100-square-centimeter template. The wipes used conform to American Standards for Testing Materials E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratories for analysis, using NIOSH Method 7300. See Appendix I for sample locations and Appendix J for laboratory results.

The Mather, California, office of Industrial Hygiene Southwest has developed a Standard Operating Procedure (SOP) for lead, which is a blend of OSHA, HUD, and Army regulations. Essentially, this SOP sets forth a criterion of 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. Additionally, a 200 $\mu\text{g}/\text{ft}^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where general public access is not expected.

3.2 Painted Surface Evaluation

The interior of the armory was visually inspected for peeling paint on the walls and ceilings. Upon encountering peeling paint, a paint chip sample was collected by removing all paint inside a two-inch by two-inch template and placing it in a sampling vial. All samples were

3.4 Asbestos Management

Armory personnel were asked if an asbestos survey and assessment had been conducted and whether there was a written Operations and Maintenance Program for the facility. IHI also reviewed any asbestos awareness training records.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The armory's heating, ventilation, and air-conditioning (HVAC) system was evaluated. This evaluation consisted of a visual inspection of the system to note any obvious problems, and a review of the facility maintenance plan, if one is available.

Carbon dioxide (CO₂), temperature, and relative humidity were measured throughout the armory using a TSI Model 8550-X Q-Trak™ IAQ Monitor. The unit was calibrated before use with certified zero gas and 1,000 ppm CO₂ span gas. See Appendix E for IAQ data.

Carbon dioxide is a normal constituent of exhaled breath and is commonly measured as a screening tool to evaluate whether adequate fresh, outdoor air is being provided. If typical CO₂ levels within a building are maintained at or less than 1,000 ppm, with appropriate temperature and humidity levels, complaints about indoor air quality should be minimized (American Society for Testing and Material (ASTM) – International D6245-12, Using Indoor Carbon Dioxide Concentrations to Evaluate Indoor Air Quality). If a building exceeds this guideline, it should not be interpreted as an unhealthy or hazardous situation. An elevated CO₂ level is only an indication that the amount of outside air being brought into a building may be inadequate or poorly distributed and further investigation may be warranted.

In building areas where there are potential sources of CO₂ other than exhaled breath, the guidelines above cannot be used. The Occupational Safety and Health Administration (OSHA) standard for CO₂ should be used in these instances. The OSHA standard is an eight-hour time-weighted average (TWA) of 5,000 ppm with a short-term 15-minute average limit of 30,000 ppm.

3.6 Hazard Communication and Hazardous Material Storage

The armory's chemical inventory and Material Safety Data Sheet (MSDS) file was reviewed. Chemical storage areas, i.e., flammable storage cabinets/rooms, were also inspected.

3.7 Safety Training and Record Keeping

An inspection of safety training programs and documentation was performed to determine if the armory's site-specific training programs and annual documentation were current.

3.8 Kitchen Ventilation Survey

Duct velocity measurements are performed on facility kitchen exhaust hoods (when present), using a TSI VelociCalc, Model 9515.

The 2011 National Fire Protection Association Standard 96, Section 8.2.1.1, requires exhaust fan ducts used in commercial cooking equipment to have a duct velocity not less than 500 feet per minute (fpm).

3.9 Kitchen Appliance Sound-Level Measurements

Sound-pressure-levels of the kitchen appliances (when present) are measured using a MSA Type-2 Sound Level Meter in the dBA and dBC ranges, with the meter set on slow response. DD Forms 2214 are provided in Appendix L.

3.10 General Safety Walk-Through

A limited Fire Life Safety code walk-through evaluation of the armory was performed to:

- document the presence of a fire alarm,
- determine if fire extinguishers are properly mounted and current on their monthly and annual inspections,
- determine if eyewash station inspections are current, and
- document any fire or safety hazards in the armory.

3.11 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
TSI VelociCalc™	9515	T95151103007	05/03/2012
TSI Q-Trak™	8550-X	8554-01051026	09/07/2012
MSA® Sound Level Meter Type II	Type 2	00035	02/10/2012

The calibration certificates for these instruments are attached in Appendix H.

3.12 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs.
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Analytical results for lead wipe sampling indicate that the desktop in room 123, the classroom used for weapons cleaning, had a surface lead concentration of $77 \mu\text{g}/\text{ft}^2$. The surface lead concentrations exceeds the $40 \mu\text{g}/\text{ft}^2$ criterion in the IHSW SOP for lead. Surface lead concentrations in the gun vault measured $130 \mu\text{g}/\text{ft}^2$. This level is below the IHSW criterion level of $200 \mu\text{g}/\text{ft}^2$. See Appendix I for a data table and a drawing showing sample locations and Appendix J for the laboratory reports. Photographs were taken of each sampling point and are presented in Appendix C.

Recommendation

1. Clean the horizontal surfaces in the classroom (Room 123) to reduce lead concentrations below the recommended level of $40 \mu\text{g}/\text{ft}^2$. See Appendix N for cleaning procedures.

4.2 Painted Surface Evaluation

Peeling paint was observed in rooms 134E and classrooms 123A and 118 on the day of the survey. None of the paint chip samples had concentrations of lead above the limit of detection for the analytical method used.

Note: The paint samples collected can only be used for the surfaces sampled. Other areas of concern must be evaluated prior to any work that may disturb the integrity of the painted surfaces.

Recommendation

None

4.3 Moisture Intrusion and Limited Visual Fungal Growth Evaluation

Water-damaged ceiling tiles were observed in rooms 123, 110, and 104F. No visible mold growth was observed in the surveyed spaces.

Recommendation

None

4.4 Asbestos Management

An asbestos survey could not be located at the armory during this visit. **Non-Responsive** told the visiting Industrial Hygienist that a general safety report, including a building survey, was located at the headquarters in Santa Fe. The facility was constructed in 1995 or 1996.

According to the Occupational Safety and Health Administration (OSHA), Code of Federal Regulations (CFR) 1910.1001, thermal system insulation and surfacing materials found in buildings constructed before 1980 are *Presumed Asbestos Containing Material* (PACM). Although there may not be any PACM in the Rio Rancho Armory building materials, suspect materials should be tested for the presence of asbestos prior to renovation and demolition activities.

Personnel have not been provided with asbestos awareness training.

Recommendations

1. Locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.

2. If asbestos-containing materials have been identified and assessed, provide awareness training to assigned personnel for the specific material types and locations of asbestos in this armory.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The HVAC system servicing the armory consists of several roof-mounted combination heating and cooling units, evaporative cooling units, and several filtered air-handling units. The heating portion of the combination heating and cooling units consists of a gas-fired forced-air furnace. The cooling portion of the air-handling units distributes cool air through the same HVAC ducting to various areas of the building.

The State of New Mexico's Department of Military Affairs, Maintenance Division, regularly services and provides monthly preventive maintenance checks of the HVAC system for this armory.

The average outdoor CO₂ concentration at the time of the survey was 433 ppm. The highest CO₂ concentration measured inside the building was 554 ppm, which should not result in indoor air quality complaints.

Building air temperatures ranged from 64.8°F to 71.8°F and relative humidity was between 39.6% and 50.7% during the testing period. Air temperatures were within the recommended comfort range of 68°F to 75°F; the relative humidity was within the recommended range of between 30% and 60%. Humidity levels above 60% can result in proliferation of bacteria and fungi, while levels below 30% can cause dry eyes, skin, and mucous membranes.

Recommendation

None

4.6 Hazard Communication and Hazardous Material Storage

4.6.1 Hazardous Materials Inventory and Material Safety Data Sheets (MSDS)

An inventory of all hazardous chemicals in use by the armory, with the associated MSDSs, is documented in a master binder located in the cleaning supply closet along with the building maintenance products. The proper MSDS was located for each of several stored building maintenance products randomly selected.

Copies of the available chemical inventory are provided in Appendix D.

Recommendation

None

4.6.2 Flammable Storage Cabinets

There are no flammable storage cabinets located within the Rio Rancho Armory. There is a flammable cabinet located at the Field Maintenance Shop (FMS) outside of the armory; however, this cabinet was not inspected during this IH Assistance Visit. The flammable chemical inventory and associated MSDSs are maintained by the guard members at the FMS shop and are not present within the armory.

Recommendation

None

4.7 Safety Training and Record Keeping

The following safety documentation is maintained in the Rio Rancho armory:

Safety Standard Operating Procedure

- Explosives Safety Management
- Army Accident Prevention Awards Program
- Radiation Safety Management
- Safety Awards Program
- Motor vehicle Accident Prevention
- Emergency Planning and Response
- Occupational Safety and Health Program
- Chemical Agent Safety Management
- Composite Risk Management
- Emergency Action and Fire Prevention Plan
- Personal protective Equipment

AR 385-10 (The Army Safety Program)

DA Pam 385-10 (Army Safety Program)

DA Pam 385-1 (Small Unit Safety Officer/NCO Guide)

DA PAM 385-30 (Mishap Risk Management)
DA PAM 385-40 (Army Accident Investigation and Reporting)
AR 385-63 (Range Safety)
DA MEMO 385-3 (HQDA MACOM Safety Program)
PAM 385-24 (The Army Radiation Safety Program)
PAM 385-63 (Range Safety)

All other safety-related regulations are maintained electronically on the Reserve Component Automation System (RCAS) website or on a DVD located in the safety binder.

Safety training records maintained at the Rio Rancho Armory include the following:

- Hazard Communication
- Radiation Safety
- Fire Prevention

The last Safety Council meeting was held on June 14, 2012. In addition, the NMARNG has numerous required computer-based training courses with reference to safety training.

Note: IHI did not conduct a thorough evaluation of the contents or quality of any of the documents identified during this visit.

Recommendation

None

4.8 Kitchen Ventilation Survey

Duct velocity measurements could not be obtained directly for the stove/oven exhaust duct. Therefore, the duct velocity was calculated indirectly (estimated) by using the face velocity readings from the face of the hood, the area dimensions of the hood face, and the diameter of the exhaust duct. The average estimated duct velocity is approximately 650 fpm, which exceeds the NFPA recommended minimum of 500 fpm.

Recommendation

None

4.9 Kitchen Appliance Sound-Level Measurements

Sound-level measurements were made for the kitchen exhaust fans servicing the stove oven, dishwasher and sink, the food warmers, food mixer, ice machine, freezer, refrigerator, dishwasher, and garbage disposal. None of the kitchen appliances exhibited sound-pressure levels that present a risk for hearing loss. The results and risk assessment for the kitchen appliance noise survey can be found in Appendix L.

Recommendation

None

4.10 General Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. Fire alarms are present in this facility.
3. Eyewash stations were not observed in this facility.
4. Fire evacuation routes are posted in the rooms of this armory.
5. All inspected electrical panels had directories of circuits and no exposed wiring was noted.
6. Fire extinguishers are strategically located throughout the armory. The annual inspections for the inspected fire extinguishers were expired. Monthly inspections however, were current.
7. Two oxygen cylinders were found unsecured.
8. The Ground Fault Circuit Interrupter (GFCI) within six feet of the sink in the kitchen (room 153A) did not interrupt the circuit when tested

Recommendations

1. Ensure that annual fire extinguisher maintenance inspections are current.
2. Secure the oxygen cylinders so they cannot be tipped over and present a missile hazard.
3. Repair or replace the GFCI located near the kitchen sink.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, IHI's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. IHI assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of IHI, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

Industrial Hygiene Services Manager

Dec. 31, 2012

Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office at 916-804-1707.

Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices
- American National Standards Institute (ANSI)/Illuminating Engineering Society (IES), Industrial Lighting.
- American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment
- AR 40-5, Preventative Medicine
- AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process
- AR 385-10, The Army Safety Program
- Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems
- DA PAM 40-ERG, Ergonomics
- DA PAM 40-501, Hearing Conservation.
- National Safety Council, Fundamentals of Industrial Hygiene
- NOR 385-10, Army National Guard Safety and Occupational Health Program
- TB MED 503, The Army Industrial Hygiene Program
- TG022, US Army Environmental Hygiene Agency (USAEHA), Industrial Hygiene Evaluation Guide
- TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997
- Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD-1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposure Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).



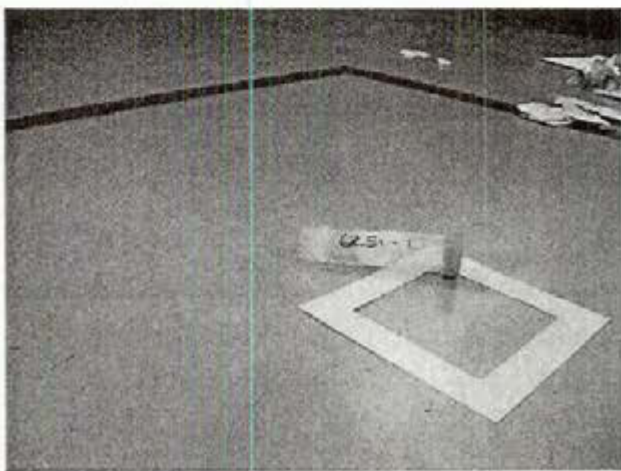
Photograph 1
View of southwest side of Rio Rancho Armory,
exterior



Photograph 2
View of north side of Rio Rancho Armory,
exterior



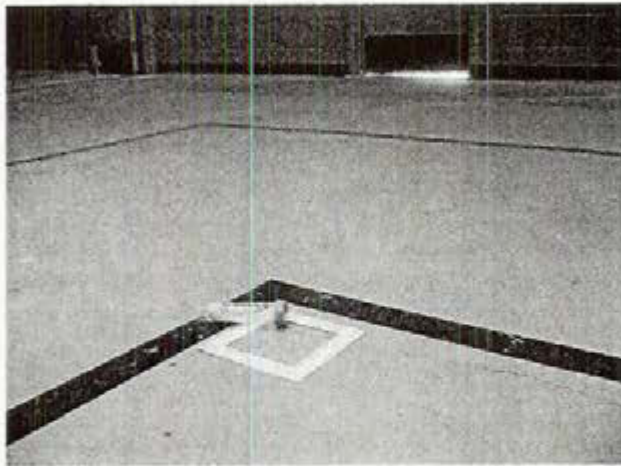
Photograph 3
View of the Rio Rancho drill hall, room 152,
interior



Photograph 4
Lead wipe sample location 6251-1, drill floor,
room 152, SW



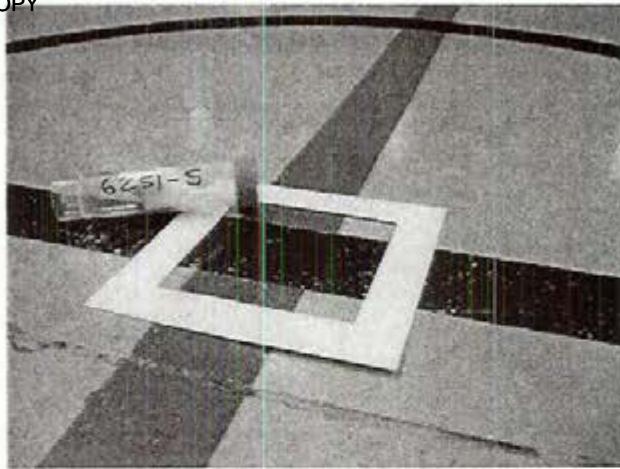
Photograph 5
Lead wipe sample location 6251-2, drill floor,
room 152, NW



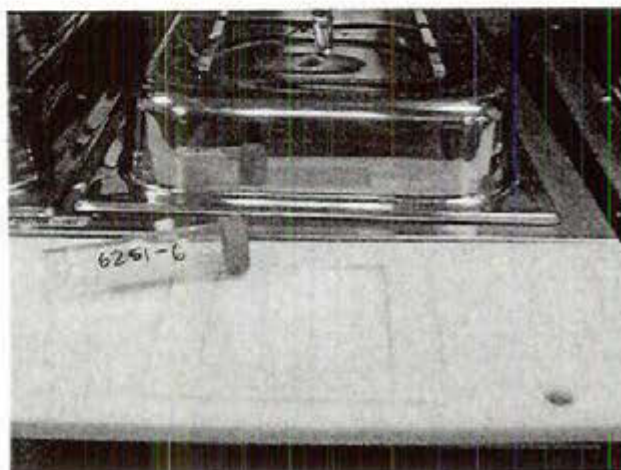
Photograph 6
Lead wipe sample location 6251-3, drill floor,
room 152, NE



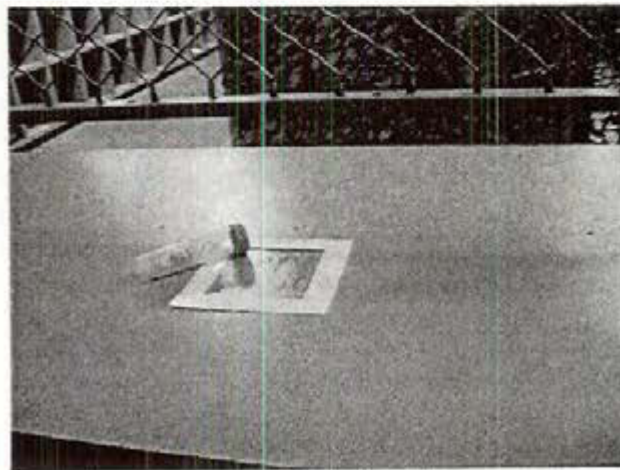
Photograph 7
Lead wipe sample location 6251-4, drill floor,
room 152, SE



Photograph 8
Lead wipe sample location 6251-5, drill floor,
room 152, center



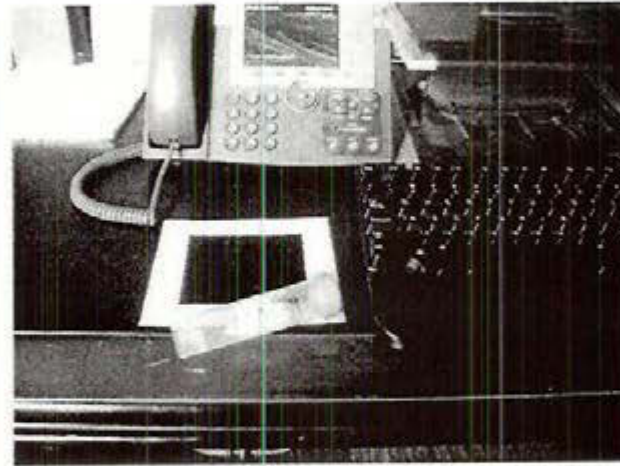
Photograph 9
Lead wipe sample location 6251-6, kitchen, room
153



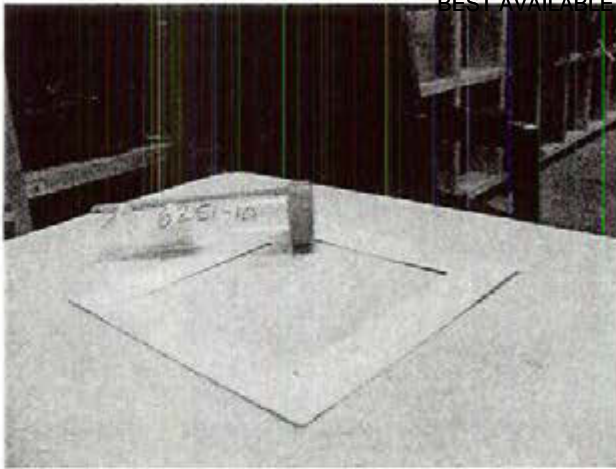
Photograph 10
Lead wipe sample location 6251-7, supply room,
room 142



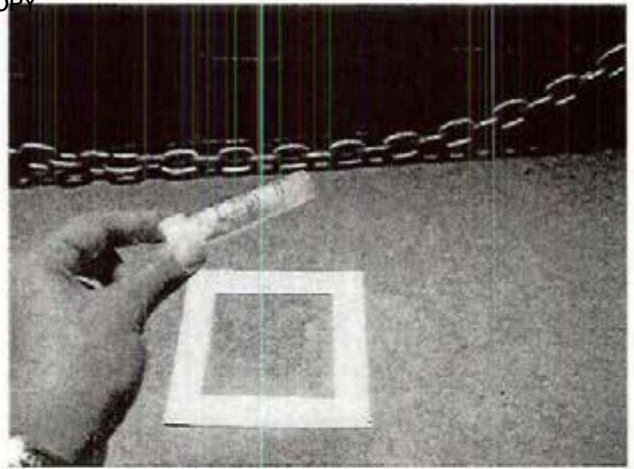
Photograph 11
Lead wipe sample location 6251-8, gun vault,
room 142 B



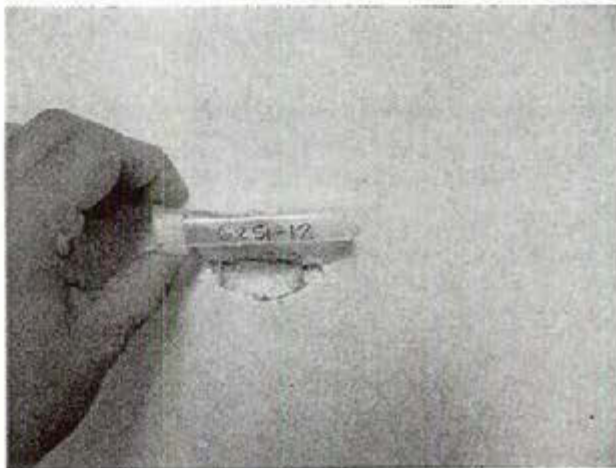
Photograph 12
Lead wipe sample location 6251-9, room 132 D



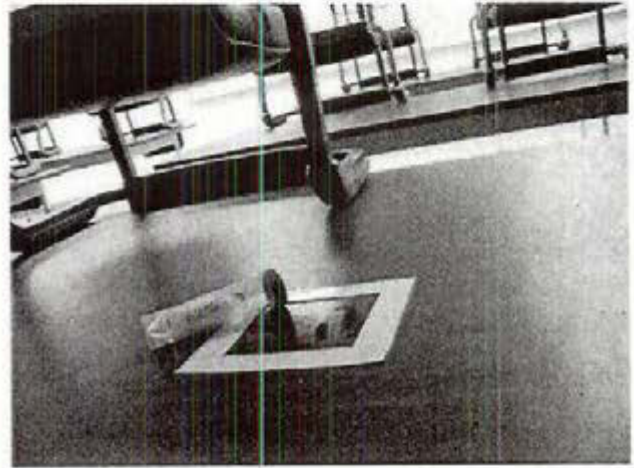
Photograph 13
Lead wipe sample location 6251-10, supply room, room 140



Photograph 14
Lead wipe sample location 6251-11, gun vault, room 140B



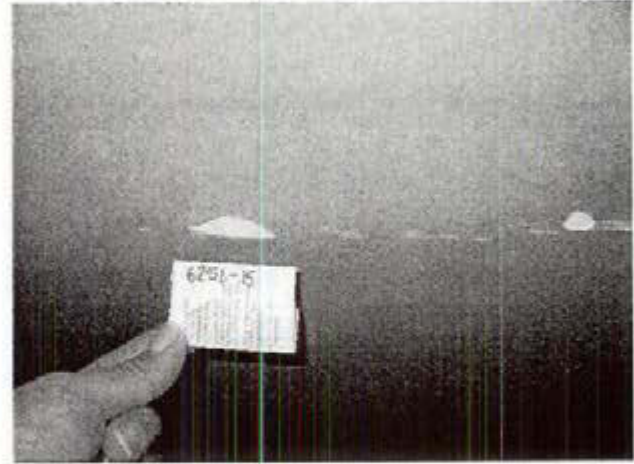
Photograph 15
Paint chip sample location 6251-12, room 134E



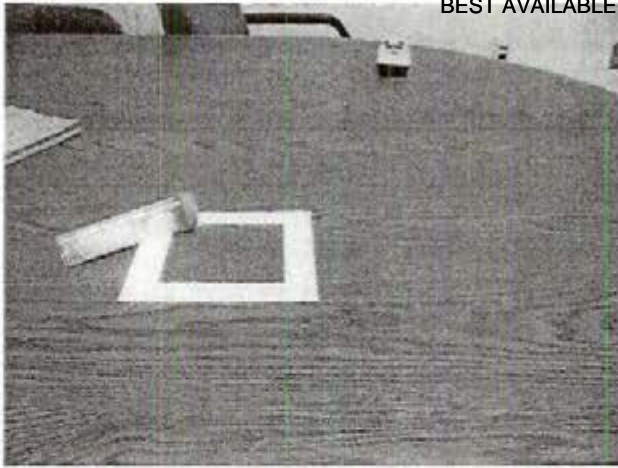
Photograph 16
Lead wipe sample location 6251-13, classroom, room 123A



Photograph 17
Paint chip sample location 6251-14, classroom, room 123A



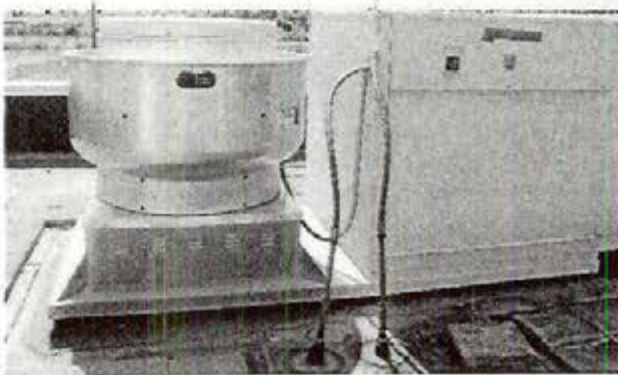
Photograph 18
Paint chip sample location 6251-15, room 118



Photograph 19
Lead wipe sample location 6251-16, room 106



Photograph 20
View of kitchen exhaust hood over stove/oven, interior



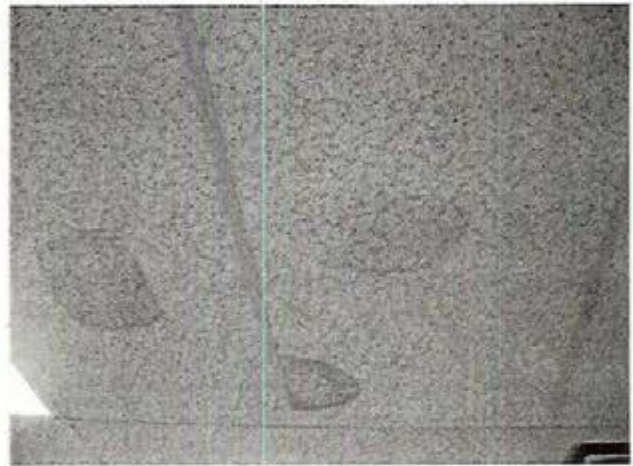
Photograph 21
View of the kitchen exhaust fan, roof



Photograph 22
Packaged combination heating and cooling units on the roof



Photograph 23
Hazardous materials storage room, room 117



Photograph 24
Water stained ceiling tiles, (room 123 A)



Photograph 25
Safety: fire extinguisher annual inspections were expired



Photograph 26
Safety: unsecured compressed oxygen cylinders

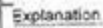


Photograph 27
Safety: GFCI within six feet of a water source did not interrupt the circuit when tested

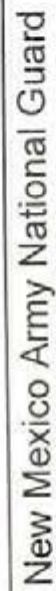
111th MATERIAL SAFETY DATA SHEET

TABLE OF CONTENTS

- A. PAD SCRUB
- B. PINE OIL
- C. SWEEPING POWDER
- D. SCOURING POWDER
- E. HAND CLEANER
- F. FLOOR FINISH
- G. HAND SOAP
- H. FLOOR FINISH
- I. SWEEPING COMPOUND
- J. GLASS MATE
- K. GENERAL PURPOSE DETERGENT
- L. PARADICHL OROBENZENE BLOCKS
- M. DISHWASHING COMPOUND
- N. FRAGRANCE CANISTER/ CHERRY TOSS URINAL SCREEN
- O. BIG JOHN BOWL CLEANER
- P. DISINFECTANT DEODORANT
- Q. RAM ROD DRAIN OPENER
- R. CLOROX DISINFECTING WIPES
- S. SIMPLE GREEN HAND CLEANER
- T. WINDEX
- U. GLASS PLUS CLEANER
- V. CLOROX BLEACH TOILET BOWEL
- W. DISHWASHING COMPOUND



70.0 °F Air Temperature (°F)
30.0 % Relative Humidity (%)
100 ppm Carbon Dioxide (ppm)

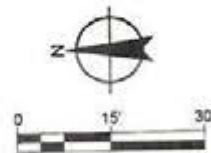


Rio Rancho Armory

4001 Northwest Loop

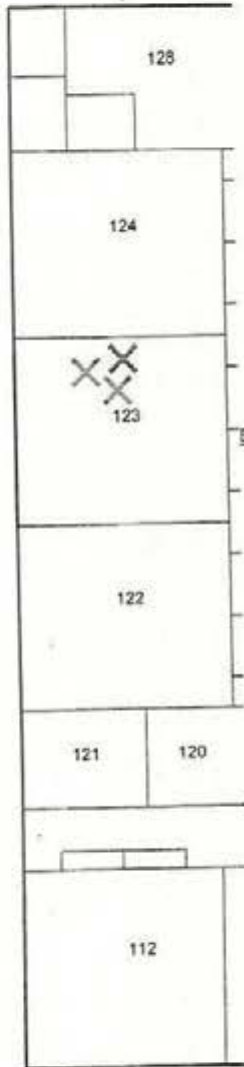
Rio Rancho, New Mexico

Indoor Air Quality Sample Locations



DATE: _____

S:\12 Projects\1216251\1216251.mxd Rio Rancho Armory New Mexico\1216251.dwg, ceiling, 10/23/2012 12:52:31 PM, Keith, AutoCAD LT 2012 R (17.00 x 11.00 inches)



Explanation



Water Stained Ceiling Tile



New Mexico Army National Guard
Rio Rancho Armory
4001 Northwest Loop
Rio Rancho, New Mexico

Water Stained Ceiling Tile Locations



PROJECT No: AL127270
SHEET: 3 of 3
DRAWN BY: Keith
DATE: 10-23-2012
REVISED BY:
DATE:
REVIEWED BY:
DATE:

Kitchen Stove/Oven Exhaust Duct Velocity Estimate

Face Dimensions = 18 X 117 Inches

Face Area = 14.625 ft²

Face Vel. Measurement Points

1 3 5 7 9 11

2 4 6 8 10 12

Face Velocity Measurements

Point Flow rate (fpm)

1 102

2 164

3 372

4 168

5 858

6 641

7 642

8 673

9 254

10 138

11 74

12 113

Ave Flow Rate 349.917 fpm

Area of Face (A) 14.625 ft²

$Q = A \times V$

Q = 5117.53 CFM

Exhaust Duct Diameter = 38 inches

Area of Roof Top Exhaust Duct = 7.87582 ft²

Estimated Duct Velocity = 649.778 fpm

Rio Rancho
 Army National Guard Armory Survey
 (To Be Included In Report)

Five lead wipe samples collected from drill floor (take samples from dusty horizontal floor surfaces)	✓
Are any weapons cleaned in the facility, if yes where are they cleaned?	yes - inside classroom 123 currently & more
Additional lead wipe samples taken from 25% of the rest of the building -- (on floor areas only)	✓
Is there a converted indoor firing range? If so collect additional wipe samples IAW the SOW.	No
Is there any peeling paint? Take bulk sample if able.	Yes
Are there any signs of water damage or mold?	yes - H ₂ O stained ceiling tiles - no signs of mold
Any suspected ACM? Where and what condition is it in. Bulk sample if able.	Yes — 1.
Quality of housekeeping	Good (v. good)
HVAC maintenance plan in place?	yes
Overall condition of HVAC system	Good
Obtained CO ₂ , Temp, RH monitoring	✓
HAZMAT inventory on hand (make copies for the report), MSDS available for all materials.	✓
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	✓ cleaning supply closet

Fire alarm in working condition - -not usually in place in older armories	✓
Fire extinguishers in place and properly identified and mounted	yes
Evidence of monthly fire extinguisher inspections	yes
Annual fire extinguisher inspections tags current	expired
Are eye wash stations available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	—
Egress routes accessible and properly marked - -noted on <u>Fire Evacuation Plan</u>	yes
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	✓
Any Photo labs	—
Any hazardous noise sources	No
Light levels checked throughout building	—
Breaker panels properly labeled with no exposed wiring	✓
Check building occupancy 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	~ 25-30 full time guard members
Any civilian activities in armory (club scouts, classes, day care, parties etc)	Family Support
Obtain two lead air samples	—

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96	✓
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	✓
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	✓
Take photos of outside of building, all sample points and any pertinent hazards or concerns.	✓
Name of Armory, POC, phone #, address and organizations in Armory	<div style="background-color: black; color: red; padding: 5px; text-align: center;">Non-Responsive</div> <p>(505) 553 - 1440</p>

4001 NW Loop
Rio Rancho Nm, 87129

FACILITY INFORMATION

(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: 9/14/12
2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: **Non-Responsive**
3. Facility Name and Brief Summary of Primary Activities Conducted at Facility:
Army National Guard, Rio Rancho
4. Facility Address:
4001 Northwest Loop
Rio Rancho, NM, 87124
5. Primary Unit Assigned to Facility: 111th Brigade Headquarters, 1116th Transportation Company, 919th Military Police Detachment, 920th Engineering Detachment, Alpha Company, 1-200th Infantry Company, and Headquarters for the Recruit Sustainment Program
6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL):
Family Support
7. Square Ft. Area of Facility: (Estimated) 53,500
8. Work Schedule: M-F 7AM-4:30PM
9. Number of work bays: 3
10. Equipment Density and Type:
25-30 915-916 Tractor Trailer
90 HMMWV
8 FMTV
2 Scrapers
1 Bulldozer 1 Loader
1 BHL
1 Grader
11. Total Number of Personnel: 26
12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): 26 AGR
13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): No maintenance personnel in this building

- 14. Total Number of Personnel Enrolled in the Hearing Conservation Program: 0
- 15. Total Number of Personnel Enrolled in the Respiratory Protection Program: 0
- 16. Total Number of Personnel Enrolled in the Medical Surveillance Program: 0

PAGE 1 of 2

- 17. Total Number of Personnel Enrolled in the Vision Program: 0

18. Facility Commander:

Non-Responsive

(505) 317-6206

19. Safety Officer:

Non-Responsive

(505) 5531426

20. Facility Telephone Number:

(505) 474-2322

Page 2 of 2



THE INDUSTRIAL DISTRIBUTION EXPERTS

Technical Services Division

Certificate of Calibration

The following equipment was calibrated to manufacturer's specification with instrumentation whose accuracies are traceable to the *National Institute of Standards and Technology*.

Manufacturer: MSA

Model: Sound Level Meter Type 2

Serial Number: 00035

Calibration Date: February 10, 2012

Calibrated By: **Non-Responsive**

1111 South 27th Street Billings, Montana 59101
1-800-947-7120

EQUIPCO**RENTALS**

BEST AVAILABLE COPY

**TSI Model 8551 Q-TRAK
CALIBRATION CERTIFICATE**DATE: 9/7/12CALIBRATED BY: JET

RENTAL I.D.: Q-TRAK. 07

SERIAL NO.: 8554-01051026CALIBRATION GAS 1 : 99.8% Nitrogen (0ppm CO₂, 0ppm CO)Lot#: 105-102192670-6RESPONSE TO GAS 1: 0 ppm CO₂0 ppm COCALIBRATION GAS 2: Carbon Dioxide 1000 ppmLot#: 919631002RESPONSE TO GAS 2: 1000 ppm \pm 3%CALIBRATION GAS 3: Carbon Monoxide 95 ppmLot#: 919631002RESPONSE TO GAS 3: 95 PPM \pm 3%

THIS INSTRUMENT HAS BEEN CALIBRATED TO MEET FACTORY SPECIFICATIONS

2100 Meridian Park Blvd, Concord, CA. 94520

Phone (888) 234-5678 Fax (925) 674-8655



CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

ENVIRONMENT CONDITION			MODEL	9515
TEMPERATURE	66.7 (19.3)	°F (°C)	SERIAL NUMBER	T95151103007
RELATIVE HUMIDITY	58	%RH		
BAROMETRIC PRESSURE	28.78 (974.6)	inHg (hPa)		

☒ AS LEFT
☐ AS FOUND

☒ IN TOLERANCE
☐ OUT OF TOLERANCE

- CALIBRATION VERIFICATION RESULTS -

TEMPERATURE VERIFICATION				SYSTEM T-101		Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED
1	32.0 (0.0)	32.1 (0.1)	31.5-32.5 (-0.3-0.3)	2	140.9 (60.0)	139.7 (59.8)
						ALLOWABLE RANGE
						139.5-140.5 (59.7-60.3)

VELOCITY VERIFICATION				SYSTEM V-111		Unit: ft/min (m/s)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED
1	0 (0.00)	0 (0.00)	-5-5 (-0.03-0.03)	7	699 (3.55)	698 (3.55)
2	30 (0.15)	30 (0.15)	25-35 (0.13-0.18)	8	1203 (6.11)	1206 (6.12)
3	60 (0.30)	61 (0.31)	55-65 (0.28-0.33)	9	1901 (9.66)	1897 (9.64)
4	101 (0.51)	102 (0.52)	96-106 (0.49-0.54)	10	2705 (13.74)	2720 (13.82)
5	200 (1.01)	198 (1.01)	190-210 (0.96-1.07)	11	3804 (19.32)	3815 (19.38)
6	397 (2.02)	399 (2.03)	377-417 (1.91-2.12)			

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003986	04-17-12	10-17-12
Barometric Pressure	E001992	04-06-12	04-06-13
Temperature	E001644	01-20-12	07-20-12
Pressure	E001058	01-18-12	01-18-13

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003987	04-17-12	10-17-12
DC Voltage	E004398	12-08-11	06-08-12
Pressure	E004041	03-30-12	09-30-12
Velocity	E003327	09-19-07	09-19-12

Non-Responsive

May 3, 2012

DATE

CALIBRATED

Doc. ID: CERT_GEN_WCC

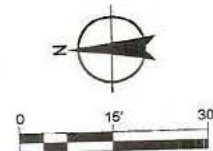
Sample Number	Collection Date	Location	Result $\mu\text{g}/\text{ft}^2$
6251-01	9/14/2012	Drill floor S.W.	< 23
6251-02	9/14/2012	Drill floor N.W.	< 23
6251-03	9/14/2012	Drill floor N.E.	< 23
6251-04	9/14/2012	Drill floor S.E.	< 23
6251-05	9/14/2012	Drill floor Center	< 23
6251-06	9/14/2012	Kitchen, on top of food preparation surface	< 23
6251-07	9/14/2012	Supply room (room 142) counter top	< 23
6251-08	9/14/2012	Gun Vault (room 142 B)	77
6251-09	9/14/2012	Desk top, room 132 D	< 23
6251-10	9/14/2012	Supply room (room 140) counter top	< 23
6251-11	9/14/2012	Gun Vault (room 140 B)	130
6251-13	9/14/2012	North classroom (room 123 A)	< 23
6251-16	9/14/2012	Conference table in room 106	< 23

Paint Chip Sample Result			
Sample Number	Collection Date	Location	Lead Result mg/kg
6248-12	9/14/2012	white paint - office (room 134 E)	< 0.0025
6248-14	9/14/2012	white paint - north classroom (room 123 A)	< 0.0033
6248-15	9/14/2012	green paint- room 118	< 0.0068



New Mexico Army National Guard
Rio Rancho Armory
4001 Northwest Loop
Rio Rancho, New Mexico

Lead Wipe & Paint Chip Sample Locations



DATE: _____



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ANALYTICAL REPORT
AmendedReport Date: October 22, 2012**Non-Responsive**Environmental
640 East Wilmington Avenue
Salt Lake City, UT 84106

Phone: (801) 466-2223

Fax: (801) 466-9616

Non-ResponsiveWorkorder: **34-1226227**

Client Project ID: 12U-16251/Rio Rancho Armory

Purchase Order: 12U-16251

Project Manager: **Non-Responsive****Analytical Results**

Sample ID: <u>6251-1</u>		Media: Lead Dust Wipe		Collected: 09/14/2012	
Lab ID: 1226227001		Sampling Location: Rio Rancho Armory		Received: 09/18/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 09/20/2012	
				Analyzed: 09/24/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: <u>6251-2</u>		Media: Lead Dust Wipe		Collected: 09/14/2012	
Lab ID: 1226227002		Sampling Location: Rio Rancho Armory		Received: 09/18/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 09/20/2012	
				Analyzed: 09/24/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: <u>6251-3</u>		Media: Lead Dust Wipe		Collected: 09/14/2012	
Lab ID: 1226227003		Sampling Location: Rio Rancho Armory		Received: 09/18/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 09/20/2012	
				Analyzed: 09/24/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

Sample ID: <u>6251-4</u>		Media: Lead Dust Wipe		Collected: 09/14/2012	
Lab ID: 1226227004		Sampling Location: Rio Rancho Armory		Received: 09/18/2012	
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²		Prepared: 09/20/2012	
				Analyzed: 09/24/2012	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)		
Lead	<2.5	<23	2.5		

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, USA 84123 | PHONE +1 801 266 7700 | FAX +1 801 268 9992

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ANALYTICAL REPORT
AmendedWorkorder: **34-1226227**

Client Project ID: 12U-I6251/Rio Rancho Armory

Purchase Order: 12U-I6251

Project Manager: **Non-Responsive****Analytical Results**

Sample ID: 6251-5		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227005		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6251-6		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227006		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6251-7		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227007		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	<2.5	<23	2.5	

Sample ID: 6251-8		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227008		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	8.2	77	2.5	

Sample ID: 6251-9		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227009		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	<2.5	<23	2.5	



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ANALYTICAL REPORT
AmendedWorkorder: **34-1226227**

Client Project ID: 12U-I6251/Rio Rancho Armory

Purchase Order: 12U-I6251

Project Manager: **Non-Responsive****Analytical Results**

Sample ID: 6251-10		Media: Lead Dust Wipe	Collected: 09/14/2012
Lab ID: 1226227010	Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm ²	Prepared: 09/20/2012
			Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6251-11		Media: Lead Dust Wipe		Collected: 09/14/2012
Lab ID: 1226227011		Sampling Location: Rio Rancho Armory		Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²		Prepared: 09/20/2012
				Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	14	130	2.5	

Sample ID: 6251-12		Media: Paint Chip	Collected: 09/14/2012
Lab ID: 1226227012		Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Weight 0.1008 grams	Prepared: 09/20/2012
			Analyzed: 09/21/2012
Analyte	%	RL (%)	
Lead	<0.0025	0.0025	

Sample ID: 6251-13		Media: Lead Dust Wipe	Collected: 09/14/2012
Lab ID: 1226227013		Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Area 100 cm²	Prepared: 09/20/2012
			Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<23	2.5

Sample ID: 6251-14		Media: Paint Chip	Collected: 09/14/2012
Lab ID: 1226227014		Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.		Sampling Parameter: Weight 0.0763 grams	Prepared: 09/20/2012
			Analyzed: 09/21/2012
Analyte	%	RL (%)	
Lead	<0.0033	0.0033	



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ANALYTICAL REPORT
AmendedWorkorder: **34-1226227**

Client Project ID: 12U-I6251/Rio Rancho Armory

Purchase Order: 12U-I6251

Project Manager: **Non-Responsive****Analytical Results**

Sample ID: 6251-15	Media: Paint Chip	Collected: 09/14/2012
Lab ID: 1226227015	Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Weight 0.0369 grams	Prepared: 09/20/2012
		Analyzed: 09/21/2012
Analyte	%	RL (%)
Lead	<0.0068	0.0068

Sample ID: 6251-16	Media: Lead Dust Wipe	Collected: 09/14/2012
Lab ID: 1226227016	Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 100 cm ²	Prepared: 09/20/2012
		Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft ² RL (ug/sample)
Lead	<2.5	<23 2.5

Sample ID: 6251-17 (FB)	Media: Lead Dust Wipe	Collected: 09/14/2012
Lab ID: 1226227017	Sampling Location: Rio Rancho Armory	Received: 09/18/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area Not Applicable	Prepared: 09/20/2012
		Analyzed: 09/24/2012
Analyte	ug/sample	ug/ft ² RL (ug/sample)
Lead	<2.5	NA 2.5

Report Authorization

Method	Analyst	
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive
NIOSH 7300 Mod.		

Laboratory Contact InformationALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123Phone: (801) 266-7700
Email: alsit.lab@ALSGlobal.com
Web: www.alsslc.com



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ANALYTICAL REPORT Amended

Workorder: 34-1226227

Client Project ID: 12U-16251/Rio Rancho Armory

Purchase Order: 12U-16251

Project Manager: Non-Responsive

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aiclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdwlabservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aiclasscorp.com
Soil, Dust, Paint, Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aiclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

** No result could be reported, see sample comments for details.

< This testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS Rio Rancho Armory, Rio Rancho New Mexico

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMRR-091412- 4.1 <input type="checkbox"/>	Analytical results for lead wipe sampling indicate that the desktop in room 123, the classroom used for weapons cleaning, had a surface lead concentration of 77 µg/ft ² .	Room 123	3	Clean the horizontal surfaces in the classroom (Room 123) to reduce lead concentrations below the recommended level of 40 µg/ft ² .					IHSW SOP & 29 CFR 1910.1025 (h)(1)
NMRR-091412- 4.4 <input type="checkbox"/>	An asbestos survey could not be located during this IH Assistance Visit.	Rio Rancho Armory	3	Either locate the asbestos survey for this building or contract with a licensed firm to perform an asbestos survey and assessment.					1910.1001 (j)(3)(i)
NMRR-091412- 4.10 <input type="checkbox"/>	Annual fire extinguisher checks were not current.	Rio Rancho Armory	4	Ensure that annual fire extinguisher maintenance inspections are current.					29 CFR 1910.157 (e)(3) 29
NMRR-091412- 4.10 <input type="checkbox"/>	Oxygen cylinders were not properly secured.	Rio Rancho Armory	3	Secure the oxygen cylinders so they cannot be tipped over and present a missile hazard.					29 CFR 1910.253 (b)(2)(ii)
NMRR-091412- 4.10 <input type="checkbox"/>	The ground fault circuit interrupters (GFCIs) installed on the outlets within six feet of water sources in the kitchen did not interrupt the circuit when tested.	Kitchen	4	Repair or replace the GFCI located near the kitchen sink.					1910.303(b)(1) & NFPA 70, Article 210-8

NOISE SURVEY (Sound Level Meter Survey)											
1. DATE (YYYYMMDD) 20120914				2. TYPE SURVEY (Enter code) 1 1 - INITIAL SURVEY 2 - RE-SURVEY 3 - OTHER							
3. SOUND LEVEL METER a. MANUFACTURER MSA				4. MICROPHONE a. MANUFACTURER MSA				5. CALIBRATOR a. MANUFACTURER MSA			
b. MODEL Type 2		c. SERIAL NO. 00035		b. MODEL Type 2		c. SERIAL NO. 00035		b. MODEL 6950		c. SERIAL NO. 07349	
d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210				d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210				d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210			
6. WIND SCREEN (X one) <input checked="" type="checkbox"/> USED <input type="checkbox"/> NOT USED				7. MEASUREMENTS OBTAINED (X one) <input checked="" type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS							
8. DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) MSA Armory Kitchen								9. PRIMARY SOURCE OF NOISE See 11a. column below			
								10. SECONDARY SOURCE OF NOISE			
11. SOUND LEVEL DATA								12. PROTECTION REQUIRED (re: dBA - Level)			
a. LOCATION		b. METER ACTION	c. dBC	d. dBA	e. RISK ASSESSMENT CODE	a. NONE (Less than 85)	b. PLUG OR MUFF (85-108)	c. PLUG AND MUFF (108-118)	d. PLUG + MUFF + TIME LIMIT (Greater than 118)		
Blodgett Food Warmers		S	78.0	75.0	IVD	X					
Univex Food Mixer		S	76.0	72.0	IVD	X					
Ice-o-matic ice machine		S	78.0	70.0	IVD	X					
True Freezer		S	75.0	67.0	IVD	X					
Hobart garbage disposal		S	84.0	82.0	IVD	X					
True Refrigerator		S	73.0	65.0	IVD	X					
NOTES: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.											
13. REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.) continued on the next page											
14. MORE DETAILED NOISE EVALUATION REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "YES," identify type evaluation needed.)											
15. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)											
16. SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION											
a. NAME (Last, First, Middle Initial) Non-Responsive				b. TELEPHONE (Include area code) (505) 474-2343				c. ORGANIZATION NMARNG			
d. NAME (Last, First, Middle Initial) Non-Responsive				18. HEARING CONSERVATION MONITOR (Last Name, First Name, MI) Non-Responsive							

NOISE SURVEY (Sound Level Meter Survey)									
1. DATE (YYYYMMDD) 20120914				2. TYPE SURVEY (Enter code) 1 1 - INITIAL SURVEY 2 - RE-SURVEY 3 - OTHER					
3. SOUND LEVEL METER			4. MICROPHONE			5. CALIBRATOR			
a. MANUFACTURER MSA			a. MANUFACTURER MSA			a. MANUFACTURER MSA			
b. MODEL Type 2		c. SERIAL NO. 00035	b. MODEL Type 2		c. SERIAL NO. 00035	b. MODEL 6950		c. SERIAL NO. 07349	
d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210			d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210			d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20120210			
6. WIND SCREEN (X one) <input checked="" type="checkbox"/> USED <input type="checkbox"/> NOT USED					7. MEASUREMENTS OBTAINED (X one) <input checked="" type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS				
8. DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) MSA Armory Kitchen						9. PRIMARY SOURCE OF NOISE See 11a. column below			
						10. SECONDARY SOURCE OF NOISE			
11. SOUND LEVEL DATA						12. PROTECTION REQUIRED (re: dBA - Level)			
a. LOCATION		b. METER ACTION	c. dBC	d. dBA	e. RISK ASSESSMENT CODE	a. NONE (Less than 85)	b. PLUG OR MUFF (85-108)	c. PLUG AND MUFF (108-118)	d. PLUG + MUFF + TIME LIMIT (Greater than 118)
Exhaust hood serving dish washer		S	78.0	64.0	IVD	X			
Exhaust hood serving sink		S	78.0	64.0	IVD	X			
Hobart automatic dishwasher		S	80.0	77.0	IVD	X			
Greenheck exhaust fan		S	87.0	83.0	IVD	X			
						X			
						X			
NOTES: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.									
13. REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.)									
14. MORE DETAILED NOISE EVALUATION REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "YES," identify type evaluation needed.)									
15. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)									
16. SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION									
Non-Responsive				b. TELEPHONE (Include area code) (505) 474-2343		c. ORGANIZATION NMGARNG			
				18. HEARING CONSERVATION MONITOR (Last Name, First Name, MI) Non-Responsive					

Summary of Recommendations for Rio Rancho Armory

4.1 Lead Wipe Sampling

Recommendation

Clean the horizontal surfaces in the classroom (room 123) to reduce lead concentrations below the recommended level of 40 $\mu\text{g}/\text{ft}^2$. See Appendix N for cleaning procedures.

4.4 Asbestos Management

Recommendations

1. Either locate the asbestos survey for this facility or contract with a licensed firm to perform an asbestos survey and assessment of building materials suspected to contain asbestos, prior to renovation and demolition activities.
2. Once asbestos-containing materials have been identified and assessed, provide awareness training to assigned personnel for the specific material types and locations of asbestos in this armory.

4.10 General Safety Walk-Through

Recommendations

1. Ensure that annual fire extinguisher maintenance inspections are current.
2. Secure the oxygen cylinders so they cannot be tipped over and present a missile hazard.
3. Repair or replace the GFCI located near the kitchen sink.

Lead

CLEANUP & FOLLOW-UP HOUSEKEEPING
RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Waste water containers.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

SOP FOR ARMORY CLEANUP

1. General.

1.1 Objective.

1.1.1. The purpose of this SOP (Standard Operating Procedure) is once a lead dust hazard has been identified and excess exists, how to lower the level of lead dust to afford a safe building, which is clean enough for all personnel exposed to this potential hazard.

1.2 Description of An Armory.

1.2.1 Armories provide a space for units to support and train soldiers.

1.2.2 The facility is utilized by Army National Guard (ARNG) family members, usually in a recreational or festive setting. This may include all members and all ages of a given family.

1.2.3 The Armory can be used for community activities, which may include all age levels.

1.3 Responsibilities.

1.3.1 It is the ARNG specialty branches, e.g., Industrial Hygiene (IH), Occupational Health & Safety's, responsibility to notify occupants of any known health risk within their facility.

1.3.2 It is the building managers responsibility to warn any users of this facility about potential hazards by, e.g., verbal, written or warning signs.

1.3.3 The ultimate responsibility falls back on the TAG of each state.

2. Background.

2.1 IH Investigation.

2.1.1 The IH community found unexpectedly high levels of lead dust during a normal IH investigation (survey) in an armory that had an Indoor Firing Range (IFR) within it. Wipe samples were taken in another armory without an IFR, only to find that this armory had higher than expected levels of lead dust, also.

2.1.2 Each ARNG Regional Industrial Hygienist has planned to survey all their armories spearheaded by the Midwest regional office, to determine the magnitude of these findings.

2.1.3 About 2/3rds of the armories tested so far, did not have "a clean bill of health". Now the IH community will attempt to discern where the contamination is coming from and also, give guidance on how to deal with these contaminant.

2.1.4 Air sampling of the armories tested have shown very low levels of lead dust in the breathing area. Dust wipe samples have varied in quantities present but have exceeded the EPA's floor standard and the ARNG IFR guidelines.

3. Relevant Standards and Guidelines.

3.1 Airborne Lead.

3.1.1 The Occupational Safety and Health Administrations (OSHA) Permissible Exposure Level (PEL) for airborne lead is **50 micrograms per cubic meter (ug/m3)**, averaged over an 8-hour work shift. The OSHA action level is 30 ug/m3.

3.2 Blood Lead Level (BLL).

3.2.1 OSHA requires that personnel who are exposed to airborne lead above the PEL be offered medical surveillance that includes blood lead level monitoring. Personnel with total **BLL above 50 micrograms per deciliter (ug/dl)** of blood are required to be removed from occupational lead exposures until the BLL drops back to 40.

3.2.2 Women who may become pregnant who are exposed to lead should consult with their physician. Fetal and newborn BLLs are similar to those of

the mother. The Center for Disease Control and Prevention considers levels above 10 ug/dl in children under 6 to be elevated BLLs.

3.3 Lead in Surface Dust.

3.3.1 There are no established standards for lead levels in dust within buildings other than those used by children under 6. The Environmental Protection Agency (EPA) along with Housing and Urban Development (HUD) floor dust lead level standard (which is currently **40 ug/ft²**) does not apply to workplace surfaces, and would be impossible to maintain in many industrial facilities. (EPA 40 CFR Part 745)

3.3.1.1 The EPA interior windowsill standard is 250 ug/ft².

3.3.1.2 The EPA standard for window trough is 400 ug/ft².

3.3.2 OSHA cites a level of 200 ug/ft² as guidance to its own inspectors for evaluating the cleanliness of lunchroom and locker room surfaces that are supposed to be kept as clean as possible.

3.4 Lead in Paint.

3.4.1 EPA's standard for lead-based paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter (mg/cm²) or 0.5 percent (%) by weight or 5000 parts per million (ppm) by weight.

4. Indoor Firing Ranges (IFR).

4.1 Relevant Standards and Guidelines.

4.1.1 OSHA guidelines stated above (see 3.3.2) are the recommended working levels to achieve in an active IFR.

4.1.2 NGR 385-10 guideline reflects that of OSHA at 200 ug/ft² for lead dust on surfaces.

4.2 Maintenance and Cleaning.

4.2.1 Follow NGR 385-10, along with SOP found in All States Letter (Log Number P00-0059 along with All States Letter (Log Number P01-0075)

addressing Policy and Responsibilities for Inspection, Evaluation and Operation of ARNG Indoor Firing Ranges. Also, utilize AR 385-63 Range Safety.

4.2.2 Cross contamination is a concern where Armories and IFR's are co-located. Keeping an IFR dust level at 200 ug/ft² does not meet the 40 ug/ft² required on floor surfaces for children 6 and under. Tracking lead dust to other parts of the armory is a concern and should be addressed by the facilities manager and the range custodian.

5. Converted/Closed Indoor Firing Ranges.

5.1 Closed IFR.

5.1.1 Closed IFR's should be not utilized for anything, e.g. storage, office space or anything else. This should be a voided space with no entry. The IFR should have been cleaned to at least 200 ug/ft² before closure to prevent contamination via air stream or other means.

5.1.2 Should be locked and signage placed on entryway to warn personnel of lead contents.

5.2 Converted IFR-- NG PAM 385-16 "Guidelines for converting of IFR."

5.2.1 These spaces should have been cleaned and taken to lowest possible level, e.g. 0-40 ug/ft², and then the proper sealant applied, retested via wipe samples. The results should be below the pre-sealant sample results and as close to zero as possible.

5.2.2 The backstop and ventilation system should have been removed prior to cleaning of the range.

5.2.3 If all of this wasn't accomplished initially and you have high lead levels after this Baseline survey, or if it was accomplished, you need to talk to the original contractor who was responsible for the cleanup or get the area re-cleaned by a different contractor. Converted IFR's have to meet certain criteria before they can be changed into something that will be utilized for an office, storage, or something else where contamination to an individual may occur.

6. Armory Cleanup.

6.1 High Test Result.

6.1.1 If the public utilizes your facility and the results came back above 40 ug/ft² you are responsible for cleaning this area and adjoining areas to meet the 40 ug/ft² or less.

6.1.1.1 Unless you can guarantee no children under the age of 7 will come into your facility.

6.1.1.2 Unless your state public health has other guidance, e.g., post signage to warn personnel who are pregnant or of child bearing age, or under the age of 7 y/o.

6.1.1.3 Signs stating "No smoking, drinking or eating, application of make-up without washing of hands prior to activity."

6.2 **Cleaning of Building.** Before proceeding into the cleanup mode, first, discuss with your Environmental office what procedures they would recommend and then coordinate your efforts with local agencies, if warranted.

6.2.1 The building, and dusty materials and equipment in it should be cleaned one time to reach the dust lead levels appropriate for the function of this facility, e.g., used by full-time personnel only, utilized by adults or children 7 y/o, or order children only, or utilized by pregnant individuals and/or children under the age of 7. **NOTE:** This type cleaning implies that this is not a facility that has an active Indoor Firing Range. For facilities with active ranges, these facilities should be monitored with wipe samples taken over the drill floor area by the Range Custodian quarterly, to ascertain the level of lead is at the required level for your particular facility and situation.

6.2.1.1 This cleanup can be accomplished using a HEPA vacuum (a very tedious and long operation) and then by utilizing a wet method with "Spic n Span" or something equivalent to this detergent - using wet rags to wipe down surfaces and mops soaked in this solution to do floor area. **NOTE:** Personal protective gloves, rubber boots or protective disposable shoe/boot covers should be used during this procedure and personnel's

clothing should be washed separately from their families, if they have young children at home. Personnel should wash their hands after performing this operation to assure lead contaminants are not ingested.

6.2.1.2 Frequent changing out of the water used is vital. Disposal of this hazardous waste water and rags/mop heads, Personal Protective Equipment (PPE), etc., should be coordinated with your Environmental office.

6.2.2 Clean all ductwork where lead was found. EPA has a protocol specifically for replacing or cleaning lead in dust form in HVAC systems. EPA Office of Pollution Prevention and Toxics, "*Reducing Lead Hazards When Remodeling Your Home*" www.epa.gov/opptintr/lead/rrpamph.pdf.

6.2.3 Continue to enforce good housekeeping and hygiene practices. These measures make good sense to minimize exposures to any toxic chemicals in the workplace.

6.2.4 Provide lead awareness training to the general workforce and any occupants of your facility.

NOTE: Before you start any new procedures or practices be aware of the local city and state regulations in your area.

June 13, 2014



ARMY NATIONAL GUARD INDUSTRIAL HYGIENE - SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Roswell Readiness Center (RC) Converted Indoor Firing Range (CIFR)

1 West Earl Cummings Loop
Roswell, NM 88201

10510 Superfortress Avenue, Suite C, Mather, CA 95655

(916) 854-1494

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494



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DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

1 April 2015

MEMORANDUM THRU New Mexico Army National Guard, ATTN:
SOHM, 600 Wyoming Blvd, NE, Albuquerque, NM 87123

Non-Responsive

FOR Commander, HHC, 717th BSB, Roswell Readiness Center (RC), 1 West Earl Cummings Loop, Roswell, NM 88201

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Indoor Firing Range (IFR) (Converted) at Roswell Readiness Center (RC), 1 West Earl Cummings Loop, Roswell, NM, dated 13 JUN 2014.

1. **References.** See attached evaluation.

2. **General.**

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the IFR in the Roswell Readiness Center (RC), 1 West Earl Cummings Loop, Roswell, NM, dated 13 JUN 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations within the Industrial Hygiene Evaluation (reference attachment). However, IHSW concurs with the observations and findings within the attached Industrial Hygiene Evaluation.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. **Findings.** Reference attached evaluation.

4. **Commendable.**

a. The facility personnel were helpful during this IHSAV.

5. **Observations / Recommendations.**

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

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a. **Background.** Multiple Industrial Hygiene Site Visits have been conducted at this facility. The earliest records maintained at the IHSW office indicate our first record visit was conducted on 22 JUL 2011. During the periods between 22 JUL 2011 to current, several space uses have been observed, i.e. IFR, office and dispatch areas, and it's current configuration – Engagement Skills Trainer (EST). During the site evaluations, lead wipe sampling analysis has consistently returned results with less than the required 40 ug/ft² throughout areas/sections where occupants may come in contact during normal use. This and previous IHSAV's did identify areas that may be considered "Hot Spots," i.e. areas with > 40 ug/ft² surface lead particulate. These areas are areas not normally in contact with general occupancy or use, however, they do indicate the need for a further and in-depth evaluation to ensure the elevated lead levels do not impact the occupied spaces. These IHSAV's also noted civilian activities, i.e. weddings, civic activities, and Non-ARNG occupancies do occur.

b. The analysis of the 13 JUN 2104 samples collected during the IHSAV indicate lead levels ranged from 150 to 2700 ug/ft² within office and IFR areas. (Ref. para. 4.3) (RAC 2)

c. **Recommendations.**

(1) **Occupant Notifications.** It is important for the State ARNG make appropriate notifications to all occupants outlining the potential hazards, measures persons must take to ensure their health, and to outline the State ARNG's plan to remediate (abate) the elevated lead levels within the facility as required by Federal, State, and local laws, regulations, and requirements. At the minimum, the following occupancy groups should be included within the notifications: AGR, IDT personnel, state employees, contract employees, youth program personnel, and all civilians. Note, the attached report provides co-tenant organizations for inclusion of notifications. Documentation of notifications should be maintained by the facility command for future reference. (reference para. 5.12 and 29 CFR 1910.1025 as a resource guide)

(2) **Recommend conducting an in-depth industrial hygiene evaluation (Holistic Lead Evaluation)** of the following facility areas to identify all elevated lead levels, provide the command with a clear assessment of areas that potentially could impact the facility, and develop Hazard Assessments (HA's) for processes involving facility maintenance and repair activities.

(a) **IFR.** - Determine status of IFR - Active, In-Active, Converted, Closed. Collect appropriate samples to identify lead levels and identify potential areas/systems that may impact other areas of facility and occupancies. Collect representative sampling of the IFR area.

(b) **Source identification and confirmation.** Evaluate facility and surrounding environment to validate and identify any and all potential lead sources, i.e. wipe, soil, and air sampling.

(c) **HVAC and Air Handling Systems/Equipment.** Evaluate Air Handling Equipment to determine lead levels and how elevated lead levels may impact facility, ventilation systems, and occupants. Collect wipe sampling from both upstream and downstream airflows of the air handling equipment to properly identify any elevated lead levels and provide corrective measures.

(d) **Facility Air Handling Duct Systems.** Evaluate facility air ducting through the collection of wipe sampling at supply and return registers within facility. Include wipe sampling from within duct systems to further clarify elevated lead levels.

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(e) Exterior Roof Top areas. Evaluate roof top air handling systems and any ventilation systems identifying any potential lead particulate entry routes into the facility areas, collect representative roof top air and roof top wipe samples to verify lead levels.

(f) Non-Occupied Spaces.

(1) Above ceiling spaces. Evaluate and collect wipe samples of all crawl spaces, plenum areas, and above drop ceilings to determine lead levels and how elevated lead levels may impact facility and occupants.

(2) Below flooring. Evaluate below floor crawl spaces to determine lead levels and methods to remediate if necessary. If the facility does not have these spaces the final evaluation must indicate such.

(3) Plenum areas. Evaluate all plenum spaces to ensure a complete understanding for how these spaces were designed/used for air circulation. These may prove to significantly enhance lead migration throughout the facility.

(g) Occupancy Density and Occupancy Types. Identify owning unit by Unit Identification Code (UIC), co-tenant organizations (include UIC), status of ARNG personnel (AGR, TECH., IDT, State (maintenance), Contract, Civilian, Volunteer(s), youth programs, and any other activities conducted at facility.

(1) Based on occupancies observed, provide notifications and education – Personal Protective Equipment (PPE) usage requirements, routine cleaning methods (general housekeeping), measures personnel should take to protect their health (frequent washing (hands/clothes), eating, drinking, etc.) to all personnel.

(2) Recommend the State ARNG determine what Non-ARNG occupancies should be allowed to occupy or utilize the facility prior to the conclusion of the lead evaluation.

(h) Occupied spaces (wipe sampling and area air sampling). Collect representative wipe samples to identify elevated lead levels and identify any potential areas/systems that may impact other areas of facility and occupancies. This sampling regime should include air sample collection for all spaces persons may enter, to properly identify inhalation hazards.

(i) It is important for the State ARNG take a holistic approach to remove all potential and existing lead hazards from within this facility by treating/remediating all non-occupied, as well as occupied, areas of this facility.

(j) It is important for all remediation activities be followed by post-remediation sampling verification. Recommend an ARNG Industrial Hygiene resource be utilized to verify all post-remediation/cleaning activities and are completed IAW the AR, ARNG, and NM ARNG Scope of Work. This will ensure lead levels are acceptable for re-occupancy and all work has been conducted accordingly. (reference para. 4.4)

(1) To ensure timely corrective action and completion of recommended treatment and /or

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remediation, the NGB IHSW Office anticipates providing continued support to NM ARNG for project completion.

(3) Develop, implement, and communicate a plan to eliminate/reduce elevated lead levels noted during Holistic Lead Evaluation. (reference 29 CFR 1910.1025 as a resource guide)

(4) Continue to maintain and/or improve housekeeping practices throughout the facility/armory to maintain lead particulate concentrations below the ARNG standard of $40 \mu\text{g}/\text{ft}^2$, or clean as possible. Utilize the enclosed Clean-up SOP as a guide to assist with these prevention efforts. Periodic cleaning for prevention purposes will eliminate and reduce the potentials for re-introduction of lead particulate and maintain areas as free as possible from the lead hazards currently observed. This will enhance occupants continued health and safety. (reference DODI 6055.01 Appendix to Enclosure 4, date 14 OCT 2014)

(5) Although not observed during this IHSAV, personnel must clean areas after all weapons cleaning activities, all surfaces, e.g. table tops, desks and floors. Designate tables used for weapons cleaning by labeling "For Weapons Cleaning Only". All perishable cleaning products/equipment (i.e. rags, towels, etc.) should be properly disposed of after use. (reference DODI 6055.01 Appendix to Enclosure 4, date 14 OCT 2014)

(6) It is important to note, maintenance activities within the IFR, HVAC and Air Handling Equipment, Duct Systems, Exterior Rooftop, Above Ceiling, Below Flooring, Plenum areas may disturbed lead particulate and generate unwanted lead particulate within the administrative areas of the facility. These processes types can be evaluated and the PPE requirements established to ensure occupant and maintenance personnel are not introducing additional hazards into the work areas through the development of Hazard Assessments (HA's). (reference para. 4.4)

(7) Conduct a facility survey to identify Asbestos Containing Material (ACM) within the facility and develop an ACM Management Plan. Conduct awareness training to all personnel who occupy the facility regarding the findings and the ACM Management Plan. The survey may have been completed, however, at the time of this assistance visit, awareness training, ACM identification, or an ACM Management Plan were not noted. (Exec. Summary) (RAC 3)

(8) It is important for State ARNG to determine a classification of all IFR's within the state to properly implement the appropriate control measures for continued occupant health and to control elevated lead surface levels to "as clean as possible," i.e. $40 \mu\text{g}/\text{ft}^2$, throughout the non-IFR areas of the facility. The following are the recommended classifications IHSW is currently using for any space that has been, or currently is, an IFR.

(a) **Active IFR.** The range is continually used for normal small arms use as long as it is maintained IAW with the criteria outlined in NGR 385-15, Policy and Responsibilities for Inspection, Evaluation and Operation of Army National Guard Indoor Firing Ranges.

(b) **In-Active IFR.** The range is deactivated and maintained IAW criteria outlined in NGR 385-15, this allows the command to reopen to an Active IFR status to support future small arms usage.

(c) **Closed IFR.** The IFR is locked with no access and maintained as necessary IAW NGR 385-15. In a Closed Status, the range must not be used for any occupancy or any storage. The Closed IFR

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must remain vacant of all activities and occupancies until all remediation has been completed (Converted) and the IFR remediation is certified "complete" by an ARNG Industrial Hygienist (OPM 0690 Series) resource.

(d) **Converted IFR.** The IFR is converted IAW NG Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges. It is important for the work to convert the IFR be certified by an ARNG Industrial Hygienist (OPM 0690 Series) resource. All sampling data and evaluation documentation must be retained for future reference to ensure positive measures have been taken to properly convert the space for occupancy or other uses.

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

(1) Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

(2) Corrective measures should be implemented and accomplished at the lowest level possible. Hazards and Corrective Measures that cannot be corrected at the facility level, requiring assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety and Occupational Health Council Meetings for resolution.

(3) Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

(4) Retain entries of the items corrected, or closed, for future reference. This may be accomplished by annotating completed items within the included Violation Correction Log Date Corrected or Corrective Actions portion of the spreadsheet of the Excel Workbook we've provided.

(5) The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes observed during this evaluation. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

b. Hazard Assessment documentation provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

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c. Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

d. IHSW also recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the State ARNG IHT, Occupational Health, and Safety Professions.

e. The Hazard Assessments provided may be used as examples for some of the facility processes. Additional operations can utilize this format to develop initial HA's not observed during this evaluation.

f. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the State ARNG Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

g. IHSW recommends using the completed and approved Hazard Assessments for monthly meetings to brief/train, and document large group training events and activities (5 Minute Topics).

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at

Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Regional Industrial
Hygiene Manager



Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Indoor Firing Range (IFR) - Roswell, New Mexico

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/INCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
<input type="checkbox"/> CLOSED									
NMRIFR-06132014-4.3	Lead concentrations exceeded established criteria	Converted IFR	2	See Corrective Actions at the bottom of the Violation Inventory Log					29 CFR 1910.1025 (h)(1)
NMRIFR-06132014-5.3	Suspected asbestos containing building materials; inspection, re-inspection, & Hazard Management Plan	Facility	3	Conduct a facility survey to identify & assess extent of asbestos hazards; develop & implement an Asbestos Hazard Management Plan					AR 420-1 5-24b, c, & d

RECOMMENDED CORRECTIVE ACTIONS FOR NMRIFR-06132014-4.3

- 1) Notify all occupants outlining the potential hazards and the States plan to remediate (abate) the elevated lead levels within the facility
- 2) Avoid any maintenance, repair, cleaning, and any other activities that may disturb settled dust & existing lead contamination on elevated surfaces.
- 3) Determine what Non-ARNG occupancies should be allowed to occupy or utilize the facility prior to the conclusion of the lead evaluation.
- 3) Have a ARNG Industrial Hygiene resource conduct an in-depth industrial hygiene evaluation (Holistic Lead Evaluation)
- 4) Take a holistic approach to remove all potential and existing lead hazards from within this facility by treating/remediating all non-occupied as well as occupied areas.
- 5) Have a ARNG Industrial Hygiene resource conduct post-remediation wipe sampling to verify post cleaning/remediation efforts were sufficient

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Indoor Firing Range

Decontamination and Cleaning Protocol

(Periodic Cleaning and Conversion)

1. Ensuring that all procedures listed below comply with all federal, state, and local regulation. Consult with the Regional Industrial Hygiene Office and the States Environmental Office for future guidance.

2. Ventilation System

The range ventilation system must be in operation during all cleaning activities. If no ventilation system is available all doors and windows must keep sealed to prevent contamination of other areas.

3. Materials

- I. A High Efficiency Particulate Air (HEPA) filtered vacuum system is the preferred method of cleanup. If a HEPA vacuum cannot be obtained a wet method, detailed below, should be utilized. **A high-pressured water system or dry sweeping may not be used.**
- II. A cleaning solution containing detergent and water is recommended. New solutions of detergent and water should be mixed frequently.
- III. Two containers should be used; one for wetting the applicator (rags, sponge, mop) and the other for rinsing once the dust has been wiped from the surfaces.

- IV. Wastewater in containers can be left to evaporate. Any waste left in the buckets and applicators should be disposed of as hazardous waste. Consult the Environmental Office for appropriate disposal instructions.
- V. Personnel responsible for decontamination of the range and stored items be provided with a full face air purifying respirator with a N100 filter or HEPA filter cartridge providing that all requirements for placing employees in respiratory protection have been met as detailed in 29 1910.134. Employees should be provided with protective coveralls with hood and shoe covers (i.e. Tyvex TM full body suite). If cotton coveralls are provided then the employer must provide for laundering of protective clothing. Protective clothing should not be taken home. Prior to leaving the area, personnel should thoroughly HEPA vacuum the clothing to prevent lead dust from leaving the area. Work and street clothing should not be stored together.

4. Order of Cleaning

- I. A progression of cleaning from top to bottom and from behind the steel backstop to the firing line should be used. All surface areas in the range must be cleaned. Stored items must be decontaminated prior to removal.
- II. After removing the sand/or the steel backstop, areas in front of and behind the bullet trap, along with the steel backstop plates should be cleaned.
- III. The ceilings, lights, baffles, retrieval system, heating system, and ventilation ducts should be cleaned.

- IV. Acoustical material should be vacuumed and removed instead of being painted over. A toxic Characteristic Leaching Procedure (TCLP) test may be used for acoustical material to determine if the material needs to be classified as hazardous and disposed of according to it. The Environmental Office should be contacted regarding this testing.
- V. The floor should be the last surface cleaned starting at the bullet trap and ending behind the firing line, to include the plenum area. Concrete floors should be sealed with deck enamel, or lead paint sealant.
- VI. All walls should be painted, preferably with a lead sealant paint, which will help prevent any leaching of lead after covering.
- VII. Following the wet cleaning of the area and after all surfaces have been allowed to dry thoroughly, a HEPA vacuum should be used on all surfaces, until no dust or residue can be seen. A thorough inspection to detect surface lead dust should be made following cleanup.
- VIII. The Regional Industrial Hygiene Office should be contacted for clearance sampling and to approve the range for converted use.

5. Decontamination of Stored Items

- I. All stored items must be decontaminated before removing from the range, stored equipment next to the bullet trap and firing line should be decontaminated first.

- II. A HEPA vacuum or wet cleaning method should be used. Every attempt should be made to clean the item before disposing as hazardous waste to reduce cost and waste.
- III. Porous items such as canvas tents or other fabrics may be laundered at companies, which specialize in industrial laundry services. Office partitions and carpeting present during firing should be considered grossly contaminated and disposed of as hazardous waste. Consult the Environmental Office before removing and disposing of items.

6. Medical Surveillance

A pre-placement medical examination is required for all individuals involved with range cleanup operations.

7. Air Monitoring

Worker breathing zone air samples must be collected during range cleanup to ensure that workers are not overexposed and to evaluate clean-up procedures.

8. Hazard Training

A training program must be instituted for all individuals who are subject to exposure to lead at or above the action levels, or for whom the possibility of skin or eye irritations exists. This training should be provided for all personnel currently involved in range cleanup operations, at least annually. As required by 29 CFR 1910.1025(I)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.



INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

**CONVERTED INDOOR FIRING RANGE
1 WEST EARL CUMMINGS LOOP
ROSWELL, NEW MEXICO 88201**

June 13, 2014

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

NES Job Number: 013.IH1716.33

Non-Responsive

Reviewed by:

Non-Responsive



Non-Responsive

Non-Responsive

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EXECUTIVE SUMMARY

On June 13, 2014, **Non-Responsive** Certified Industrial Hygienist (CIH) with Network Environmental Systems, Inc. (NES), conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the converted Indoor Firing Range (IFR) located at 1 West Earl Cummings Loop in Roswell, New Mexico. The primary point of contact (POC) for information gathered during this survey was **Non-Responsive** who may be reached by phone at (505) 463-0895 or by email at **Non-Responsive**.

The objectives of this IHSAV were to:

- Obtain historical information regarding the conversion of the IFR;
- Inspect & assess the converted IFR space & HVAC system;
- Collect metal surface wipe samples;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards;
- Inspect & evaluate the paint booth operation and systems (if present); and
- Evaluate the facility for potential asbestos, lead, and mold hazards.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest (IHSW) – Violation Inventory Log located in Appendix L of this report. The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as methodologies, results, findings, regulatory requirements, and recommendations. Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: The assistance of **Non-Responsive** was greatly appreciated for providing all resources necessary to accomplish this IHSAV.

1.0 INTRODUCTION

On June 13, 2014, **Non-Responsive** CIH with NES conducted an IHSAV at the converted IFR located at 1 West Earl Cummings Loop in Roswell, New Mexico. The primary POC for information gathered during this survey was **Non-Responsive** who may be reached by phone at (505) 463-0895 or by email at **Non-Responsive**

1.1 Objectives

The primary objective of the IHSAV was to evaluate the occupational environment of the areas within the Roswell converted IFR in order to determine the presence of health and safety risks. Processes and activities at the facilities were evaluated and recommendations to control the existence and extent of potentially hazardous operations or conditions at the Army National Guard (ARNG) facility were documented accordingly. This IHSAV will serve to establish a baseline Hazard Assessment (HA) / Job Safety Analysis (JSA) of workplace and process conditions or update/validate a previous HA/JSA so a worker's history of exposures, or potential exposures is provided for each civilian and military employee.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Obtain historical information regarding the conversion of the IFR;
- Inspect & assess the converted IFR space & HVAC system;
- Collect metal surface wipe samples;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards;
- Inspect & evaluate the paint booth operation and systems (if present); and
- Evaluate the facility for potential asbestos, lead, and mold hazards.

2.0 PROCESS DESCRIPTION

The Roswell converted IFR facility is located within the 44,676 square foot (ft²) Roswell Readiness Center (RC) building. The RC building contains offices used for administrative support purposes and contained a formerly active IFR used by National Guard personnel. The former IFR was reportedly converted into a laser target training system in 2000. A concrete block wall was installed to repurpose part of the IFR into additional office space, labeled "New Mexico State Guard." There was no documentation of the conversion or renovation available during the IHSAB. Personnel on-site did not know whether asbestos was present, inspected, or abated as part of the renovations to the IFR. There were no records (building material survey or Asbestos Hazard Management Plan) available on-site.

The facility operates Tuesday thru Friday from 0830 to 1630. The primary units assigned to the facility were the HHC 717th BSB and the 920th Engineering Company, reported to have Unit Identification Codes (UIC) of WX8CT0 and WPLHAA respectively. There were a total of eighteen (18) full time guard members assigned to the facility. A copy of the employee list is provided in Appendix K.

NES visually inspected the areas that made up the old IFR in order to identify building materials that may have been in place while the IFR was active. The majority of building materials appeared to be newer and part of the renovations to the space. The walls and half of the concrete floor within the space used as a laser target training system have been painted black. The ceiling in the converted section of the IFR was open and consisted of exposed ducting, fiberglass insulation, and other mechanical components that may have been present when the IFR was active.

NES observed records indicating one (1) previous IHSAB had been conducted to evaluate the conditions of the converted IFR. The IHSAB was conducted by IHI Environmental (IHI) on July 10, 2012. According to the POC, the 2012 IHI report documented the lead concentrations within the converted IFR spaces following renovations and cleaning. The reported purpose of the IHSAB was to determine whether an IFR was present / active or converted into another functional space, and collecting lead wipe samples to determine the presence of lead contamination within the facility. NES was provided a copy of the report, minus appendices (e.g. sample results for lead wipe sampling), during the site visit. NES conducted a cursory review of the report to assist with assessment of existing conditions and the potential for persisting lead hazards. The report didn't specify sample locations or the number of samples collected by IHI. NES suspects this information was located in the missing appendices. However, the lead wipe sampling results reported by IHI were below

200 micrograms per square foot ($\mu\text{g}/\text{ft}^2$). A copy of the 2012 targeted IHSAB report is provided in Appendix T.

NOTE: The RC facility was evaluated by NES during a separate IHSAB conducted on June 12, 2014. Detailed observations made at the RC facility are provided in a separate, corresponding IHSAB report, dated June 12, 2014. Field notes for the IHSAB conducted at both the RC and converted IFR are provided in Appendix G of this report.

During the opening conference meeting, NES was informed of the following:

- The RC facility is available to and rented by the public for weddings and parties. The facility is accessible to children.
- Weapon cleaning is reportedly not performed at the facility.

3.0 METHODS

NES assessed multiple conditions and operations using quantitative means. The methods used to conduct these assessments are detailed in this section. Results of these assessments are detailed in Section 4.0.

3.1 Indoor Air Quality

Carbon dioxide (CO₂) measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO₂, water vapor, and other bio effluents during respiration. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2013, *Ventilation for Acceptable Air Quality*, recommend maintaining CO₂ below a concentration that is 700 parts per million (ppm) above outdoor levels. Outside CO₂ concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO₂ concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bio effluents (body odors).

Temperature is commonly measured during IAQ assessments to determine comfort of occupants. According to ASHRAE, in their standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*, indoor temperatures are recommended to range 68-74° Fahrenheit (F) during the winter and 73-79 °F in the summer. Relative humidity indicates the amount of moisture in the air. ASHRAE in their Standard 62.1-2013, recommends maintaining humidity levels below 65%.

Carbon dioxide, temperature, and relative humidity were measured using a TSI QTrak IAQ Meter, model 8551. A copy of the current annual calibration certificate for this instrument is located in Appendix H.

3.2 Air Monitoring – Carbon Monoxide

Carbon monoxide is a colorless, odorless, poisonous gas. It is produced by the incomplete burning of solid, liquid, and gaseous fuels. Appliances fueled with natural gas, liquefied petroleum (LP gas), oil, kerosene, coal, or wood may produce CO. Through the use of ventilation, it is uncommon to find elevated concentrations of CO indoors. The health effects of CO depend on the concentration of CO and length of exposure, as well as each individual's health condition. The concentration of CO is measured in ppm. Health effects from exposure to CO levels of approximately 1 to 70 ppm are uncertain, but most people will not experience any symptoms. Air monitoring for carbon monoxide (CO) was performed

within the converted IFR using a TSI QTrak IAQ Meter, model 8551. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.3 Metal Wipe Sampling

Lead dust may be introduced into a facility from work processes, facility finishes, consumer products, or other sources. In facilities with converted IFRs, residual lead contamination may be present as a result of insufficient decontamination prior to conversion. Lead wipe samples were collected from horizontal surfaces in various locations throughout the converted IFR to evaluate the potential presence of lead-contaminated dust and provide insight as to whether the space may have been decontaminated prior to being re-purposed.

Ghost Wipe™ brand wipes were used to wipe a four (4) square inch (in²) or one (1) square foot (ft²) areas. In sample locations where these area sizes could not be obtained, the sample area size was recorded. All sample results were converted to micrograms per square foot (µg/ft²) to allow for easier and better data evaluation. The collected wipe samples were placed in clean and labeled plastic centrifuge tubes and promptly sealed upon collection. Sampling personnel donned a clean pair of Nitrile gloves for each sample collected. Samples were submitted to ALS Environmental Laboratory, located in Salt Lake City, Utah, to be analyzed for lead in accordance with NIOSH Method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix I for a summary of sample results and Appendix J for laboratory reports.

3.4 Painted Surface Evaluation

Based on the age of most National Guard facilities, it is possible that lead paint could be present on walls and other surfaces. If kept intact, the potential hazard of lead paint is minor. Paint that is peeling or otherwise degraded could potentially result in lead-contaminated dust and increases the risk of exposure. Thus, an identification and assessment of deteriorating paint was conducted as part of this IHSAV.

The painted surfaces within the converted IFR were in good and intact condition. Peeling paint was not identified within the converted IFR.

3.5 Illumination Level Monitoring

Illumination measurements were taken inside the State Guard Office portion of the converted IFR using a Konica Minolta Light Meter, Model TL-1. Measurements in the office area were taken at the desktop. Illumination measurements were not collected from the laser training

area as low level lighting was required during laser target system operation. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.6 Equipment Used

The following equipment was used for this survey:

Type	Model Number	Serial Number	Calibration Date
TSI QTrak IAQ Meter	8551	51380	10/2013
Konica Minolta Light Meter	TL-1	00279019	6/2014

Please see Appendix H for a complete inventory of calibration certificates of equipment used during this IHSAV.

3.7 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Using appropriately educated & experienced staff who receive continuing education;
- Documentation of pertinent field and sampling information;
- Peer review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to documented method requirements, in particular to NIOSH & OSHA methods, & strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs;
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 SAMPLING RESULTS

4.1 Indoor Air Quality

The facility has methods and engineering controls in place to provide adequate IAQ. General dilution ventilation is provided throughout most areas within the facility. The HVAC system was able to provide the general dilution by removing indoor contaminants and displacing them outdoors. The average outdoor CO₂ concentration was measured to be 444 ppm; therefore, the maximum indoor CO₂ concentration recommended by ASHRAE was 1,144 ppm. The CO₂ concentration from inside the State Guard Office portion of the converted IFR space (e.g. State Guard Office) was measured to be 548 ppm. The area measured was within the ASHRAE recommended range for CO₂.

ASHRAE recommends maintaining temperatures between 68 and 79°F and relative humidity below 65% to minimize the growth of allergenic or pathogenic organisms. Temperature inside the converted IFR was measured to be 71.7°F. Relative humidity was measured to be 46.3%. The location measured within the converted IFR was within the ASHRAE recommended range for temperature. The location measured was below the peak recommended value for relative humidity (65%).

A table of the sample location and corresponding IAQ measurements is available in Appendix E of this report.

4.2 Air Monitoring – Carbon Monoxide

The carbon monoxide concentration was measured within the State Guard Office portion of the converted IFR space using a TSI QTrak IAQ Meter, model 8551. The concentration of CO inside the office area was measured to be 2 ppm, equal to the outdoor background concentration. This concentration was also below the exposure limit ceiling of 200 ppm set forth by OSHA. A summary of CO measurements collected is provided in Appendix E.

4.3 Metal Wipe Sampling

Wipe samples for lead dust were collected from horizontal surfaces in selected areas of the Roswell converted IFR facility to determine if lead contamination was present from the former IFR. Samples were collected from building materials believed to be installed during the renovation of the IFR, from building components that could have been present when the IFR was active, and other surfaces to assess potential lead hazards.

The US Department of Housing and Urban Development (HUD) recommends 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) as a clearance level for floors (includes carpeted and

uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. The Army National Guard has applied this criterion to any areas of a facility that may be used by the public for nonmilitary functions, including: administrative offices, restrooms, classrooms, and hallways. NES was informed that some of the spaces within the area of the converted IFR, specifically the recruitment retention and conference rooms, can be occupied by public and nonmilitary personnel. Thus, all surfaces sampled during this IHSAV were compared to the 40 $\mu\text{g}/\text{ft}^2$ criteria.

A total of eight (8) lead wipe samples were collected during the IHSAV to be analyzed in accordance with NIOSH Method 7300, modified for Ghost WipesTM. Samples were collected from the following locations: converted IFR floor, HVAC ducting, door headers, State Guard Office floor and ceiling mounted radiant heater. Photographs taken of sampling location are presented in Appendix C (Photo Log). The analytical results are summarized in Table 1. Laboratory results are attached in Appendix J.

Table 1: Summary of Lead Wipe Sample Results

Sample Number	Sample Area	Sample Location	Results ($\mu\text{g}/\text{ft}^2$)	ARNG/HUD Standard
61214-32-F	Converted IFR	Center, unpainted concrete floor	4.1	≤ 40
61214-32-G	Converted IFR	West end, top of HVAC duct	150	≤ 40
61214-32-H	Converted IFR	East end, top of HVAC duct	48	≤ 40
61214-32-I	Converted IFR	Back wall door header	2,700	≤ 40
61214-32-J	State Guard Office	Top of door jam	2,000	≤ 40
61214-32-K	State Guard Office	Top of radiant heater	2,200	≤ 40
61214-32-L	State Guard Office	Concrete floor	7.6	≤ 40
61214-32-M	Storage area adjacent to State Guard Office	Concrete floor	14	≤ 40

Bold – Denotes sample results were greater than the allowable level set by ARNG

Analytical results for samples which exceed the acceptable concentration are shown in bold. The analytical results indicate acceptable lead concentrations for three (3) of the eight (8) locations sampled. It is believed that these surfaces were cleaned or new as part of the conversion renovations. Elevated lead concentrations were identified within areas of the converted IFR, including the laser training room and the State Guard Office.

Contradictory to what was reported in 2012 by IHI Environmental; sample results indicate that the IFR was not fully decontaminated prior to being converted. NES did not have access to specific sample locations or results from IHI's sampling efforts. However, we speculate

that their wipe samples were collected from accessible, regularly cleaned surfaces within the State Guard Offices and Laser Training room, which had been decontaminated prior to the IFR being converted. It is unknown whether IHI sampled elevated surfaces above the drop-in ceiling tiles in the office space or other surfaces that may have existed when the IFR was active. *NES* observed dust and particulate build up on top of the elevated surfaces (e.g. on top of the radiant heaters, the top of door trim, exposed ducting, etc.) and other surfaces located above the drop-in ceiling of the State Guard Offices. The elevated lead concentrations identified from our wipe sampling were collected from surfaces with visible dust accumulation. The contaminated surfaces identified by *NES* include the existing HVAC ducting and wall mounted radiant heaters, both are believed to have been present in the IFR when it was active.

Visible dust on surfaces within areas of the converted IFR should be treated as lead-contaminated and avoided until proper decontamination can be completed. Avoid any maintenance, repair, and any other activities that may disturb settled dust and existing lead contamination. Decontamination of the elevated surfaces should be conducted by a licensed remediation contractor in accordance with a site-specific remediation work plan developed by a CIH. Facility personnel should be removed from the affected areas prior to remediation beginning. Follow-up wipe sampling should be conducted following remediation efforts to evaluate verify remediation efforts were sufficient.

4.4 Painted Surface Evaluation

Peeling paint was not identified during the IHSAV. Painted surfaces within the converted IFR were in good and intact condition.

4.5 Illumination Level Monitoring

The illumination level was measured in the State Guard Office portion of the converted IFR. The measurement was collected in foot-candles (FC) at the desktop surface. The illumination measurement was compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Based on the measurement collected in comparison to the above criteria, lighting was not sufficient in the State Guard Office. See Appendix E for a summary of illumination measurements.

5.0 FACILITY SYSTEMS & HAZARDS

5.1 Facility/Building HVAC System

An evaluation of the heating, ventilation, and air-conditioning (HVAC) systems that serve the converted IFR was conducted. This evaluation consisted of a visual inspection of the system. The HVAC system helped to provide the facility with proper indoor air quality (IAQ); temperature, humidity and CO₂ levels. The State Maintenance Office portion of the converted IFR did not have an outside air supply into the workspace. The area was serviced by a wall mounted air conditioning unit that recirculated air within the space.

5.2 Water Damage and Limited Fungal Growth Evaluation

The interior of the converted IFR was visually inspected for water damage and subsequent fungal growth resulting from moisture. There were no visual signs of fungal growth or active water intrusion during the IHSAP. Water staining was observed on a ceiling tile in the State Guard Office from a historical roof leak that has since been repaired.

5.3 Asbestos Evaluation

A cursory evaluation of the converted IFR was made to identify the presence of building materials suspected to contain asbestos. Building materials suspected to contain asbestos were identified during the IHSAP, but there was no asbestos survey report and/or Asbestos Hazard Management Plan available on-site. Suspect building materials identified in the converted IFR included: drop-in ceiling tiles, drywall and associated joint compound. Each of the suspect building materials observed were found to be in good condition.

No bulk samples were collected during this IHSAP due to variability in State regulations regarding certification and sampling requirements. Having asbestos-containing materials (ACM) in a building does not constitute a hazard in of itself. However, if the ACM is or were to become damaged, asbestos fibers could be released and made airborne, which could result in potential exposure to asbestos fibers. Thus, ACM should be managed in a manner to protect them from becoming damaged.

6.0 OBSERVATIONS AND QUALITATIVE ASSESSMENTS

NES assessed multiple conditions and operations using qualitative means and observations. Our methods and findings of qualitative assessments made are detailed in this section.

6.1 Observations of Converted IFR

NES visually inspected the accessible spaces within the converted IFR space. The converted IFR was made up of a laser target training system and an administrative office. The majority of spaces were in good and clean condition. A concrete partition wall had been installed to create the separate State Guard Office.

6.2 Contract (Non-DoD) Operations

Contract (non-DoD) operations were performed at this facility. Non-DoD contractors include the following: State of New Mexico (pest control), and City of Roswell (refuse).

6.3 Safety Walk-Through

NES conducted a walk-through of the converted IFR to identify existing conditions and whether safety hazards or regulatory deficiencies were present. Some of the conditions observed were documented in photographs, attached in Appendix C (Photo Log).

1. Fire extinguishers were current for monthly and annual inspections.

7.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES*' professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

Appendix A

References

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices
- American National Standards Institute (ANSI), Various
- American National Standards Institute, Z358. 1-2009. Emergency Eyewash and Shower Equipment
- AR 40-5, Preventative Medicine
- AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process
- AR 385-10, The Army Safety Program
- AR 420-1, Army Facilities Management
- ARNG “Maintenance Shop Local Exhaust Ventilation Measurements”, issued by Mr. Kenneth A Forsythe III, Dated 14Nov2013,
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Various
- Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems
- DA PAM 40-ERG, Ergonomics
- DA PAM 40-501, Hearing Conservation.
- MIL-STD-1472E, Illumination Level Standard
- NGR 385-15, National Guard Bureau, Policy and Responsibilities for Inspection, Evaluation and Operation of Army National Guard Indoor Firing Ranges, 3NOV2006
- OR 385-10, Army National Guard Safety and Occupational Health Program
- TB MED 503, The Army Industrial Hygiene Program
- TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997
- Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards
- Title 40, Code of Federal Regulations (CFR), Protection of Environment, Part 262, Standards Applicable to Generators of Hazardous Waste.
- TM 5-810-1, Department of the Army, Heating, Ventilating, and Air Conditioning, 15 June 1991

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD-1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

**PHOTO LOG
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014**



Photo 1: Roswell Readiness Center facility exterior.



Photo 2: Roswell Readiness Center facility signage.

**PHOTO LOG
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014**



Photo 3: Interior of the converted IFR with the laser weapons training equipment and firing platform. Lead wipe sample 61214-32-I was collected from the back wall door header.



Photo 4: Interior of the converted IFR with the laser weapons system target screen. Lead wipe sample 61214-32-H was collected from the top of the HVAC ducting on the east end.

PHOTO LOG
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014



Photo 5: HVAC ducting in the converted IFR. Lead wipe sample 61214-32-G was collected from the top of the HVAC ducting on the west end.



Photo 6: Lead wipe sample 61214-32-F collected from the unpainted concrete floor in the center of the converted IFR.

**PHOTO LOG
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014**



Photo 7: New Mexico State Guard office interior, part of the former IFR.



Photo 8: Drop ceiling in the State Guard Office covering the existing IFR concrete shell.

PHOTO LOG
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014



Photo 9: Storage area in the back of the State Guard Office.

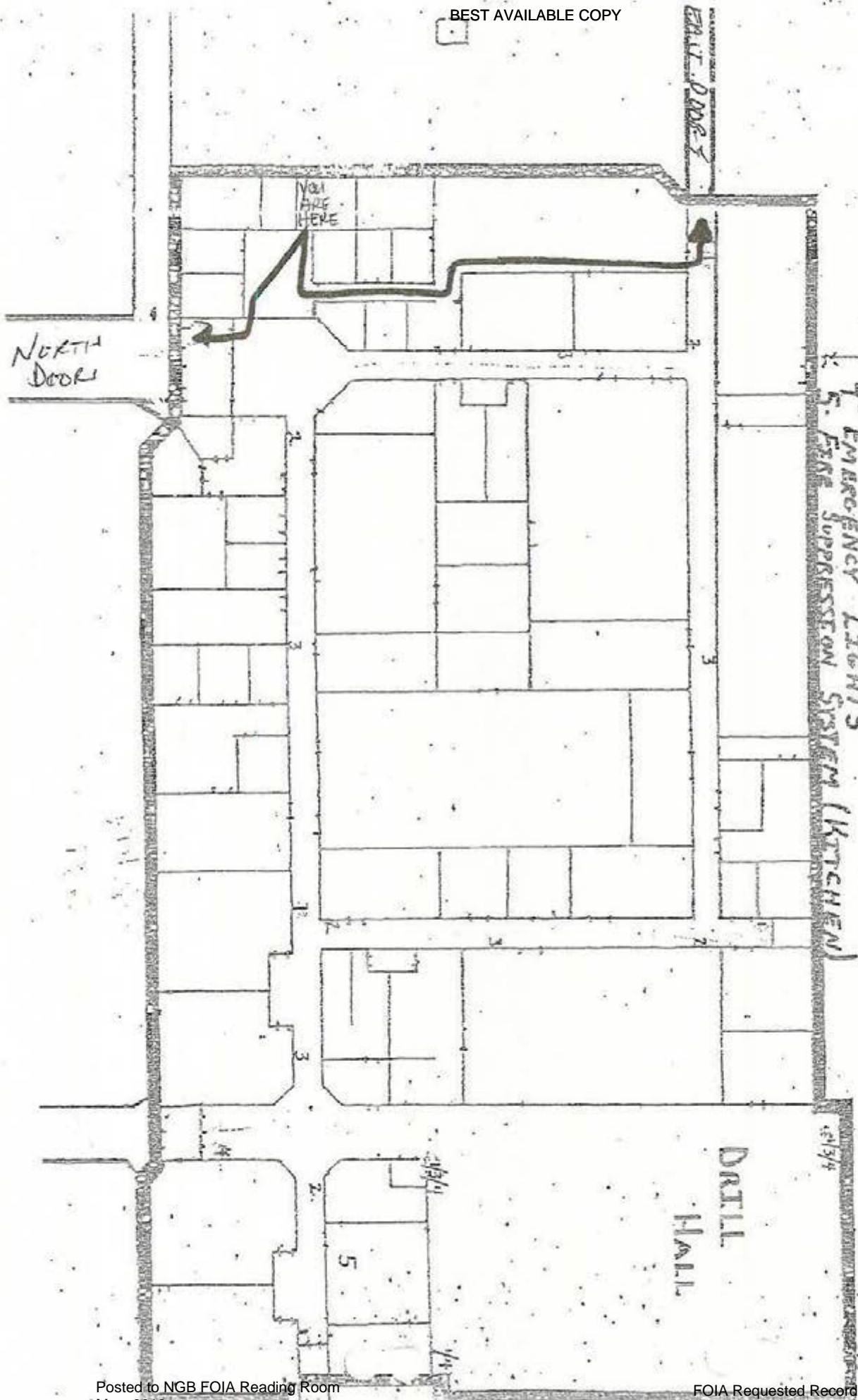


Photo 10: Radiant heater in the State Guard Office. Lead wipe samples 61214-32-J and K were collected from this location.

ROSWELL ARMORY FIRE SAFETY INFO

LEGEND

- 1- FIRE ALARM SWITCH
- 2- FIRE EXTINGUISHER
- 3- FIRE ALARM Buzzer
- 4- EMERGENCY LIGHTS
- 5- FIRE SUPPRESSION SYSTEM (KITCHEN)



32

N

IAQ MEASUREMENTS
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014

Location	CO ₂ Site Permissible Level 1,144 ppm	Temperature Permissible Range 68 - 79°F	RH% Permissible Level < 65%	CO Ceiling Limit 200 ppm
Outside Control	444	86.5	41.3	2
State Guard Office	548	71.7	46.3	2

BOLD = Outside of permissible range

CO₂ = Carbon Dioxide

CO = Carbon Monoxide

°F = Fahrenheit

RH = Relative Humidity

ILLUMINATION SURVEY
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014

Room	Location	Light Measurement (FC)	Minimum Lighting Requirement (FC)
State Guard Office	Desktop	18.1	≥ 50

*FC = foot candle measurement
Bold = Insufficient Lighting



Facility Information Form

Revised: December 4, 2013



General Facility Information

Date(s) of Previous IHSAs: Not Avail at time of IHSAsIH(s): **Non-Responsive**Date(s) of IHSAs: June 12/13, 2014Facility Name: Roswell NM Readiness CenterAddress: 1 Earl Cummings Loop, Roswell NM 88203Facility Commander: CPT Randall Bates/505 463 0895/Randall.I.bates.mil@mail.mil

Safety Officer:

Non-ResponsiveNo Person(s): 18 Admin: 18 Maint: 0 Work Sched: 0830-1630 Size of Facility: 44,676ft²

(Include status —AGR, Fed, Tech., IDR, State or Contract Employee)

Unit(s): HHC 717th BSB **Non-Responsive** 20th EN Co **Non-Responsive** Co-Tenant(s): NA

Include UIC if available

List All

Primary work activities at Facility:

This facility serves as the BN headquarters and is mainly used for administrative purposes. The FMS shop to the rear of this facility supports all maintenance activities.

Written Health & Safety Programs / SOPs

Program	Program Needed	Have Program	Date of Last Training	# Enrolled	Comments
Confined Space	<input checked="" type="checkbox"/>				NA
Emergency Preparedness		X	?	?	Training, Records Not Available
Hazard Communication		X	Dec 1, 2012	55	
Hearing Conservation	<input checked="" type="checkbox"/>				NA
PPE	<input checked="" type="checkbox"/>				NA
Respiratory Protection	<input checked="" type="checkbox"/>				NA
Others (Bloodborne Pathogens, Lock Out / Tag Out, Lifting Devices, Radiation, SOPs, etc.) — List on back					

Y = Yes N = No NA = Not Applicable to this site

Documents / Records to Obtain

- ☒ Facility floor plan / evacuation map
☒ Hazardous Materials inventory
☒ List of equipment serviced / maintained
☒ Personnel list
☒ Previous IH reports — *They are looking for copy per IHSAs*
☐ Others (List):

Non — DoD Contractors

Service

Provider

Oil / Water Separator

NA

Tools

NA

Rags

NA

Refuse

City

Others:

Service

Provider

Laundry

NA

Pest Control

Contracted through State

Hazardous Waste

NA

Crane Maintenance

NA



General Safety Compliance Assessment Form

Facility: Roswell NM ReadinessDate: June 12, 2014

Revised: September 18, 2013



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Hazardous Materials (1910.106 - .107)	<u>Applicable</u>	<u>Not Applicable</u>
Storage (quantity, upright, sealed)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Storage cabinet (flammable & corrosive)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Safety equip. present (eyewash / shower/spill kit)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazard signs at entrance (NFPA, etc.)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Proper segregation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hearing Conservation / Noise (1910.95)	<u>Applicable</u>	<u>Not Applicable</u>
Audiometric testing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Noise haz. areas (>85dBA) present / labeled	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Exposure monitoring	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Heat Stress (General Duty Clause)	<u>Applicable</u>	<u>Not Applicable</u>
Worksite evaluation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Precaution / control measures	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Ladders (1910.25 - .27)	<u>Applicable</u>	<u>Not Applicable</u>
Sturdy / good condition	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Training received / documented	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Overhead Crane (1910.179)	<u>Applicable</u>	<u>Not Applicable</u>
Written procedures	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Training received / documented	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rated load markers	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Warning devices (power travel mechanism)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Inspection / testing / certification	<input type="checkbox"/> Yes	<input type="checkbox"/> No
PPE (1910.132, .133, & .135 - .138)	<u>Applicable</u>	<u>Not Applicable</u>
Proper type / selection / use	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Hazard assessment conducted	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Respiratory Protection (1910.134)	<u>Applicable</u>	<u>Not Applicable</u>
Proper type / selection / use	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Medical surveillance / fit-testing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Walking / Working Surfaces (1910.22)	<u>Applicable</u>	<u>Not Applicable</u>
Floors / aisles dry	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Floors / aisles unobstructed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Openings guarded	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Welding, Cutting, Brazing (1910.94 & 251 - .255)	<u>Applicable</u>	<u>Not Applicable</u>
Local exhaust ventilation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Exposure assessment conducted	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Guards / barriers	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Building Material Hazards		
Asbestos		
Suspect materials present	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is there an ACM Inspection Report	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, obtain copy		
Lead		
Peeling paint present	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If yes, collect bulk sample		
Mold		
Is there evidence of moisture intrusion?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is there current moisture intrusion?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is there visible mold growth?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

water damaged ceiling tile - Roofers fixed



Industrial Hygiene Site Assessment Visit (IHSAV) Facility Work Activities

~~RTI Facilities~~
Revised: April 25, 2014



-32

List of Facility Work Activities

Roswell NM Readiness Center

Work Activity	Conducted at Facility		Hazard Assessment Conducted	
	Yes	No	Yes	No
Administrative	✓			
Abrasive Blasting				
Battery Charging		✓		
Battery Handling		✓		
Battery Storage		✓		
Bench Grinder		✓		
Bodywork / Fiberglass		✓		
Brake Re-Lining / Changing		✓		
Crain & Hoist		✓		
Electrical Work		✓		
Engine / Motor Repair, Test & Maintenance		✓		
Explosives / Munitions Storage		✓		
Forklift Operations		✓		
Fuel Storage / Re-Fueling		✓		
Hazardous Material Disposal / Handling		✓		
Jack / Lift Use		✓		
Metal Grinding		✓		
Paint Removal		✓		
Painting - Spot Spray		✓		
Parts Washer - Automatic		✓		
Parts Washer - Manual		✓		
Petroleum, Oil, Lubricant (POL) Handling		✓		
Pneumatic Tool Use - Air Grinder		✓		
Pneumatic Tool Use - Miscellaneous		✓		
Pressure Washer		✓		
Radioactive Material Storage		✓		
Tool Supply		✓		
Soldering		✓		
Small Arms Cleaning		✓		
Wash Rack / Oil Water Separator		✓		
Welding / Cutting / Brazing		✓		
Wrecker Use		✓		

List any new activities below

2

Fire alarm in working condition - -not usually in place in older armories	Yes
Fire extinguishers in place and properly identified and mounted	Yes
Evidence of monthly fire extinguisher inspections	Yes, current for monthly inspections
Annual fire extinguisher inspections tags current	Yes
Are eye wash stations available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	None provided
Egress routes accessible and properly marked - -noted on <u>Fire Evacuation Plan</u>	Yes, recommend adding primary and secondary gathering points to evacuation maps.
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Yes, see field notes and Facility Information form
Any Photo labs	None
Any hazardous noise sources	None identified
Light levels checked throughout building	Complete, see Appendix E
Breaker panels properly labeled with no exposed wiring	Boiler Rm - Sub Panel M (left side) was not labeled
Check building occupancy 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. 18 military personnel 2. Administrative
Any civilian activities in armory (cub scouts, classes, day care, parties etc)	Community use - weddings, parties, children have access
Obtain two lead air samples	On IHSW Request Only N/A

Facility: Doswell Readiness Center .32
Date: 6/12/2014



FOIA Requested Record #J-15-0085 (NM)
Released by National Guard Bureau
Page 1143 of 1628



Indoor Air Quality & Illumination Measurements

 Facility: Roswell NM Readiness Center

 Date: June 12, 14

Revised: September 18, 2013



Location	CO ₂ max permissible level 1,000 ppm	Temperature permissible range 68 - 75° F	RH% permissible range 30-60%	CO max permissible range 200 ppm. STEL	Illumination (FC)
Boiler Rm	828	78.3	46.0	2	29.9
Junior #123	559	77.5	35.6	2	23.7
Classroom #120	536	73.7	33.6	2	55.8
Gym #126	529	74.1	37.3	2	37.0
Computer Kiosk	561	75.2	34.6	2	43.8
Secret Computer Rm. 1200m	526	73.4	34.5	2	34.4
Classroom #134	504	74.4	40.8	2	56.8
Assembly Hall #132	494	76.9	42.0	2	24.7
Kitchen	491	78.6	43.1	3	29.9
920th Readiness Office	522	74.4	37.8	2	75.3
Classroom 131	594	75.6	40.0	2	67.5
PSD Office	543	73.7	35.7	2	77.2
Supply #115	553	73.3	38.8	2	63.0
Office # 114	523	73.0	38.7	2	67.1

 CO₂ = Carbon Dioxide

°F = Fahrenheit

RH = Relative Humidity

CO = Carbon Monoxide

STEL = Short Term Exposure Limit

 Office #
109 588

73.1

~~70.3~~
40.1

2

~~40.3~~
70.3



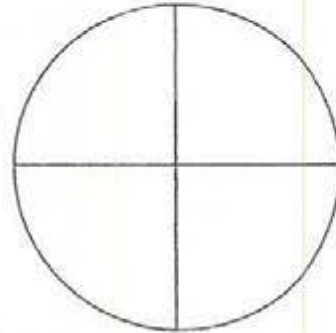
LEV System Survey Form

Facility: Roswell NM Readiness Center-32Date: June 12, 14

Revised: May 8, 2014

Name of LEV System: Gas Grill, Griddle + Oven Canopy HoodModel: NASerial Number: NADimensions of LEV: 15' x 3.5' OR 52.5" diameter

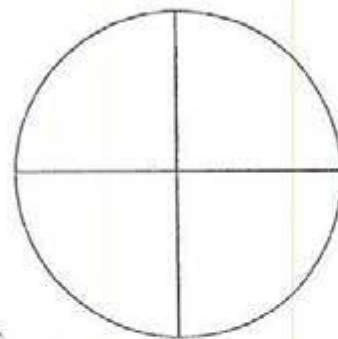
124	154	196	251
98	136	158	196
36	87	57	158



NOTES: Ave Flow: 138 fpm x 52.5 = 7,245 CFM

Name of LEV System: Canopy Hood Over DishwasherModel: NASerial Number: NADimensions of LEV: 3' x 3' OR 9" diameter

	68	71	82
	54	56	41
	35	31	37



NOTES: 53 fpm x 9 = 477 CFM

For Vehicle Exhaust Ventilation Systems, obtain the following:

(1) types of vehicles serviced in each Bay, (2) average tailpipe temp., (3) engine displacement, & (4) RPM's.

NOISE SURVEY <i>(Sound Level Meter Survey)</i>									
1. DATE (YYYYMMDD) 20140612				2. TYPE SURVEY (Enter code) <div style="display: flex; align-items: center;"> <input checked="" type="checkbox"/> 1 - INITIAL SURVEY <input type="checkbox"/> 2 - RE-SURVEY <input type="checkbox"/> 3 - OTHER </div>					
3. SOUND LEVEL METER			4. MICROPHONE			5. CALIBRATOR			
a. MANUFACTURER Quest			a. MANUFACTURER Attached to SLM			a. MANUFACTURER Quest			
b. MODEL 210 SLM		c. SERIAL NO. DCFO10012	b. MODEL		c. SERIAL NO.	b. MODEL QC-10		c. SERIAL NO. QIF010094	
d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20130712			d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD)			d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20130712			
6. WIND SCREEN (X one) <div style="display: flex; align-items: center;"> <input type="checkbox"/> USED <input checked="" type="checkbox"/> NOT USED </div>					7. MEASUREMENTS OBTAINED (X one) <div style="display: flex; align-items: center;"> <input checked="" type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS </div>				
8. DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED <i>(Illustrate on additional sheet and attach to form)</i> Evaluation of Kitchen canopy hoods (3) during operation.						9. PRIMARY SOURCE OF NOISE canopy hood			
						10. SECONDARY SOURCE OF NOISE None			
11. SOUND LEVEL DATA						12. PROTECTION REQUIRED (re: dBA - Level)			
a. LOCATION	b. METER ACTION	c. dBC	d. dBA	e. RISK ASSESSMENT CODE	a. NONE (Less than 85)	b. PLUG OR MUFF (85-108)	c. PLUG AND MUFF (108-118)	d. PLUG + MUFF + TIME LIMIT (Greater than 118)	
Canopy hood over range/ovens @ operator hearing level	S		86			X			
Canopy hood over sink @ OHL	S		79		X				
Canopy hood over dishwasher @ OHL	S		81		X				
NOTES: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.									
13. REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.) No hazardous noise placards were posted. Recommend to perform dosimetry for canopy hood operation to assess potential hazardous noise exposure.									
14. MORE DETAILED NOISE EVALUATION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "YES," identify type evaluation needed.) Noise dosimetry for an 8 hour TWA									
15. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)									
16. SUPERVISOR OF NOISE HAZARDOUS AREA OR OPERATION									

Non-Responsive

6/12/14

.32

IFR Closed + cleared per CPT Bates,
an IH Rpt was generated for the
closure ^{Sampling}

? → According to **Non-Responsive** **Non-Responsive** a copy
of the past IHSAU where sampling was performed.

IFR-C presently converted to a
laser weapon training site, EST-2000
Weapons Training System

Drill Hall Leased, Community Use,
Wedding Quinceaeras, children have access,
B-days for full times,

Adj. Properties

- Roswell Intl Airport (West & South)
- City Property (East)
- Private Land (North)

Building exterior constructed of brick -
no peeling paint

Building interior - no peeling paint

6/13/14

32

Flammables stored in a room w/ access from back of Armory, Flammable Pictorial on door. Metal cabinet (not a flammable cabinet) stored 4 spray paint cans.

Separated below was corrosives, cleaning mths. Gasoline stored (for mower) in plastic gas container. Rec Just Like sealing gas can.

BMP

Five Extinguishers inspected monthly

FMS #1 Located at the back of the Readiness Center

6/16/14

Any haz waste gen (v. little) given to FMS #1

Non-Responsive

Action pending

provided an electronic copy after the IHSAT^{tbl} was completed by IHI, Rgt dated Oct. 30, 2012 w/o Results Tables

- Requested copies of report tables
- Requested of LTC Moura Martinez info establishing that the convicted IFR has been cleared.



Certificate of Calibration



8710195 REV1

Certificate Page 1 of 2

Instrument Identification

Company ID: 607229

NETWORK ENVIRONMENTAL SYSTEMS

Non-Responsive

1141 SIBLEY STREET
FOLSOM, CA 95630

PO Number: CC-

Non-Responsive

Instrument ID: 00279019

Manufacturer: KONICA MINOLTA

Description: ILLUMINANCE METER

Model Number: TL-1

Serial Number: 00279019

Certificate Information

Reason For Service: CALIBRATION

Type of Cal: NORMAL

As Found Condition: IN TOLERANCE

As Left Condition: IN TOLERANCE

Procedure: 33K4-4-475-1 JUN13

Remarks: REV 1 ADDED: DATA REPORT ATTACHED

Technician:

Non-Responsive

Cal Date 02Jun2014

Cal Due Date: 02Jun2015

Interval: 12 MONTHS

Temperature: 24.0 C

Humidity: 43.0 %

Tektronix certifies the performance of the above instrument has been verified using test equipment of known accuracy, which is traceable to National Metrology Institutes (NIST, NPL, PTB) that are linked to the International System of Units (SI). The policies and procedures used comply with ANSI/NCSL Z540.1-1994 (R2002).

This certificate shall not be reproduced, except in full, without the written permission of Tektronix.

Approved By:

Non-Responsive

Service Representative

Issue Date: 6/2/2014

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
7302067	000800	STANDARD SHUNT	RUBICON	ABS 1	26Apr2013	26Apr2015
1700294966	17-1001076	6 STEEL RULE	STARETT	C416R-72	22Mar2013	22Mar2015
8095776	17-1001081	LUMINANCE STD	OPTRONIC LABS	OL 455-4	16Dec2013	16Dec2014



Manufacturer: KONICA MINOLTA
 Serial Number: 00279019

Model Number: TL-1
 Calibration Date: 6/22/2014

Function / Range	Nominal Value	As Found	Result	As Left	Result	Min	Max	Units	UNC
ILLUMINANCE									
	10	10.04	Pass	Same	Pass	9.49	10.51	fc	
	100	100.10	Pass	Same	Pass	94.9	105.1	fc	
	1000	950.00	Pass	Same	Pass	940	1060	fc	

Datasheets may contain measurements that are not covered by the Scope of Accreditation. These measurements are indicated by a pound sign (#).

*****END OF MEASUREMENT REPORT*****

TABLE 1
LEAD WIPE SAMPLE RESULTS
READINESS CENTER – CONVERTED IFR
ROSWELL, NM
JUNE 13, 2014

Sample Number	Sample Area	Sample Location	Results ($\mu\text{g}/\text{ft}^2$)	ARNG Standard ($\mu\text{g}/\text{ft}^2$)
61214-32-F	Converted IFR	Center, unpainted concrete floor	4.1	≤ 40
61214-32-G	Converted IFR	West end, top of HVAC duct	150	≤ 40
61214-32-H	Converted IFR	East end, top of HVAC duct	48	≤ 40
61214-32-I	Converted IFR	Back wall door header	2,700	≤ 40
61214-32-J	State Guard Office	Top of door jam	2,000	≤ 40
61214-32-K	State Guard Office	Top of radiant heater	2,200	≤ 40
61214-32-L	State Guard Office	Concrete floor	7.6	≤ 40
61214-32-M	Storage area adjacent to State Guard Office	Concrete floor	14	≤ 40

$\mu\text{g}/\text{ft}^2$ = micrograms per square foot
ARNG = Army National Guard
Bold = Above ARNG Standard limit



BEST AVAILABLE COPY

ANALYTICAL REPORT

Report Date: June 24, 2014

Non-Responsive

Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20

Non-Responsive

Workorder: 34-1416949

Client Project ID: 013.IH1716.32/Roswell NM

Purchase Order: 013.IH1716.32

Project Manager: **Non-Responsive**

Analytical Results

Sample ID: 61214-32-A		Collected: 06/12/2014	
Lab ID: 1416949001		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
		Prepared: 06/20/2014	
		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<1.3	1.3

Sample ID: 61214-32-B		Collected: 06/12/2014	
Lab ID: 1416949002		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
		Prepared: 06/20/2014	
		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<1.3	1.3

Sample ID: 61214-32-C		Collected: 06/12/2014	
Lab ID: 1416949003		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
		Prepared: 06/20/2014	
		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.5	1.5	1.3

Sample ID: 61214-32-D		Collected: 06/12/2014	
Lab ID: 1416949004		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
		Prepared: 06/20/2014	
		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.4	1.4	1.3

ADDRESS: 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA PHONE: +1 801 266 7700 FAX: +1 801 268 9992

ALS GROUP USA, CORP. An ALS Limited Company

Environmental

www.alsglobal.com



ANALYTICAL REPORT

Workorder: 34-1416949

Client Project ID: 013.IH1716.32/Roswell NM

Purchase Order: 013.IH1716.32

Project Manager: Non-Responsive

Analytical Results

Sample ID: 61214-32-E		Collected: 06/12/2014	
Lab ID: 1416949005		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	<1.3	<1.3	1.3

Sample ID: 61214-32-F		Collected: 06/12/2014	
Lab ID: 1416949006		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 1 ft ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	4.1	4.1	1.3

Sample ID: 61314-32-G		Collected: 06/13/2014	
Lab ID: 1416949007		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 4 in ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	4.2	150	1.3

Sample ID: 61314-32-H		Collected: 06/13/2014	
Lab ID: 1416949008		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 4 in ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	1.3	48	1.3

Sample ID: 61314-32-I		Collected: 06/13/2014	
Lab ID: 1416949009		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 4 in ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	76	2700	1.3

Sample ID: 61314-32-J		Collected: 06/13/2014	
Lab ID: 1416949010		Received: 06/18/2014	
Method: NIOSH 7300 Mod.		Media: Ghost Wipe	
		Sampling Parameter: Area 4 in ²	
Prepared: 06/20/2014		Analyzed: 06/23/2014	
Analyte	ug/sample	ug/ft ²	RL (ug/sample)
Lead	56	2000	3.8

Bates, Randall L CPT USARMY (US)

From:
Sent:
To:
Cc:
Subject:

Non-Responsive

Classification: UNCLASSIFIED
Caveats: NONE

CPT Bates,

As per your request minus the FMS see list of full time personnel below.

1 **Non-Responsive**

2

3

4

5

6

7

8

9

1

1

1

1

1

1

1

1

1

1

2



Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS Converted Indoor Firing Range (IFR) - Roswell, New Mexico

CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NGOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMRIFR- 06132014-4.3	Lead concentrations exceeded established criteria	Converted IFR	2	See <i>Corrective Actions at the bottom of the Violation Inventory Log</i>					29 CFR 1910.1025 (h)(1)
NMRIFR- 06132014-4.6	Illumination levels were insufficient for activities performed	State Guard Office	4	Increase lighting to provide the necessary 50 foot candles in areas requiring reading					ANSI RP7-1991 Standard & MIL-STD-1472E
NMRIFR- 06132014-5.3	Suspected asbestos containing building materials; inspection, re-inspection, & Hazard Management Plan	Facility	3	Conduct a facility survey to identify & assess extent of asbestos hazards; develop & implement an Asbestos Hazard Management Plan					AR 420-1, 5-24b, c, & d

RECOMMENDED CORRECTIVE ACTIONS FOR NMRIFR-06132014-4.3

- 1) Prohibit public access into the offices and spaces that make up the CIFR space; Public meaning any non-National Guard personnel.
- 2) Avoid any maintenance, repair, cleaning, and any other activities that may disturb settled dust & existing lead contamination on elevated surfaces.
- 3) Have a Remediation Work Plan developed by a CIH or other qualified individual.
- 4) Contract a licensed Remediation Contractor to decontaminate elevated surfaces in the offices & spaces that make up the CIFR
- 5) Conduct post-remediation wipe sampling to verify remediation efforts were sufficient.

APPENDIX-N: CONCLUSIONS AND RECOMMENDATIONS

N.1 Introduction – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for the Roswell Converted IFR. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.4 describes the following: the N is Conclusions & Recommendations and the 4.4 corresponds back to Section 4.0 – Sampling Results; Item 4 – Metal Wipe Sampling).

N4.3 Metal Wipe Sampling – Recommended corrective actions:

- 1) Prohibit public access into the State Office and other spaces that make up the former IFR space; Public meaning any non-National Guard personnel.
- 2) Avoid any maintenance, repair, cleaning, and any other activities that may disturb settled dust & existing lead contamination on elevated surfaces, specifically in the State Office and storage area adjacent to the State Office.
- 3) Have a Remediation Work Plan developed by a CIH or other qualified individual.
- 4) Contract with a licensed Remediation Contractor to decontaminate elevated surfaces in the offices & spaces that make up the CIFR.
- 5) Conduct post-remediation wipe sampling to verify remediation efforts were sufficient.

N4.5 Illumination Level Monitoring – Increase the lighting in the State Guard Office to provide the necessary illumination levels within the space.

N5.3 Asbestos Management – Conduct an asbestos survey to identify and assess extent of suspected asbestos containing materials present at the facility and to evaluate any hazards posed by these materials. Implement an Asbestos Hazard Management Plan if asbestos is found to be present within the facility.

FY 14 Installation Status Report (ISR) Services Documentation		Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls		953-01-04			0	
Breathing Zone samples collected above Occupational Exposure Limit (OEL)		953-01-04			0	
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls		953-01-05			0	
Number of Personal Noise Dosimetry samples collected >= 85 dBA		953-01-05			0	
Number of Noise Sound Level samples collected >= 140 dBP with no controls		953-01-06			0	
Number of Noise Sound Level samples collected >= 140 dBP		953-01-06			0	
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control		953-01-07			0	
Number of Noise Sound Level samples collected >= 140 dBP not controlled		953-01-07			0	
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control		953-01-08			0	
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled		953-01-08			0	
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control		953-01-09			0	
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled		953-01-09			0	
Total number of DOEHS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months		953-02-10	IHT	IHT	IHT	IHT
Total number of DOEHS-IH shops coded as Priority 1		953-02-10	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months		953-02-11	IHT	IHT	IHT	IHT
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months		953-02-11	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months		953-02-12	IHT	IHT	IHT	IHT
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months		953-02-12	IHT	IHT	IHT	IHT
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit		953-02-13	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit		953-02-13	IHT	IHT	IHT	IHT

FY 14 Installation Status Report (ISR) Services Documentation		Intellicode	Q1	Q2	Q3	Q4 Annual
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.		953-02-14	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.		953-02-14	IHT	IHT	IHT	IHT
Number of personnel who were reassessed by industrial hygiene within the last 12 months.		953-02-15	IHT	IHT	IHT	IHT
Number of personnel who required reassessment by industrial hygiene within the last 12 months.		953-02-15	IHT	IHT	IHT	IHT
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.		953-02-16	IHT	IHT	IHT	IHT
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.		953-02-16	IHT	IHT	IHT	IHT
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.		953-02-17	IHT	IHT	IHT	IHT
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.		953-02-17	IHT	IHT	IHT	IHT
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates		953-02-18			0	
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates		953-02-18			0	
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey		953-02-19			0	
Number of ventilation systems which were evaluated by an IH		953-02-19			0	
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns		953-02-20	IHT	IHT	IHT	IHT
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns		953-02-20	IHT	IHT	IHT	IHT



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Facility Information Form
Revised: December 4, 2013



General Facility Information

Date(s) of Previous IHSAVs: July 10, 2012

IH(s): **Non-Responsive**

Date(s) of IHSAV: June 12/13, 2014

Facility Name: Roswell Readiness Center & Converted Indoor Firing Range

Address: 1 Earl Cummings Loop Roswell NM 88203

Facility Commander: **Non-Responsive**

Safety Officer: **Non-Responsive**

No Person(s): 18 Admin: 18 Maint: 0 Work Sched: 0830-1630 Size of Facility: 44,676 ft²

(Include status -AGR, Fed, Tech., IDR, State or Contract Employee)

Unit(s): BSB (WX8CT0), 920th EN Co (WPLHAA) Co-Tenant(s): N/A Build Date: Unknown

Include UIC if available

List All

Renovation:

Primary work
activities at
Facility:

This facility serves as the BN headquarters and is mainly used for administrative purposes. The
FMS shop to the rear of this facility supports all maintenance activities.

Written Health & Safety Programs / SOPs

Program	Program Needed	Have Program	Date of Last Training	# Enrolled	Comments
Confined Space	N	N			
Emergency Preparedness	Y	Y			Training Records Not Available
Hazard Communication	Y	Y	Dec 1, 2012	55	
Hearing Conservation	Y	N			Need to develop
PPE	N	N			
Respiratory Protection	N	N			

Others (Bloodborne Pathogens, Lock Out / Tag Out, Lifting Devices, Radiation, SOPs, etc.) - List on back

Y = Yes N = No NA = Not Applicable to this site

Documents / Records to Obtain

☒ Facility floor plan / evacuation map
☐ List of equipment serviced / maintained
☒ Previous IH reports

NA = Not Applicable to this site

☒ Hazardous Materials inventory
☒ Personnel list
☒ Others (List): IHI Targeted Site Visit Report (2012)

Non - DoD Contractors

Service	Provider	Service	Provider
Oil / Water Separator	<u>None</u>	Laundry	<u>None</u>
Tools	<u>None</u>	Pest Control	<u>New Mexico State</u>
Rags	<u>None</u>	Hazardous Waste	<u>None</u>
Refuse	<u>City of Roswell</u>	Crane Maintenance	<u>None</u>

Others: None
Posted to NGB FOIA Reading Room
May, 2018

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FOIA Requested Record #J-15-0085 (NM)
Released by National Guard Bureau
Page 1159 of 1628

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE:* Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.
2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.
3. Disposable gloves should be treated as hazardous waste.
4. Soiled cotton rags should be treated as hazardous waste.
5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

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IH ASSISTANCE VISIT

**New Mexico Roswell Armory
1 West Earl Cummings Loop
Roswell, New Mexico 88203**

October 30, 2012

Prepared for:

**Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655**

Non-Responsive

Reviewed by:

Non-Responsive

Project #AL127200

640 EAST WILMINGTON AVENUE

SALT LAKE CITY, UT 84106

TELEPHONE: 801-466-2223

FAX: 801-466-9616

E-MAIL: IHI@IHI-ENV.COM

SALT LAKE CITY

EMERYVILLE

PHOENIX

DENVER

SEATTLE

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APPENDICES

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Appendix D	Lead Wipe Sample Location Map
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EXECUTIVE SUMMARY

On July 10, 2012, [Non-Responsive] MPH, Industrial Hygienist of IHI Environmental (IHI), conducted an IH Assistance Visit at the Roswell Armory located at 1 West Earl Cummings Loop, Roswell, New Mexico 88203. The primary point of contact for information gathered during this survey was [Non-Responsive] (575) 347-3545, [Non-Responsive]

The objectives of this limited survey were to determine whether a firing range is present and operational or converted into another functional space, and to collect lead dust wipe samples throughout the entire facility in order to determine the presence of any lead contamination above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

An indoor firing range had previously existed in the Roswell Armory and was converted to what are currently the State Defense and Dispatch offices and a storage room. Lead wipe sampling results revealed detectable levels of lead in the storage room that was previously part of the firing range; however, concentrations were below the recommended 200- $\mu\text{g}/\text{ft}^2$ criterion for cleanup.

Significant findings for this evaluation can be found in the Lead Wipe Sample Results located in Appendix B of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

1.0 INTRODUCTION

On July 10, 2012, [Non-Responsive] PH, Industrial Hygienist of IHI Environmental (IHI), conducted an IH Assistance Visit at the Roswell Armory located at 1 West Earl Cummings Loop, Roswell, New Mexico 88203. The primary point of contact for information gathered during this survey was [Non-Responsive] (575) 347-3545, [Non-Responsive]

1.1 Objectives

The objectives of this limited survey were to determine whether a firing range is present and operational or converted into another functional space, and to collect lead dust wipe samples throughout the entire facility in order to determine the presence of any lead contamination above limits outlined in NGP 420-15, *Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges*, and the *Standard Operating Procedure (SOP) for Armory Cleanup & Follow-up Housekeeping*.

1.2 Scope of Work

To achieve the above objectives at this facility, the visit included the following:

- verifying if an indoor firing range is present and to determine its status; and
- collecting lead surface wipe samples throughout the facility, including, but not limited to, the firing range, adjacent spaces, common spaces, and any areas where weapons are cleaned.

2.0 PROCESS DESCRIPTION

The Roswell Armory has 17 full-time guard members. The armory has offices used for administrative purposes, training facilities, a drill floor, storage rooms, locker room, kitchen, and an equipment storage bay. The organizations assigned to this armory are the State Defense Office, 717th Service Maintenance Company, Detachment I, and Company B. There are 3 State civilian employees who are responsible for maintenance of the armory. Army National Guard members occasionally use the drill floor as a staging area to clean weapons.

3.0 METHODS AND APPLICABLE REGULATIONS AND STANDARDS

3.1 Lead Wipe Sampling

Lead residue (dust) wipe samples were collected on horizontal surfaces, such as the drill floor, kitchen, administrative areas, and indoor firing ranges (where present), to determine housekeeping standards. Lead Wipe™ brand wipes were used with a 100-square-centimeter template. The wipes used conform to American Standards for Testing Materials E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratories for analysis, using NIOSH Method 7300. See Appendix D for sample locations and Appendix C for laboratory results.

The Mather, California, office of Industrial Hygiene Southwest has developed a Standard Operating Procedure (SOP) for lead, which is a blend of OSHA, HUD, and Army regulations. Essentially, this SOP sets forth a criterion of 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. Additionally, a 200 $\mu\text{g}/\text{ft}^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where general public access is not expected.

3.2 Quality Assurance

IHI employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs.

- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Status of Indoor Firing Range

The Roswell Armory historically had an indoor rifle range which was converted to three offices: the State Defense office, the Dispatch office, and a storage room, all of which are located on the south side of the building. The State Defense office is the portion of the range that included the starting line, the Dispatch office includes the historical mid-range area, and the storage room is where the bullet trap was located.

4.2 Lead Wipe Sampling

Analytical results for lead wipe sampling indicate a surface lead concentration of 54 $\mu\text{g}/\text{ft}^2$ in the storage room. This space is generally not accessed by the general public. The concentration of lead is below the criterion level outlined in the IHSW SOP of 200 $\mu\text{g}/\text{ft}^2$. All other sampling results were below the analytical criterion outlined in the IHSW SOP. See Appendix B for a data table and Appendix D for a drawing showing sample locations. Appendix C contains the analytical reports. Photographs were taken of each sampling point and are presented in Appendix F.

Recommendation

None

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be

construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, IHI's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. IHI assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of IHI, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since IHI is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IH Assistance Visit was reviewed and approved by:

Non-Responsive

October 30, 2012
Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact **Non-Responsive** at 801-466-2223, or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office at 916-804-1707.

Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

**Industrial Hygiene Southwest
Violation Inventory Log**

**LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Roswell Armory, Converted Indoor Firing Range (IFR), NM**



CONTROL NUMBER	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
CLOSED <input type="checkbox"/>									
NMRA-071012- Exec. Summary	Potential for lead dust from future weapons storage/cleaning within armory proper.	Armory	None	Continue good housekeeping practices and also clean after any future weapons cleaning episode.					Prudent Industrial Hygiene Practices, NGB, OSHA Regulations

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ARMY NATIONAL GUARD INDUSTRIAL HYGIENE - SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Roswell Readiness Center (RC)

1 West Earl Cummings Loop
Roswell, NM 88201

12 June 14

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494



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DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

10 SEP 2014

MEMORANDUM THRU **Non-Responsive** SOHM, 600 Wyoming Blvd, NE,
Albuquerque, NM 87123

FOR Commander, Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM
88201

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Roswell
Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the Industrial Hygienist report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached Industrial Hygiene report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility personnel were helpful during this IHSAV.

5. Observations / Recommendations.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHS AV) for Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Implement control measures to reduce the noise of the above range canopy hood in the kitchen or post signage on the exhaust hood to warn personnel of this noise hazard. (para. 4.7) **(RAC 4)**

b. Increase the illumination in administrative areas to 50 foot candles and 30 foot candles in the drill hall area. This may require increasing the number of light fixtures in the office areas and providing task lighting for personnel working in the four office areas. (para 4.8 & 4.9) **(RAC 4)**

c. Conduct a facility survey to identify Asbestos Containing Material (ACM) within the facility and develop ACM Management Plan. Conduct awareness training to all personnel who occupy the facility regarding the findings and the ACM Management Plan. The survey may have been completed, however, at the time of this assistance visit awareness training, ACM identification, or an ACM Management Plan was not available. (para. 5.3) **(RAC 3)**

d. Develop and implement a written Hazard Communication Program (HAZCOM) which should include, as a minimum, training that is documented in personnel's records at this facility. (para. 4.6.1) **(RAC 4)**

e. Repair the fire alarm system in order to notify personnel within the facility of a fire emergency. (para. 4.11.1) **(RAC 4)**

f. Repair or replace the non-functioning emergency lighting. Institute an emergency lighting weekly operational verification procedure and annotate in local log or on file. (para. 4.11.4) **(RAC 3)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

(1) Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

(2) Corrective measures should be implemented and accomplished at the lowest levels possible.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHS AV) for Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

(a) Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

(3) Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

(4) Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

(5) The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this IHS AV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHS AV) for Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

(a) Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

(3) Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

(4) Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

(5) The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (RCAS-SOH) Program.

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SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Roswell Readiness Center (RC) 1 West Earl Cummings Loop, Roswell, NM on 12 JUN 2014.

personnel and forward to the New Mexico Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at **Non-Responsive**

Non-Responsive

NGB, IHSW, CIV
Regional Industrial
Hygiene Manager



Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Readiness Center - Roswell, New Mexico

CONTROL NUMBER <input type="checkbox"/> CLOSED	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Costs	DATE CORRECTED	REFERENCES
NMRC-06122014-4.7	Hazardous noise was identified in the kitchen, but no hazard postings were present	Kitchen	4	Research / implement means to reduce the noise of the range canopy hood - OR - post warning signage on the exhaust hood of noise levels exceeding 85 dBA					DA PAM 40-501 Ch 1-4(f)(1)
NMRC-06122014-4.8	Illumination levels were insufficient for activities performed	Facility - multiple locations	4	Increase lighting to provide the necessary 50 foot candles in areas requiring reading & 30 foot candles in the Assembly Hall					ANSI RP7-1991 Standard and MIL-STD-147ZE
NMRC-06122014-5.3	Suspected asbestos containing building materials; inspection, re-inspection, & Hazard Management Plan	Facility	3	Conduct a facility survey to identify & assess extent of asbestos hazards; develop & implement an Asbestos Hazard Management Plan					AR 420-1, 5-24b, c, & d
NMRC-06122014-6.1	Written Bloodborne Pathogens (BBP) Program was not available	Facility	4	Develop & implement a written Exposure Control Plan (e.g. BBP Program)					29 CFR 1910.1030 (c)(1) & AR 385-10,
NMRC-06122014-6.1	Written Hazard Communication (HAZCOM) Program was not available	Facility	4	Develop & implement a written HAZCOM Program					29 CFR 1910.1200 (e)(1) & AR 385-10,
NMRC-06122014-6.2	Emergency Action Plan / evacuation training was not provided / documented	Facility	4	Ensure site personnel receive emergency preparedness training & maintain documentation indicating this training has been conducted					29 CFR 1910.38 (e)&(f) & AR 385-10, 16-2d(g)

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Industrial Hygiene Southwest
Violation Inventory Log
LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS
Readiness Center - Roswell, New Mexico

CONTROL NUMBER <input type="checkbox"/> CLOSED	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
NMRC-06122014-7.1	The facility did not have a copy of Safety Data Sheets (SDS) for chemicals corresponding with the chemical inventory	Facility	4	Obtain and maintain a copy of SDS for each chemical listed in the chemical inventory					29 CFR 1910.1200 (g)(8)(8)
NMRC-06122014-7.1	NFPA diamond placarding was missing on entrance door to chemical storage area	Flammable Materials Storage	4	Label chemical storage areas properly with NFPA diamond placards indicating the corresponding safety hazards					NFPA 704-4.3(1)
NMRC-06122014-7.1	Missing emergency eyewash station	Flammable Materials Storage	3	Provide an emergency eyewash station within ten (10) seconds travel from chemical storage/use areas					ANSI Z358.1-2009-5.4.2
NMRC-06122014-7.4.1	Unlabeled electrical panel	Boiler Room	4	Complete the electrical panel schedule to indicate the equipment or locations assigned to each breaker					NEC Article 408.4(A)

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- a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
- b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
- c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. Completely clean each room before moving on.
2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.
 - a. Rinse out cleaning cloths thoroughly and frequently.
 - b. Change out cleaning water as necessary.

NOTE: If walls to be cleaned show signs of deterioration, e.g., chipping or crumbling paint, in which wiping, scrubbing, or disrupting might potentially increase or spread contamination, then this portion of the clean up should be avoided.

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.
 - a. Change out water frequently (when water appears dirty)
 - b. Rinse out mop heads frequently to prevent contamination of dirty water.
5. Cover entire drill floor surface with above prescribed water and detergent.
6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

- b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility.** Shaking of mop head could release unwanted contaminants into surrounding atmosphere.
2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (*Cleaned Monthly*)
 - b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (*Cleaned 2x's Monthly*)
 - c. Used regularly by soldiers or outside agencies/personnel. (*Cleaned Regularly - -at least Weekly*)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.



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INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHS AV)

ROSWELL READINESS CENTER
1 WEST EARL CUMMINGS LOOP
ROSWELL, NEW MEXICO 88201

June 12, 2014

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

NES Job Number: 013.IH1716.32

Prepared by:

Non-Responsive

Industrial Hygiene Specialist

Reviewed by:

Non-Responsive

Senior Industrial Hygienist

Non-Responsive

Principle-In-Charge



Non-Responsive

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EXECUTIVE SUMMARY

On June 12, 2014, **Non-Responsive** Certified Industrial Hygienist (CIH) with Network Environmental Systems, Inc. (NES), conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Readiness Center located at 1 West Earl Cummings Loop in Roswell, New Mexico. The primary point of contact (POC) for information gathered during this survey was **Non-Responsive** who may be reached by phone at (505) 463-0895 or by email at **Non-Responsive**.

The objectives of this IHSAV were to:

- Evaluate work processes conducted within the facility;
- Review hazardous material storage and use procedures;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of exhaust ventilation systems;
- Assess potentially noise hazardous areas;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards;
- Inspect and evaluate the indoor firing range, active or converted (if present);
- Inspect and evaluate the paint booth operation and systems (if present);
- Evaluate the facility for potential asbestos, lead, and mold hazards;
- Review safety policies/programs, training, and record keeping; and
- Conduct Hazard Assessments (HA's).

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest (IHSW) – Violation Inventory Log located in Appendix L of this report. The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as methodologies, results, findings, regulatory requirements, and recommendations. Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: The assistance of **Non-Responsive** was greatly appreciated for providing all resources necessary to accomplish this IHSAV.

1.0 INTRODUCTION

On June 12, 2014, [Non-Responsive] IH with NES conducted an IHSAV at the Readiness Center located at 1 West Earl Cummings Loop in Roswell, New Mexico. The primary POC for information gathered during this survey was [Non-Responsive] who may be reached by phone at (505) 463-0895 or by email at [Non-Responsive]

1.1 Objectives

The primary objective of the IHSAV was to evaluate the occupational environment of the areas within the Readiness Center facility in order to determine the presence of health and safety risks. Processes and activities at the facilities were evaluated and recommendations to control the existence and extent of potentially hazardous operations or conditions at the Army National Guard (ARNG) facility were documented accordingly. This IHSAV will serve to establish a baseline Hazard Assessment (HA) / Job Safety Analysis (JSA) of workplace and process conditions or update/validate a previous HA/JSA so a worker's history of exposures, or potential exposures is provided for each civilian and military employee.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Evaluate work processes conducted within the facility;
- Review hazardous material storage and use procedures;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of exhaust ventilation systems;
- Assess potentially noise hazardous areas;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards;
- Inspect and evaluate the indoor firing range, active or converted (if present);
- Inspect and evaluate the paint booth operation and systems (if present);
- Evaluate the facility for potential asbestos, lead, and mold hazards;
- Review safety policies/programs, training, and record keeping; and
- Conduct Hazard Assessments (HA's).

2.0 PROCESS DESCRIPTION

The Roswell Readiness Center operates in a facility that consists of the following: offices used for administrative purposes, supply rooms, a kitchen, a drill floor, a classroom, and a converted indoor firing range (IFR). General administrative duties are conducted in the offices for the New Mexico Army National Guard.

The facility is located along Earl Cummings loop, north of the Roswell International Airport. Private land borders the facility to the north, and city property borders the facility to the east. The back end of the property is used for motor pool parking and is bordered by the Field Maintenance Shop (FMS) #1.

The facility was reported to be 44,676 square feet (ft²) in size and operates Tuesday thru Friday from 0830 to 1630. The primary units assigned to the facility were the HHC 717th BSB and the 920th Engineering Company, reported to have Unit Identification Codes (UIC) of **Non-Responsive** respectively. There were a total of 18 full time guard members assigned to the facility. A copy of the employee list is provided in Appendix K.

NES observed records indicating one (1) previous IHSAV had been conducted at the site. The IHSAV was conducted by IHI Environmental (IHI) on July 10, 2012. The IHSAV was limited to determining whether an indoor firing range (IFR) was active, or had been converted into another functional space. As part of that IHSAV lead wipe samples were collected to determine the presence of lead contamination within the facility. NES also conducted an IHSAV of the converted IFR. The methods and findings of that IHSAV are detailed in a separate report, dated June 13, 2014.

During the opening conference meeting, NES was informed of the following:

- The Readiness Center facility is available to and rented by the public for weddings and parties. The facility is accessible to children.
- Weapon cleaning is reportedly not performed at the facility.

3.0 METHODS

NES assessed multiple conditions and operations using quantitative means. The methods used to conduct these assessments are detailed in this section. Results of these assessments are detailed in Section 4.0.

3.1 Personal Breathing Zone Air Sampling

NES did not conduct personal breathing zone air sampling during this IHSAP as no work processes were performed where NES could conduct such sampling.

3.2 Indoor Air Quality

Carbon dioxide (CO₂) measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO₂, water vapor, and other bio effluents during respiration. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2013, *Ventilation for Acceptable Air Quality*, recommend maintaining CO₂ below a concentration that is 700 parts per million (ppm) above outdoor levels. Outside CO₂ concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO₂ concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bio effluents (body odors).

Temperature is commonly measured during IAQ assessments to determine comfort of occupants. According to ASHRAE, in their standard 55-2010, *Thermal Environmental Conditions for Human Occupancy*, indoor temperatures are recommended to range 68-74° Fahrenheit (F) during the winter and 73-79 °F in the summer. Relative humidity indicates the amount of moisture in the air. ASHRAE in their Standard 62.1-2013, recommends maintaining humidity levels below 65%.

Carbon dioxide, temperature, and relative humidity were measured using a TSI QTrak IAQ Meter, model 8551. A copy of the current annual calibration certificate for this instrument is located in Appendix H.

3.3 Air Monitoring – Carbon Monoxide

Carbon monoxide is a colorless, odorless, poisonous gas. It is produced by the incomplete burning of solid, liquid, and gaseous fuels. Appliances fueled with natural gas, liquefied petroleum (LP gas), oil, kerosene, coal, or wood may produce CO. Through the use of ventilation, it is uncommon to find elevated concentrations of CO indoors. The health effects

of CO depend on the concentration of CO and length of exposure, as well as each individual's health condition. The concentration of CO is measured in ppm. Health effects from exposure to CO levels of approximately 1 to 70 ppm are uncertain, but most people will not experience any symptoms. Air monitoring for carbon monoxide (CO) was performed throughout the facility using a TSI QTrak IAQ Meter, model 8551. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.4 Metal Wipe Sampling

Lead dust may be introduced into a facility from work processes, facility finishes, consumer products, or other sources. Lead wipe samples were collected from horizontal work and floor surfaces in various locations throughout the facility to evaluate the potential presence of lead-contaminated dust. Ghost Wipe™ brand wipes were used to wipe a one (1) square foot (ft²) area. The collected wipe samples were placed in clean and labeled plastic centrifuge tubes and promptly sealed upon collection. Sampling personnel donned a clean pair of Nitrile gloves for each sample collected. Samples were submitted to ALS Environmental Laboratory, located in Salt Lake City, Utah, to be analyzed for lead in accordance with NIOSH Method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix I for a summary of sample results and Appendix J for laboratory reports.

3.5 Painted Surface Evaluation

Based on the age of most National Guard facilities, it is possible that lead paint could be present on walls and other surfaces. If kept intact, the potential hazard of lead paint is minor. Paint that is peeling or otherwise degraded could potentially result in lead-contaminated dust and increases the risk of exposure. Thus, an identification and assessment of deteriorating paint was conducted as part of this IHSAV.

The majority of painted surfaces throughout the Readiness Center were in good and intact condition. Peeling paint was not identified during this IHSAV.

3.6 Exhaust Ventilation Survey

Exhaust ventilation systems were assessed to determine their functionality and ability to sufficiently exhaust air and contaminants from the areas they operate within. Ventilation measurements were collected from the kitchen canopy hood located above the range and oven, as well as the canopy hoods located above the sink and the dishwasher. No other exhaust ventilation systems were present at the site. NES collected air velocity and flow

measurements using a TSI VelociCalc Plus meter, model 8360. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.7 Personal Noise Dosimetry and Sound-Level Measurements

Personal noise dosimetry measurements were not collected during this IHSAV. Sound-level measurements were collected from identified specific noise sources located within this facility by using a Quest Sound Level Meter in the A-weighted decibel (dBA) range, using the slow meter response setting. The sound level meter calibration was verified in the field using a Quest QC-10 calibrator. Copies of annual calibration certificates for these instruments are located in Appendix H.

3.8 Illumination Level Monitoring

Illumination measurements were taken throughout the facility using a Konica Minolta Light Meter, Model TL-1. Measurements in office areas were taken at typical work locations, such as the tops of desks and near workstations. To provide information on the overall lighting conditions in the remainder of the facility, measurements were taken from the surfaces of typical work locations and at waist level from selected locations. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.9 Equipment Used

The following equipment was used for this survey:

Equipment Type	Model Number	Serial Number	Calibration Date
TSI QTrak IAQ Meter	8551	51380	10/2013
TSI VelociCalc Plus	8360	97100136	7/2013
Konica Minolta Light Meter	TL-1	00279019	6/2014
Quest Sound Level Meter	210 SLM	DCF010012	7/2013
Quest Acoustic Calibrator	QC-10	QIF010094	7/2013

Please see Appendix H for a complete inventory of calibration certificates of equipment used during this IHSAV.

3.10 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Using appropriately educated & experienced staff who receive continuing education;
- Documentation of pertinent field and sampling information;
- Peer review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to documented method requirements, in particular to NIOSH & OSHA methods, & strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs;
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 SAMPLING RESULTS

4.1 Personal Breathing Zone Air Sampling

NES did not conduct personal breathing zone air sampling during this IHSAV as no work processes were performed where NES could conduct such sampling.

4.2 Indoor Air Quality

The facility has methods and engineering controls in place to provide adequate IAQ. General dilution ventilation is provided throughout most areas within the facility. The HVAC system was able to provide the general dilution by removing indoor contaminants and displacing them outdoors. Also the HVAC system was able to provide temperature and relative humidity controls. The outdoor CO₂ concentration was measured to be 444 ppm; therefore, the maximum indoor CO₂ concentration recommended by ASHRAE was 1,144 ppm. The CO₂ concentrations from inside the facility ranged between 491 and 846 ppm. The areas measured were within the ASHRAE recommended range.

ASHRAE recommends maintaining temperatures between 68 and 79°F and relative humidity below 65% to minimize the growth of allergenic or pathogenic organisms. Temperatures inside the building ranged between 71.8 and 82.1°F. Relative humidity ranged from 31.1 to 46.7%. One (1) of the 27 locations measured within the facility was found to exceed the ASHRAE recommended range for temperature. All of the locations measured were below the peak recommended value for relative humidity (65%).

A table of the sample locations and corresponding IAQ measurements is available in Appendix E of this report.

4.3 Air Monitoring – Carbon Monoxide

Carbon monoxide concentrations were measured at a total of 27 locations throughout the facility using a TSI QTrak IAQ Meter, model 8551. The concentrations of CO inside the facility ranged from 2 to 3 ppm, close to the outdoor background concentrations. These concentrations were also below the exposure limit ceiling of 200 ppm set forth by OSHA. A summary of CO measurements collected is provided in Appendix E.

4.4 Metal Wipe Sampling

Wipe samples for lead dust were collected from horizontal surfaces in selected areas of the Readiness Center facility to determine if housekeeping efforts have been successful. The US Department of Housing and Urban Development (HUD) recommends 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) as a clearance level for floors (includes carpeted and uncarpeted floors).

This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; and fitness areas. Areas of a facility which are not expected to be used by the public are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu\text{g}/\text{ft}^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays and tool rooms, which are not routinely accessible to the general public.

A total of five (5) lead wipe samples were collected during the IHSAV to be analyzed in accordance with NIOSH Method 7300, modified for Ghost WipesTM. Samples were collected from the center and four corners of the Drill Floor. Additional lead wipe samples were collected from the interior spaces of the converted IFR and are discussed in the corresponding IHSAV report. The analytical results are summarized in Table 1. Laboratory results are attached in Appendix J.

Table 1: Summary of Lead Wipe Sample Results

Sample Number	Sample Area	Sample Location	Results ($\mu\text{g}/\text{ft}^2$)	ARNG/HUD Standard
61214-32-A	Drill Floor	Southeast corner, floor	< 1.3	≤ 40
61214-32-B	Drill Floor	Southwest corner, floor	< 1.3	≤ 40
61214-32-C	Drill Floor	Center, floor	1.5	≤ 40
61214-32-D	Drill Floor	Northeast corner, floor	1.4	≤ 40
61214-32-E	Drill Floor	Northwest corner, floor	< 1.3	≤ 40

Bold = Denotes sample results were greater than the allowable level set by ARNG

The analytical results indicate acceptable lead concentrations for five (5) locations sampled from the Drill Floor.

4.5 Painted Surface Evaluation

Peeling paint was not identified during the IHSAV. Painted surfaces within the Readiness Center were in good and intact condition.

4.6 Exhaust Ventilation Survey

Air velocity measurements were taken from the three (3) kitchen canopy hoods located above the range, sink and dishwasher. Measurements for the canopy hoods were collected in a grid pattern across the exhaust opening. The average air velocity of the exhaust systems was calculated and ranged from 50 to 138 feet per minute. Air velocity for the canopy hoods were found to meet the minimum of 50 fpm required in Section 4-9 of the U.S. Army Technical Manual (TM) 5-810-1: *"Mechanical Design: Heating, Ventilating, and Air Conditioning,"* dated, June 1991.

A summary of the ventilation measurements collected and calculations made are provided in Appendix F of this report.

4.7 Personal Noise Dosimetry and Sound Level Measurements

Personal noise dosimetry was not performed during this IHSAV. Sound-level measurements were collected from the three (3) kitchen canopy hoods during their operation. Measurements were recorded into the appropriate DD 2214 Forms. Copies of the completed DD 2214 Form is provided in Appendix O of this report. A summary of measurements collected is provided in Table 2.

Table 2: Summary of sound level measurements

Noise Source	Noise Level Measurement (dBA)
Kitchen canopy hood over range	86
Canopy hood over sink	81
Canopy hood over dishwasher	79

Sound level measurements collected during operations of two (2) of the three (3) kitchen canopy hoods were below 85 A-weighted decibels (dBA) and did not present a noise hazard. The canopy hood above the range and ovens was measured to be greater than 85 dBA and presents a noise hazard. A more detailed noise evaluation should be performed on the kitchen canopy hood to assess potential for hazardous noise exposure over an eight (8) hour time weighted average (TWA). There were no hazardous noise placards posted adjacent to this canopy hood, in the kitchen area.

4.8 Illumination Level Monitoring

Illumination levels were measured throughout the facility. Measurements were collected in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level. The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Lighting measurements were collected in a total of 27 locations. Based on the above criteria, lighting was insufficient at the following five (5) locations: EST Office #104, 920th Dispatch Office, computer kiosk, computer room, and the Assembly Hall #132. See Appendix E for a table of illumination measurements.

5.0 FACILITY SYSTEMS & HAZARDS

5.1 Facility/Building HVAC System

An evaluation of the heating, ventilation, and air-conditioning (HVAC) systems that serve the facility was conducted. This evaluation consisted of determining whether a maintenance plan was in place and a visual inspection of the system. No written maintenance plan was available during the site visit, but it was reported that the system was maintained by State Maintenance. The administrative areas and assembly hall were serviced by ducted supply and return vents. The facility HVAC systems were in good visible condition. No exposed hazards or defects were observed during the IHSAV.

5.2 Water Damage and Limited Fungal Growth Evaluation

The interior of the facility was visually inspected for water damage and subsequent fungal growth resulting from moisture. There were no visual signs of fungal growth or active water intrusion during the IHSAV.

5.3 Asbestos Evaluation

A cursory evaluation of the facility's interior and exterior was made to identify the presence of building materials suspected to contain asbestos. Building materials suspected to contain asbestos were identified during the IHSAV, but there was no asbestos survey report and/or Asbestos Hazard Management Plan available on-site. Suspect building materials identified in the facility included: 12 inch x 12 inch floor tiles and associated mastic, drop-in ceiling tiles, drywall and associated joint compound, and base cove mastic. Each of the suspect building materials observed were found to be in good condition.

No bulk samples were collected during this IHSAV due to variability in State regulations regarding certification and sampling requirements. Having asbestos-containing materials (ACM) in a building does not constitute a hazard in of itself. However, if the ACM is or were to become damaged, asbestos fibers could be released and made airborne, which could result in potential exposure to asbestos fibers. Thus, ACM should be managed in a manner to protect them from becoming damaged.

6.0 TRAINING DOCUMENTS AND HAZARD ASSESSMENTS

6.1 Written Programs & SOPs

The following written programs and procedures were maintained at the facility with dates of the latest revisions in parenthesis:

- Emergency Preparedness Program (no date)

There were no written Bloodborne Pathogens Program or Hazard Communications Program maintained on-site.

Note: NES evaluated the written programs / procedure documents to verify their presence and implementation. NES did not evaluate the contents or quality of any of the documents identified during this visit.

6.2 Training Documentation

The following training documentation was found at the site with dates of the most recent training provided in parenthesis:

- Hazard Communication (12/2012)

Training documentation consisted of sign-up sheets for personnel attending and summary of the topic covered. There was no documentation for Emergency Preparedness training.

Note: NES evaluated the training documents to verify whether training has been provided. NES did not evaluate the contents or quality of any of the training.

6.3 Hazard Assessments

Hazard assessments were not performed during this IHSAV as the primary work activity conducted at the facility was determined to be administrative support in an office setting. No other work processes were identified to be conducted by staff on a regular basis that would be expected to result in an increased potential for exposure to biological, chemical, and/or physical hazards.

7.0 OBSERVATIONS AND QUALITATIVE ASSESSMENTS

NES assessed multiple conditions and operations using qualitative means and observations. Our methods and findings of qualitative assessments made are detailed in this section.

7.1 Hazardous Materials Inventory, Storage & Material Safety Data Sheets

A review of the facility's chemical inventory was conducted. The facility had a chemical inventory. However, safety data sheets (SDS) were not available at the time of the IHSAT. A copy of the chemical inventory is provided in Appendix D.

The facility had a flammable storage room. The flammable materials storage room was located on the back end of the facility and contained a storage cabinet and plastic gasoline cans used for fueling the site's lawn mower. Materials in the storage cabinet were present in small quantities, well-organized and segregated. There was a flammable materials placard on the flammable materials storage room door, but not an NFPA diamond placard to identify and communicate hazards associated with the stored materials. The flammable storage room was equipped with passive ventilation. The small amounts of hazardous waste generated were delivered to the nearby Field Maintenance Shop (FMS). There was no emergency eye wash station provided at the facility.

7.2 General Supply Areas

General supply areas throughout the facility were organized and in good visible condition.

7.3 Contract (Non-DoD) Operations

Contract (non-DoD) operations were performed at this facility. Non-DoD contractors include the following: State of New Mexico (pest control), and City of Roswell (refuse).

7.4 Safety Walk-Through

NES conducted a walk-through of the facility to identify existing conditions and whether safety hazards or regulatory deficiencies were present. Some of the conditions observed were documented in photographs, attached in Appendix C (Photo Log).

1. The electrical panel in the Boiler Room, labeled "Sub Panel M," was missing a circuit directory to identify each breaker on the left side panel. The right side panel was properly labeled.
2. Fire extinguishers were current for monthly and annual inspections.

8.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES*' professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

9.0 PROJECT APPROVAL

This HISAV was reviewed and approved by:

Non-Responsive

August 6, 2014

Date

Non-Responsive

August 14, 2014

Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey; please contact NES at 916-353-2360 or **Non-Responsive** of the Southwest Regional Industrial Hygiene Office, 916-854-1491. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices
- American National Standards Institute (ANSI), Various
- American National Standards Institute, Z358. 1-2009. Emergency Eyewash and Shower Equipment
- AR 40-5, Preventative Medicine
- AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process
- AR 385-10, The Army Safety Program
- AR 420-1, Army Facilities Management
- ARNG “Maintenance Shop Local Exhaust Ventilation Measurements”, issued by **Non-Responsive** **Non-Responsive** dated 14Nov2013,
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Various
- Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems
- DA PAM 40-ERG, Ergonomics
- DA PAM 40-501, Hearing Conservation.
- MIL-STD-1472E, Illumination Level Standard
- NGR 385-15, National Guard Bureau, Policy and Responsibilities for Inspection, Evaluation and Operation of Army National Guard Indoor Firing Ranges, 3NOV2006
- OR 385-10, Army National Guard Safety and Occupational Health Program
- TB MED 503, The Army Industrial Hygiene Program
- TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997
- Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards
- Title 40, Code of Federal Regulations (CFR), Protection of Environment, Part 262, Standards Applicable to Generators of Hazardous Waste.
- TM 5-810-1, Department of the Army, Heating, Ventilating, and Air Conditioning, 15 June 1991

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD-1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposure Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

**PHOTO LOG
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014**



Photo 1: Roswell Readiness Center facility exterior.



Photo 2: Roswell Readiness Center facility signage.

**PHOTO LOG
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014**



Photo 3: Vehicle parking area, located behind the facility.



Photo 4: Field Maintenance Shop #1, located behind the facility.

**PHOTO LOG
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014**



Photo 5: Drill Floor interior view. Lead wipe samples 61214-32-A to E were collected from the center and four corners of this area.



Photo 6: Kitchen with canopy hoods above range and ovens. Ventilation measurements were collected from the three (3) kitchen hoods.

**PHOTO LOG
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014**



Photo 7: Entrance door to the flammable materials storage room, missing NFPA diamond placarding.

BEST AVAILABLE COPY
Readiness Center
Roswell, New Mexico

Chemicals

Husky 603

Husky 302

Gojo Hand Soap

Zep Ring Master

Husky 802

Spray Nine

Windex Foaming Glass Cleaner

Sprayaway Glass Cleaner

Shamrock Pine Oil Cleaner

Husky 303

No Para Urinal Cakes and screens

SprayBuff

Shamrock Pot and Pan Cleaner

Pledge Lemon Polish

Tough Guy Lemon Polish

Perfect 7 Floor Cleaner

Flamables (if needed)

Gasoline

Motor Oil

Chainsaw/Weed Eater Mixture

Oven Cleaner

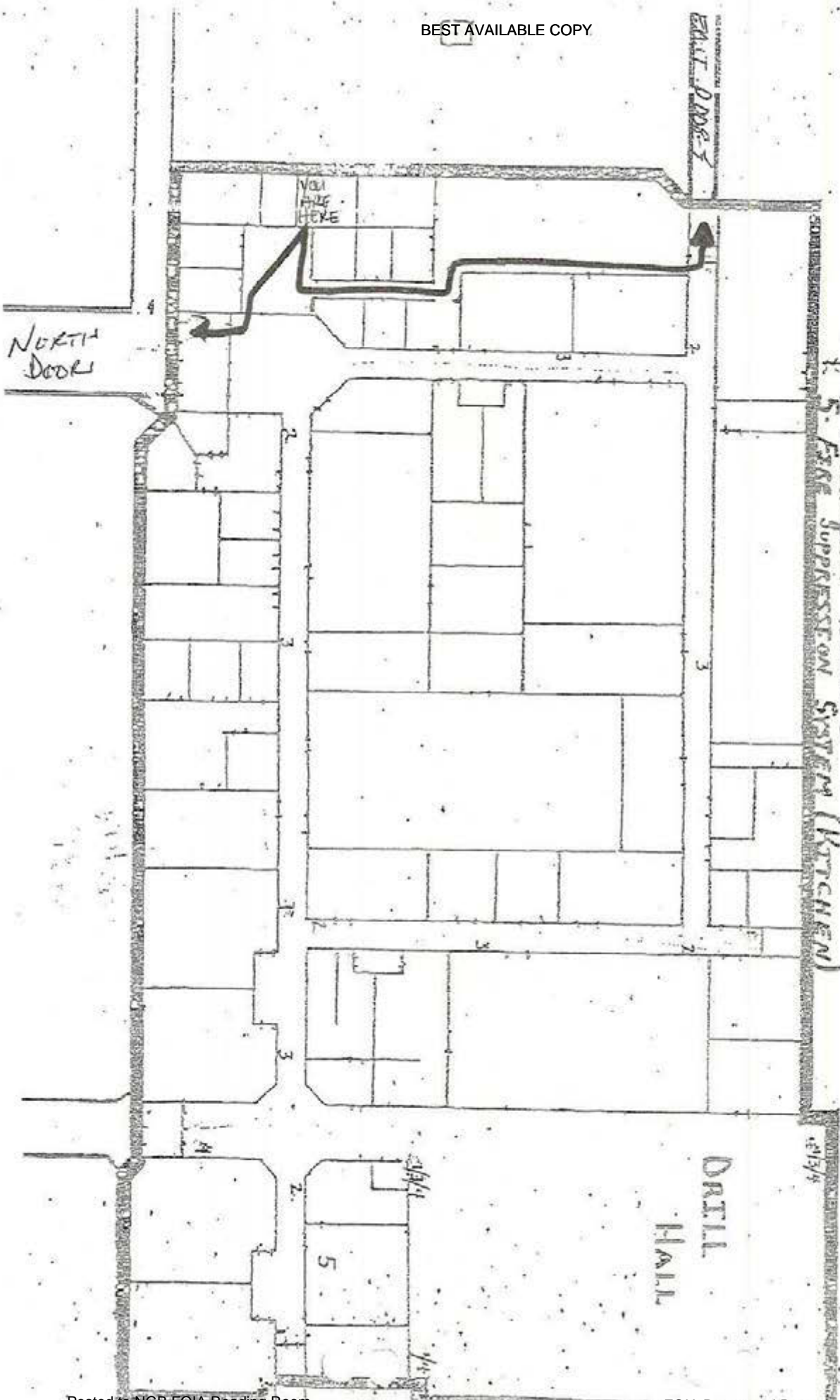
ROSWELL ARMORY FIRE SAFETY INFO

LEGEND

- 1- FIRE ALARM SWITCH
- 2- FIRE EXTINGUISHER
- 3- FIRE ALARM BUZZER
- 4- EMERGENCY LIGHTS
- 5- FIRE SUPPRESSION SYSTEM (KITCHEN)

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N



IAQ MEASUREMENTS
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014

Location	CO ₂ Site Permissible Level 1,144 ppm	Temperature Permissible Range 68 - 79°F	RH% Permissible Level < 65%	CO Ceiling Limit 200 ppm
Outside Control	444	86.5	41.3	2
Administrative Office #102	640	82.1	32.6	2
Office #102H	650	78.4	31.1	3
Office #102I	703	77.5	31.2	2
Office #103	630	73.7	32.4	2
Office #103A	602	72.5	33.4	2
Office #103D	721	73.1	36.3	2
Office #103E	588	72.0	35.4	2
EST Office #104	546	71.8	40.4	2
Lawn Mower Room	579	73.1	46.0	2
920 th Dispatch Room	687	76.2	46.7	2
State Maintenance Office	846	76.7	41.9	2
Storage Room #115A	636	74.4	35.1	2
Boiler Room	828	78.3	46.0	2
Janitor Room #123	559	77.5	35.6	2
Classroom #120	536	73.7	33.6	2

BOLD = Outside of permissible range

CO₂ = Carbon Dioxide

CO = Carbon Monoxide

°F = Fahrenheit

RH = Relative Humidity

Location	CO ₂ max permissible level 1,144 ppm	Temperature permissible range 68 - 79°F	RH% max permissible level 65%	CO Max permissible 200 ppm STEL
Gym #126	529	74.1	37.3	2
Computer Kiosk	561	75.2	34.6	2
Computer Room	526	73.4	34.5	2
Classroom #134	504	74.4	40.8	2
Assembly Hall #132	494	76.9	42.0	2
Kitchen	491	78.6	43.1	3
920 th Readiness Office	522	74.4	37.8	2
Classroom #131	594	75.6	40.0	2
RSD Office	543	73.7	35.7	2
Supply Room #115	553	73.3	38.8	2
Office #114	523	73.0	38.7	2
Office #109	588	73.1	40.1	2

BOLD = Outside of permissible range

CO₂ = Carbon Dioxide

CO = Carbon Monoxide

°F = Fahrenheit

RH = Relative Humidity

ILLUMINATION SURVEY
READINESS CENTER
ROSWELL, NM
JUNE 12, 2014

Room	Location	Light Measurement (FC)	Minimum Lighting Requirement (FC)
Administrative Office #102	Desktop	84.9	≥ 50
Office #102H	Desktop	130.2	≥ 50
Office #102I	Desktop	113.5	≥ 50
Office #103	Desktop	61.8	≥ 50
Office #103A	Desktop	87.1	≥ 50
Office #103D	Desktop	67.2	≥ 50
Office #103E	Desktop	51.5	≥ 50
EST Office #104	Desktop	25.3	≥ 50
Lawn Mower Room	Center of room	19.4	≥ 10
920th Dispatch Room	Desktop	8.4	≥ 50
State Maintenance Office	Desktop	50.1	≥ 50
Storage Room #115A	Center of room	22.4	≥ 10
Boiler Room	Center of room	29.9	≥ 10
Janitor Room #123	Center of room	23.7	≥ 10
Classroom #120	Desktop	55.8	≥ 50
Gym #126	Center of room	37.0	≥ 30
Computer Kiosk	Desktop	43.8	≥ 50

*FC = foot candle measurement

Bold = Insufficient Lighting

Room	Location	Light Measurement (FC)	Minimum Lighting Requirement (FC)
Computer Room	Center of room	34.4	≥ 50
Classroom #134	Desktop	56.8	≥ 50
Assembly Hall #132	Center of room	24.7	≥ 30
Kitchen	Center of room	89.9	≥ 30
920 th Readiness Office	Desktop	75.3	≥ 50
Classroom #131	Desktop	67.5	≥ 50
RSD Office	Desktop	77.2	≥ 50
Supply Room #115	Center of room	63.0	≥ 50
Office #114	Desktop	67.1	≥ 50
Office #109	Desktop	70.3	≥ 50

*FC = foot candle measurement

Bold = Insufficient Lighting

BEST AVAILABLE COPY
Exhaust Ventilation System Survey
Facility: Readiness Center – Roswell, NM
Date: June 12, 2014

Name of LEV System: Kitchen canopy hood over gas grill, griddle, and oven

Model: NA Serial Number: NA

Dimensions of LEV: 15' x 3.5'

Sketch of ventilation measurement grid; all measurements in feet per minute (fpm)

124	154	196	251
98	136	158	196
36	87	57	158

Average Velocity = 138 fpm

NOTES:

Name of LEV System: Kitchen canopy hood over dishwasher

Model: NA Serial Number: NA

Dimensions of LEV: 3' x 3'

Sketch of ventilation measurement grid; all measurements in feet per minute (fpm)

68	71	82
54	56	41
35	31	37

Average Velocity = 53 fpm

NOTES:

Exhaust Ventilation System Survey
Facility: Readiness Center – Roswell, NM
Date: June 12, 2014

Name of LEV System: Kitchen canopy hood over sink

Model: NA Serial Number: NA

Dimensions of LEV: 3' x 3'

Sketch of ventilation measurement grid; all measurements in feet per minute (fpm)

68	55	51
48	45	46
49	43	41

Average Velocity = 50 fpm

NOTES:



BEST AVAILABLE COPY

Facility Information Form

Revised: December 4, 2013



General Facility Information

IH(s):

Non-Responsive

Date(s) of Previous IHSAs:

Not Avail at time of IHSAs

Date(s) of IHSAs:

June 12/13, 2014

Facility Name: Roswell NM Readiness Center

Address: 1 Earl Cummings Loop, Roswell NM 88203

Facility Commander:

Non-Responsive

Safety Officer:

Non-Responsive

Name / Phone Number / email

No Person(s): 18 Admin: 18 Maint: 0 Work Sched: 0830-1630 T-F Size of Facility: 44,676ft²

(Include status -AGR, Fed, Tech., IDR, State or Contract Employee)

Unit(s): HHC 717th BSB Non-Responsive 920th EN Co Non-Responsive Co-Tenant(s): NA

Include UIC if available

List All

Primary work activities at Facility:

This facility serves as the BN headquarters and is mainly used for administrative purposes. The FMS shop to the rear of this facility supports all maintenance activities.

Written Health & Safety Programs / SOPs

Program	Program Needed	Have Program	Date of Last Training	# Enrolled	Comments
Confined Space	X				NA
Emergency Preparedness		X	?	?	Training, Records Not Available
Hazard Communication		X	Dec 1, 2012	55	
Hearing Conservation	X				NA
PPE	X				NA
Respiratory Protection	X				NA
Others (Bloodborne Pathogens, Lock Out / Tag Out, Lifting Devices, Radiation, SOPs, etc.) - List on back					

Y = Yes N = No NA = Not Applicable to this site

Documents / Records to Obtain



Facility floor plan / evacuation map



Hazardous Materials inventory



List of equipment serviced / maintained



Personnel list



Previous IH reports - They are looking for copy, prev. IHSAs



Others (List):

Non - DoD Contractors

Service

Provider

Service

Provider

Oil / Water Separator

NA

Laundry

NA

Tools

NA

Pest Control

Contracted through State

Rags

NA

Hazardous Waste

NA

Refuse

City

Crane Maintenance

NA

Others:



General Safety Compliance Assessment Form

Facility: Roswell NM ReadinessDate: June 12, 2014

Revised: September 18, 2013



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Hazardous Materials (1910.106 – .107)	<u>Applicable</u>	<u>Not Applicable</u>
Storage (quantity, upright, sealed)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Storage cabinet (flammable & corrosive)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Safety equip. present (eyewash / shower/spill kit)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazard signs at entrance (NFPA, etc.)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Proper segregation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hearing Conservation / Noise (1910.95)	<u>Applicable</u>	<u>Not Applicable</u>
Audiometric testing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Noise haz. areas (>85dBA) present / labeled	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Exposure monitoring	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Heat Stress (General Duty Clause)	<u>Applicable</u>	<u>Not Applicable</u>
Worksite evaluation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Precaution / control measures	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Ladders (1910.25 – .27)	<u>Applicable</u>	<u>Not Applicable</u>
Sturdy / good condition	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Training received / documented	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Overhead Crane (1910.179)	<u>Applicable</u>	<u>Not Applicable</u>
Written procedures	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Training received / documented	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rated load markers	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Warning devices (power travel mechanism)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Inspection / testing / certification	<input type="checkbox"/> Yes	<input type="checkbox"/> No
PPE (1910.132, .133, & .135 – .138)	<u>Applicable</u>	<u>Not Applicable</u>
Proper type / selection / use	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Hazard assessment conducted	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Respiratory Protection (1910.134)	<u>Applicable</u>	<u>Not Applicable</u>
Proper type / selection / use	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Medical surveillance / fit-testing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Walking / Working Surfaces (1910.22)	<u>Applicable</u>	<u>Not Applicable</u>
Floors / aisles dry	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Floors / aisles unobstructed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Openings guarded	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Welding, Cutting, Brazing (1910.94 & 251 – .255)	<u>Applicable</u>	<u>Not Applicable</u>
Local exhaust ventilation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Exposure assessment conducted	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Guards / barriers	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Building Material Hazards		
Asbestos		
Suspect materials present	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is there an ACM Inspection Report	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		If yes, obtain copy
Lead		
Peeling paint present	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		If yes, collect bulk sample
Mold		
Is there evidence of moisture intrusion?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is there current moisture intrusion?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is there visible mold growth?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

water damaged ceiling tile - Roofers fixed



Industrial Hygiene Site Assessment Visit (IHSAV)

Facility Work Activities

~~RTI Facilities~~

Revised: April 25, 2014



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List of Facility Work Activities

Roswell NM Readiness Center

Work Activity	Conducted at Facility		Hazard Assessment Conducted	
	Yes	No	Yes	No
Administrative	✓			
Abrasive Blasting		✓		
Battery Charging		✓		
Battery Handling		✓		
Battery Storage		✓		
Bench Grinder		✓		
Bodywork / Fiberglass		✓		
Brake Re-Lining / Changing		✓		
Crain & Hoist		✓		
Electrical Work		✓		
Engine / Motor Repair, Test & Maintenance		✓		
Explosives / Munitions Storage		✓		
Forklift Operations		✓		
Fuel Storage / Re-Fueling		✓		
Hazardous Material Disposal / Handling		✓		
Jack / Lift Use		✓		
Metal Grinding		✓		
Paint Removal		✓		
Painting – Spot Spray		✓		
Parts Washer – Automatic		✓		
Parts Washer – Manual		✓		
Petroleum, Oil, Lubricant (POL) Handling		✓		
Pneumatic Tool Use – Air Grinder		✓		
Pneumatic Tool Use – Miscellaneous		✓		
Pressure Washer		✓		
Radioactive Material Storage		✓		
Tool Supply		✓		
Soldering		✓		
Small Arms Cleaning		✓		
Wash Rack / Oil Water Separator		✓		
Welding / Cutting / Brazing		✓		
Wrecker Use		✓		

List any new activities below

.32

e. Welding Rods: NA

1. Types used:

2. Provide an MSDS for Welding Rods:

f. Respiratory protection used by employees for welding operations:

1. Manufacture:

2. Respiratory Protection Type, i.e. half face, full face, Powered Air Purifying Respirator (PAPR):

3. Cartridge type used on Respiratory Protection:

4. Is other Personal Protective Equipment (PPE) used in operation? If so what types:

g. Are ventilation systems used during welding operations? If so, briefly explain:

1. Booth used:

2. Local exhaust/ventilation:

3. Outside area used:

4. What is the size(ft) of the room/booth for these operations:

Height:

Length:

Width:

h. Has a noise survey been conducted on the equipment in this area to determine the noise levels (<85 decibels)?

4. Brazing Operations, Copper, Aluminum: NAa. What are the names and SSN's of the personnel conducting Brazing operations for the facility? NA

b. Are these personnel enrolled in a medical surveillance program? If yes, why are they enrolled?

c. What are components treated/painted with:

Provide a MSDS for the paint/coating:

Provide a MSDS for the paint/coating: *32*

b. Respiratory protection used by employees for Grinding operations: *None Used*

1. Manufacture:
2. Respiratory Protection Type, i.e. half face, full face, Powered Air Purifying Respirator (PAPR):
3. Cartridge type used on Respiratory Protection:
4. Is other Personal Protective Equipment (PPE) used in operation? If so what types:

c. Are ventilation systems used during Grinding operations? If so, briefly explain: *NA*

1. Booth used:
2. Local exhaust/ventilation:
3. Outside area used:

d. Do processes involve the use of solvents/cleaners:

Provide MSDS for products used:

e. Has a noise survey been conducted on the equipment used to determine the noise levels (<85 decibels)?

6. Sand/Grit Blasting: *NA*

a. What are components treated/painted with:

Provide a MSDS for the paint/coating:

b. Respiratory protection used by employees for Sand/Grit Blasting operations:

1. Manufacture:
2. Respiratory Protection Type, i.e. half face, full face, Powered Air Purifying Respirator (PAPR):
3. Cartridge type used on Respiratory Protection:

4. Is other Personal Protective Equipment (PPE) used in operation? If so what types:

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c. Are ventilation systems used during Wiping/Cleaning processes? If so, briefly explain:

1. Booth used:
2. Local exhaust/ventilation:
3. Outside area used:

8. Soldering Operations: NA

a. What are components being soldered, treated/painted with:

Provide a MSDS for the paint/coating:

b. What are the metals used in soldering operations at the facility:

Provide a MSDS for these metals:

c. What other materials are used in conjunction with soldering operations (Flux, Cleaning solvents):

Provide an MSDS for other materials used:

d. Respiratory protection used by employees for Soldering operations:

1. Manufacture:
2. Respiratory Protection Type, i.e. half face, full face, Powered Air Purifying Respirator (PAPR):
3. Cartridge type used on Respiratory Protection:
4. Is other Personal Protective Equipment (PPE) used in operation? If so what types:

e. Are ventilation systems used during Soldering operations? If so, briefly explain:

1. Booth used:
2. Local exhaust/ventilation:
3. Outside area used:

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1. Manufacture:
 2. Respiratory Protection Type, i.e. half face, full face, Powered Air Purifying Respirator (PAPR):
 3. Cartridge type used on Respiratory Protection:
 4. Is other Personal Protective Equipment (PPE) used in operation? If so what types:
- g. Are ventilation systems used during Large Scale Painting operations? If so, briefly explain:

1. Booth used:
2. Local exhaust/ventilation:
3. Outside area used:
4. What is the size(ft) of the room/booth for these operations:

Height:

Length:

Width:

- h. Do processes involve the use of Solvents or Cleaners?

Provide MSDS for products used:

- i. Has a noise survey been conducted on the equipment used in this area, or general noise measurements collected within this area, to determine the noise levels (<85 decibels)?

10. Painting Operations (Small Scale Operations - Aerosol): NA

- a. What paints are used?:

Provide MSDS for paints used in painting operations:

Do the paints contain Chromates:

Do the paints contain Isocyanates:

- b. What is the process for Small Scale Paint application:

Roller

Spray

11. Chemical Inventory/Hazardous Materials Listing:

Provided

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- a. Is there a list of the Hazardous Materials and quantities on hand located at the facility?

Provide a copy of the list:

12. To date, How many Ergonomic Workstation Evaluations have been conducted at the facility? No

13. What types of High Frequency Communication Systems are located at this facility, or what equipment has High Frequency Communication Systems authorized/installed for use. N/A

14. What Radioactive Isotopes are processed at this facility (i.e. M43A1, M1AI, CAM and Calibration Equipment)?

920th Unit → Rad Detection
Sigus Renard - matl. disposition
unknown

Fire alarm in working condition - -not usually in place in older armories	Yes
Fire extinguishers in place and properly identified and mounted	Yes
Evidence of monthly fire extinguisher inspections	Yes, current for monthly inspections
Annual fire extinguisher inspections tags current	Yes
Are eye wash stations available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	None provided
Egress routes accessible and properly marked - -noted on <u>Fire Evacuation Plan</u>	Yes, recommend adding primary and secondary gathering points to evacuation maps.
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Yes, see field notes and Facility Information form
Any Photo labs	None
Any hazardous noise sources	None identified
Light levels checked throughout building	Complete, see Appendix E
Breaker panels properly labeled with no exposed wiring	Boiler Rm - Sub Panel M (left side) was not labeled
Check building occupancy 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. 18 military personnel 2. Administrative
Any civilian activities in armory (cub scouts, classes, day care, parties etc)	Community use - weddings, parties, children have access
Obtain two lead air samples	On IHSW Request Only N/A

Facility: Doswell Readiness Center .32

Date: 6/12/2014

Revised: September 18, 2013

[illegible]



Indoor Air Quality & Illumination Measurements

Facility: Roswell NM Readiness Center - .32

Date: June 12, 14

Revised: September 18, 2013



Location	CO ₂ max permissible level 1,000 ppm	Temperature permissible range 68 - 75° F	RH% permissible range 30-60%	CO max permissible range 200 ppm STEL	Illumination (FC)
Boiler Rm	828	78.3	46.0	2	29.9
Juniata #123	559	77.5	35.6	2	23.7
Classroom #120	536	73.7	33.6	2	55.8
Gym #126	529	74.1	37.3	2	37.0
Computer Kiosk	561	75.2	34.6	2	43.8
Secure Computer Srs. Room	526	73.4	34.5	2	34.4
Classroom #134	504	74.4	40.8	2	56.8
Assembly Hall #132	494	76.9	42.0	2	24.7
Kitchen	491	78.6	43.1	3	89.9
920th Readiness Office	522	74.4	37.8	2	75.3
Classroom 131	594	75.6	40.0	2	67.5
RSD Office	543	73.7	35.7	2	77.2
Supply #115	553	73.3	38.8	2	63.0
Office # 114	523	73.0	38.7	2	67.1

CO₂ = Carbon Dioxide

°F = Fahrenheit

RH = Relative Humidity

CO = Carbon Monoxide

STEL = Short Term Exposure Limit

Office #
109 588

73.1

~~70.3~~
40.1

2

~~40.1~~
70.3



LEV System Survey Form

Facility: Roswell NM Readiness Center - 32
 Date: June 12, 14
 Revised: May 8, 2014



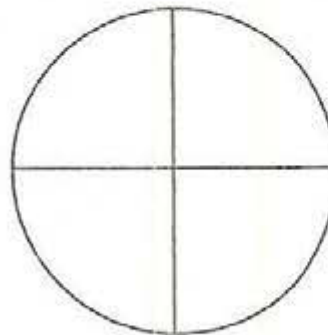
Name of LEV System: Gas Grill, Griddle + Oven Canopy Hood

Model: NA

Serial Number: NA

Dimensions of LEV: 15' x 3.5' OR 52.5 ft diameter

124	154	196	251
98	136	158	196
36	87	57	158



NOTES: Ave fpm: 138 $\times 52.5 = 7,245 \text{ CFM}$

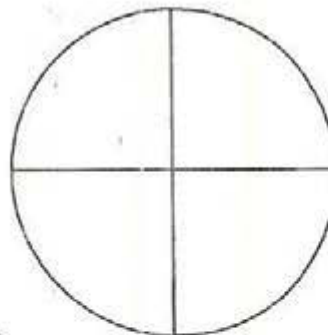
Name of LEV System: Canopy Hood Over Dishwasher

Model: NA

Serial Number: NA

Dimensions of LEV: 3' x 3' OR 9 ft diameter

	68	71	82
	54	56	41
	35	31	37



NOTES: 53 fpm $\times 9 = 477 \text{ CFM}$

For Vehicle Exhaust Ventilation Systems, obtain the following:

(1) types of vehicles serviced in each Bay, (2) average tailpipe temp., (3) engine displacement, & (4) RPM's.

NOTE: information may not be available for each vehicle, but obtain what you can.

NOISE SURVEY (Sound Level Meter Survey)							
1. DATE (YYYYMMDD) 20140612				2. TYPE SURVEY (Enter code) 1 - INITIAL SURVEY 2 - RE-SURVEY 3 - OTHER			
3. SOUND LEVEL METER		4. MICROPHONE		5. CALIBRATOR			
a. MANUFACTURER Quest		a. MANUFACTURER Attached to SLM		a. MANUFACTURER Quest			
b. MODEL 210 SLM	c. SERIAL NO. DCF010012	b. MODEL	c. SERIAL NO.	b. MODEL QC-10	c. SERIAL NO. QIF010094		
d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20130712		d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD)		d. LAST ELECTROACOUSTIC CALIB DATE (YYYYMMDD) 20130712			
6. WIND SCREEN (X one) <input type="checkbox"/> USED <input checked="" type="checkbox"/> NOT USED				7. MEASUREMENTS OBTAINED (X one) <input checked="" type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS			
8. DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) Evaluation of Kitchen canopy hoods (3) during operation.				9. PRIMARY SOURCE OF NOISE canopy hood			
				10. SECONDARY SOURCE OF NOISE None			
11. SOUND LEVEL DATA				12. PROTECTION REQUIRED (re: dBA - Level)			
a. LOCATION	b. METER ACTION	c. dBC	d. dBA	e. RISK ASSESSMENT CODE	a. NONE (Less than 85)	b. PLUG OR MUFF (85-108)	c. PLUG AND MUFF (108-118)
Canopy hood over range/ovens @ operator hearing level	S		86			X	
Canopy hood over sink @ OHL	S		79		X		
Canopy hood over dishwasher @ OHL	S		81		X		
NOTES: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.							
13. REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.) No hazardous noise placards were posted. Recommend to perform dosimetry for canopy hood operation to assess potential hazardous noise exposure.							
14. MORE DETAILED NOISE EVALUATION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "YES," identify type evaluation needed.) Noise dosimetry for an 8 hour TWA							
15. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)							
16. SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION							
Non-Responsive		b. TELEPHONE (Include area code) 505-474-2501		c. ORGANIZATION Roswell Readiness Center, NM			
		e, First Name, MI)		18. HEARING CONSERVATION MONITOR (Last Name, First Name, MI)			

6/12/14 HVAC

.32

Bldg HVAC System operates satisfactorily per the building occupants

- Maintenance and PM activities are performed by the State.

BMP State Maintenance Office - occupied by 1 person did not have an outside air supply, but a wall mounted air conditioner was provided. Provide fresh makeup air to all occupied offices.

Written Program

F BBP - Not Avail.

F Haz Comm - Not Avail

Fire Prevention Plan

- complies w/ 29CFR 1910.39 & 38

BMP - add primary & secondary meeting points, ~~to~~ should be added to evac route maps.

32

6/13/14

Flammables stored in a room w/ access from back of Armory, Flammable Placard on door. Metal cabinet (not a flammable cabinet) stored 4 spray paint cans.

Separated below was corrosives, cleaning matts. Gasoline stored (for mow) in plastic gas container. Rec Just Like sealing gas can.

BMP

Five Extinguishers inspected monthly

FMS #1 Located at the back of the Readiness Center

6/16/14

Action pending

Any haz waste gen (v. little) given to FMS #1

Non-Responsive

provided an electronic copy after the IHSAT^{test} was completed by IHI, Rgt dated Oct. 30, 2012 w/o Results Tables

- Requested copies of report tables
- Requested of Non-Responsive [REDACTED] info. establishing that the converted IFR has been cleared.



Certificate of Calibration



8710195 REV1

Certificate Page 1 of 2

Instrument Identification

Company ID: 607229
 NETWORK ENVIRONMENTAL SYSTEMS
 Non-Responsive
 1141 SIBLEY STREET
 FOLSOM, CA 95630

PO Number Non-Responsive

Instrument ID: 00279019
 Manufacturer: KONICA MINOLTA
 Description: ILLUMINANCE METER

Model Number: TL-1
 Serial Number: 00279019

Certificate Information

Reason For Service: CALIBRATION
 Type of Cal: NORMAL
 As Found Condition: IN TOLERANCE
 As Left Condition: IN TOLERANCE
 Procedure: 33K4-4-475-1 JUN13

Technician Non-Responsive

Cal Date 02Jun2014
 Cal Due Date: 02Jun2015
 Interval: 12 MONTHS
 Temperature: 24.0 C
 Humidity: 43.0 %

Remarks: REV 1 ADDED: DATA REPORT ATTACHED

Tektronix certifies the performance of the above instrument has been verified using test equipment of known accuracy, which is traceable to National Metrology Institutes (NIST, NPL, PTB) that are linked to the International System of Units (SI). The policies and procedures used comply with ANSI/NCSL Z540.1-1994 (R2002).

This certificate shall not be reproduced, except in full, without the written permission of Tektronix.

Approved By: Non-Responsive
 Service Representative

Issue Date: 6/2/2014

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
7302067	000800	STANDARD SHUNT	RUBICON	ABS 1	26Apr2013	26Apr2015
1700294966	17-1001076	6 STEEL RULE	STARETT	C416R-72	22Mar2013	22Mar2015
8095776	17-1001081	LUMINANCE STD	OPTRONIC LABS	OL 455-4	16Dec2013	16Dec2014