

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

18 July 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: LTC [Non-Responsive]
[Non-Responsive] Safety Manager, Safety and Occupational Health Office, St. Francis Barracks, 82
[Non-Responsive] Marine Street, St. Augustine, FL 32085-1008

SUBJECT: Industrial Hygiene Survey of the Florida Army National Guard, Eugene M. Bass Armory, 120 Bartow Municipal Airport, Bartow Florida 33830-9504.

1. References.

- a. Report submitted 11 July 2003, Industrial Hygiene Survey, Tammer Sciences, Inc.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office a Service Contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

- b. M [Non-Responsive] of Tammer Sciences, Inc. conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. **Ensure the Armory Commander get a copy of this report.**

c. **Discuss the high Lead and Asbestos samples taken in the Armory with the Safety and Occupational Health Office, the Facility Management Office and the Environmental Office. Request help in eliminating possible employee lead and Asbestos exposure. Be prepared to educate personnel on proper clean-up procedures.**

d. Use the report to help in correcting all deficiencies noted by the contractor.

e. Consider additional Industrial Hygiene services to conduct a follow up or monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive



Regional Industrial Hygienist

Industrial Hygiene Baseline Survey Report
For
Florida Army National Guard
(FLARNG)

At
Eugene M. Bass National Guard Armory
Bartow Armory
120 Bartow Municipal Airport
Bartow Florida 33830-9504

Prepared for:

Department of the Army and the Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By
Non-Responsive [REDACTED] CIH PE
Tammer Sciences, Inc.

June 30, 2003

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Executive Summary

An initial baseline industrial hygiene survey was conducted at the Bartow Armory on 22 April 2003 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality, and a review of several industrial hygiene programs such as hazard communication, ergonomics, personal protection equipment, and posting of forms and bulletins.

The following table summarizes the survey findings and recommendations for each topic surveyed.

Topic	Summary of Findings	Recommendations
Lead Wipe Samples	10 to 6100 microgram per square foot	Clean contaminated surface in the IFR Area
Asbestos Bulk Samples	12x12 floor tiles in the office area contained 8% chrysotile.	Update the facility asbestos management plan to include the floor tiles in the office area.
Noise Survey	No sources identified. Noise levels are estimated to well below the 85 dBA limit	No action
Illumination Survey	9 to 95 footcandles	Consider increasing the lighting levels in the drill hall and lounge.
HVAC/IAQ	No issues observed or documented.	No action
Hazcom	No findings.	No action
Ergonomics	No issues	Consider offering ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
PPE	No issues	No action
Posters & Bulletins	Emergency evacuation plans were not posted	Post Emergency Evacuation plan throughout the armory.

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Eugene M. Bass National Guard Armory in Bartow, Florida on 23 April 2003

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Bartow Armory in Bartow, Florida. Sgt. [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 23 April 2003. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards present at the armory.

Site Description. The facility houses Btry A, 2nd Bn, 116th Field Artillery (FA) and has 3 full time employees. The armory building is a one-story structure that was constructed in 1978. The facility houses two administrative office areas, kitchen, mess hall, a classroom, a drill hall, a supply room, a break room/lounge, and a converted indoor firing range area used for storage. The Petroleum Oil and Lubricant (POL) storage is housed in a separate structure approximately 100 yards from the Armory. Refer to Building layout drawing and photos in Appendix D.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, and an evaluation of the ventilation system as it pertains to indoor air quality. A list of occupational health programs and procedures were verbally covered with the Armory designated safety officer. The list included programs such as Hazard Communication, Ergonomics, and Personal protection Equipment. Procedures included posting of applicable posters and bulletins, training, and posting of warning signs and labels.

Methodology Lead wipe samples were collected from surfaces that showed signs of lead contamination in Armories that have a renovated, inactive, or closed indoor firing range (IFR). The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. A photograph of the sampled material and area were also taken. Illumination readings were collected using a Davis light meter Model L595339. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SSG Non- (863) 534-7147.

Lead Wipe Samples: Eight wipe samples were collected from the converted indoor firing range area and other administrative areas as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
BTW001	Top of lockers in the converted IFR by the trap area.	150
BTW002	Intake to the air handlers located on top of the trap area in the converted IFR.	4100
BTW003	Top of air handler in the converted IFR over the firing line area.	6100
BTW004	Top of a winterization kit stored in the converted IFR.	18
BTW005	Top of the microwave oven in the kitchen.	10
BTW006	Top of soda machine in the drill or assembly hall underneath the air supply diffuser.	85
BTW007	Supply air diffuser in the office area	13
BTW008	Return air intake grill in office area hallway.	40
BTW009	Field blank	<10

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

The indoor firing range should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18. Appendix E contains recommended guidelines for cleaning and decontaminating indoor firing range.

Asbestos Suspect Building Material Six types of building materials were identified as potentially containing asbestos and included two types of 12 by 12 floor tiles, three types of 2x4 ceiling tiles, and tar like sealant. A total of six bulk samples were collected randomly from the identified materials. Suspect materials for the surveyed areas are listed in the table below:

Bartow Armory

Survey Date: 22 APRIL 2003

Area	Floor	Walls	Ceiling	Other
Office Area	Carpet	Cement Block	2x4 Ceiling Tiles	Black tar on Supply duct
Office Area Hallways	12x12" Tiles	Cement Block	2x4 Ceiling Tiles	
Drill Hall	Cement	Cement Block	2x4 Ceiling Tiles.	
Lounge	Carpet on tiles	Cement with baseboard	4x8 wood ceiling tiles	
Cleaning Storage	Cement	Cement Block	Concrete	
Vault Storage	Cement	Wood Panels	Corrugated Steel	
Supply Sergeant Office	Carpet	Wallboard & Cement Block	2x4 Ceiling Tiles	
Supply Room	Cement	Cement Block	Corrugated Steel	

Suspect building materials were collected from floor tiles, ceiling tiles and the black tar found on the air supply duct. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
BTW01A	12x12 inch floor tile from lounge	None
BTW02A	12x12 inch floor tile from office area	8% Chrysotile
BTW03A	Ceiling tile from lounge	None
BTW04A	2x4 feet ceiling tile from drill hall	None
BTW05A	2x4 feet ceiling tile from office area	None
BTW06A	Black tar sealant form air supply duct	None

The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey Due to the lack of noise sources, area noise level readings were not measured. Based on experience noise levels in the armory could range from 60 decibels on the A scale (dBA) to 75 dBA depending on the activity or background noise source.

Illumination Survey Lighting levels throughout the Armory ranged between 9 foot-candles to 95 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Converted Firing Range	19 to 79
Drill hall	12 to 15
Office Areas	60 to 65
Kitchen	25 to 35
Cleaning Supply Storage	80 to 95
Lounge	9 to 20
Vault Storage	10 to 15

Report Date: 30 June 2003

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Bartow Armory

Survey Date: 22 APRIL 2003

Supply Office	40 to 50
Supply Room	25 to 35

Except for the drill hall, all readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Armory is heated with two forced air furnaces and two ceiling mounted heaters in the drill hall. One window air conditioners provide cooling to the supply office and the two furnace units provide cooling to the office areas. The two air handlers/furnaces and the supply office have outside makeup air capability. No complaints of indoor air quality issues were documented or communicated with the POC.

Hazard Communication Standard All full time employees have received their annual hazard communication training. Material Safety Data Sheets (MSDSs) for the cleaning supplies are kept in a binder, which is located in the cleaning supplies storage room. No other chemicals are used or stored at the Armory.

Ergonomics No ergonomic related injuries or concerns were expressed by the full time employees that work at the Armory. Consideration should be given to provide all full time employees that spend the majority of their working time working at a computer terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

Personal Protection Equipment (PPE) Normal duties of the full time employees at the Armory do not require the use of PPE. However, all full time employees are issued safety glasses and personal earplugs as part of their field duties.

Posters and Bulletin Posting The Department of Defense Safety and Occupational Health Protection Program, DD Form 2272, were posted. Employee Report of Alleged Unsafe or Unhealthful Working Conditions, DA Form 4755 was not posted. Safety related bulletins and information issued by State Headquarters were also posted. No evacuation plan drawings were posted.

Recommendations:

1. Clean the two contaminated air handlers by wet wiping and vacuuming using a High Efficiency Particulate Air (HEPA) filter.
2. Update the facility asbestos plan to include the floor tile in the office area as containing asbestos.
3. Consider increasing the lighting levels in the drill hall and lounge.
4. Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.
5. Post necessary evacuation plan.

Technical Assistance: For technical assistance regarding information found in this report or the performed survey please contact Mr. Non- Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

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APPENDIX A

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

Army Regulation (AR) 11-34, The Army Respiratory Protection Program, 1990

Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990.

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

National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustibles Liquid Code, 1996.

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

NGR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

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

Title 29, Code Of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.

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

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APPENDIX B

EMSL Analytical

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3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: gmiller1@emsl.com

EMSLAttn: **Non-**Tammer Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:10 AM

Fax: (630) 369-7957

Phone: 630-369-7956

EMSL Order: 200304247

Project: **Bartow**

EMSL Project ID:

Lead in Wipes by Flame AAS (SW 846, 7420)

Client Sample Description		Lab ID	Analyzed	Area Sampled	Lead Concentration
BTW001	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/9/03	144 in ²	150.0 µg/ft ²
BTW002		0002	5/9/03	144 in ²	4100.0 µg/ft ²
BTW003		0003	5/9/03	144 in ²	6100.0 µg/ft ²
BTW004		0004	5/9/03	144 in ²	18.0 µg/ft ²
BTW005		0005	5/9/03	144 in ²	10.0 µg/ft ²
BTW006		0006	5/9/03	144 in ²	85.0 µg/ft ²
BTW007		0007	5/9/03	144 in ²	13.0 µg/ft ²
BTW008		0008	5/9/03	144 in ²	40.0 µg/ft ²
BTW009		0009	5/9/03	144 in ²	<10.0 µg/ft ²

Non-ResponsiveLaboratory Director
NJ-NELAP: 04653

AIHA: 100194

or other approved signatory

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA, unless specifically indicated otherwise in the comment section.

ACCREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Date Printed: 5/9/03 3:32:28 PM

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Page 1 of 1

PB w/o QC

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Released by National Guard Bureau

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EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-4960 Email: ssiegel@EMSL.com

EMSL

Attn: **Non-**
 Tammer Science Inc
 3744 Lawrence Drive
 Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project:

Customer ID: TS80
 Customer PO:
 Received: 04/28/03 11:32 AM
 EMSL Order: 040306863
 EMSL Project ID:
 Analysis Date: 5/7/2003

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
BTW01A 040306863-0001		Gray/White Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
BTW02A 040306863-0002		Gray Non-Fibrous Heterogeneous	Dissolved		92% Non-fibrous (other)	8% Chrysotile
BTW03A 040306863-0003		Tan/White Fibrous Heterogeneous	Dissolved	95% Cellulose	5% Non-fibrous (other)	None Detected
BTW04A 040306863-0004		White/Yellow Fibrous Heterogeneous	Teased Dissolved	95% Glass	5% Non-fibrous (other)	None Detected
BTW05A 040306863-0005		Gray Fibrous Heterogeneous	Teased	40% Cellulose 40% Min. Wool	20% Non-fibrous (other)	None Detected
BTW06A 040306863-0006		Black Non-Fibrous Heterogeneous	Dissolved	5% Glass	95% Non-fibrous (other)	None Detected

Non-Responsive

Analyst(s)

Non- (6)

Non-
Responsive CIH
 or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

PLM-1

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APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

2030424 LEAD

Revised 7/1/99

EMSL Rep:

Your Company

Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project

Name/Number:

DATE:

Third party billing requires written authorization from third party

EMSL-Bill to:

Street:

Box #:

City/State:

Zip:

Fax Results to:

Name:

Fax #:

Purchase

Order #:

MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chips*	SW846-7420 or AOAC 5.009 (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
	or NIOSH 7300	ICP	3.0 ug/filter	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	10 ug/wipe	6-10 day
	or SW846-6010	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010	ICP	0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
Lead Soil +			0.3 mg/kg (ppm) soil	
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - 3 hours, 6 hours, Please call ahead to schedule.

12 hours (must arrive by 11:00 a.m),

24 hours (1day), 48 hours (2 days), 72 hours, 96 hours (3 days), 120 hours(4 days), 144 + hours (6-10 days)

* **, ***, ****, +, ++ Please Refer to Price Quote

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
✓ BTW001		144 in ²	642471
✓ BTW002		↓	2
✓ BTW003		↓	3
✓ BTW004		↓	4
Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date: 4/26/03		Date: 4/26/03	11:10 am

Note: Please duplicate this form and use additional sheets if necessary.

Page 1 of 3

EMSL ANALYTICAL

CHAIN OF CUSTODY

200304247 LEAD

Revised 7/1/99

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW005		144 in ²	04247-5
BTW006			-6
BTW007			-7
BTW008			-8
BTW009			-9
LW001			
LW002			
LW003			
LW004			
LW005			
LW006			
LW007			
LW008			
LW009			
HC001			
HC002			
HC003			
HC004			
HC005			
HC006			
HC007			
HC008			
HC009			
HC010			
LH001			
LH002			
LH003			
LH004			
LH005			
LH006			
LH007			
LH008			
LH009			
LH010			

Relinquished By: (Person) **Non-Responsive**

Received at EMSL By:

Non-Responsive

Date 4/26/03

Date

4/28/03 11:11 AM

Note: Please duplicate this form and use additional sheets if necessary.

* Separate Report

Page 2 of 3

LEAD

[illegible]

Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date	4/26/03	Date	15/15/03 10:10 AM

Note: Please duplicate this form and use additional sheets if necessary.

* Separate report

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040306863

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Asbestos



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

EMSL Rep:

Your Company Name: Tammer Sciences, Inc.
Street: 3744 Lawrence Dr.
Box #:
City/State: Naperville, IL Zip: 60564
Phone Results to: Non-Responsive
Name:
Telephone #: 630-369-7956
Project Name/Number:

EMSL-Bill to:
Street: Same

Box #:
City/State:

Fax Results to: Non-Responsive
Name:

Fax #: 630-369-7957
Purchase Order #:

Third Party Billing requires written authorization from third party

Zip:

MATRIX

TURNAROUND

<input type="checkbox"/> Air	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Soil	<input type="checkbox"/> 3 hrs	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours 1 day
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Dust	<input type="checkbox"/> 48 Hours 2 days	<input type="checkbox"/> 72 Hours 3 days	<input type="checkbox"/> 96 Hours 4 days	<input type="checkbox"/> 120 Hours 5 Days
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Micro-Vac	<input checked="" type="checkbox"/> 144+ hours 6-10 Days			

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3 hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m Mon - Fri.), Please Refer to Price Quote

PCM - Air

- ☐ NIOSH 7400
☐ OSHA
☐ Other:

TEM AIR

- ☐ AHERA
☐ NIOSH 7402
☐ EPA Level II

TEM WATER

- ☐ Wastewater
☐ Drinking Water EPA 100.1
☐ Water - NY Wastewater
☐ Water-NY Drinking Water

PLM - Bulk

- ☒ EPA 600/R-93/116

- ☐ EPA Point Count
☐ NY Stratified Point Count
☐ PLM NOB (Gravimetric) NY 198.1
☐ Other:

TEM BULK/misc

- ☐ Drop Mount (Qualitative)
☐ Chatfield
☐ TEM NOB (Gravimetric) NY 198.4

TEM MICROVAC / WIPE

- ☐ ASTM D 5755-95
quantitative method

SEM Air or Bulk

- ☐ Qualitative
☐ Quantitative

XRD

- ☐ Asbestos
☐ Silica

OTHER

☐

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s) Non-Responsive

Total Samples #:

Relinquished:

Date: 4/26/03 Time: PM

Received:

Date: 4-28-03 Time: 11:32am

Page 1 of 2 1

JMK 5-7-03

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EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Asbestos

[illegible]

✶ Separate report

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DMK 5-7-03

APPENDIX D

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APPENDIX E

Indoor Firing Range Cleaning Guidance

1. Introduction - This document describes procedures to be employed in cleaning a range for non-lead use. All lead hazard control activities can produce dangerous quantities of leaded dust. Unless this dust is properly removed, a facility will be more hazardous after the work is completed than it was originally. Once deposited, leaded dust is difficult to remove effectively. Whenever possible, ongoing and daily cleaning of leaded dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures. Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead hazards in a space will not make the space safe unless excessive levels of leaded dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.

2. Difficulties in Cleaning - While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail. Several common reasons for this failure include worker inexperience, high dust-producing methods, and deadlines.

3. Performance Standard - Although the cleaning methods described in this document are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both occupants and workers.

4. Clearance Standard - 200 $\mu\text{g}/\text{ft}^2$ on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 $\mu\text{g}/\text{ft}^2$ for exterior concrete (a HUD interim recommendation and serves as a useful guideline). These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied as a non-lead work area after the completion of a lead hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.

5. Worker Inexperience - To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.

6. Equipment Needed for Cleaning - The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice

tools), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).

7. Waste Disposal - Regulations governing hazardous and non-hazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.

8. Containment - Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containments or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area.

9. Pre-cleaning Procedures - Pre cleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in facilities that are heavily contaminated with debris/paint chips, etc. Pre cleaning involves removing large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant furniture or carpeting (rugs or carpets or any porous item in the firing range is not recommended due to the difficulty in cleaning these items effectively), depending on the worksite preparation. Carpeting (if present) should always be misted before its removal to control the generation of hazardous dust. However, if necessary, owners or project management should be prepared to remove furniture before lead hazard control work begins.

10. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques - Because leaded dust adheres tenaciously, especially to rough or porous materials like weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time. The typical cleaning method uses a special vacuum cleaner equipped with a HEPA filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum. Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the Alternatives Methods section in this document, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.

a. HEPA Vacuuming - HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small particles. These filters can remove particles of 0.3 microns or greater from air with 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is

capable of filtering out particles of 0.13 microns or greater at 99.9995 percent efficiency. However, ULPA filters are slightly more expensive and may be less available than HEPA filters. Vacuuming with conventional vacuum machines is unlikely to be effective because much of the fine dust will be exhausted back into the environment where it can settle on surfaces. Considerations for the proper use of a HEPA vacuum are listed below.

(1) Operating Instructions - There are a several manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, carefully follow the manufacturer's operating instructions and, if possible, arrange training sessions with the manufacturer's representative. Although HEPA vacuums have the same suction capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.

(2) Special Attachments - Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces such as brushes of various sizes, crevice tools, and angular tools.

(3) Selecting Appropriate Size(s) - HEPA vacuums are available in several sizes, ranging from a small lunch bucket-sized unit to track-mounted systems. Two criteria for size selection are the size of the job and the type of electrical power available. Manufacturer recommendations should be followed.

(4) Wet-Dry HEPA Vacuums - Some hazard control contractors have found the wet-dry HEPA vacuums to be particularly effective in meeting clearance standards. These vacuums are equipped with a special shut-off float switch to protect the electrical motor from water contact.

(5) Pre-filters - HEPA filters are usually used in conjunction with a pre filter or series of pre filters that trap the bulk of the dust in the exhaust air stream, particularly the larger particles. The HEPA filter traps most of the remaining small particles that have passed through the pre filter(s). All filters must be maintained and replaced or cleaned as specified in the manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the pre-filters.

(6) HEPA Vacuuming Procedures - Surfaces to be vacuumed include ceilings, walls, floors, doors, heating, ventilation, and air conditioning (HVAC) equipment (heating diffusers, radiators, pipes, and vents), fixtures of any kind (light), built-in cabinets, and appliances. All rooms and surfaces should be included in the HEPA vacuum process, except for those that (1) were found not to have lead hazards and were properly separated from work areas before the process began, or (2) were never entered during the process. Sidewalks, driveways, and other exterior surfaces should be vacuumed if exterior hazard control work was conducted, or if debris was stored or dropped outside. Vacuuming

should begin on the ceilings and end on the floors, sequenced to avoid passing through rooms already cleaned, with the entryway cleaned last.

(7) Emptying the HEPA Vacuum - Used filters and vacuumed debris are potentially hazardous waste and should be treated accordingly. Therefore, operators should use extreme caution when opening the HEPA vacuum for filter replacement or debris removal to avoid accidental release of accumulated dust into the environment. This may occur, for example, if the vacuum's seal has been broken and the vacuum's bag is disturbed. Operators should also wear a full set of protective clothing and equipment, including appropriate respirators, when performing this maintenance function, which should be done in the containment area or off-site.

b. Wet Detergent Wash - Several types of detergents have been used to remove leaded dust. Those with a high phosphate content (containing at least 5 percent presidium phosphate, also known as TSP) have been found to be effective when used as part of the final cleaning process. TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups, which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some states have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control. Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several investigators and may also be safer, since TSP is a skin and eye irritant.*

Manufacturer's Dilution Instructions - Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre-filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the pre-filters.

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Appropriate Cleaning Equipment - Because a detergent may be used to clean lead dust from a variety of surfaces, several types of application equipment are needed, including cleaning solution spray bottles, wringer buckets, mops, variously sized hand sponges, brushes, and rags. Using the proper equipment on each surface is essential to the quality of the wet-wash process.

(1) Proper Wet-Cleaning Procedures - At the conclusion of the active lead hazard control process and after the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and be sequenced to avoid passing through rooms already cleaned.

(2) Changing Cleaning Mixture - Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no more than 1,000 square feet. Used cleaning mixture is potentially hazardous waste; consult with your local water and sewage utility for directions on its

proper disposal. Wash water should never be poured onto the ground. The wash water is usually filtered and then poured down toilet (if the local water authority approves).

11. The HEPA/Wet Wash/HEPA Cycle Typical Procedures - The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows: First, the area is HEPA vacuumed. Next, the area is washed down. After drying, the area is again HEPA vacuumed. The rationale for this three-pass system is as follows: The first HEPA vacuum removes as much dust and remaining debris as possible. The wet wash further dislodges dust from surfaces. The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.

12. Single-Pass Wet Wash/HEPA Vacuum - Some lead hazard control contractors have roundhead spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.

13. Sealing Floors - Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or epoxy coating. Concrete floors should be sealed with a concrete sealer or other type of epoxy coating. If these floors are already covered by an effective coat of sealant, it may be possible to skip this step. New surfaces should be cleaned with a cleaning solution that is appropriate for that type of surface.

14. Surface Painting or Sealing of Non-floor Surfaces - Surfaces, including walls, ceilings, and wood-work, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision. Coating of walls may not be appropriate if lined with acoustic material to control noise.

15. Exterior Cleaning - Areas potentially affected by exterior lead hazard control should be protected via a containment system. Because weather can adversely affect the efficacy of exterior containment, the surface plastic of the containment system should be removed at the end of each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6-mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming is inappropriate for hard exterior surfaces, not for soil.

16. Worker Protection Measures - Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment and appropriate respirators if required.

17. Maintaining Containment - The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should monitor the sheeting and immediately repair any holes or rips with 6-mil plastic and duct tape.

18. Decontamination of Workers, Supplies, and Equipment - Decontamination is necessary to ensure that worker's families, other workers, and subsequent properties do not become contaminated. Specific procedures for proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas should be implemented. Work clothing, work shoes, and tools should not be placed in a worker's automobile unless they have been laundered or placed in sealed bags. All vacuums and tools that were used should be wiped down using sponges or rags and detergent solutions. Consumable/disposable supplies, such as mop heads, sponges, and rags, should be discarded after each space is completed. Soiled items should be treated as contaminated debris. Durable equipment, such as power and hand tools, generators, and vehicles should be cleaned prior to their removal from the site. The cleaning should consist of a thorough HEPA vacuuming followed by washing.

19. Preliminary Visual Examination - After the cleaning work is completed, the certified supervisor should visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. While the preliminary examination may be performed by the lead hazard control supervisor, contractor, or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or reclined. Therefore, it is more cost-effective to have the supervisor rather than the clearance examiner perform this initial examination.

20. Final Inspection - The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work is complete; 2) to detect the presence of leaded dust; and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the sealant is applied to the floor.

21. Advanced Screening - Advanced screening for clearance may be considered. Immediate on-site analysis of dust wipes may alert the contractor to continue cleaning prior to final clearance sampling.

22. Recleaning After Clearance Failure - If after passing the final visual examination, the space fails the clearance wipe dust tests, the HEPA/wet wash/HEPA cleaning cycle should be carefully and methodically repeated. Failure is an indication that the cleaning

has not been successful. Recleaning should be conducted under the direct supervision of a certified supervisor. Care should be exercised during the recleaning of "failed" surfaces or components to avoid recontaminating "cleared" surfaces or components.

23. Cleaning Cost Considerations - An important consideration in determining lead hazard control strategies and methods is the cost and difficulty of required daily and final cleanup operations and the likelihood that one can meet dust-clearance standards. A general rule of thumb is that lead hazard control strategies that generate the most dust will have higher cleanup costs and higher initial clearance test-failure rates.

24. Initial Clearance Test Failure Rates - The likelihood of passing final dust-clearance tests is highly correlated with the chosen intervention strategy, methods, and care exercised by the contractor. Chemical removal and hand-scraping strategies generally experience higher failure rates than replacement and encapsulation/ enclosure strategies. However, clearance failure is not solely related to abatement method. The diligence and effectiveness of an abatement contractor's cleaning process has a major impact on the likelihood of the space to pass the final wipe test clearance.

25. Key Factors In Effective Cleaning - Effective cleaning will be aided by adequate sealing of surfaces with polyethylene sheeting prior to lead hazard control, proper daily cleaning practices, good worker training, and attention to detail. Where poor worksite preparation is employed, additional cleaning may be required to meet clearance.

26. Special Problems - Surfaces such as porous concrete, old porous hardwood floors, and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve unacceptable level of cleanliness.

27. Alternative Methods - Alternatives to the recommended cleaning tools and practices discussed in this document are available, some with significant potential for increasing effectiveness and lowering costs. Other vacuums may be used if worker exposures do not increase, if compliance with clearance standards is achieved, and if a variance from OSHA regulation is obtained by the contractor or employer (if required). The OSHA lead standard requires the use of HEPA vacuum equipment (see 29 CFR 1926.62 (h)(4), which states, "where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters."). Agitator heads on vacuums have been shown to significantly enhance vacuum effectiveness on carpets in cleaning fine dust without increasing airborne dust levels. Vacuums without agitator heads appear to perform relatively poorly on carpets.



Photo 1: Bartow Armory Front Entrance



Photo 2: East side of Armory



Photo 3: Armory west and rear side



Photo 4: Outside the converted IFR



Photo 5: West end of the converted IFR (Bullet trap area) showing the air handling unit and storage lockers.



Photo 6: East end of the converted IFR (Firing line area).



Photo 7: Air handling unit on the east end of the converted IFR



Photo 8: Armory kitchen



Photo 9: Drill hall.



Photo 10: Soda machine in drill hall where a wipe sample was collected.



Photo 11: Lounge area.



Photo 12: Janitor's storage room.



Photo 13: Air supply grill to office area.



Photo 14: Return air grill for the office area.



Photo 15: Office floor tiles photo where sample was collected.



Photo 16: Ceiling tiles in lounge area.



Photo 17: Floor tiles in lounge area.



Photo 18: Ceiling tiles found throughout the assembly hall and office areas.



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ARNG-CSG-P

September 27, 2012

MEMORANDUM FOR: Florida Army National Guard, ATTN: CPT [Non-Responsive] 308
West North Ave, Bonifay, FL 32425.

SUBJECT: Industrial Hygiene survey of the Alpha Troop 1-153 Rd CAV (RSTA) on
September 18, 2012.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. EPA, Guidance for Controlling Asbestos Containing Materials in Buildings, June 1985.
- c. MEMORANDUM SGPS-PSP, OTSG, subject: AMEDD Role Supporting Asbestos Abatement/ Asbestos Management Programs, 19 January 1989.
- d. TB MED 513, Guidelines for the Evaluation and Control of Asbestos Exposure, 15 December 1986. [10/2007 Under Revision as DA PAM 40-513]
- e. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 22 July 2005.
- f. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, 1988.
- g. DA PAM 40-503, The Army Industrial Hygiene Program, 30 October 2000.
- h. Title 29, Code of Federal Regulations (CFR), 2011 rev., part 1910, Occupational Safety and Health Standards.

2. General.

- a. An Industrial Hygiene survey was conducted at Alpha Troop 1-153 Rd CAV (RSTA) on September 18, 2012. The purpose of this visit was to conduct a formal walk through while identifying hazards and making recommendations regarding those hazards.
- b. SSG [Non-Responsive] Industrial Hygiene Technicians, performed the survey.

Industrial Hygiene Report
For
Florida National Guard
Alpha Troop 1-153 Rd CAV (RSTA)
308 West North Ave
Bonifay, FL 32425



Prepared for:
National Guard Bureau
Regional Industrial Hygiene Office
Region South
510 Plaza Drive, Suite 1530
College Park, Georgia 30349

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3. **Instrumentation.** The following instrumentation was used to determine ventilation rates, illumination measurements, and photographically document findings.

- a) Extech Light Meter, Model 407026, S/N:Q009471, Calibrated: 07/20/2011
- b) Canon camera, PowerShot A2200, S/N: 282063093333

4. **Findings.**

a) **Roof Leaking**

- i) Throughout the facility watermarks were seen on the ceiling tile in rooms 113A, 114, and 119.

b) **Water Damage**

- i) Water pooling was seen in the drill hall during the survey. Drains from the building runs into the concrete where water was accumulating. Water also floods the annex building after it rains.

c) **General Information**

- i) Lighting requirements were met in every room.
- ii) Material Data Sheets were present throughout the building available to all employees.
- iii) It is obvious the facility is being maintained well.

5. **Lead**

- a) Laboratory findings show there was no lead present above the reporting limit.

The results are illustrated in the chart below.

Sample Number	Sample Location	Laboratory Results
1-153 CAV MMN 201 09-18-12	Mechanic Room	Not Detected
1-153 CAV MMN 202 09-18-12	Mechanic Room	Not Detected
1-153 CAV MMN 203 09-18-12	Outside Supply Room	Not Detected
1-153 CAV MMN 204 09-18-12	Outside Supply Room	Not Detected
1-153 CAV MMN 205 09-18-12	Outside Supply Room	Not Detected
1-153 CAV MMN 206 09-18-12	Inside vault on back floor	Not Detected
1-153 CAV MMN 207 09-	Inside vault on cabinet	Not Detected

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18-12		
1-153 CAV MMN 208 09-18-12	Outside vault	Not Detected

6. Illumination

a) Light samples where taking throughout the facility.

Location	Number of Fixtures/ Lights per Fixture	Number of burned out tubes	Illumination Foot Candles (FC)
Kitchen	6 Fixture, 3 each		54.1-72.4
Classroom	10 Fixture, 3 each		52.3-73.3
R&R	4 Fixture, 3 each		36.1-54.7
Conference Room	6 Fixture, 3 each		68.9-75.5
Male Latrine	4 Fixture, 2 each		28.2-45.7
Mail Room	1 Fixture, 2 each		33.8-35.1
Female Latrine	3 Fixture, 2 each		22.9-31.6
1SG Office	2 Fixture, 2 each		19.2-24.5
Commander	4 Fixture, 3 each		39.9-49.6
Admin	4 Fixture, 3 each		32.0-35.0
RDN NCO	2 Fixture, 3 each		25.8-33.6
Supply	2 Fixture, 3 each		48.2-54.2
Supply Room	5 Fixture, 3 each		57.2-68.2
Supply Foyer	2 Fixture, 3 each		37.3-43.3
Vault	4 Fixture, 3 each		45.5-47.6
NBC Room	2 Fixture, 3 each		29.7-42.6
Storage #1	1 Fixture, 2 each		17.0-34.2
Storage #2	1 Fixture, 2 each		22.3-26.1
Weight Room	6 Fixture, 3 each		39.8-43.4
Mechanic Room	2 Fixture, 2 each		21.6-28.6
Break Room	3 Fixture, 2 each		28.7-37.5
Training Bldg	4 Fixture, 2 each		32.8-51.3

According to the IES Lighting Handbook, Volume 1995, working spaces where visual tasks are conducted should have a range of illumination between 20- 50 FC. Illumination in areas where visits are temporary should range from 5- 10 FC.

7. Discussions.

a) Watermarks on ceiling suggest there is a water leak of some sort in the facility. Because of the leaks mold has the potential to form throughout the building on walls, ceilings, and on vents. This can pose health hazard to those that enter the facility.

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- b) The improper draining of rain water can pose a serious health hazard if left untreated. The combination of a water source and warmth of the environment is a great environment to breed disease carrying insects such as mosquitoes.
- c) Keep up the good work maintaining the facility.

8. Recommendations.

- a) Find the origin of the leak and repair it.
- b) Replace all damaged tile after roof has been fixed.
- c) To rectify the water entering the building issue, request someone from facility manager's office inspect the facility. Also request someone in the engineering department make a recommendation to correct the problem.

9. If additional information is needed in regards to the above report, please contact SSG **Non-Responsive** Industrial Hygiene Technician, at (404) 559-4174 ext. 37 or **Non-Responsive** Regional Industrial Hygienist, NGB-CSG-P, COMMERCIAL (404) 559-4174 ext. 11.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Manager, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, 2305 State Road, St. Augustine, FL 32086.

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Watermark Room 114



Water pooling by bay doors



Pooling behind building



Drill Hall



Analytical Environmental Services, Inc

Date: 30-Sep-12

Lab Order: 1209J10
Client: National Guard Bureau Region-South IH
Project: Bonifay FI
Matrix: Wipe
Date Received: 9/25/2012 1:50:00 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1209J10-001A	1-153 CAV MMN 201 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-002A	1-153 CAV MMN 202 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-003A	1-153 CAV MMN 203 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-004A	1-153 CAV MMN 204 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-005A	1-153 CAV MMN 205 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-006A	1-153 CAV MMN 206 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-007A	1-153 CAV MMN 207 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW
1209J10-008A	1-153 CAV MMN 208 09-18-12	BRL	ug, Total	20	1		09/18/2012	09/27/2012	MW



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ARNG-CSG-P

29 July 2011

MEMORANDUM TO: SSG [Non-Responsive] Company C, 1st Battalion 244th Attack Helicopter Battalion, 16386 Spring Hill Drive, Brooksville, Florida 34604-0607.

SUBJECT: Industrial Hygiene follow-up survey of the Brooksville Armory.

1. References.

- a. Report dated 23 May 2011, Industrial Hygiene Survey [Non-Responsive] SES Solutions.
- b. Report dated 25 July 2011, Industrial Hygiene Survey [Non-Responsive] HINCHCO
- c. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- d. AR 40-5, Preventive Medicine, 25 May 2007.
- e. AR 385-10, 23 August 2007, Army Safety Program.
- f. DA PAM 40- 503, Industrial Hygiene Program, 30 October 2000
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th ed, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. IES Lighting Handbook, Application Volume, 8th edition, 1995, Illumination Engineering Society of North America.

2. General.

- a. Follow-up sampling was conducted to collect additional samples to see just how serious the lead contamination was in the Indoor Firing Range (IFR) after one sample came up high during an earlier survey conducted 23 May 2011.
- b. Industrial Hygiene Lead sampling conducted at the Brooksville Armory 23 May 2011 by Mr. [Non-Responsive] revealed 1 of 12 lead swipe results with a level of 5950 micro grams per square foot. The sample was collected in the area where the bullet back stop at one time was located.

c. This Indoor Firing Range has been converted into a weight room, lounge area and storage area.

d. Mr. **Non-Responsive** of HINCHCO conducted the follow-up survey 5 July 2011.

3. Findings. The laboratory results indicated there were five lead samples above the IFR post cleaning standard of 200 micro grams per square foot as outlined in NG PAM 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges.

The results of the lead swipe sampling activities are summarized in the following table.

Sample Number	Sample Location	Laboratory Results ¹
00-15L	On floor where back stop was located	2960
00-16L	On floor where back stop was located	9580
00-16L	On floor where back stop was located	2810
00-19L	On floor in room behind Plenum wall	207
00-20L	On floor in room behind Plenum Wall	
	The remainder of the samples were below 200 micro grams per square foot	

¹ Results reported in micrograms per square feet ($\mu\text{g}/\text{ft}^2$)

² BRL = Below Reportable Limits

The laboratory report is attached for review.

4. Discussion.

a. The sample results show a distinct pattern of where the high levels were located. They were where the back stop was at one time located and on the floor in the room behind the Plenum wall.

b. From the results of the samples collected, it appears that this Indoor Firing Range was either not cleaned or not properly cleaned before being converted into a storage and weight room.

5. Recommendations.

- a. Stop all employees from entering the Indoor Firing Range. (RAC 1)
- b. Clean and then remove all items from the Indoor Firing Range using a Professional Contracting Company. (RAC 1)
- c. Discard stored items that cannot be cleaned. (RAC 1)
- d. Clean Indoor firing Range following guidelines as outlined in NG PAM 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges using a Professional Contracting Company. (RAC 1)
- e. Have swipe samples collected after the Indoor Firing Range is cleaned and before the floors are encapsulated. (RAC 1)

6. If additional information is needed about the Attached report, please contact Non-Responsive Regional Industrial Hygienist, ARNG-CSG, (404) 559-4174. Non-Responsive

Non-Responsive
Non-Responsive
Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: Office of the Adjutant General, ATTN: MAJ Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

MAJ Non-Responsive SSMO, Route 1, Box 478, Camp Blanding, Starke Florida 32091-9708

FLORIDA ARMY NATIONAL GUARD
(FL ARNG)



BROOKSVILLE ARMORY
INDOOR FIRING RANGE
16386 SPRING HILL DRIVE
BROOKSVILLE, FLORIDA 34604

Industrial Hygiene Report
For
Florida Army National Guard
(FL ARNG)

At
Brooksville Armory
Indoor Firing Range
16386 Spring Hill Drive
Brooksville, Florida 34604

Prepared For:
Department of the Army and Air Force
National Guard Bureau
Region South
510 Plaza Drive, Suite 1530
College Park, Georgia 30349

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BACKGROUND

Introduction.....Page 1

Site Description.....Page 1

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- B. INDOOR FIRING RANGE DIAGRAMS
- C. LABORATORY SUBMISSIONS
- D. LABORATORY RESULTS
- E. PHOTOGRAPH INDEX AND PHOTOGRAPHS

APPENDIX A

REFERENCES

APPENDIX A

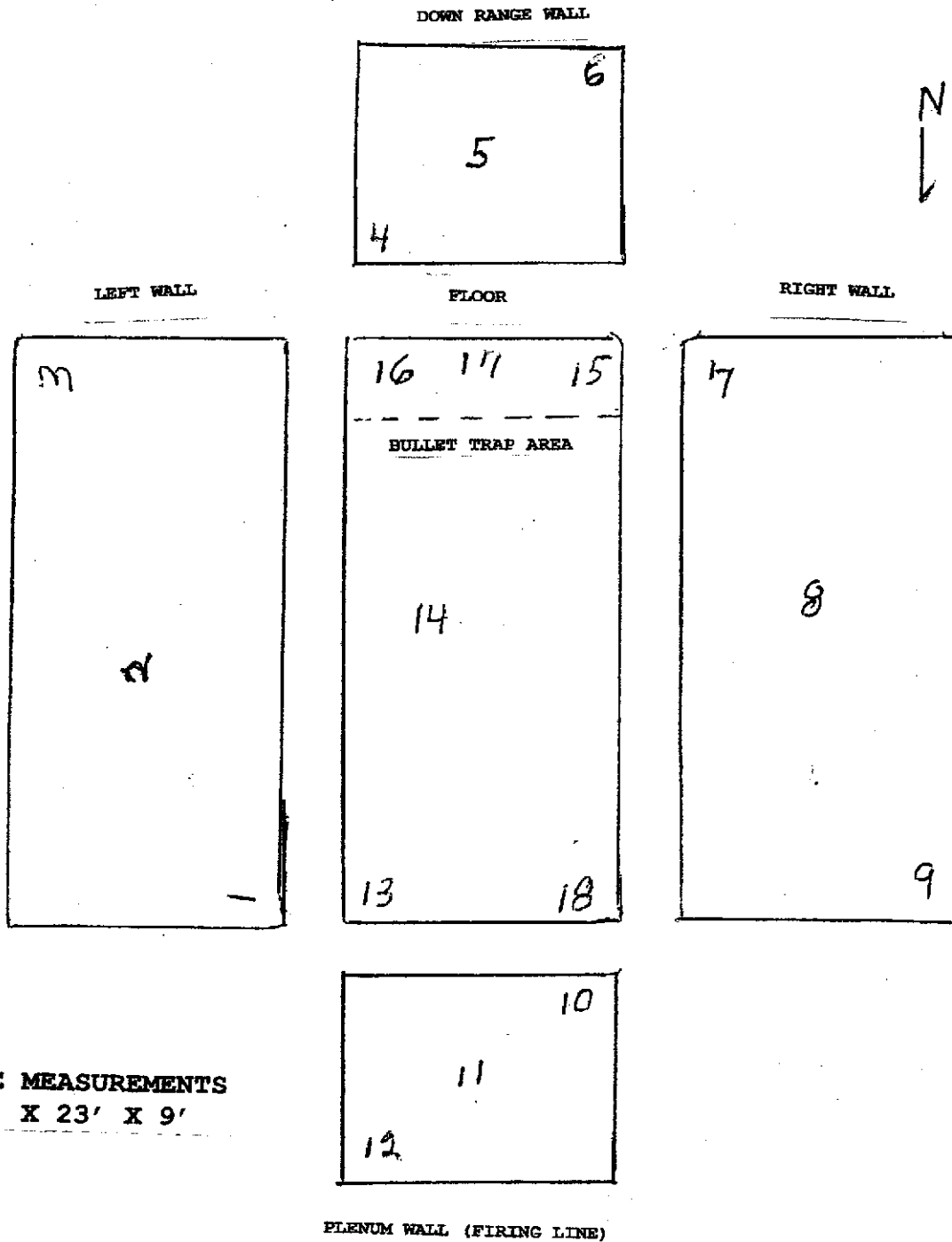
REFERENCES

- a. Army Regulation 11-34, The Army Respiratory Protection Program, 15 February 1990.
- b. Army Regulation 40-5, Medical Service, Preventive Medicine, 25 MAY 2007.
- c. Army Regulation 385-10, Army Safety Program, 29 February 2000.
- d. Department of the Army Pamphlet 40-501, Hearing Conservation, 10 December 1998.
- e. Nation Guard Regulation 385-10, Army National Guard Safety Program, September 2008.
- f. Department of Defense Instruction 6055.1 Department Defense Occupational Safety and Health (OSH) Program, 26 October 1986, with update dated 19 August 1998.
- g. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- h. TB MED 503, The Army Industrial Hygiene Program, 1 February 1985.
- i. Technical Guide 040, Noise Hazard Evaluation/Sound Level Data of Noise Sources.
- j. USAHA TG-141, Guidelines for Air Sampling and Bulk Sample Collection, January 2007.
- k. Design Guide 415-2, Table 8, Electrical Requirements, 31 August 2007.
- l. Life Safety Code Handbook, Eighth Edition, National Fire Protection Association, Quincy, Massachusetts, 2009 Eition.
- m. National Electric Code Handbook, 2011 Edition, National Fire Protection Association, Quincy, Massachusetts.

- n. IES Lighting Handbook, Application Volume, Illumination Engineering Society of North America, December 15, 2009.
- o. Industrial Ventilation, 27th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio, February 1, 2010.
- p. Threshold Limit Values and Biological Exposure Indices (TLV's) for 1997, American Conference of Industrial Hygienists, Cincinnati, Ohio.
- q. Title 29, Code of Federal Regulations, Part 1910, Occupational Safety and Health Standards, rev. 2000.
- r. NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, September, 2007.

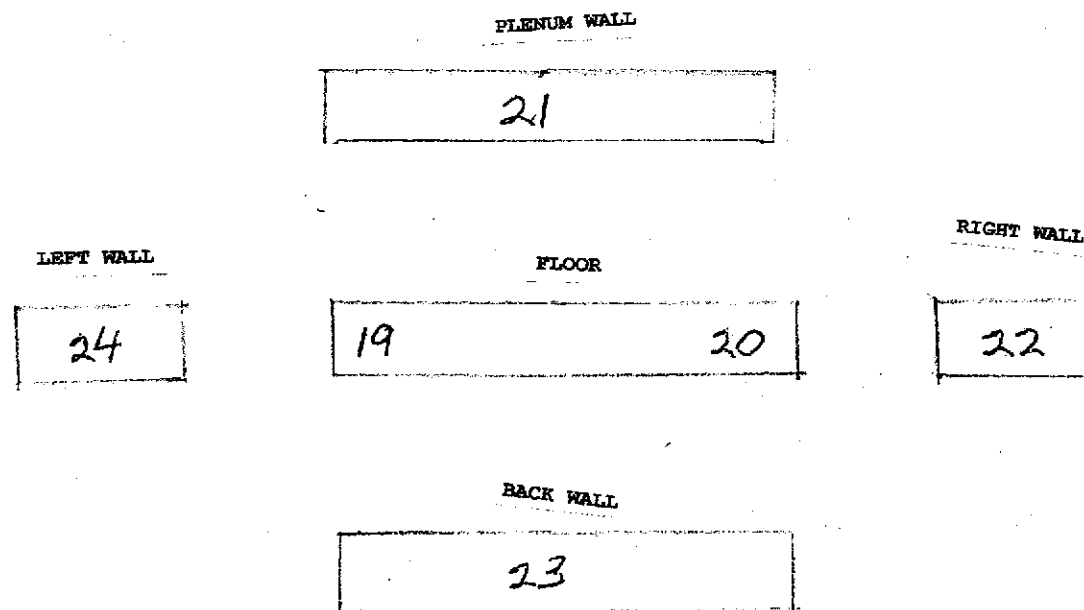
APPENDIX B
INDOOR FIRING RANGE DIAGRAMS

BEST AVAILABLE COPY
FLORIDA ARMY NATIONAL GUARD
BROOKSVILLE ARMORY
INDOOR FIRING RANGE
DIAGRAM AND LEAD WIPE LOCATIONS



FLORIDA ARMY NATIONAL GUARD
BROOKSVILLE ARMORY
INDOOR FIRING RANGE
ROOM BEHIND PLENUM
DIAGRAM AND LEAD WIPE LOCATIONS

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**FLORIDA ARMY NATIONAL GUARD
BROOKSVILLE ARMORY
INDOOR FIRING RANGE
LEAD WIPE TESTING**

<u>DATE</u>	<u>SAMPLE NUMBER</u>	<u>LOCATION</u>
05 JUL 11	00-00L	BLANK
05 JUL 11	00-01L	LEFT WALL, LOWER
05 JUL 11	00-02L	LEFT WALL MIDDLE
05 JUL 11	00-03L	LEFT WALL, TOP
05 JUL 11	00-04L	TRAP WALL, LOWER
05 JUL 11	00-05L	TRAP WALL, MIDDLE
05 JUL 11	00-06L	TRAP WALL, TOP
05 JUL 11	00-07L	RIGHT WALL, LOWER
05 JUL 11	00-08L	RIGHT WALL, MIDDLE
05 JUL 11	00-09L	RIGHT WALL, TOP
05 JUL 11	00-10L	PLENUM WALL, LOWER
05 JUL 11	00-11L	PLENUM WALL, MIDDLE
05 JUL 11	00-12L	PLENUM WALL, TOP
05 JUL 11	00-13L	FLOOR, LEFT SIDE (NE)
05 JUL 11	00-14L	MIDDLE FLOOR
05 JUL 11	00-15L	FLOOR, RIGHT SIDE (SW)
05 JUL 11	00-16L	FLOOR, LEFT SIDE (SE)
05 JUL 11	00-17L	FLOOR, MID BULLET TRAP
05 JUL 11	00-18L	FLOOR, RIGHT SIDE (NW)
ROOM BEHIND PLENUM WALL OR ROOM BEHIND FIRING LINE		
05 JUL 11	00-19L	FLOOR, LEFT SIDE
05 JUL 11	00-20L	FLOOR, RIGHT SIDE
05 JUL 11	00-21L	SOUTH WALL, PLENUM
05 JUL 11	00-22L	WEST WALL
05 JUL 11	00-23L	NORTH WALL
05 JUL 11	00-24L	EAST WALL

APPENDIX C
LABORATORY SUBMISSIONS

TO:
ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3785 PRESIDENTIAL PARKWAY
ATLANTA, GEORGIA 30340

07 JULY 2011

FROM:
Non-Responsive [REDACTED] dba HINCHCO
P.O. BOX 3083
PLACIDA, FLORIDA 33946

RE: LEAD WIPE SAMPLES FOR THE FL ARNG BROOKSVILLE ARMORY
INDOOR FIRING RANGE

GENTLEMEN:

I AM ENCLOSING THE FOLLOWING:

- THIS MEMORANDUM
- TWENTY-FOUR (24) LEAD WIPE SAMPLES
- YOUR COC FORM
- SEPARATE LISTING OF WIPE SAMPLE LOCATIONS WITHIN THE
INDOOR FIRING RANGE

THE LEAD WIPE SAMPLES WERE TAKEN UTILIZING 12" X 12" (1
SQ.FT.) TEMPLATES. GHOST WIPES, WITH AN EXPIRATION DATE OF
JULY 2013, WERE UTILIZED AS THE MEDIUM FOR SAMPLE
COLLECTION.

PLEASE E-MAIL RESULTS TO ME AT: gwh8@earthlink.net

SEND HARD COPY OF RESULTS TO Non-Responsive [REDACTED] dba
HINCHCO, P.O. BOX 3083, PLACIDA, FLORIDA 33946.

BILLING SHOULD BE SENT TO NGB INDUSTRIAL HYGIENE REGION
SOUTH IN COLLEGE PARK, GEORGIA.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ME TELEPHONICALLY
AT 217-341-3796 OR AT THE ABOVE MENTIONED E-MAIL.

SINCERELY,
Non-Responsive [REDACTED]

DbA HINCHCO

CHAIN OF CUSTODY FORM FOR AIR SAMPLE ANALYSIS

Client Name: **Non-Responsive** Contact: **Non-Responsive**
 Address: 1800 Peachtree Dunwoody Ave NE Phone: 404-341-3796
Placida, FL 33996 Fax: 888-644-6666
 Project Name: Brockville Army
 Samplers Name: **Non-Responsive**
 Sampling Date: 5 Jul 11

SAMPLE ID	SAMPLE DESCRIPTION (e.g. Locations, Name, etc)	PUMP NUMBER	TIME		FLOW RATE			VOLUME	ANALYSIS REQUESTED/REMARKS
			START	END	INITIAL	FINAL	AVG		
00-001	Blank							159 ft	Lead
00-011									
00-021									
00-031									
00-041									
00-051									
00-061									
00-071									
00-081									
00-091									
00-101									
00-111									
00-121									
00-131									
00-141									
00-151									
00-161									

see attached sheet

Turnaround Time: ☒ Normal (5 days) ☐ 3 Days Rush ☐ 2 Days Rush ☐ Next Day Rush

Comments: Large Area = 159 ft medium = 600 ft exp date July 2013

Relinquished By: **Non-Responsive** Date/Time: 7/21/11

Received By: **Non-Responsive** Date/Time: 7/21/11

Relinquished By: **Non-Responsive** Date/Time: 7/21/11

Received By: **Non-Responsive** Date/Time: 7/21/11

Delivered Direct to Lab: ☐ Shipped: ☐

Method of Shipment: Lab Recipient

Date: 7/21/11

**FLORIDA ARMY NATIONAL GUARD
BROOKSVILLE ARMORY
INDOOR FIRING RANGE
LEAD WIPE TESTING**

<u>DATE</u>	<u>SAMPLE NUMBER</u>	<u>LOCATION</u>
05 JUL 11	00-00L	BLANK
05 JUL 11	00-01L	LEFT WALL, LOWER
05 JUL 11	00-02L	LEFT WALL MIDDLE
05 JUL 11	00-03L	LEFT WALL, TOP
05 JUL 11	00-04L	TRAP WALL, LOWER
05 JUL 11	00-05L	TRAP WALL, MIDDLE
05 JUL 11	00-06L	TRAP WALL, TOP
05 JUL 11	00-07L	RIGHT WALL, LOWER
05 JUL 11	00-08L	RIGHT WALL, MIDDLE
05 JUL 11	00-09L	RIGHT WALL, TOP
05 JUL 11	00-10L	PLENUM WALL, LOWER
05 JUL 11	00-11L	PLENUM WALL, MIDDLE
05 JUL 11	00-12L	PLENUM WALL, TOP
05 JUL 11	00-13L	FLOOR, LEFT SIDE (NE)
05 JUL 11	00-14L	MIDDLE FLOOR
05 JUL 11	00-15L	FLOOR, RIGHT SIDE (SW)
05 JUL 11	00-16L	FLOOR, LEFT SIDE (SE)
05 JUL 11	00-17L	FLOOR, MID BULLET TRAP
05 JUL 11	00-18L	FLOOR, RIGHT SIDE (NW)
ROOM BEHIND PLENUM WALL OR ROOM BEHIND FIRING LINE		
05 JUL 11	00-19L	FLOOR, LEFT SIDE
05 JUL 11	00-20L	FLOOR, RIGHT SIDE
05 JUL 11	00-21L	SOUTH WALL, PLENUM
05 JUL 11	00-22L	WEST WALL
05 JUL 11	00-23L	NORTH WALL
05 JUL 11	00-24L	EAST WALL

APPENDIX D
LABORATORY RESULTS



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

July 19, 2011

Non-Responsive

HINCHCO
P.O. Box 3083
Placida FL 33946

TEL: (214) 341-3796

FAX: (214) 341-3796

RE: Brooksville Armory

Dear Non-Responsive

Order No: 1107790

Analytical Environmental Services, Inc. received 25 samples on 7/13/2011 10:40:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/11-06/30/12.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
 3785 Presidential Pkwy, Atlanta, GA 30340-3704
 Tel: (770) 457-8177 (800) 972-4889
 www.aesatlanta.com

1107790

CHAIN OF CUSTODY FORM FOR AIR SAMPLE ANALYSIS

Client Name: **Non-Responsive**
 Address: 18 Bad Creek Ave SE, Atlanta, GA 30316
 Phone: 404-341-3096
 Fax: 404-341-3096
 City: Atlanta, GA 30316

Contact: **Non-Responsive**
 Project Name/ID: Brooksville Armory
 Sample Name: 4th HHC
 Sampling Date: 5 Jul 11

SAMPLE ID	SAMPLE DESCRIPTION (e.g. Locations, Name, etc)	PUMP NUMBER	TIME		FLOW RATE			VOLUME	ANALYSIS REQUESTED/REMARKS
			START	END	INITIAL	FINAL	AVG		
00-00L	Blank							169 ft	Lead
00-01L									
00-02L									
00-03L									
00-04L									
00-05L									
00-06L									
00-07L									
00-08L									
00-09L									
00-10L									
00-11L									
00-12L									
00-13L									
00-14L									
00-15L									
00-16L									

See attached sheet

Turnaround Time: Normal (5 days): ☒ 3 Days Rush: ☐ 2 Days Rush: ☐ Next Day Rush: ☐

Comments: 18 Bad Creek Ave = 154 ft medium = 160 ft exp date 12/13

Relinquished By: **Non-Responsive** Date/Time: 7/21/11 14:20
 Received By: **Non-Responsive** Date/Time: 7/21/11 10:40
 Relinquished By: **Non-Responsive** Date/Time:
 Received By: **Non-Responsive** Date/Time:
 Delivered Direct to Lab: ☐ Shipped: ☐
 Method of Shipment:
 Lab Recipient: **Non-Responsive** Date: 7/21/11 10:40

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE FOLLOWING BUSINESS DAY; IF NO TAT IS MARKED ON COC AFS WILL PROCEED AS STANDARD TAT.

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3785 Presidential Pkwy, Atlanta, GA 30340-3704
Tel: (770) 457-8177 (800) 972-4889

www.aesatlan1a.com

1107790

CHAIN OF CUSTODY FORM FOR AIR SAMPLE ANALYSIS

Client Name: Non-Responsive

Contact: Non-Responsive

Address: 18301 128th Ave Phone: 919-341-3796

Non-Responsive

Project Name/ID: Protektive 11a
 Sampler Name: [REDACTED]
 Sampling Date: 5 Feb 11

Sampling Date: 5/24/11

11

the Hinko

[illegible]

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FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

Page 70 of 1021

Turnaround Time:

Normal (5 days):

3 Days Rush:

2 Days Rush:

Next Day Rush:

Comments: $w_{\text{pooled}} = 159.07$ inches \approx School height expected July 2018

Relinquished By

Date/Time	27/11/14
-----------	----------

Delivered Direct to Lab:

Shipped:Received By: No
Re
po
ive

Deadline

Method of Shipment:

—

Relinquished By:

Date/Time

Experienced:

7/2/1940

Received By:

Date/Time

Date:

Non
Res
sive

SAMPLES RECEIVED AFTER 3PM ON SATURDAY ARE CONSIDERED AS RECEIVED ON THE FOLLOWING BUSINESS DAY; IF NO TAT IS MARKED ON COCAES WILL PROCEED AS STANDARD TAT

Analytical Environmental Services, Inc

Date: 19-Jul-11

Lab Order: 1107790
 Client: HINCHCO
 Project: Brooksville Armory
 Matrix: Wipe
 Date Received: 7/13/2011 10:40:00 AM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1107790-001A	00-00 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-002A	00-01 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-003A	00-02 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-004A	00-03 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-005A	00-04 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-006A	00-05 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-007A	00-06 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-008A	00-07 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-009A	00-08 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-010A	00-09 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-011A	00-10 L	27	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-012A	00-11 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-013A	00-12 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-014A	00-13 L	120	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-015A	00-14 L	95	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-016A	00-15 L	2960	µg/ft²	92	4.58		07/05/2011	07/14/2011	MP
1107790-017A	00-16 L	9580	µg/ft²	365	18.25		07/05/2011	07/14/2011	MP
1107790-018A	00-17 L	2810	µg/ft²	89	4.47		07/05/2011	07/14/2011	MP
1107790-019A	00-18 L	134	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-020A	00-19 L	207	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-021A	00-20 L	699	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-022A	00-21 L	22	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-023A	00-22 L	80	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-024A	00-23 L	BRL	µg/ft²	20	1		07/05/2011	07/14/2011	MP
1107790-025A	00-24 L	88	µg/ft²	20	1		07/05/2011	07/14/2011	MP

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client GA Army Work Order Number 1107790Checklist completed by Non-Responsive Date 7/13/11Carrier name: FedEx ☐ UPS ☒ Courier ☐ Client ☐ US Mail ☐ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? ND (4°C ± 2°C) Yes ☒ No ☐Cooler # 1 Cooler #2 7/13 Cooler #3 7/13 Cooler #4 7/13 Cooler #5 7/13 Cooler #6 7/13Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☒ No ☐

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters

\\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

**FLORIDA ARMY NATIONAL GUARD
BROOKSVILLE ARMORY
INDOOR FIRING RANGE
LEAD WIPE TESTING**

<u>DATE</u>	<u>SAMPLE NUMBER</u>	<u>LOCATION</u>
05 JUL 11	00-00L	BLANK
05 JUL 11	00-01L	LEFT WALL, LOWER
05 JUL 11	00-02L	LEFT WALL MIDDLE
05 JUL 11	00-03L	LEFT WALL, TOP
05 JUL 11	00-04L	TRAP WALL, LOWER
05 JUL 11	00-05L	TRAP WALL, MIDDLE
05 JUL 11	00-06L	TRAP WALL, TOP
05 JUL 11	00-07L	RIGHT WALL, LOWER
05 JUL 11	00-08L	RIGHT WALL, MIDDLE
05 JUL 11	00-09L	RIGHT WALL, TOP
(27) 05 JUL 11	00-10L	PLENUM WALL, LOWER
05 JUL 11	00-11L	PLENUM WALL, MIDDLE
05 JUL 11	00-12L	PLENUM WALL, TOP
(120) 05 JUL 11	00-13L	FLOOR, LEFT SIDE (NE)
(95) 05 JUL 11	00-14L	MIDDLE FLOOR
2960-05 JUL 11	00-15L	FLOOR, RIGHT SIDE (SW)
9580-05 JUL 11	00-16L	FLOOR, LEFT SIDE (SE)
2810-05 JUL 11	00-17L	FLOOR, MID BULLET TRAP
(134) 05 JUL 11	00-18L	FLOOR, RIGHT SIDE (NW)
ROOM BEHIND PLENUM WALL OR ROOM BEHIND FIRING LINE		
207-05 JUL 11	00-19L	FLOOR, LEFT SIDE
699-05 JUL 11	00-20L	FLOOR, RIGHT SIDE
(22) 05 JUL 11	00-21L	SOUTH WALL, PLENUM
(80) 05 JUL 11	00-22L	WEST WALL
05 JUL 11	00-23L	NORTH WALL
(88) 05 JUL 11	00-24L	EAST WALL

**APPENDIX E
PHOTOGRAPH INDEX
AND
PHOTOGRAPHS**

PHOTOGRAPH INDEX

1. BROOKSVILLE, ARMORY
2. INDOOR RANGE, LOOKING DOWN RANGE (SOUTH)
3. INDOOR RANGE, UP RANGE TOWARD FIRING POINT (NORTH)
4. LEFT WALL
5. BULLET TRAP WALL
6. RIGHT WALL
7. PLENUM WALL
8. FLOOR
9. BULLET TRAP AREA (LOOKING EAST)
10. BULLET TRAP AREA (LOOKING WEST)
11. ROOM BEHIND PLENUM (LOOKING WEST)
12. ROOM BEHIND PLENUM (LOOKING EAST)

BROOKSVILLE ARMORY PHOTOGRAPHS



#1 – BROOKSVILLE ARMORY

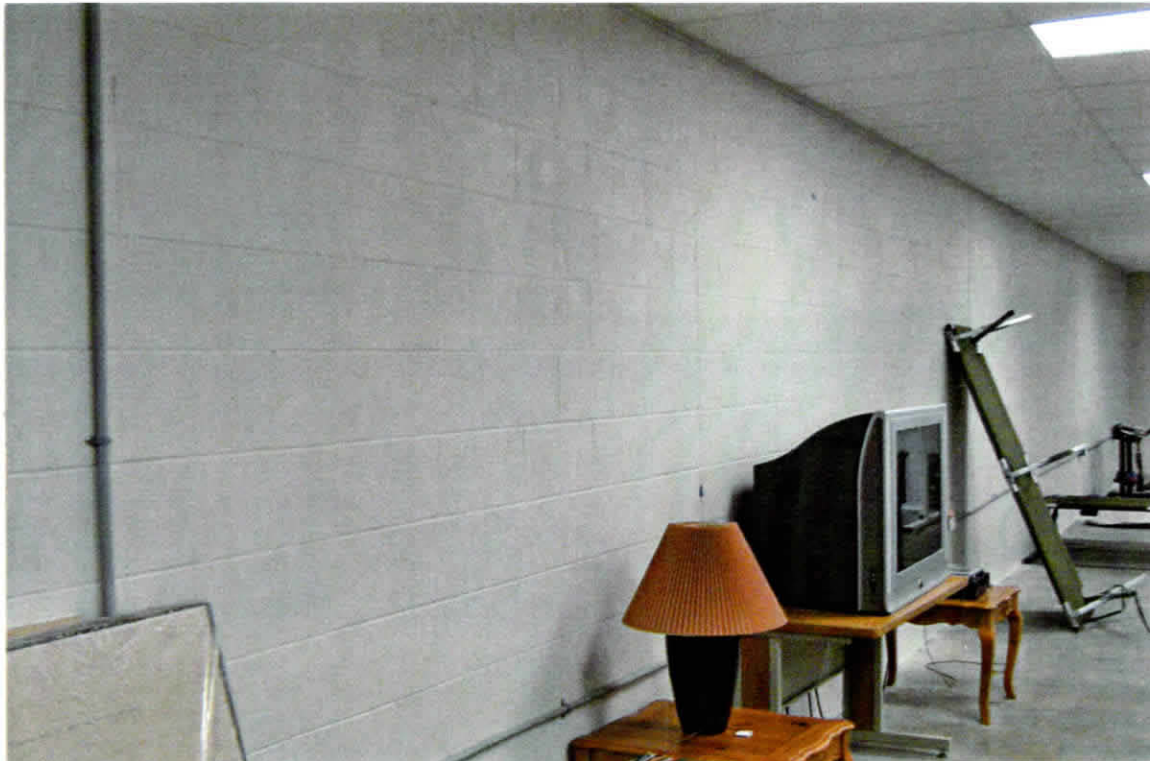


#2 – INDOOR RANGE, LOOKING DOWN RANGE (SOUTH)

BROOKSVILLE ARMORY PHOTOGRAPHS

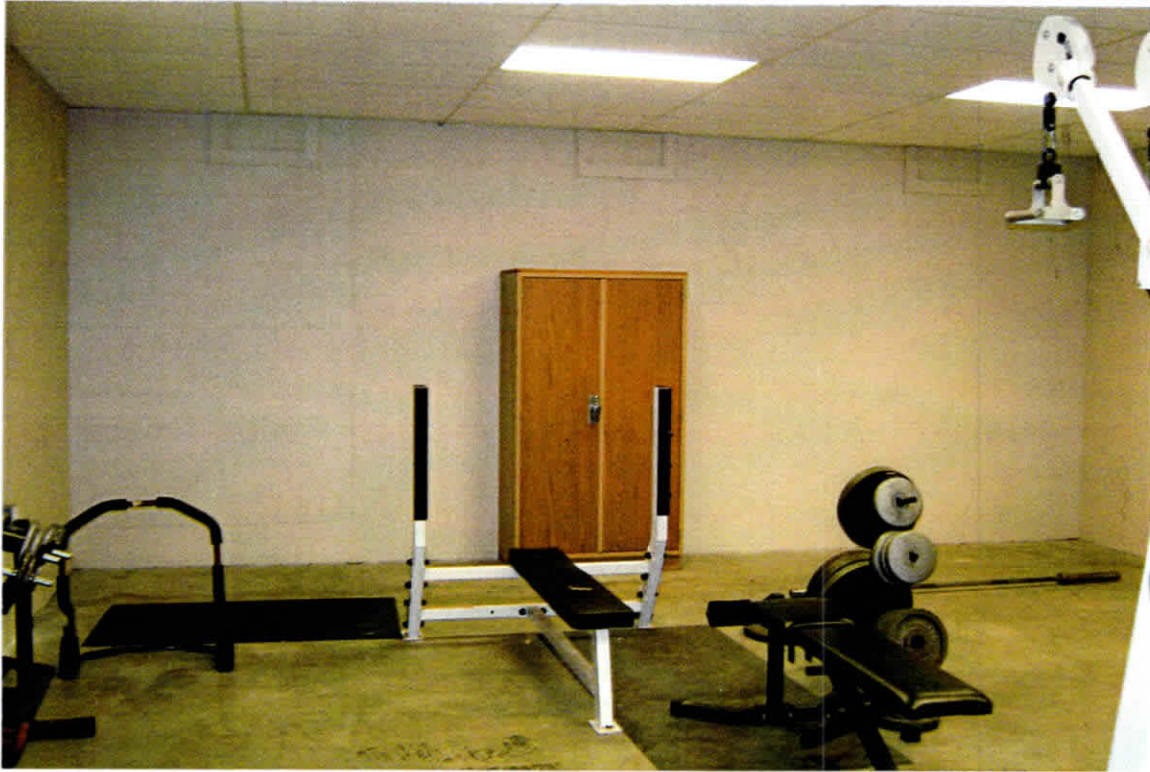


#3 – INDOOR RANGE, UP RANGE TOWARD FIRING POINT (NORTH)

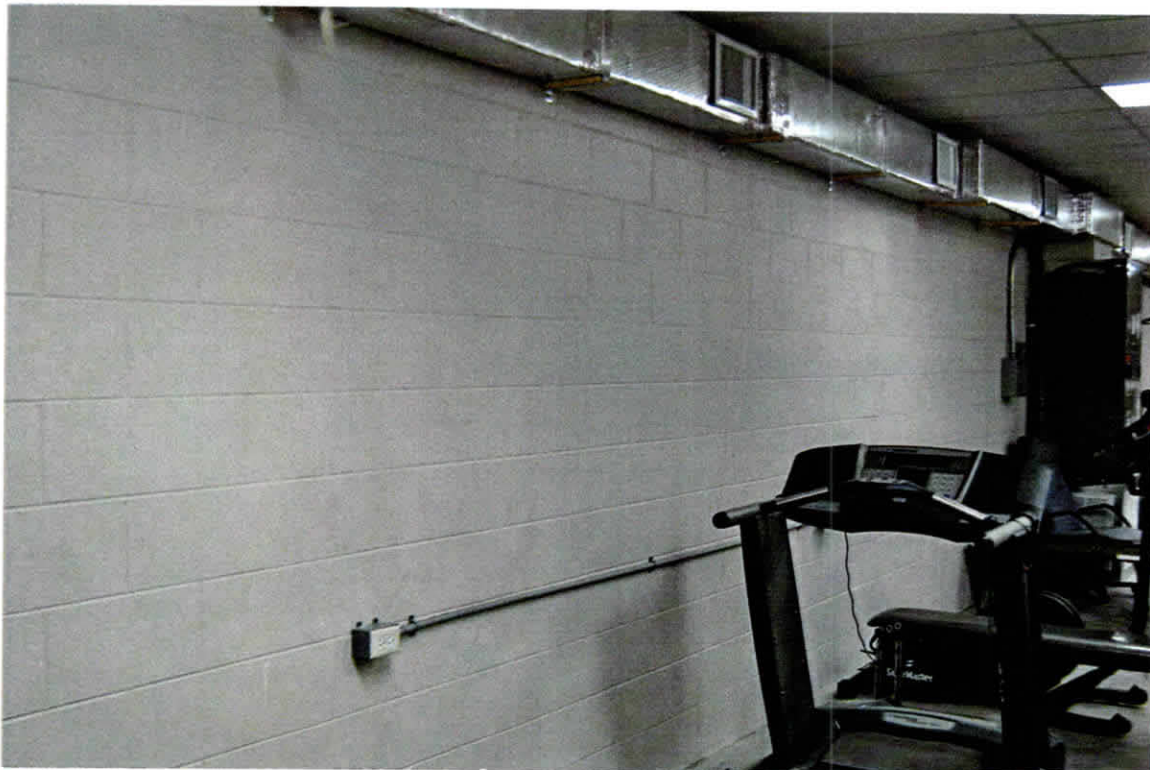


#4 – LEFT WALL

BROOKSVILLE ARMORY PHOTOGRAPHS



#5 - BULLET TRAP WALL



#6- RIGHT WALL

BROOKSVILLE ARMORY PHOTOGRAPHS



#7 - PLENUM WALL



#8- FLOOR

BROOKSVILLE ARMORY PHOTOGRAPHS

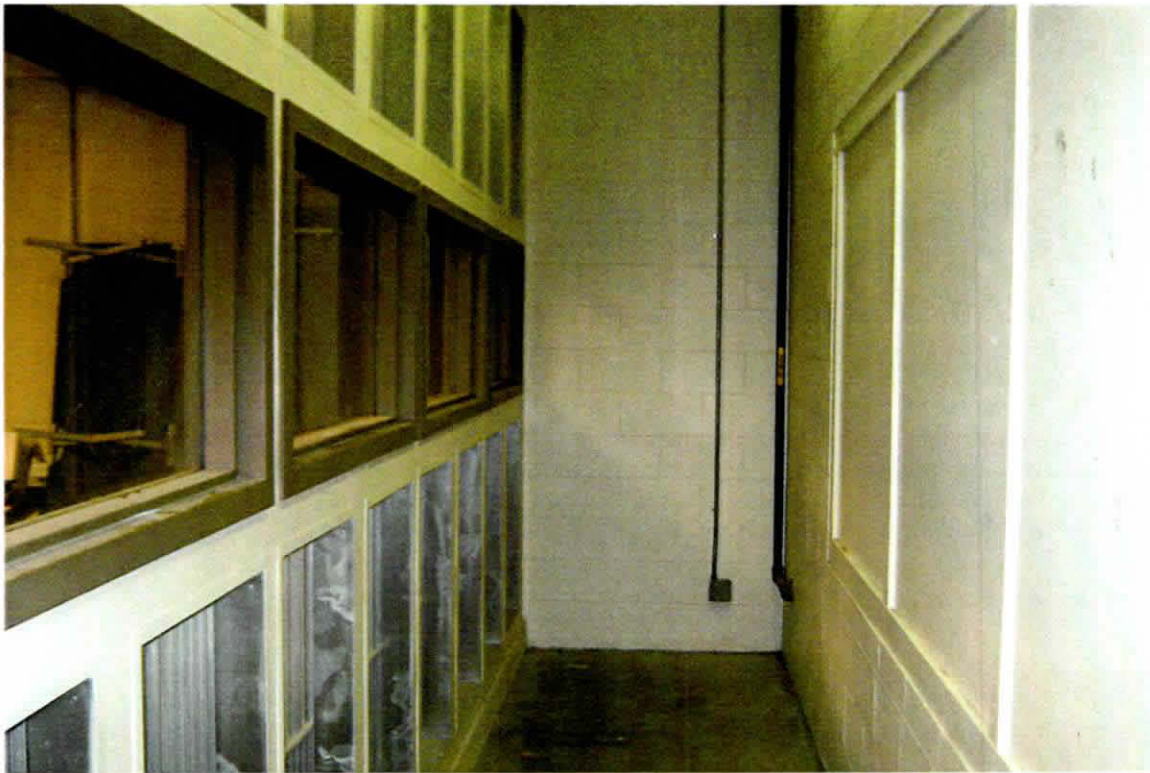


#9 – BULLET TRAP AREA (LOOKING EAST)

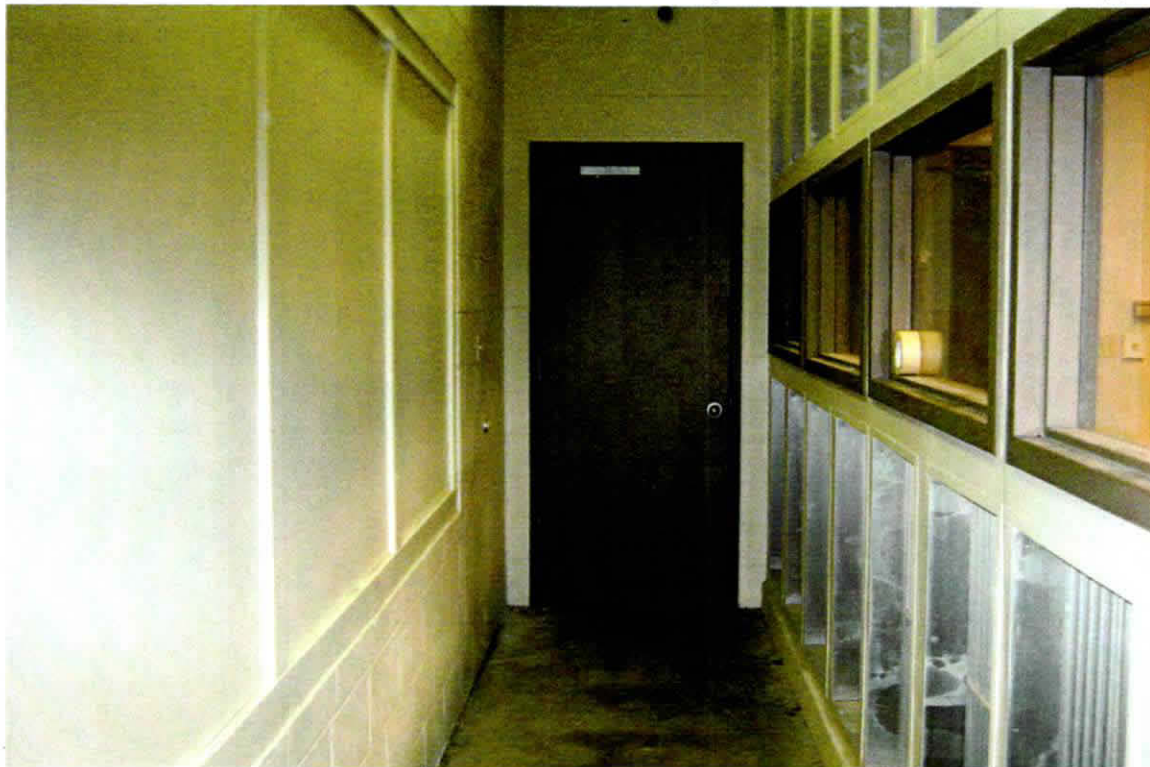


#10– BULLET TRAP AREA (LOOKING WEST)

BROOKSVILLE ARMORY PHOTOGRAPHS



#11 – ROOM BEHIND PLENUM (LOOKING WEST)



#12 – ROOM BEHIND PLENUM (LOOKING EAST)



**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

ARNG-CSG-P

16 June 2011

MEMORANDUM TO: SSG **Non-Responsive** Company C, 1st Battalion 244th Attack Helicopter Battalion, 16386 Spring Hill Drive, Brooksville, Florida 34604-0607.

SUBJECT: Industrial Hygiene survey of the Brooksville Armory.

1. References.

- a. Report dated 23 May 2011, Industrial Hygiene Survey **Non-Responsive** SES Solutions.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, 25 May 2007.
- d. AR 385-10, 23 August 2007, Army Safety Program.
- e. DA PAM 40- 503, Industrial Hygiene Program, 30 October 2000
- f. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- g. Industrial Ventilation, 25th ed, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume, 8th edition, 1995, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida Safety and Occupational and Health Office and the Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was put together to conduct a baseline IH survey at the Brooksville Armory.

b. Mr. **Non-Responsive** of SES Solutions conducted the survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Understand that all findings found in the enclosed report have been reviewed by the Regional Industrial Hygienist and the following recommendations are the ones to be followed.

b. A lead swipe level reading of 5950 micrograms per sq foot in the converted Indoor Firing Range (weight Room) dictates that resampling be conducted. A follow-up will be conducted as soon as possible. At that time cleanup recommendations if needed will be made. A converted clean range should not have lead levels above 200 micrograms per sq foot.

c. Use the report to help in correcting all deficiencies noted by the contractor. Put a plan in place to correct the deficiencies and let the Occupational Safety and Health Office know in 30 days how you are going to correct all recommendations.

d. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse, Industrial Hygiene Technician and the Occupational Safety and Health Office for technical guidance if needed.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

BEST AVAILABLE COPY
Industrial Hygiene Report
For
Florida Army National Guard
(FL ARNG)
At
Brooksville Armory
16386 Spring Hill Drive
Brooksville, Florida 34604



Prepared for:
National Guard Bureau
Regional Industrial Hygiene Office
Region South
510 Plaza Drive, Suite 1530
College Park, Georgia 30349
By
Non-Responsive
SES Solutions
May 23, 2011

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Enclosures:

1. Health Hazard Information Module (HHIM) Survey Form
2. Listing of hazardous chemicals/materials at the facility
3. Analytical Lead Wipe Results
4. Personnel Roster
5. Design Floor Plan
6. Lead Clean Up Procedures
7. References
8. Pictures: 1-24

SESS

May 23, 2011

MEMORANDUM FOR: Florida Army National Guard, ATTN: SSG [Non-Responsive] Company C, 1st Battalion 244th Attack Helicopter Battalion, 16386 Spring Hill Drive, Brooksville, Florida 34604-0607

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module (HHIM) Survey, Co C 244th AHB

1. REFERENCES: See Enclosure 7.
2. BACKGROUND: At the request of Mr. [Non-Responsive] National Guard Bureau Regional Industrial Hygienist, Atlanta, Georgia, an Industrial Hygiene Consultation and Health Hazard Information Module Field Survey were performed at the Florida National Guard Armory, 16386 Spring Hill Drive, Brooksville, Florida 34604 on May 23, 2011. The POC was SSG [Non-Responsive] at (352) 797-5817. Their primary mission is Air Assault Attack Helicopter Warfighter. On the day of this survey roofing contractors were working on the building roof to stop water leaks. The purpose of the survey was to perform lead wipe samples; a ventilation survey, an Illuminations Survey, and complete HHIM field survey forms on all industrial operations at the facility (see Encl 1 for completed HHIM Survey Form).
3. INSTRUMENTATION: The following survey instrumentation was provided by the contractor and was used to obtain lead wipe dust samples and illumination measurements. All other instrumentation was operated according to manufacturer recommendations.
 - a) Reed LM-81LX, Light Meter, S/N: Q303521, calibrated: 12/15/2010
 - b) Ghost Lead Dust Wipes, Manufactured: February 2, 2010, Expiration: 08/2013
4. FINDINGS:
 - a) 244th AHB Company and Supply:
 - i) Administrative duties included pay, promotions, schools, family support, assignments, and supplies. The supply area was broken down into Class 2 items of clothing and equipment. The supply area was also responsible for maintaining some TA 50.
 - ii) Eighty M-Day soldiers trained at the facility.

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

b) General Area Armory Information:

- i) Material Safety Data Sheets (MSDS) were located in the facility. All employees must be initially trained in the Federal Hazardous Communication Program IAW 1910.1200 (see Encl 2 for a listing of hazardous chemicals/materials at the facility).
- ii) Twelve lead dust wipe samples were taken, using a 12 inch by 12 inch template. Two samples were above the federal standard of $40\mu\text{g}/\text{ft}^2$. One sample was above the National Guard Standard of $200\mu\text{g}/\text{ft}^2$. Pictures of the lead sample wipes were taken (see Encl. 8, photos M193 to M204). The analytical lead result sheet included the sampled locations and corrected results. The following table notes where the samples were taken, the surveyor's field number, and the lead results:

Location:	Surveyor's Field No:	Results:
Drill Hall Floor S.E. Side	M193	BRL
Drill Hall Floor N.E. Side	M194	BRL
Drill Hall Floor Center	M195	BRL
Drill Hall Floor S.W. Side	M196	BRL
Drill Hall Floor N.W. Side	M197	BRL
Kitchen Countertop Serving Line	M198	BRL
Front Entrance Hall Way Floor	M199	BRL
Vault #1 Floor	M200	BRL
Vault # 2 Floor	M201	24
Table Weapons are Cleaned on	M202	BRL
Class Room Floor	M203	BRL
Floor of old ID Range Bullet Trap	M204	5950
Blank		63

Note 1: $\mu\text{g}/\text{ft}^2$ refers to micrograms or one millionth of a gram per sq ft.

Note 2: BRL means Not Detected at the Reporting Limit.

- iii) Drill Hall: Conducting classes and drill formations is the main purpose in the hall. (See Encl. 8, photo 13). Illumination levels ranged from 6 to 12 FC's.
- iv) Furnace/General Mechanical Ventilation: Good.

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

- v) The following table identifies area deficiencies:

AREA	DEFICIENCIES
Drill Hall	Water leak in the ceiling w/mold
Admin Office	Water leak in the ceiling
Supply Room	2 fluorescent bulbs burned out
Weight Room	Ceiling falling down

- vi) Due to the low noise levels (administrative areas) there was no requirement for a Hearing Conservation Program. The only requirement would be when the M-Day troops were firing their weapons. All M-Day and full-time soldiers had earplugs.
- vii) A listing of 244th AHB C CO personnel is attached as Encl. 4.
- viii) A design floor plan of the armory is attached as Encl. 5. Illumination levels are listed below in Paragraph 5.

5. ILLUMINATION SURVEY RESULTS:

- a) Illumination Levels: The following additional illumination level readings were taken during the survey and are reported below in foot candles (FC's).

AREA/LOCATION	FOOT CANDLES (FC)
Front Entrance Hallway	28-52
Admin Office	59-75
Safety Office	83-100
ISG Office	43-50
Commander's Office	34-70
Training Office	80-89
Copy Room	25-28
Conference Room	36-40
Weight Room (Old ID Range)	72-73
Class Room	32-46
Kitchen	16-23
Female Latrine	11-20
Male Latrine	22-23
Storage	10-25
Supply Room	28-51
Vault # 1	8-17
Vault # 2	6-20
Recruiter's Office	26-29
Drill Hall	6-12

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

As indicated in the IES Lighting Handbook, Application Volume 1987, Offices: 20-50 FC's, Supply and Publication Areas: 20-50 FC's, Assembly 20-50 FC's, Restrooms: 5-10 FC's, Classrooms: 50-100 FC's, Kitchen: 20-50 FC's, FC's, Library: 50-100 FC's, Storage Rooms: 10-20 FC's, Mail Room: 20-50 FC's.

6. TECHNICAL ASSISTANCE:

POC for further assistance concerning this evaluation is **Non-Responsive**

Non-Responsive

SES Solutions

7. RECOMMENDATIONS:

- a) Due to the lead dust wipe results, it is recommended that the vault floor in vault No. 2 and the old indoor range floor is cleaned IAW NGB (AR) 385-15 Appendix C. The floors should be thoroughly wiped down and or wet mopped with an industrial cleaner using tri-phosphates, Mr. Clean or Spic-n-Span. For additional lead cleaning measures, see Enclosure 6. **(RAC 1)**
- b) Conduct semi-annual inventories and update MSDS's on all chemicals in the facility. **(RAC 3)**
- c) Replace the 2 blown fluorescent bulbs in the Supply Room to increase lighting. **(RAC 3)**
- d) Replace the blown fluorescent bulbs in vaults No. 1 and No. 2 to increase lighting. **(RAC 3)**
- e) Submit a work order to FMO requesting the water damaged ceiling tiles in the in the Drill Hall, Administrative Office and the Weight Room (old indoor range) be replaced. (See encl 8, photos 14-17) **(RAC 3)**
- f) Submit a work order to FMO requesting that higher wattage bulbs be installed in the Drill Hall to increase lighting. **(RAC 3)**
- g) Perform monthly checks on fire extinguishers each month, ensure that the devices are checked, recorded, turn upside down and tapped with a rubber mallet to loosen any material at the bottom. Have the local fire department conduct annual inspections of fire extinguishers. **(RAC 3)**
- h) If work practices change, a new assessment should be made on the controls in Place.

ACO ADM DSA DSN LAB LCK
RAD ECB EPL RHS SPR WEL

Back Page

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Storage Room

Manufacturer	Product	Use	Detail	Size	Max	MSDS TAB #
Enterprise Paint Co	Latex Paint	Interior 1 Coat Latex Wall and Trim	Semi Gloss Enamel	5 gal	1	8
FLAMMABLE CABINET						
Spartan	F6	Flying Insect Killer		oz	2	4
Spartan	Superior High Shine	Stainless Steel Cleaner and Polish		oz	3	1
Sheila Shine, Inc.	Sheila Shine	Stainless Steel Cleaner and Polish	7930-00018138	10 oz	12	1
Spartan	Dust Mop/Dust Cloth Treatment	Dust Mop/Dust Cloth Treatment		16 oz	3	1
Pacific West Chemical Corp	PWC	Polyurethane 280	34031 Green	oz	1	8
Digital Innovations	Air Dr	Dust Remover-Liquid Air	30111	10 oz	1	req
LHB Industries	So Sure	Lacquer-Aerosol 15080 Blue	8010-00-079-3758	10.5 oz	1	8
Rustoleum	Fluorescent Orange Paint	Spray Paint	1932830	11 oz	3	8
MINWAX	PolyShades	Stain and Varnish-Bombay Mahogany	Satin 380	quart	1	req
Macco or ICI Paints	Liquid Nails	Adhesive Sealant-Small Project	LN-275	4 oz tube	1	12
Behr	Latex Paint	Premium Plus-Deep Base	5340 or 7453401	gallon	1	8
Valspar	Latex Paint	Zone Marking Paint-Interior/Exterior	49440 White	gallon	1	8
Clean Strip	Mineral Spirits	Odorless Mineral Spirits		gallon	1	7
Johnson Diversary	Good Sense	Air Freshner Refills	ActiScent	.67 oz	12	1
Behr	Behr Premium Plus Paint		556099H11002	gallon	1	8
3M	Spray Buff	Cleaner and Polish		gallon	1	1
CORROSIVE CABINET						
Johnson Diversary	Windex	Glass Cleaner		quart	12	1
Spartan	SparCling	Toilet Bowl Cleaner	7228,7498	quart	5	1
Spartan	CDC-10	Clinging Cleaner		quart	5	1
Hospitality Specialty Co	Health Gards - Cherry	Urinal Deodorizer/Splash guard	01991	x x	12	1
Hospitality Specialty Co	Health Gards - Mint	Urinal Deodorizer/Splash guard	03904	x x	12	1
Spartan	HDQC2	Cleaner - Disinfectant - Detergent		quart	3	1
LHB Industries	Kitchenmate	Dishwashing Detergent		gallon	1	1
Spartan	Shine Line	Multisurface Cleaner		quart	2	1
Spartan	Foamy Q & A	Porcelain Cleaner		quart	2	1
Spartan	Grub Scrub	Hand Cleaner	2809,2810	gallon	1	1
Spartan	I-Shine	Floor Finish		5 gal	1	1
Spartan	Spray Buff	Floor Polish Mist		quart	12	1
Johnson Wax	Bravo	Floor Stripper		5 gal	1	1
Kuol Products Co.	Antibacterial Hand Soap	Soft and Silky	NDC 50865-951-12	40.6 oz	5	1
State	Shower Supreme	Shower Soap w/aloe	52152	22.8 oz	3	1
Spartan	Clean on the GO			2 litr	6	1
Spartan	Clean on the GO			2lit	6	1
Spartan	Clean on the GO			2lit	6	1
Spartan	Clean on the GO			2lit	6	1

Analytical Environmental Services, Inc

Date: 3-Jun-11

Lab Order: 1105L41
Client: SES
Project: Brooksville, Fl Armory
Matrix: Wipe
Date Received: 5/25/2011 9:35:00 AM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1105L41-001A	M193	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-002A	M194	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-003A	M195	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-004A	M196	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-005A	M197	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-006A	M198	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-007A	M199	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-008A	M200	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-009A	M201	24	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-010A	M202	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-011A	M203	BRL	ug, Total	20	1		05/23/2011	05/31/2011	MP
1105L41-012A	M204	5950	ug, Total	124	6.18		05/23/2011	05/31/2011	MP
1105L41-013A	BLANK	63	ug, Total	20	1		05/23/2011	05/31/2011	MP

Qualifiers: BRL - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank

DF - Dilution Factor

Results are blank corrected where applicable

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Brooksville Armory Full Time Support Personnel

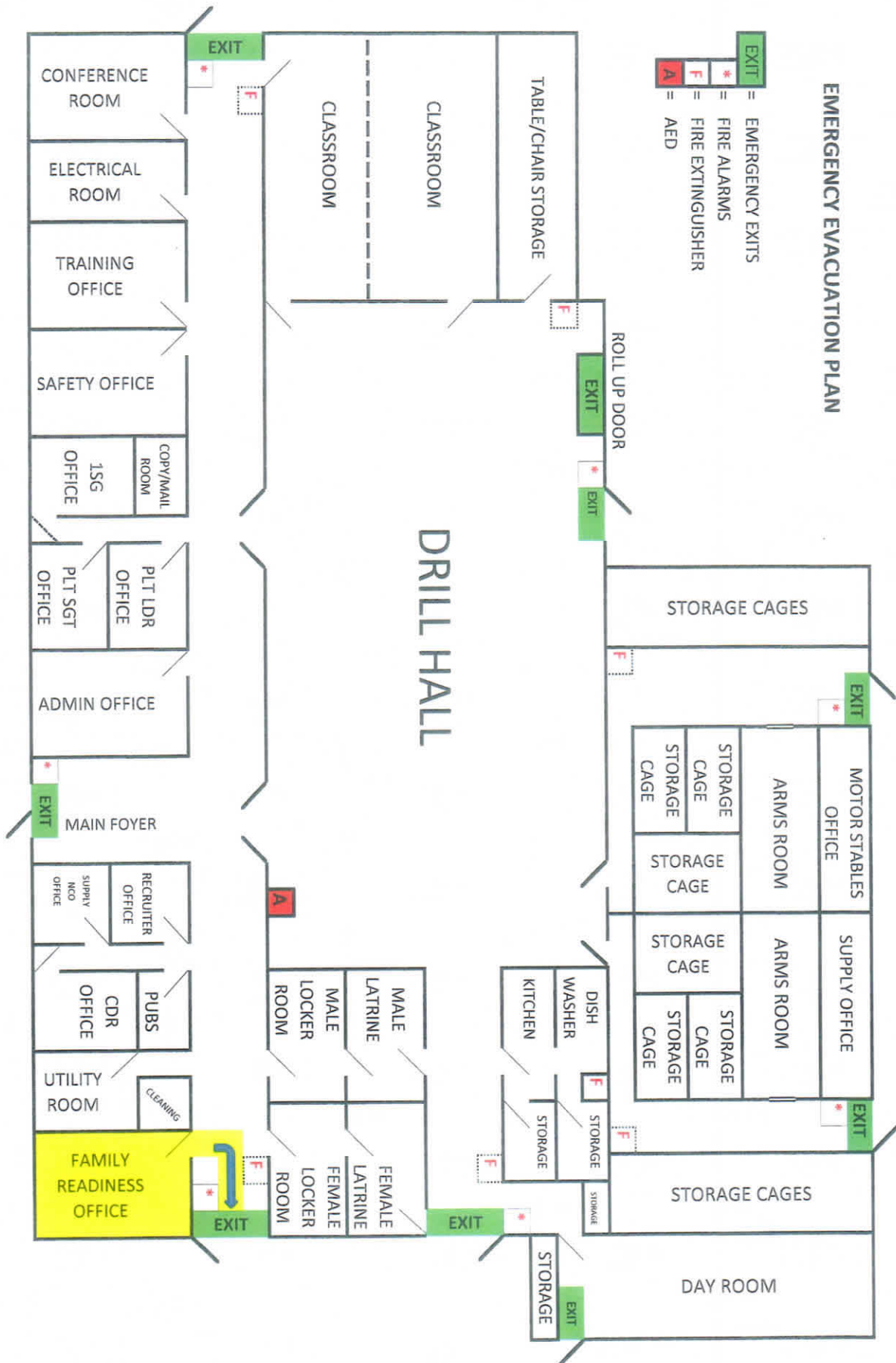
Non-Responsive

W 2, Training Officer

FC , Readiness NCO

, SSG, Training NCO

, Logistics NCO



ENCLOSURE 6

ARMORY CLEANUP REQUIREMENTS

High Test Results

If the public utilizes your facility and the test results for lead came back above 40 $\mu\text{g}/\text{ft}^2$ you are responsible for cleaning this area and adjoining areas to meet the 40 $\mu\text{g}/\text{ft}^2$ or less, unless:

1. You can guarantee that no children under the age of 7 will come into your facility.
2. Your state public health has other guidance, for example, signage is required to warn personnel who are pregnant or of child bearing age, or under the age of 7 years old.
3. Signs stating "No smoking, drinking, eating, or applications of cosmetics without washing of hands prior to activity" are properly installed in your facility.

1. Cleaning of Building.

Before proceeding into the cleanup mode, first discuss with your Environmental Office what procedures are recommended and then coordinate your cleanup efforts with local agencies, if warranted.

- a. The building, as well as the dusty materials and equipment in it, should be cleaned one time to reach the lead dust levels that are appropriate for the function of the facility, for example, facilities used by full-time personnel only, utilized by adults or children 7 years old or older children only, or not utilized by pregnant individuals and/or children under the age of 7. **NOTE:** This type of cleaning implies that this is not at 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 that the level of lead is at the required level for your particular facility and situation.
1. This cleanup can be accomplished using a HEPA vacuum (a very tedious and time-consuming 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 the entire floor area. **NOTE:** Personal protective gloves, rubber boots, or protective disposable shoe/boot covers should be used during this procedure and personnel who have performed the cleanup should wash their clothing separately from their family's clothing,

ENCLOSURE 6

especially if they have young children at home. Personnel should wash their hands after performing this operation to assure that lead contaminates are not ingested.

2. Frequent changing out of the water used for cleaning is vital. Disposal of this hazardous waste water and rags/mop heads, Personal Protective Equipment (PPE), etc., should be coordinated with your Environmental office.
- b. 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, "*Renovate Right – Important Lead Hazard Information for Families, Child Care Providers and Schools*". <http://www.epa.gov/lead/pubs/rrpamph.pdf>.
- c. Continue to enforce good housekeeping and hygiene practices. These measures make good sense to minimize exposures to any toxic chemicals in the workplace.
- d. 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.

ENCLOSURE 6

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 gallon) 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. Wastewater containers.

Disposal of Waste Water and Cleaning Materials:

1. **NOTE:** Consult with the Local Army National Guard Environmental Office prior to taking any collection, disposal, or commencement of wiping activities. Each state and territory may have additional regulatory guidance regarding the collection, storage, and disposal of wastewater.
2. Mop heads should be disposed of after initial cleaning, unless otherwise advised by Environmental Office personnel. **NOTE: Thorough cleaning of mop heads may be sufficient enough to permit subsequent reuse on future Armory cleanups, but check with the local Environmental Office before reuse.**
3. Disposable gloves should be treated as hazardous waste material.
4. Soiled cotton rags should be treated as hazardous waste material.
5. Wash water contaminated with lead may 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.

ENCLOSURE 6

- 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 the established waste stream. If personnel have chosen to use overshoes for protection, dispose of the used overshoes into the established waste stream. **NOTE: This recommendation is for initial cleanup activities; PPE requirements may be reduced after it has been determined that non-hazardous levels of lead have been achieved.**
3. Wash BDU's or personal clothing separately from children's clothes.

IMPORTANT NOTES:

1. **No eating, drinking or application of cosmetics is allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area).**
2. **Avoid blowing, shaking or like actions which could potentially disperse 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 room (ceiling, wall 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 manufacturer's recommendations.

ENCLOSURE 6

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.

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

4. Now prepare water and detergent (for example, Spic n Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufacturer's recommendations, which should be found on the product's label for general clean up.
 - a. Change out water and detergent 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 cleaning described in Initial Armory Cleanup SOP.

NOTE: The only exception to these wet cleaning procedures is the use of an approved chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Use of a pre-treated (chemically treated) dust floor mop will prevent lead dust particles from being disbursed into the surrounding atmosphere.
 - b. If a pre-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 an armory or facility.** Shaking of a pre-treated mop head may 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 cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (Cleaned Monthly.)

ENCLOSURE 6

- b. Occasional activities taking place during the month, for example, 1-2 classes or volleyball games, etc. (Cleaned Twice Monthly.)
- c. Used regularly by soldiers or outside agencies/personnel. (Cleaned Regularly – at least Weekly)

IMPORTANT NOTES:

1. Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on the use of the Armory and IFR.
2. Clearance sampling/testing is to be accomplished by certified IH personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for whom you are cleaning and is not a converted IFR space, you may continue to utilize the Armory space before 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.
3. If lead cleanup work was contracted out, a third party should do the clearance sampling.
4. If young children and pregnant females are, or may be present, signs shall be posted on all facilities, warning of the potential danger of exposure to lead dust.

References

Army Regulation (AR) 11-34, The Army Respiratory Protection Program.

Army Regulation (AR) 40-5, Preventative Medicine.

Army Regulation (AR) 385-10, The Army Safety Program.

NGR 385-10, Army National Guard Safety and Occupational Health Program.

TB MED 503, The Army Industrial Hygiene Program.

Title 29, Code of Federal Regulations (CFR), 2010, revision, Part 1910, Occupational Safety and Health Standards.

TG 022, US Army Environmental Hygiene Agency (YSAEHA), Industrial Hygiene Evaluation Guide.

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

IES Lighting Handbook

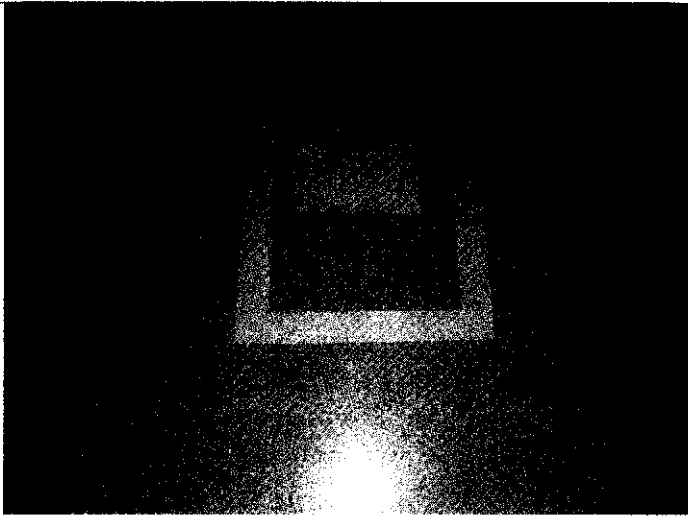


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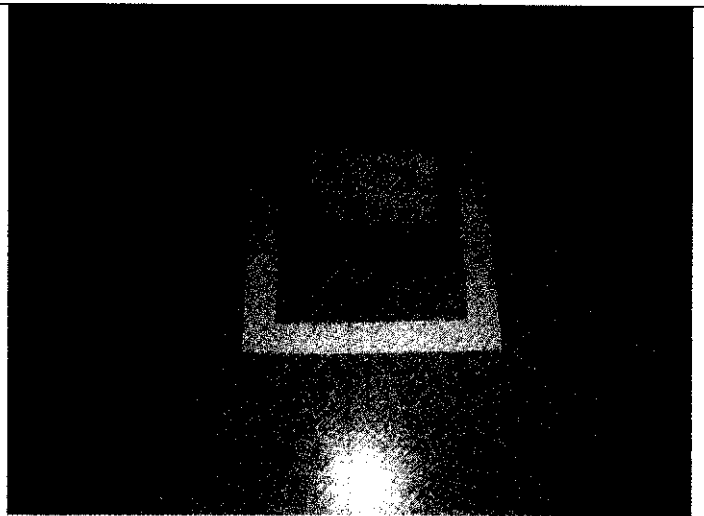


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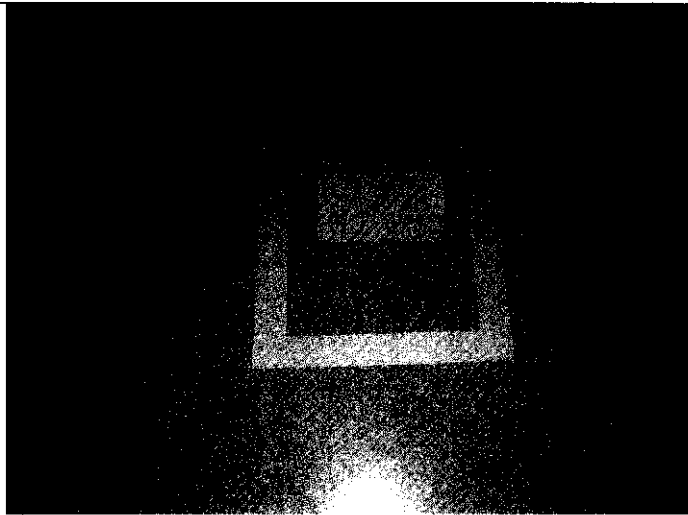


Photo No.3

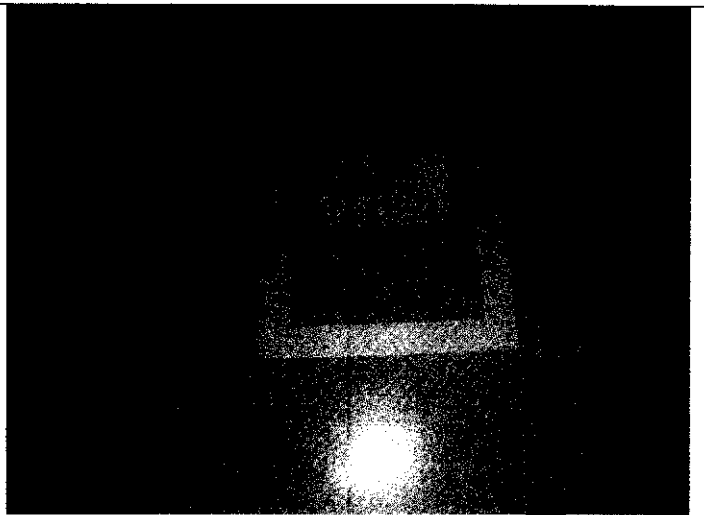


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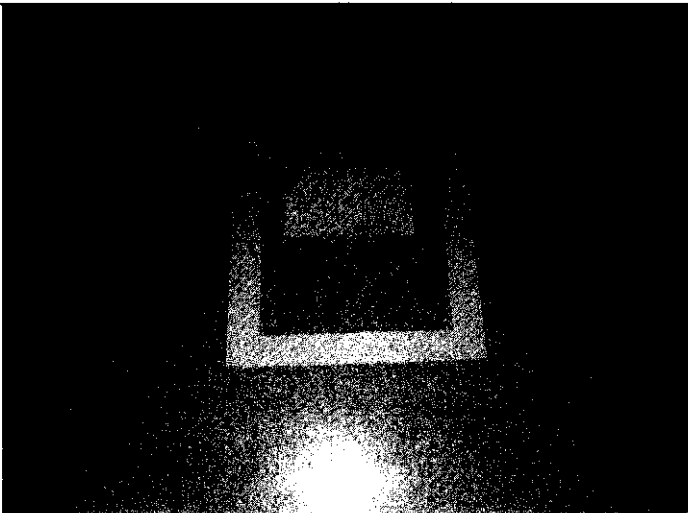


Photo No.5



Photo No.6

ENCLOSURE 8

Page 1 of 5



Photo No.7

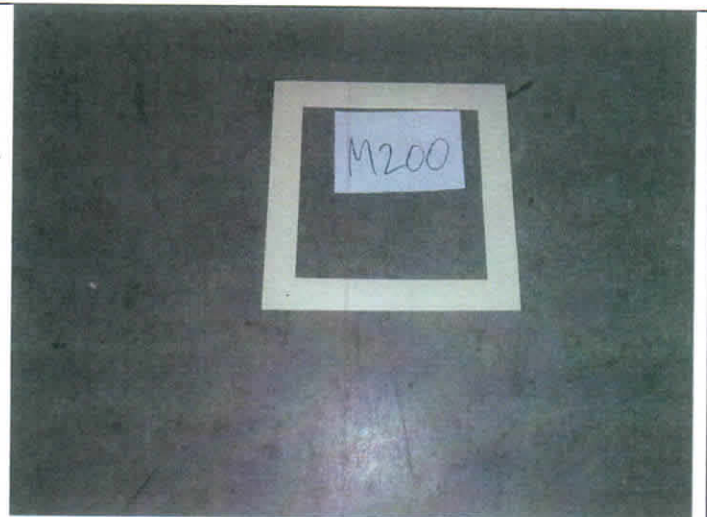


Photo No.8



Photo No.9



Photo No.10



Photo No.11



Photo No.12

ENCLOSURE 8

Page 2 of 5

FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

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Photo No.13

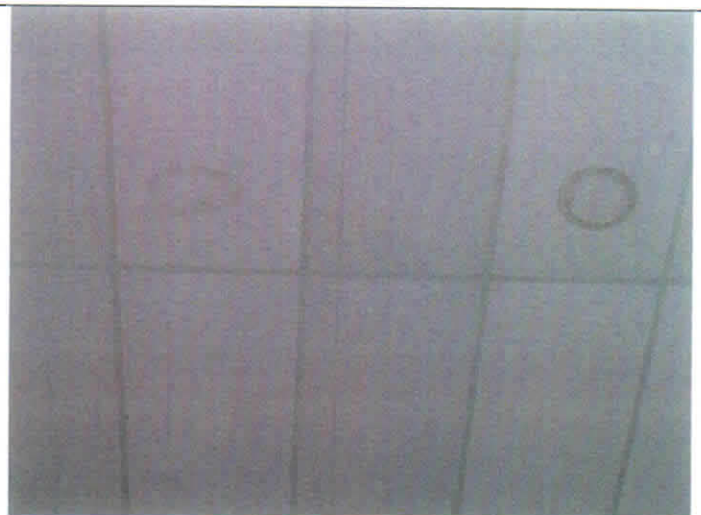


Photo No.14



Photo No.15



Photo No.16



Photo No.17



Photo No.18



Photo No.19



Photo No. 20



Photo No.21



Photo No.22



Photo No.23



Photo No. 24

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

13 February 2002

MEMORANDUM FOR The Florida Army National Guard, ATTN: CPT [Non-Responsive]
Commander, Company C, 3rd Battalion, 124th Infantry, 749 7th Street, Chipley, Florida
32428-5002

SUBJECT: Industrial Hygiene Survey of the Chipley National Guard Armory, Chipley, Florida.

1. References.

- a. Report submitted 23 December 2001, Industrial Hygiene Survey, Minckler and Associates.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a Service Contract was put together to conduct Health Hazard Information module (HHIM) Field surveys and IH surveys at the Florida National Guard Armories.

b. Mr. [Non-Responsive] of Minckler and Associates conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed.
(See ENCL. 1)

4. Recommendations.

a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Request the Industrial Hygiene Technician or the Occupational Health Nurse conduct further lead sampling in the Indoor firing range to determine the extent of the lead problem in the Indoor Firing Range.

c. Use the report to help in correcting all deficiencies noted by the contractor.

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174. **Non**

Non-Responsive

Regional Industrial Hygienist

CF: NBG-AVN-SH

Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

23 December 2001

MEMORANDUM FOR: Florida Army National Guard, ATTN: CPT [Non-Responsive] Commander,
Company C, 3rd Battalion, 124th Infantry, 749 7th Street, Chipley, Florida 32428-5002

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module (HHIM) Survey,
Army National Guard, Chipley, Florida

I. REFERENCES:

- a) Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b) Army Regulation (AR) 40-5, 15 October 1990, Medical Service, Preventive.
- c) AR 11-34, 15 February 1990, The Army Respiratory Program.
- d) AR 385-10, 23 May 1988, Army Safety Program.
- e) FC-Reg. 385-2, 1 July 1999, Ionizing and Nonionizing Radiation Protection Program
- f) Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g) Technical Bulletin Medical (TB MED) 503, 1 February 1985, The Army Industrial Hygiene Program.
- h) Technical Bulletin Medical (TB MED) 530, 1 January 1991, Food Service Sanitation
- i) National Guard Regulation (NGR) 385-10, 20 December 1989, Army National Guard Safety and Occupational Health Program.
- j) Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- k) IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.
- l) National Electrical Code Handbook Eighth Edition, 1999

2. BACKGROUND: At the request of Mr. [Non-Responsive] National Guard Bureau Regional Industrial Hygienist, Atlanta, Georgia, an Industrial Hygiene Consultation and Health Hazard Information Module Field Survey was performed at Company C, 3rd Battalion, 124th Infantry, Army National Guard Armory, Chipley, Florida on December 4, 2001 (See appendix 1, photo 1). Sergeant [Non-Responsive] provided assistance during the survey. The purpose of the survey was to perform noise surveys, ventilation surveys, Illuminations surveys, and complete HHIM field survey forms on all industrial operations at the facility (See encl. 1 for completed HHIM Survey forms).

3. **INSTRUMENTATION:** The following survey instrumentation was either provided by the National Guard Bureau or the contractor and was used to obtain noise, ventilation, minor electrical and illumination measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

- a) Sper Scientific 840021, Light Meter, S/N: 02997, calibrated January 1, 2000
- b) Sper Scientific 840020, Light Meter, S/N: 025432, calibrated
- c) Bruel & Kjaer, Type 2234, Noise Analyzer, calibrated June 27, 2001
- d) Bruel & Kjaer, Type 4231, Calibrator, calibrated June 27, 2001
- e) TSI Model 8360 (Veloci Calc), Air Velocity Meter, S/N: 408077 calibrated November 16, 2000.
- f) 61-051 Circuit Tester

4. **Findings:**

- a) **Company C, 3rd Battalion, 124th Infantry:**
 - i) Material Safety Data Sheets (MSDS) were on file and readily available on all chemicals and hazards used in the facility maintenance shop. A chemical inventory sheet was sent to the facility coordinator. All employees must be initially trained in the Federal Hazardous Communication Program IAW 1910.1200 (See incl. 2 for a listing of the hazardous chemicals/materials at the section).
 - ii) Two AGR (Active Guard Regular) personnel and one technician were assigned to the company. The AGR are paid through the federal government; however, they work for the governor. Seventy troops train once a month at the facility. Under 40 physicals were conducted every 5 years and over 40 physicals are conducted every three years at MacDill or Blanding Air Force Bases or a mobile medical unit (Det 3) in Orlando. One hundred and thirty-four M16A's and NBC masks were stored at the armory. Unit primarily conducts light infantry drills, which included hiking with equipment and maintaining their M16A's.
 - iii) Drill Hall: The hall was rented out to tool shows, community events and other activities (See appendix 1, photo 2). Illumination levels range from 8 to 26 FC (foot-candles). Three air supply units and two general mechanical exhaust vents were located on the west-side wall. Six ceiling gas heaters from 1957 heated the facility, however, inadequately (See appendix 2, photo 1). A work order was submitted to update the heating system. Apparently, the armory loses a lot of business due to the inadequate heating and air conditioning. Four sets of fluorescent lamps were inoperative. Must use a forklift or extension ladder to replace the tubes. The unit is purchasing exterior ceiling tiles for the interior ceiling (See appendix 2, photo 2). The exterior tiles form to the ceiling hangers better and will not buckle and fall out.

- iv) Female Restroom: Light out in the room.
- v) Supply Room: Storage of TA 50, duct tape, chemical lights and other items were in the room. An old dog tag machine was on site.
- vi) Old Indoor Firing Range: An old indoor firing range had been completely gutted out and thoroughly cleaned out of any lead residue (See appendix 3, photo 1). Three lead wipe samples were taken. The results were over the allowable limit (See encl.3 for sampling results). Also, metal deflectors, heat ceiling tiles and baffles had been removed from the range per conversation with the facility manager.
- vii) Classroom: Area had adequate lighting and was well-maintained (See appendix 3, photo 2).
- viii) Due to the low noise levels (administrative areas) there was no requirement for a Hearing Conservation Program. Monthly drill soldiers (motor pool) had earplugs and earmuffs available for use.
- ix) A general noise evaluation survey is attached as encl. 4.
- x) A listing of Chipley Armory personnel is shown in encl. 5.
- xi) A design drawing of the building is attached as encl. 6.
- xii) A Sample HAZCOM SOP is attached as encl. 7.

5. ILLUMINATION SURVEY RESULTS:

a. Illumination Levels: The following additional illumination level readings were taken during the survey and are reported below in foot candles (FC's).

<u>AREA/LOCATION</u>	<u>FOOT CANDLES (FC)</u>
Drill Hall	8-27
Offices	66-78
Classroom	54-83
Supply Room	16-62
Communication's Room	23-24
Kitchen	57-76
NBC Room	18-21
Recruiter's Office	62-83
Women's Restroom	11-22
Men's Restroom	8-35
Janitor Closet	12-14

As indicated in the IES Lighting Handbook, Application Volume 1987, Offices: 50-100 FC's, Supply and Publication Areas: 20-50 FC's, Auditorium 10-20 FC's, Restroom: 5-10 FC's, Classrooms: 50-100 FC's, Kitchen: 20-50 FC's, FC's, Library: 50-100 FC's, Storage Rooms: 10-20 FC's, Mail Room: 20-50 FC's, Battery Room: 10-20 FC's.

6. Recommendations:

- a) An updated HAZCOM SOP is included in the report (See encl. 7). All chemicals must have an index where it includes not only the nomenclature and MSDS availability but also the quantity, national stock number and the type of storage container (See encl. 8).
- b) Due to the over exposure lead wipe results from the old indoor firing range (275 and 648 ug/SQ FT), it is recommended that the walls and floor be wet mopped with an industrial cleaner using tri-phosphates. The Construction and Facility Management Office (CW2 Fawcett an Environmental Protection Specialist) out of St. Augustine, Florida should be contacted to investigate the area and recommend any other corrective actions.
- c) Submit a work order to have the burned out light fixtures (i.e., fluorescent tubes, and lamps) in the drill hall replaced. Also, have all facility light fixtures and covers routinely cleaned and maintained.
- d) Due to the low lighting levels in the drill hall, a fresh coat of paint on the walls would brighten up the area.
- e) Ensure that new heaters and air conditioners are going to be installed in the facility.
- f) Repair the light in the women's restroom.

7. TECHNICAL ASSISTANCE:

POC for further assistance concerning this evaluation is **Non-Responsive**

Non-Responsive

Industrial Hygiene Technician

CF:

Florida Army National Guard

St. Francis Barracks

Occupational Health Office ATTN: MAJ **Non-**

82 Marine St.

St. Augustine, Florida 32084

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

*SEE PRIVACY ACT STATEMENT ON REVERSE
(For use of this form, see SFHDM User's Instructions.)

SECTION 1.

DEMOGRAPHIC DATA

a. ARLLOC 12000 b. INSTALLATION FL ARNG c. BLDG/RM NUMBER Chipley Armory
 d. LOCATION/CODE AA e. OPERATION/CODE ADD 1 f. DESCRIPTION Administrative
 SUPPORT SUCH AS PERSONNEL, SUPPLY AND MAINTENANCE FOR 70 TROOPS, WHO TRAIN
 AT THE FACILITY ONCE PER MONTH.
 g. MACOM/CODE NG h. SUBMACOM/CODE XX i. SUPERVISOR SFC **Non-Responsive**
 j. TELEPHONE/AUTOVON NUMBER (850) 63816260/6261 k. RAC 3 l. FREQUENCY (hrs Per Day) 9 HRS/DY
 m. NO CIV(S) 1 n. NO MIL 2 o. NO CONTRACTOR(S) 1 p. NO LOC(S) 1 q. NO OTHER 1

SECTION 2.

IH STAFFING DATA

a. LAB HOODS 1 b. VAPOR DEGREASERS 1 c. MAINTENANCE BAYS 1 d. SPRAY BOOTHS 1
 e. OPEN SURFACE TANKS 1 f. VENTILATION UNITS 3 g. MV 1

SECTION 3.

SURVEY DATA

a. SURVEY DATE 4 Dec. 2001b. EVALUATOR (INITIALS) **Non-Responsive**

c. CONTROLS PRESENT	e. EVALUATION	d. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
OTH (Offices)	62-78 FC adequate	ETC	50 FC (50-100 FC nominal)	ACCOM
OTH (Kitchen)	57-76 FC adequate	ETC	20 FC (20-50 FC nominal)	ACCOM
OTH (classroom)	38-54 FC adequate	ETC	50 FC (30-50 FC nominal)	ACCOM
OTH (drill hall)	41-77 FC adequate	ETC	20 FC (10-20 FC nominal)	ACCOM
GMV		GMV		

h. PERSONAL PROTECTIVE EQUIPMENT (R=REQUIRED; A=AVAILABLE)

1. RESPIRATOR

DISPOSABLE
 1/2 FACE AIR PURIFYING
 3/4 FACE AIR PURIFYING
 FULL FACE AIR PURIFYING
 POWERED AIR PURIFYING
 AIRLINE
 SELF-CONTAINED
 ABRASIVE BLASTING HOOD

MANUFACTURER

NIOSH TC NO

R/A

2. GLOVES	R/A	3. EYES/FACE	R/A	4. HEARING	R/A	5. BODY	R/A	6. HEAD/FOOT	R/A
ACID	/	CHEMICAL/SPLASH	/	MUFFS	X/X	APRONS	/	HARD HATS	/
OIL	/	SAFETY/IMPACT	X/X	EARPLUGS	X/X	COVERALLS	/	IMPERMEABLE BOOTS	/
SOLVENTS	/	CHEMICAL/SAFETY	/	CANAL CAPS	/	FULL BODY SUIT	/	SAFETY CONDUCT SHOES	/
HOT SURFACES	/	FULL FACE SHIELD	/	HELMETS	/	SAFETY BELT/HARNES	/	SAFETY/NONCONDUCTIVE SHOES	/
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/					BDUs	X/X		

SECTION 4.

HAZARD INVENTORY DATA

a. CAS CODE	b. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
7439-92-1	LEAD, INORGANIC DUSTS & FUMES, AS PB	3F	YES

Enclosure 2

Hazardous Material Inventory Sheet

Facility Name: Chipley Armory

Date: December 4, 2001

Storage Areas: Storage Closet

MSDS Trade Name Nomenclature

Yes	Purple K Dry Chemical Powder
Yes	Buckeye Juggernaut (Floor Finish Stripper)
Yes	Buckeye Proclaim (Floor Sealer)
Yes	MDC-20 (Urinal Cleaner)
Yes	All Purpose Spotter
Yes	All Kleer
Yes	Buckeye Sanicare II (Aerosol Disinfectant Deodorant)
Yes	Micrell Anti-Bacterial
Yes	Phosphoric Acid Cleaner
Yes	Germ-Aid (Quarts)
Yes	Buckeye Citation (Floor Finish)
Yes	One Step Floor Finish

Enclosure 3

GENERAL AREA EXPOSURE MONITORING RESULTS

Location	Material Sampled	Results	Permissible Std.
Indoor Firing Range (1A)	Lead	275 ug / SQ FT	100 ug / SQ FT
Indoor Firing Range (1B)	Lead	< = 17 ug / SQ FT	100 ug / SQ FT
Indoor Firing Range (1C)	Lead	648 ug / SQ FT	100 ug / SQ FT

01/11/2002 16:25 WOHL OFFICE MDSN WI → 815097574846

NO. 099 0001

**Wisconsin Occupational
Health Laboratory**Mail:
P.O. Box 7996
Madison, WI 53707-7996
Phone: (800) 446-0403Packages:
2601 Agriculture Dr.
Madison, WI 53718
Fax: (608) 224-6213

Wisconsin State Laboratory of Hygiene

University of Wisconsin

January 11, 2002

Non-ResponsiveMINCKLER ASSOCIATES
1503 ZAIGER DR
COLORADO SPRINGS CO 80915-2240

Company #: 6776

CHIPLEYARMORYFL

The results for the samples received by the lab on 01/02/02
are as follows:

Lab#	Field#	Value	Unit	Analyte
931599	1A	275	ug/wipe	Lead
931600	2B	<=17	ug/wipe	Lead
931601	3C	648	ug/wipe	Lead

Comments: Diaper wipes are not valid media for lead dust wipe sampling. WOHL will
supply appropriate media upon request.

Report contains 1 page(s).

If you have any questions about these results, please call the lab at
(800)-446-0403

Non-Responsive_____
FIH, Chemist Supervisor

01/11/2002 16:25 WOHL OFFICE MDSN WI → 815097574846

NO.099 D005

BULK SAMPLE DATA				
For use of this form see USAEHA TG 14; the proponent is ESEB-LO.				
Return Address (complete address including Zip Code)			Point of Contact (name/AUTOFAX)	
Thomas L. Minckler 1508 Zenger Dr. Columbus, OH 43260-2240			Non-Responsive (719) 570-9639	
Sampled Installation		Project Number		ARL06
Chipley Armory, FL				12000
Samples Collected By		Date Collected		Date Shipped
Mc. Responsive		Dec. 17, 2001		26 Dec. 2001
Description of Operation LEAD WIPE SAMPLES OF				Location (ALDG/AREA)
AN INACTIVE INDOOR FIRING RANGE				Old Indoor Firing Range
Associated Complaints (be specific)				
NONE				
Associated Air Samples If yes, list sample numbers				
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Label Information				
Trade Name		NSN		Manufacturer
Address		MSDS Attached		
		<input type="checkbox"/> Yes <input type="checkbox"/> No		
Analysis Desired				
wipes				
Lab Use Only	Sample No.	Constituents	Results	Remarks
931593	1 A	left wall-indoor firing range	275 ug/wipe	
931600	2 B	Center wall-indoor firing range	<= 17 ug/wipe	
931601	3 C	Right wall-indoor firing range	648 ug/wipe	
Comments to Lab:				
Lab Use Only				
Analyst (initials)		Reviewed By (initials)		Date Received
				Date Reported
Procedures Performed		Comments:		

AEHA Form 8-R, 1 Oct 84

Replaces AEHA Form 8, 1 Oct 80 which is obsolete.

NOISE SURVEY (Sound Level Meter Survey)											
DATE (Year Month Day) 01 11 20 04				TYPE SURVEY 1 INITIAL SURVEY 2 RE-SURVEY 3 OTHER 1							
SOUND LEVEL METER			MICROPHONE				CALIBRATOR				
MANUFACTURER Brüel & Kjaer			MANUFACTURER				MANUFACTURER Brüel & Kjaer				
MODEL TYPE 2236		SERIAL NO		MODEL		SERIAL NO		MODEL TYPE 2236		SERIAL NO	
LAST ELECTROACOUSTIC CALIB DATE 01 06 21			LAST ELECTROACOUSTIC CALIB DATE			LAST ELECTROACOUSTIC CALIB DATE			LAST ELECTROACOUSTIC CALIB DATE 01 06 21		
WIND SCREEN <input type="checkbox"/> USED <input checked="" type="checkbox"/> NOT USED			MEASUREMENTS OBTAINED <input type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS								
DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) Florida Army National Guard Chipley Armory Company C, 3 Battalion, 124th Infantry Chipley, Florida								PRIMARY SOURCE OF NOISE See item description below			
								SECONDARY SOURCE OF NOISE			
SOUND LEVEL DATA						PROTECTION REQUIRED (re: dBA Level)					
LOCATION	METER ACTION	dBc	dBA	RISK ASSESSMENT CODE	NONE less than 85	PLUG OR MUFF 85-108	PLUG AND MUFF 108-118	PLUG + MUFF + TIME LIMIT greater than 118			
Oil Hall Exhaust Fan	S		75	IVC	X						
NOTES: Range of levels noted by /; i.e., 102/109. At operator work stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.											
REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.)											
Cal PRE & POST MORE DETAILED NOISE EVALUATION REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "YES", identify type evaluation needed.) Noise evaluation was PERFORMED AT THE SOURCE.											
NAME(S) OF PERSONS IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)											
See PERSONNEL ROSTER											
NAME, PHONE NO. AND ORGANIZATION OF SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION											
Non-Responsive NCOIC, Co. C, 3 Bn, 124th INF. (850) 638-6260											
SURVEY PERFORMED BY (Last Name, First Name, MI) BEST AVAILABLE COPY HEARING CONSERVATION MONITOR (Last Name, First Name, MI)											
Non-Responsive Non-Responsive FOIA Requested Record #J-15-0085 (FL)											
Non-Responsive by National Guard Bureau Page 121 of 1021											

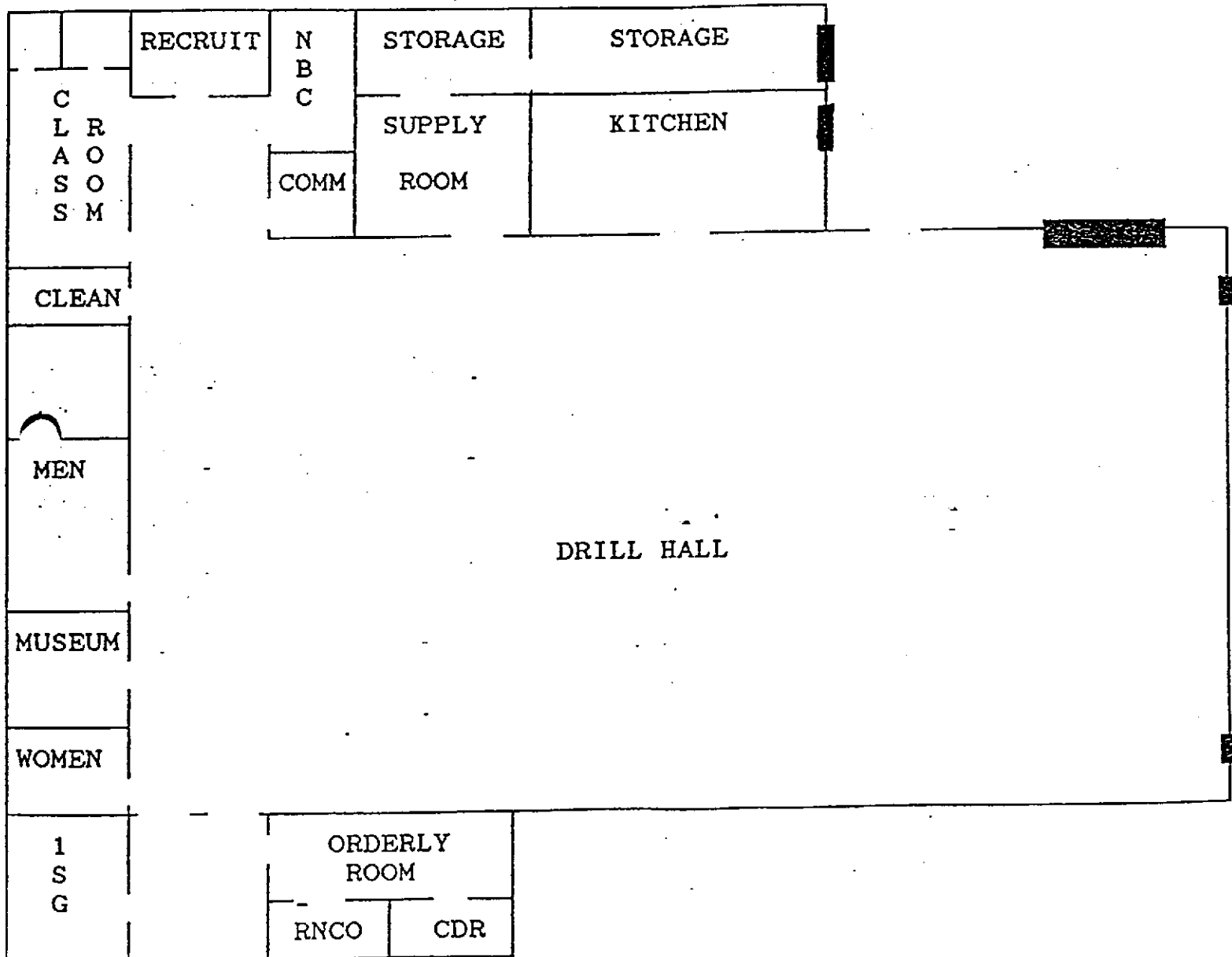
Enclosure 5

Company C, 3 Battalion, 124th Infantry
Personnel Roster

	<u>Personnel</u>	<u>SSN</u>	<u>Rank</u>	<u>Job/Title</u>
1.	Non-Responsive (AGR)	Non-	SFC	Readiness NCO
2.	(AGR)	Respon	SSG	Supply
3.	(Tech)	sive	SPC	Company Clerk

AGR: Active Guard
Reserve

Company C, 3 Battalion, 124th Infantry
Chipley, Florida



FRONT ENTRANCE

The [OS&H manager or designee] will maintain list of all hazardous chemicals used in the facility, and update the list as necessary. The hazardous chemical list will be updated upon receipt of hazardous chemicals at the facility. The list of hazardous chemicals is maintained at [location].

II. List of Hazardous Chemicals

In general, each employee in the facility will be appraised of the substance of the HCS, the hazardous properties of chemicals they work with, and measures to take to protect themselves from these chemicals.

The [occupational safety and health manager (OS&H) manager] or other technically qualified designee] is the overall coordinator of the facility program acting as the representative of {senior facility official}, who has overall responsibility.

The purpose of this instruction is to ensure that (facility name) is in compliance with the OSHA Hazard Communication Standard (HCS) 29 CFR 1910.1200.

I. General

NOTE: The written program must include the specific methods that are used to achieve compliance with the requirements of the Hazard Communication Standard (29 CFR 1910.1200). The specific methods described in this sample written program are for illustrative purposes, and other effective methods may be substituted to satisfy local needs or practices.

HAZARD COMMUNICATION SAMPLE WRITTEN PROGRAM

Enclosure 7

III. Material Safety Data Sheets (MSDS's)

The [OS&H manager or designee] will maintain an MSDS library on every substance on the list of hazardous chemicals in the [location]. The MSDS will consist of a fully completed OSHA Form 174 or equivalent. The [location manager or supervisor] will ensure that each [work area or shop] maintains an MSDS for hazardous materials used in that area. MSDS's will be readily available to all employees.

The [local OS&H manager or designee] is responsible for acquiring and updated MSDS's. The [local OS&H manager or designee] will review each MSDS for accuracy and completeness and will consult with the [Area/Region/Headquarters OS&H manager] if additional research is necessary. The [local OS&H manager or designee] must clear all new procurements for the facility. Whenever possible, the least hazardous substance will be procured.

IV. Contractor Employers

The [local OS&H manager or designee], upon notification from the [responsible supervisor], will advise outside contractors of any chemical hazards which may be encountered in the normal course of their work on the premises.

V. Non-Routine Tasks

[Maintenance or other supervisors] contemplating a non-routine task, e.g. boiler repair, will consult with the [local OS&H manager or designee] and will ensure that employees are informed of chemical hazards associated with the performance of these tasks and appropriate protective measures. This will be accomplished by a meeting of supervisors and the OS&H manager with affected employees before such work is begun.

VI. Additional Information

Further information on this written program, the hazard communication standard, and applicable MSDS's is available at [location/telephone number].

Enclosure 8

Facility Name:

Date:

[illegible]

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 22, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SGG **Non-Responsive**
Readiness NCO, 8551 West Venable Street, Crystal River, Florida 34429

SUBJECT: Industrial Hygiene Survey of the Crystal River National Guard Armory,
Crystal River, Florida.

1. References.

a. Report submitted 16 April 2004, Industrial Hygiene Survey, Crystal River Armory,
George Hinchliffe.

b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised
1988.

c. AR 40-5, Preventive Medicine, October 1990.

d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.

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

f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing
Conservation.

g. TB MED 530, The Army Industrial Hygiene Program.

h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-
10, Ventilation.

i. Industrial Ventilation, 21st ed, 1992. American Conference of Governmental
Industrial Hygienist, Cincinnati, Ohio.

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering
Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the
Region South Industrial Hygiene Office a service contract was put together to conduct
Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. **Non-Responsive** conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

a. Discontinue use of converted Indoor Firing Range (IFR) by the Family Support Group until the IFR has been properly cleaned of Lead and retested by the Florida State Safety and Occupational Health Office.

b. Clean converted Indoor Firing Range (Supply/Storage room) of lead following NG PAM's 385-15 and 385-16. Keep in mind that EPA and your state may have lead reduction levels lower than the levels recommended in the 385-15 and 385-16.

c. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174. **Non-Res**

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**CRYSTAL RIVER ARMORY
8551 WEST VENABLE STREET
CRYSTAL RIVER, FLORIDA 34429**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Crystal River Armory
8551 West Venable Street
Crystal River, FL 34429

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Crystal River Armory on 23 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 12800 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	2 to 92 footcandles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Crystal River Armory in Crystal River, Florida on 23 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Crystal River Armory in Crystal River, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 23 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses the 690th MP Company. There are three full time employees at the Crystal River Armory. Total M-Day soldiers drilling at the facility is 90. The armory was built in 1989 and contains 22,287 square feet. The armory is a typical building of this era with an indoor firing range that was converted to a supply/storage room that is currently being utilized by the Family Support group (see photograph after sample photographs). Also Refer to building layout in Appendix F.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SSG Non-Responsive
PH# 352-795-0362.

Lead Wipe Samples: Eighteen wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00CR	FIELD BLANK	UNDETECTED
04-01CR	IFR BEHIND FIRING LINE	93.1
04-02CR	IFR 15' IN FRONT OF FIRING LINE	269.0
04-03CR	IFR TEN FEET IN FRONT OF BULLET TRAP	10300
04-04CR	IFR BULLET TRAP AREA	12800
04-05CR	IFR WALL BEHIND BULLET TRAP/BACKSTOP	208
04-06CR	IFR LEFT WALL MID RANGE	57.4
04-07CR	IFR RIGHT WALL MID RANGE	37.3
04-08CR	IFR FACE OF PLENUM	32.7
04-09CR	IFR WALL BEHIND PLENUM	30.1
04-10CR	DRILL FLOOR SOUTHEAST CORNER	UNDETECTED
04-11CR	DRILL FLOOR CENTER	UNDETECTED
04-12CR	DRILL FLOOR NORTHEAST CORNER	7.61
04-13CR	IFR NORTH END MIDDLE OF FLOOR	UNDETECTED
04-14CR	DRILL FLOOR SOUTHWEST CORNER	UNDETECTED
04-15CR	KITCHEN, TOP OF COOLER ROOM 123	7.78
04-160A	KITCHEN, TOP OF COOLER, ROOM 124	35.0
04-170A	ARMS VAULT, INSIDE DOOR, ON FLOOR	43.5
04-180A	ARMS VAULT, CENTER OF FLOOR	102

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range is a major concern. There are extremely high lead sample readings within the range. The family support group meets in the range to ship items to the deployed troops, lend each other support, and there are signs of food consumption within the range. Most importantly is the presence of toys in the range which leads one to believe several children are playing in this area. The indoor firing range (supply room) should be properly cleaned and decontaminated in accordance with NG PAM 385-18. Wipe samples should be taken after the cleaning and decontamination process to ensure levels are well below the standard of 200 micrograms per square foot. Highly suggest the family support group ceases and desists in utilizing this area, especially if children are present.

Asbestos Suspect Building Material There were no signs of asbestos in the Crystal River Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Crystal River armory ranged from 2 foot-candles to 100 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	28 to 71
Indoor Firing Range (Supply)	2 to 27
Office Areas	51 to 100
Classrooms	35 to 53
Mechanical Rooms	16 to 50
Kitchen	32 to 53

Practically all areas within the Crystal River Armory meet or exceeds the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. The north end of the indoor firing range could be improved with the addition of some light fixtures.

Noise Survey The Crystal River Armory, for its size, is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBA. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Crystal River Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise class that addresses muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Properly clean the contaminated surfaces of the converted indoor firing range by wet mopping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Obtain wipe samples after cleaning to ensure lead level standards have been met.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination level in the indoor firing range through additional light fixtures.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

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APPENDIX A
REFERENCES

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

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

Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990

Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000

National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996

NGR 385-10, Army National Guard Safety Program, 20 December 1989

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

Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities

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, November 1997

Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail mfo@prairieanalytical.com



Client Information						Project Information					
Client		HINCHCO				Client/Project		Elochuck Army National Guard			
Address		8702 K.H. Hawk Court Springfield, IL 62799				Project Location		Crystel River Armory, Crystal River, FL			
City, State Zip Code						Sample(s) / Phone No.		210-289-2000			
Phone / Facsimile No.		210-289-2000				Turnaround Time		Standard Rush [] Date Required:			
Contact Person		[Redacted]				P.O.# or Invoice To		HINCHCO			
Sample Description (10 Characters Only)		Sampling Date Time		Container Size Type/LNo.		Matrix Code		Analysis and Test Method Requested		Laboratory Comments	
04-00 CR		13MAR04	0935		1	1		BLANK (Lead)			
04-01 CR			0930		1	1		LEAD			
04-02 CR			0931		1	1					
04-03 CR			0935		1	1					
04-04 CR			0940		1	1					
04-05 CR			0948		1	1					
04-06 CR			0945		1	1					
04-07 CR			0947		1	1					
04-08 CR			0950		1	1					
04-09 CR			0955		1	1					
04-10 CR			0957		1	1					
04-11 CR			1000		1	1					

Special Instructions:

BEST AVAILABLE COPY

BEST AVAILABLE COPY

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 139 of 1021

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com

Analytical
Mind
Systems, INCORPORATED[illegible]

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-001 Collection Date: 3/23/2004 9:25:00 AM
 Client Sample ID: 04-00CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 4:48:00 AM

Lab ID: 0403178-002 Collection Date: 3/23/2004 9:30:00 AM
 Client Sample ID: 04-01CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	93.1	7.50		µg/ft²	10	4/2/2004 4:55:00 AM

Lab ID: 0403178-003 Collection Date: 3/23/2004 9:32:00 AM
 Client Sample ID: 04-02CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	269	7.50		µg/ft²	10	4/2/2004 5:03:00 AM

Lab ID: 0403178-004 Collection Date: 3/23/2004 9:35:00 AM
 Client Sample ID: 04-03CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	10300	375		µg/ft²	500	4/2/2004 8:02:00 PM

Lab ID: 0403178-005 Collection Date: 3/23/2004 9:40:00 AM
 Client Sample ID: 04-04CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	12800	375		µg/ft²	500	4/2/2004 8:09:00 PM

Lab ID: 0403178-006 Collection Date: 3/23/2004 9:42:00 AM
 Client Sample ID: 04-05CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	208	7.50		µg/ft²	10	4/2/2004 8:17:00 PM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403178
 Project: Crystal River Armory

Lab ID: 0403178-007 Collection Date: 3/23/2004 9:45:00 AM
 Client Sample ID: 04-06CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 57.4 7.50 µg/ft² 10 4/2/2004 8:24:00 PM

Lab ID: 0403178-008 Collection Date: 3/23/2004 9:47:00 AM
 Client Sample ID: 04-07CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 37.3 7.50 µg/ft² 10 4/2/2004 8:03:00 AM

Lab ID: 0403178-009 Collection Date: 3/23/2004 9:50:00 AM
 Client Sample ID: 04-08CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 32.7 7.50 µg/ft² 10 4/2/2004 6:11:00 AM

Lab ID: 0403178-010 Collection Date: 3/23/2004 9:55:00 AM
 Client Sample ID: 04-09CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 30.1 7.50 µg/ft² 10 4/2/2004 6:18:00 AM

Lab ID: 0403178-011 Collection Date: 3/23/2004 9:57:00 AM
 Client Sample ID: 04-10CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 7.50 µg/ft² 10 4/2/2004 6:26:00 AM

Lab ID: 0403178-012 Collection Date: 3/23/2004 10:00:00 AM
 Client Sample ID: 04-11CR Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 7.50 µg/ft² 10 4/2/2004 6:34:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-013 Collection Date: 3/23/2004 10:10:00 AM
 Client Sample ID: 04-12CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	7.61	7.50		µg/ft²	10	4/2/2004 6:41:00 AM

Lab ID: 0403178-014 Collection Date: 3/23/2004 10:12:00 AM
 Client Sample ID: 04-13CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 6:49:00 AM

Lab ID: 0403178-015 Collection Date: 3/23/2004 10:15:00 AM
 Client Sample ID: 04-14CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 6:56:00 AM

Lab ID: 0403178-016 Collection Date: 3/23/2004 10:20:00 AM
 Client Sample ID: 04-15CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	7.78	7.50		µg/ft²	10	4/2/2004 7:04:00 AM

Lab ID: 0403178-017 Collection Date: 3/23/2004 10:25:00 AM
 Client Sample ID: 04-16CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	35.0	7.50		µg/ft²	10	4/2/2004 7:34:00 AM

Lab ID: 0403178-018 Collection Date: 3/23/2004 11:15:00 AM
 Client Sample ID: 04-17CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	43.5	7.50		µg/ft²	10	4/2/2004 7:41:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-019

Collection Date: 3/23/2004 11:20:00 AM

Client Sample ID: 04-18CR

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	102	7.50		µg/ft²	10	4/2/2004 7:49:00 AM

Prairie Analytical Systems, Inc.

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

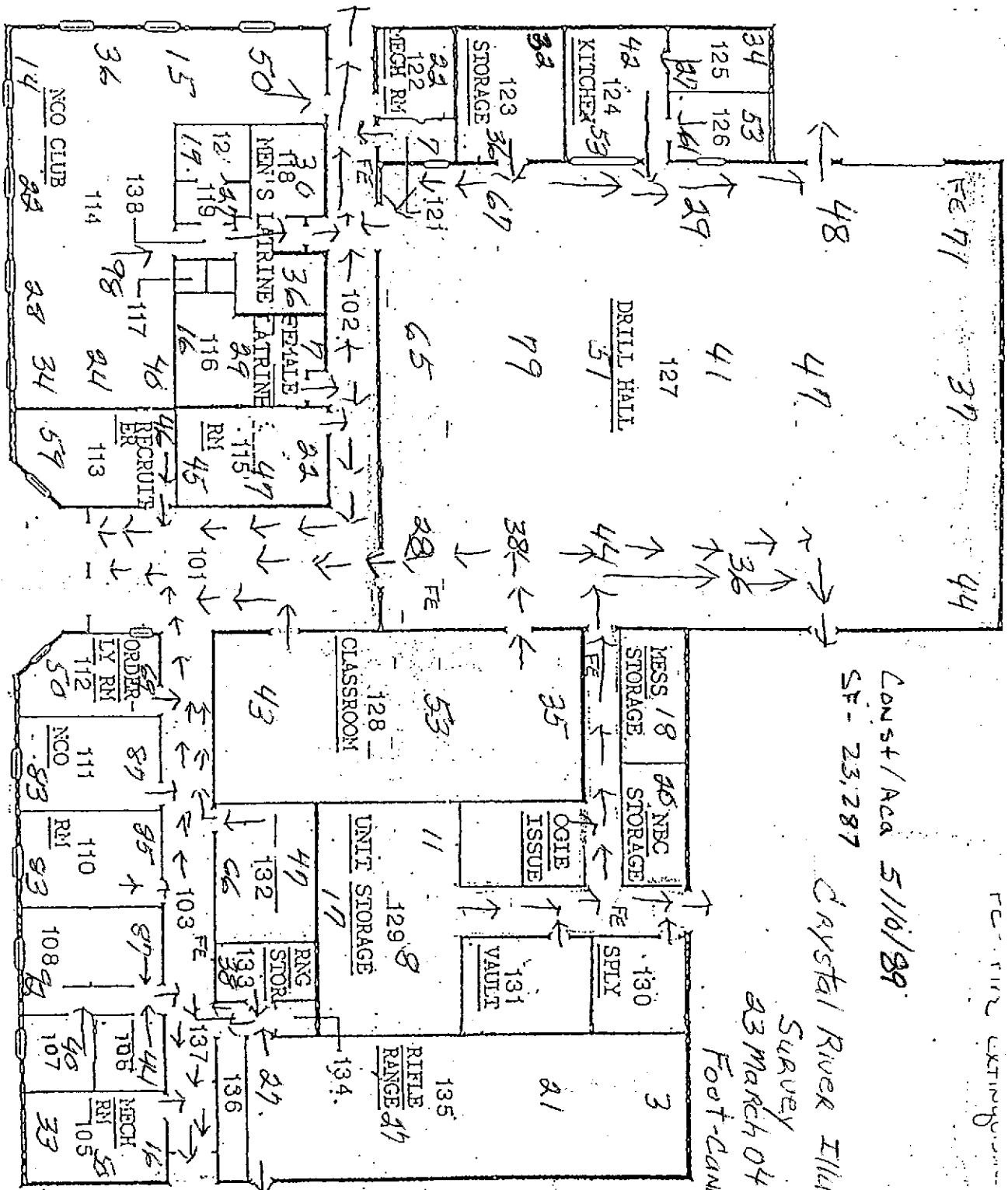
S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

APPENDIX D

ILLUMINATION SURVEY DIAGRAM

NATIONAL GUARD ARMORY
CRYSTAL RIVER, FLORIDA



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: 690th MP Co / Crystal River, FL

2. Area or rooms where you spend the most time in the building:

The Orderly Room

3. Does any of your work activities produce dust or odor? YES ☐ NO ☒

Describe:

4. Gender: Male ☐ Female ☒

Age: Under 25 ☒ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over

5. Do you:

Smoke

Y

☒ N

Have fever/pollen allergies

Y

☒ N

Have skin allergies/dermatitis

Y

☒ N

Have a cold/flu

Y

☒ N

Have sinus problems

☒ Y

N

Have other allergies

☒ Y

N

Wear contact lenses

☒ Y

N

Operate video display terminals (computers)

☒ Y

N

Operate photocopiers 10% of the time

☒ Y

N

Use other office machines

☒ Y

N

Specify:

Currently take any medications?

Y

☒ N

Reason:

6. Office Characteristics:

1 Number of persons sharing same room/work area

2 Number of windows in room/work area

Do windows open?

☒ Y

N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

☒ 4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

☒ 4

5

Are there smokers in your area?

Y

☒ N

7. How long have you worked:

2 mos In this room/area

2 mos In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y

N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

N/A

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Keep the air filters clean and the air at a reasonable temperature.

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

A reasonable temperature in this work environment.

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: 690th MP Co, Crystal River
2. Area or rooms where you spend the most time in the building:
Readiness, Admin office
3. Does any of your work activities produce dust or odor? YES ☒ NO
Describe: _____
4. Gender: Male ☒ Female
Age: ☒ Under 25 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have skin allergies/dermatitis | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have a cold/flu | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have sinus problems | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have other allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Wear contact lenses | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
- Specify: _____
- Currently take any medications? Y ☒ N
Reason: _____
6. Office Characteristics:
- ☒ Number of persons sharing same room/work area
1 Number of windows in room/work area
Do windows open? ☒ Y ☒ N
- Rate adequacy of work space per person:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Rate room temperature:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Are there smokers in your area? Y ☒ N
7. How long have you worked:
9 mos In this room/area
3 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y

N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

air ducts not cleaned frequently enough

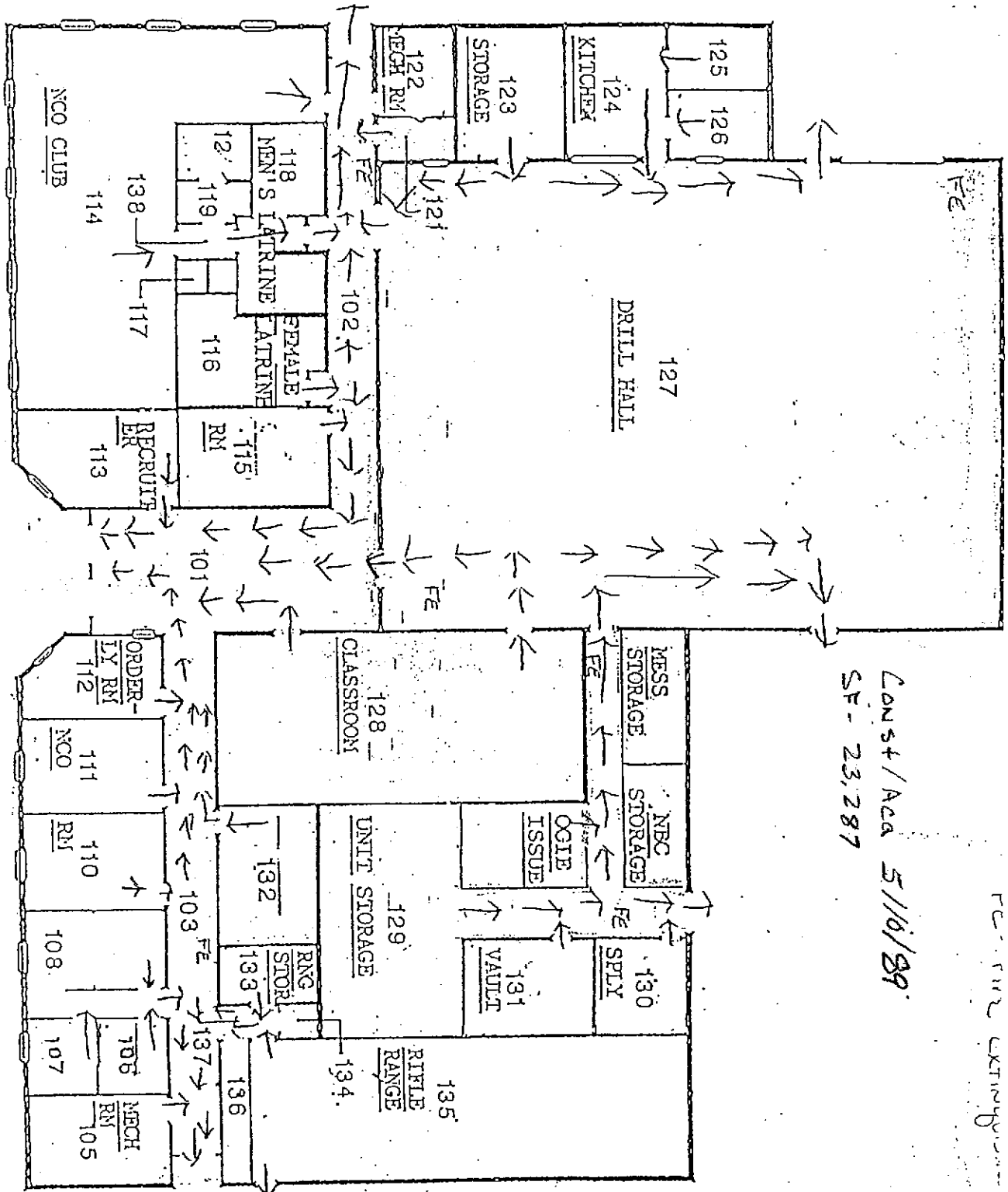
10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL GUARD ARMORY
CRYSTAL RIVER, FLORIDA



Const/ACA 5/16/89
SF - 23,287

ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Behind Firing Line



Sample # 2 Indoor Firing Range 15' In Front of Firing Line

ARMORY PHOTOGRAPHS



Sample #3 Indoor Firing Range 10' in Front of Bullet Trap

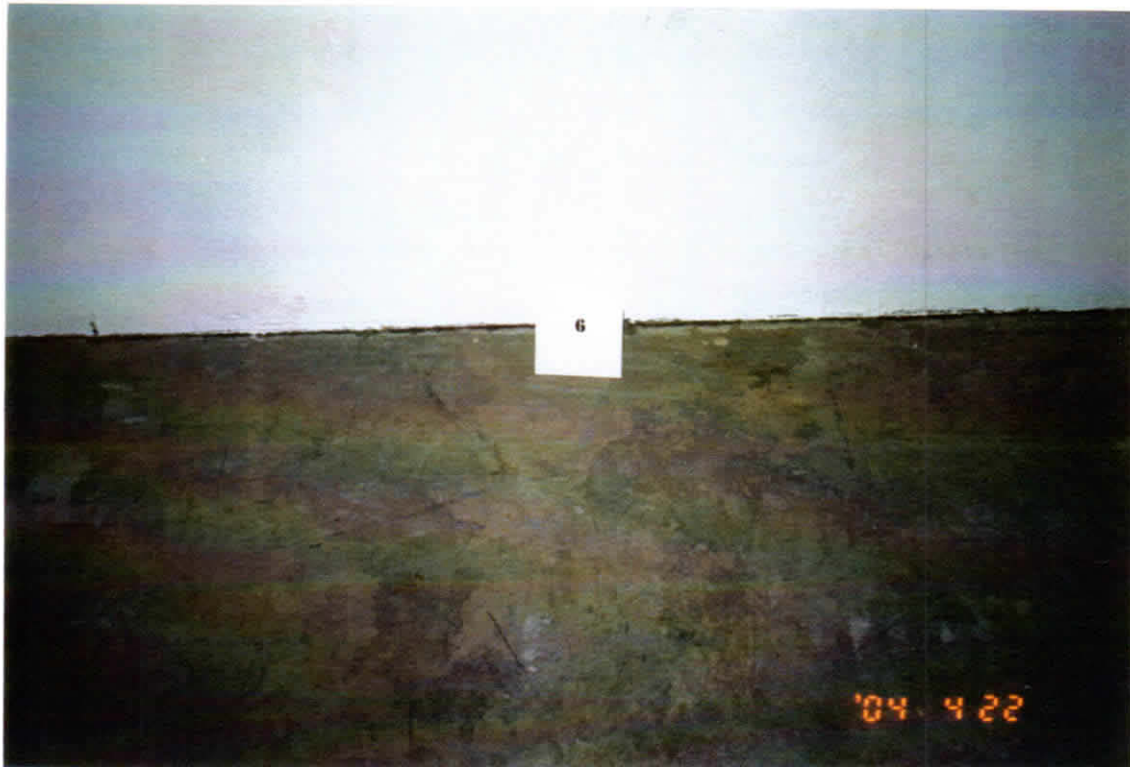


Sample # 4 Indoor Firing Range in Trap Area

ARMORY PHOTOGRAPHS



Sample #5 Indoor Firing Range Wall Behind Backstop



Sample # 6 Indoor Firing Range Left Wall Trap Area

ARMORY PHOTOGRAPHS



Sample #7 Indoor Firing Range Right Wall Trap Area



Sample # 8 Indoor Firing Range Plenum Face

ARMORY PHOTOGRAPHS

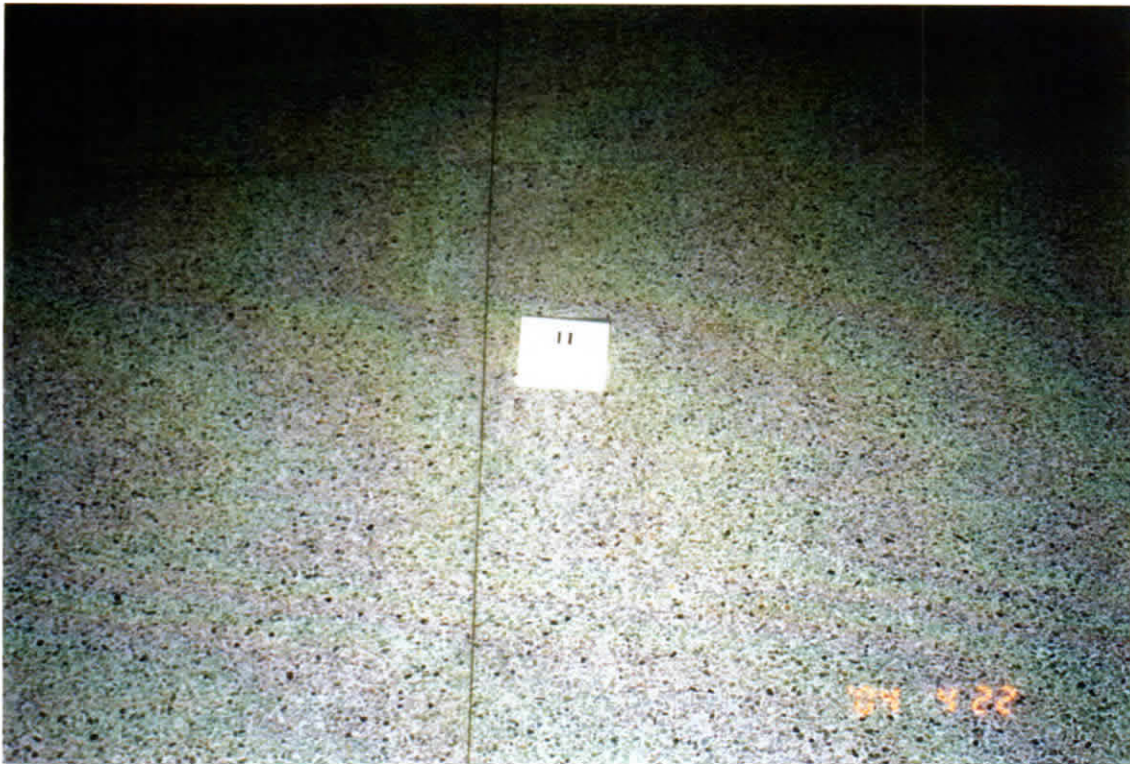


Sample #9 Indoor Firing Range Wall Behind Plenum



Sample # 10 Drill Floor Southeast Corner

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Center



Sample # 12 Drill Floor Northeast Corner

ARMORY PHOTOGRAPHS



Sample #13 Drill Floor Northwest Corner

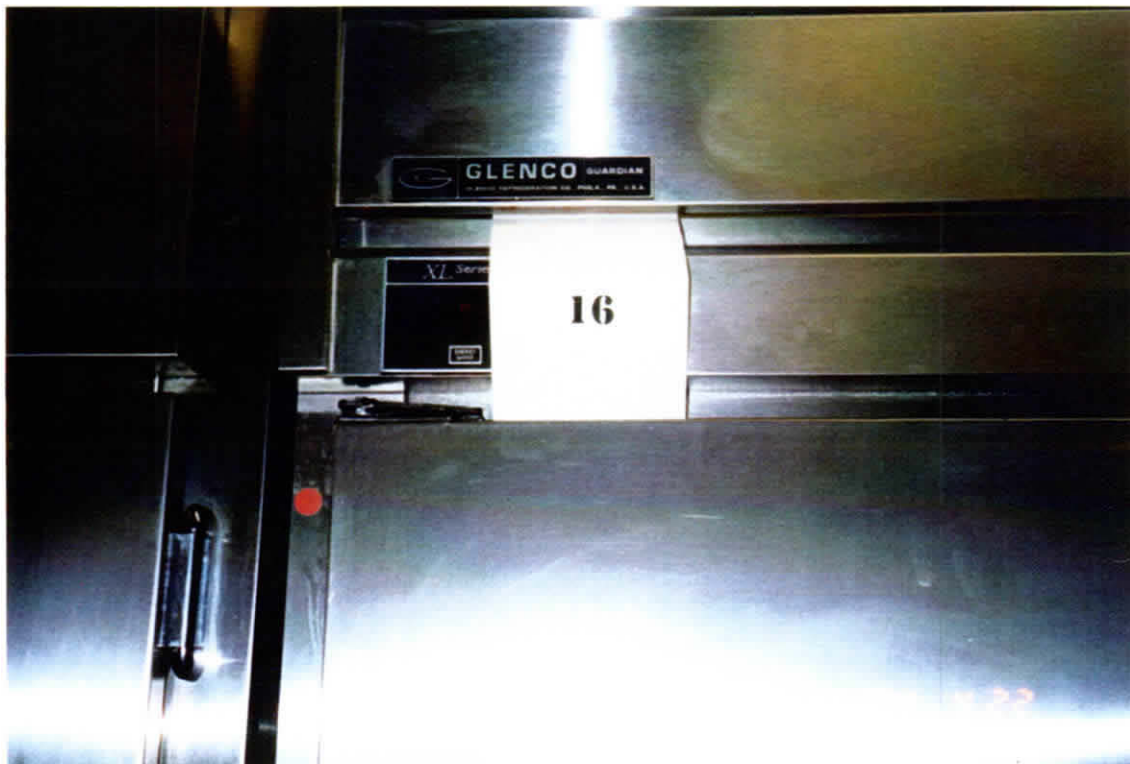


Sample # 14 Drill Floor Southwest Corner

ARMORY PHOTOGRAPHS



Sample #15 Kitchen, Top of Cooler, Room 123



Sample # 16 Kitchen, Top of Cooler, Room 124

ARMORY PHOTOGRAPHS



Sample #17 Arms Vault, Inside Door



Sample # 18 Arms Vault, Center of Floor

ARMORY PHOTOGRAPHS



Photograph, Indoor Firing Range, From Firing Line



Photograph, Crystal River Unit Sign

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APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: CRYSTAL RIVER ARMORY

LOCATION: 8551 W. VENABLE ST., CRYSTAL RIVER,
FL 34429

YEAR BUILT: 1989

SQUARE FOOTAGE: 23,287

FULL TIME PERS: 3

M-DAY: 90

UNIT(S) DRILLING AT THIS ARMORY:
690TH MP COMPANY

ARMORY UTILIZED BY CIVILIANS: YES NO
WHAT FUNCTIONS: CRAFT SHOWS, ANTIQUE SHOWS,
VARIOUS OTHER - APPROXIMATELY 24 TIMES/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO

POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO

STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO

KNOWN MOLD/MILDEW IN THE ARMORY? YES NO

INDOOR FIRING RANGE IN ARMORY? YES NO

(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1989, CLEANED AND CONVERTED TO
SUPPLY/STORAGE ROOM (UTILIZED BY FAMILY SUPPORT GROUP)

NUMBER OF VAULTS IN ARMORY: ONE

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED ON THE DRILL FLOOR



**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

ARNG-CSG-P

16 June 2011

MEMORANDUM TO: SFC [Non-Responsive] 690th Military Police Company, 8551 West Venable Street, Crystal River, Florida 34429-5496.

SUBJECT: Industrial Hygiene survey of the Crystal River Armory.

1. References.

- a. Report dated 23 May 2011, Industrial Hygiene Survey [Non-Responsive] SES Solutions.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, 25 May 2007.
- d. AR 385-10, 23 August 2007, Army Safety Program.
- e. DA PAM 40- 503, Industrial Hygiene Program, 30 October 2000
- f. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- g. Industrial Ventilation, 25th ed, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume, 8th edition, 1995, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida Safety and Occupational and Health Office and the Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was put together to conduct a baseline IH survey at the Crystal River Armory.

b. Mr. [Non-Responsive] of SES Solutions conducted the survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Understand that all findings found in the enclosed report have been reviewed by the Regional Industrial Hygienist and the following recommendations are the ones to be followed.

b. Follow all recommendations made in report.

c. Use the report to help in correcting all deficiencies noted by the contractor. Put a plan in place to correct the deficiencies and let the Occupational Safety and Health Office know in 30 days how you are going to correct all recommendations.

d. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse, Industrial Hygiene Technician and the Occupational Safety and Health Office for technical guidance if needed.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

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Industrial Hygiene Report
For
Florida Army National Guard
(FL ARNG)
At
Crystal River Armory
8551 West Venable Street
Crystal River, Florida 34429



Prepared for:
National Guard Bureau
Regional Industrial Hygiene Office
Region South
510 Plaza Drive, Suite 1530
College Park, Georgia 30349
By
Non-Responsive
SES Solutions
May 23, 2011

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Enclosures:

1. Health Hazard Information Module (HHIM) Survey Form
2. Listing of hazardous chemicals/materials at the facility
3. Analytical Lead Wipe Results
4. Personnel Roster
5. Design Floor Plan
6. Lead Clean Up Procedures
7. References
8. Pictures: 1-24

SESS

May 23, 2011

MEMORANDUM FOR: Florida Army National Guard, ATTN: SFC [Non-Responsive] 690th Military Police Company, 8551 West Venable Street, Crystal River, Florida 34429-5496

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module (HHIM) Survey, 690th MP Company

1. REFERENCES: See Enclosure 7.
2. BACKGROUND: At the request of Mr. [Non-Responsive] National Guard Bureau Regional Industrial Hygienist, Atlanta, Georgia, an Industrial Hygiene Consultation and Health Hazard Information Module Field Survey were performed at the Florida National Guard Armory, 8551 Venable Street, Crystal River, Florida 34429 on May 23, 2011. The POC was SFC [Non-Responsive] at (352) 795-0362. Their primary mission is to provide law and order in the military community. The purpose of the survey was to perform lead wipe samples; a ventilation survey, an Illuminations Survey, and complete HHIM field survey forms on all industrial operations at the facility (see Encl 1 for completed HHIM Survey Form).
3. INSTRUMENTATION: The following survey instrumentation was provided by the contractor and was used to obtain lead wipe dust samples and illumination measurements. All other instrumentation was operated according to manufacturer recommendations.
 - a) Reed LM-81LX, Light Meter, S/N: Q303521, calibrated: 12/15/2010
 - b) Ghost Lead Dust Wipes, Manufactured: February 2, 2010, Expiration: 08/2013
4. FINDINGS:
 - a) 690th MP Company and Supply:
 - i) Administrative duties included pay, promotions, schools, family support, assignments, and supplies. The supply area was broken down into Class 2 items of clothing and equipment. The supply area was also responsible for maintaining some TA 50.
 - ii) One hundred fifty nine M-Day soldiers trained at the facility.

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

b) General Area Armory Information:

- i) Material Safety Data Sheets (MSDS) were located in the facility. All employees must be initially trained in the Federal Hazardous Communication Program IAW 1910.1200 (see Encl 2 for a listing of hazardous chemicals/materials at the facility).
- ii) Twelve lead dust wipe samples were taken, using a 12 inch by 12 inch template. One sample was above the federal standard of $40\mu\text{g}/\text{ft}^2$ and the National Guard Standard of $200\mu\text{g}/\text{ft}^2$. Pictures of the lead sample wipes were taken (see Encl. 8, photos M181 to M192). The analytical lead result sheet included the sampled locations and corrected results. The following table notes where the samples were taken, the surveyor's field number, and the lead results:

Location:	Surveyor's Field No:	Results:
Drill Hall Floor N.E. Side	M181	BRL
Drill Hall Floor S.E. Side	M182	BRL
Drill Hall Floor Center	M183	BRL
Drill Hall Floor N.W. Side	M184	BRL
Drill Hall Floor S.W. Side	M185	BRL
Kitchen Countertop Serving Line	M186	BRL
Water Fountain in Drill Hall	M187	BRL
Vault Floor	M188	350
Front Entrance Hallway Floor	M189	BRL
Rear Wall of Old ID Range	M190	BRL
Left Wall of Old ID Range	M191	BRL
Table Weapons are cleaned on	M192	37
Blank		BRL

Note 1: $\mu\text{g}/\text{ft}^2$ refers to micrograms or one millionth of a gram per sq ft.

Note 2: BRL means Not Detected at the Reporting Limit.

- iii) Drill Hall: Conducting classes and drill formations is the main purpose in the hall. (See Encl. 8, photo 13). Illumination levels ranged from 13 to 27 FC's.
- iv) Furnace/General Mechanical Ventilation: Good.

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

- v) The following table identifies area deficiencies:

AREA	DEFICIENCIES
Kitchen	8 fluorescent bulbs burned out
Supply Room	10 fluorescent bulbs burned out
Conference Room	7 fluorescent bulbs burned out

- vi) Due to the low noise levels (administrative areas) there was no requirement for a Hearing Conservation Program. The only requirement would be when the M-Day troops were firing their weapons. All M-Day and full-time soldiers had earplugs.
- vii) A listing of 690th MP CO personnel is attached as Encl. 4.
- viii) A design floor plan of the armory is attached as Encl. 5. Illumination levels are listed below in Paragraph 5.

5. ILLUMINATION SURVEY RESULTS:

- a) Illumination Levels: The following additional illumination level readings were taken during the survey and are reported below in foot candles (FC's).

AREA/LOCATION	FOOT CANDLES (FC)
Front Entrance Hallway	20-30
Admin Office	56-64
Readiness NCO Office	60-62
ISG Office	30-33
Commander's Office	41-44
Training Office	54-56
Copy Room	20-34
Conference Room	21-40
Weight Room	29-46
Class Room	38-52
Kitchen	12-79
Female Latrine	38-41
Male Latrine	18-22
Storage	23-25
Supply Room	15-26
Vault	10-24
Room 131	19-35
Room 126	47-48
Room 125	47-59
Drill Hall	13-27

SESS

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module

As indicated in the IES Lighting Handbook, Application Volume 1987, Offices: 20-50 FC's, Supply and Publication Areas: 20-50 FC's, Assembly 20-50 FC's, Restrooms: 5-10 FC's, Classrooms: 50-100 FC's, Kitchen: 20-50 FC's, FC's, Library: 50-100 FC's, Storage Rooms: 10-20 FC's, Mail Room: 20-50 FC's.

6. TECHNICAL ASSISTANCE:

POC for further assistance concerning this evaluation is Non-Responsive

Non-Responsive

SES SOLUTIONS

7. RECOMMENDATIONS:

- a) Due to the lead dust wipe results, it is recommended that the vault floor and all tables that weapons are clean on is cleaned IAW NGB (AR) 385-15 Appendix C. The floors and tables should be thoroughly wiped down and or wet mopped with an industrial cleaner using tri-phosphates, Mr. Clean or Spic-n-Span. For additional lead cleaning measures, see Enclosure 6. **(RAC 2)**
- b) Conduct semi-annual inventories and update MSDS's on all chemicals in the facility. **(RAC 3)**
- c) Replace the 8 blown fluorescent bulbs in the Kitchen to increase lighting. **(RAC 3)**
- d) Replace the 10 blown fluorescent bulbs in the Supply Room to increase lighting. **(RAC 3)**
- e) Replace the 7 blown fluorescent bulbs in the Conference Room to increase lighting. **(RAC 3)**
- f) Submit a work order to FMO requesting higher wattage bulbs be installed in the Drill Hall to increase lighting. **(RAC 3)**
- g) Perform monthly checks on fire extinguishers each month, ensure that the devices are checked, recorded, turn upside down and tapped with a rubber mallet to loosen any material at the bottom. Have the local fire department conduct annual inspections of fire extinguishers. **(RAC 3)**
- h) If work practices change, a new assessment should be made on the controls in Place.

HHIMS Industrial Hygiene Survey Form

Front page

ARLOC		Installation		Building		Room Number	
Location		Operation		Survey Date		Evaluator	
11/1		Mr.		1/1/95		Macom	
Supervisor		Ms.		Rank		Submacom	
Supervisor, or Point of Contact Telephone Number		DSN		Commercial		Frequency (hrs/day)	
Lab Hoods		Vapor Degreasers		Spray Booths		Open Surface Tanks	
Controls Present (If > 6, continue in comments)(25)		Evaluation (25 characters max)		Unit code		Controls Required (25 characters max)	
OTH		12-79		FTC		80-50 FTC	
OTH		13-27		FTC		20-50 FTC	
OTH		15-26		FTC		20-50 FTC	
Gloves		Respirator		Manufacturer's Description (10 characters max)		NIOSH TC # or Foreign equivalent (10 characters max)	
acid		airline		abrasive blasting hood			
cold surfaces		disposable		full face air purifying			
hot surfaces		1/2 face air purifying		powered air purifying			
NBC agents		1/4 face air purifying		self-contained			
oil		other		Hearing		Body	
solvents		canal caps		(> 85-108 dBA steady) earplugs		aprons	
surgical gloves		helmets w/ muffs		" muffs alone		cold weather clothing	
leather / cotton		(108-118 dba) earplugs		muffs and earplugs		full body suit	
other		(118 or >) with time limit		other		heat reflective	
Eyes and Face		Hearing		Body		Head and Feet	
chemical splash		canal caps		aprons		cold weather boots/shoes	
full face shield		helmets w/ muffs		cold weather clothing		hard hats	
chem/safety impact		muffs alone		coveralls		impermeable boots	
safety helmet		(108-118 dba) earplugs		full body suit		safety shoes (conductive)	
welding goggles/glasses		muffs and earplugs		heat reflective		safety (nonconductive)	
sunglasses		(118 or >) with time limit		vest/suit		other	
laser eye protection		other		safety belt/harness		other	
other		other		special purp. clothing		other	
other		other		other		other	

e* = evaluator's recommendation or agreement

Reminders: ergonomics - dermatitis - physical agents - flammable storage
EYE (permanent) ____ EYE (portable) ____ SHW - GMV - LEVACO ADM DSA DSN LAB LCK
RAD ECB EPL RHS SPR WEL

Back page

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
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Operation described is Administrative Operation typic, Record Keeping, Promotions, Extension, Personnel and Training

(Comments continued on attached)

Activity Name: 690th MP COMPANY (GUARD)

Storage Location: Master

Inventory Performed By: SGT No n-
Re sp on siv e

Date Performed: 20 Jan 11

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Analytical Environmental Services, Inc

Date: 1-Jun-11

Lab Order: 1105K39
Client: SES
Project: Crystal River, Fl Armory
Matrix: Wipe
Date Received: 5/25/2011 9:35:00 AM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1105K39-001A	M181	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-002A	M182	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-003A	M183	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-004A	M184	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-005A	M185	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-006A	M186	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-007A	M187	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-008A	M188	350	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-009A	M189	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-010A	M190	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-011A	M191	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-012A	M192	37	ug, Total	20	1		05/23/2011	05/27/2011	MP
1105K39-013A	BLANK	BRL	ug, Total	20	1		05/23/2011	05/27/2011	MP

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

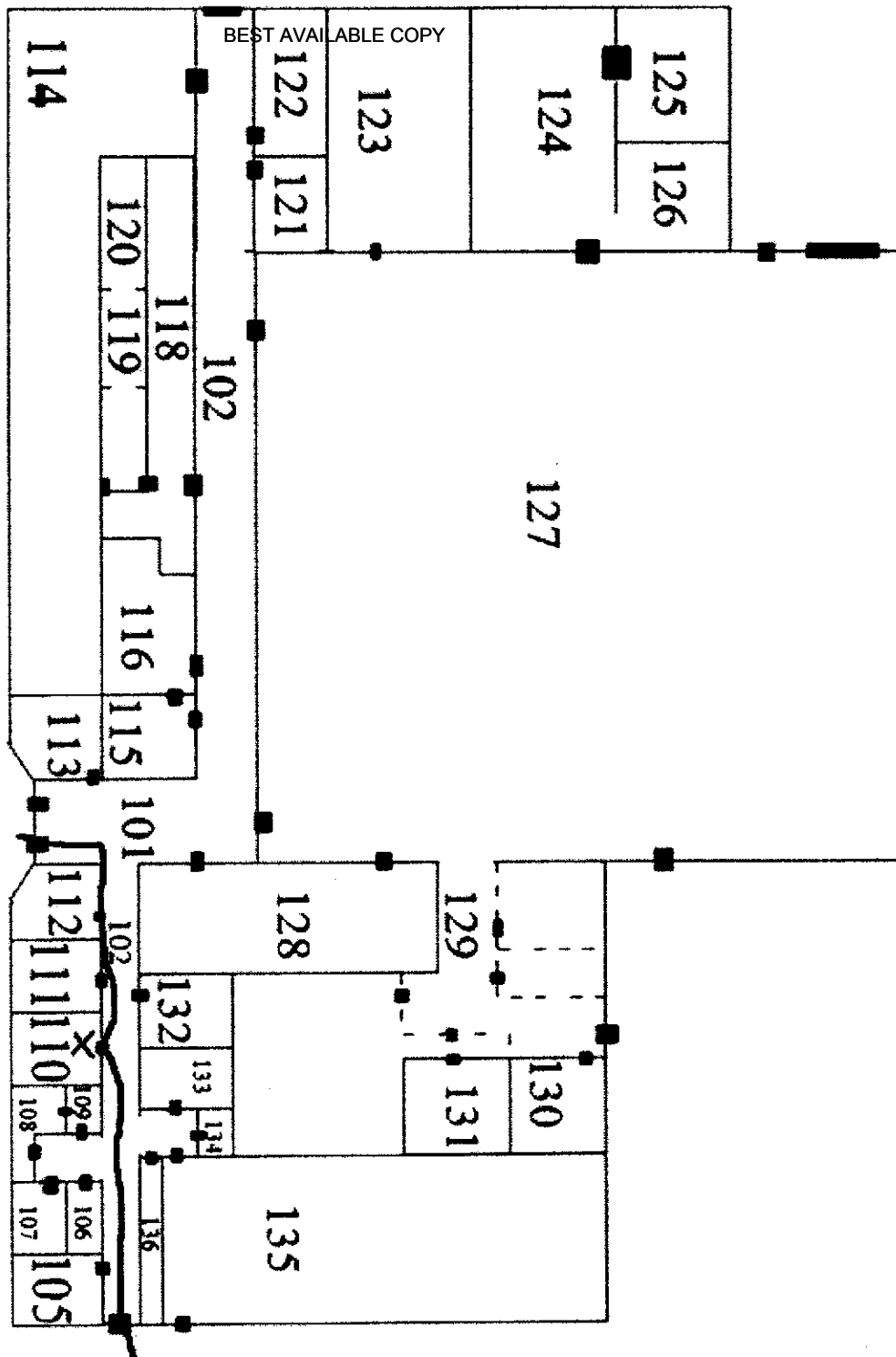
Results are blank corrected where applicable

FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

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Non-Responsive
SFC [REDACTED] Business NCO
SSG [REDACTED] Supply SGT
SSG [REDACTED] Training NCO
SGT [REDACTED] Admin NCO
SSG [REDACTED] ADOS
SGT [REDACTED] ADOS



ENCLOSURE 6

ARMORY CLEANUP REQUIREMENTS

High Test Results

If the public utilizes your facility and the test results for lead came back above 40 $\mu\text{g}/\text{ft}^2$ you are responsible for cleaning this area and adjoining areas to meet the 40 $\mu\text{g}/\text{ft}^2$ or less, unless:

1. You can guarantee that no children under the age of 7 will come into your facility.
2. Your state public health has other guidance, for example, signage is required to warn personnel who are pregnant or of child bearing age, or under the age of 7 years old.
3. Signs stating "No smoking, drinking, eating, or applications of cosmetics without washing of hands prior to activity" are properly installed in your facility.

1. Cleaning of Building.

Before proceeding into the cleanup mode, first discuss with your Environmental Office what procedures are recommended and then coordinate your cleanup efforts with local agencies, if warranted.

- a. The building, as well as the dusty materials and equipment in it, should be cleaned one time to reach the lead dust levels that are appropriate for the function of the facility, for example, facilities used by full-time personnel only, utilized by adults or children 7 years old or older children only, or not utilized by pregnant individuals and/or children under the age of 7. **NOTE:** This type of cleaning implies that this is not at 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 that the level of lead is at the required level for your particular facility and situation.
 1. This cleanup can be accomplished using a HEPA vacuum (a very tedious and time-consuming 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 the entire floor area. **NOTE:** Personal protective gloves, rubber boots, or protective disposable shoe/boot covers should be used during this procedure and personnel who have performed the cleanup should wash their clothing separately from their family's clothing.

ENCLOSURE 6

especially if they have young children at home. Personnel should wash their hands after performing this operation to assure that lead contaminates are not ingested.

2. Frequent changing out of the water used for cleaning is vital. Disposal of this hazardous waste water and rags/mop heads, Personal Protective Equipment (PPE), etc., should be coordinated with your Environmental office.
- b. 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, "*Renovate Right – Important Lead Hazard Information for Families, Child Care Providers and Schools*". <http://www.epa.gov/lead/pubs/rrpamph.pdf>.
- c. Continue to enforce good housekeeping and hygiene practices. These measures make good sense to minimize exposures to any toxic chemicals in the workplace.
- d. 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.

ENCLOSURE 6

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 gallon) 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. Wastewater containers.

Disposal of Waste Water and Cleaning Materials:

1. **NOTE:** Consult with the Local Army National Guard Environmental Office prior to taking any collection, disposal, or commencement of wiping activities. Each state and territory may have additional regulatory guidance regarding the collection, storage, and disposal of wastewater.
2. Mop heads should be disposed of after initial cleaning, unless otherwise advised by Environmental Office personnel. **NOTE: Thorough cleaning of mop heads may be sufficient enough to permit subsequent reuse on future Armory cleanups, but check with the local Environmental Office before reuse.**
3. Disposable gloves should be treated as hazardous waste material.
4. Soiled cotton rags should be treated as hazardous waste material.
5. Wash water contaminated with lead may 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.

ENCLOSURE 6

- 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 the established waste stream. If personnel have chosen to use overshoes for protection, dispose of the used overshoes into the established waste stream. **NOTE: This recommendation is for initial cleanup activities; PPE requirements may be reduced after it has been determined that non-hazardous levels of lead have been achieved.**
3. Wash BDU's or personal clothing separately from children's clothes.

IMPORTANT NOTES:

1. **No eating, drinking or application of cosmetics is allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area).**
2. **Avoid blowing, shaking or like actions which could potentially disperse 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 room (ceiling, wall 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 manufacturer's recommendations.

ENCLOSURE 6

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.

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

4. Now prepare water and detergent (for example, Spic n Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufacturer's recommendations, which should be found on the product's label for general clean up.
 - a. Change out water and detergent 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 cleaning described in Initial Armory Cleanup SOP.

NOTE: The only exception to these wet cleaning procedures is the use of an approved chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

- a. Use of a pre-treated (chemically treated) dust floor mop will prevent lead dust particles from being disbursed into the surrounding atmosphere.
 - b. If a pre-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 an armory or facility.** Shaking of a pre-treated mop head may 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 cleaning schedule is provided:
 - a. Only full-time technicians and traditional soldiers using facility during the month. (Cleaned Monthly.)

ENCLOSURE 6

- b. Occasional activities taking place during the month, for example, 1-2 classes or volleyball games, etc. (Cleaned Twice Monthly.)
- c. Used regularly by soldiers or outside agencies/personnel. (Cleaned Regularly – at least Weekly)

IMPORTANT NOTES:

1. Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on the use of the Armory and IFR.
2. Clearance sampling/testing is to be accomplished by certified IH personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for whom you are cleaning and is not a converted IFR space, you may continue to utilize the Armory space before 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.
3. If lead cleanup work was contracted out, a third party should do the clearance sampling.
4. If young children and pregnant females are, or may be present, signs shall be posted on all facilities, warning of the potential danger of exposure to lead dust.

References

Army Regulation (AR) 11-34, The Army Respiratory Protection Program.

Army Regulation (AR) 40-5, Preventative Medicine.

Army Regulation (AR) 385-10, The Army Safety Program.

NGR 385-10, Army National Guard Safety and Occupational Health Program.

TB MED 503, The Army Industrial Hygiene Program.

Title 29, Code of Federal Regulations (CFR), 2010, revision, Part 1910, Occupational Safety and Health Standards.

TG 022, US Army Environmental Hygiene Agency (YSAEHA), Industrial Hygiene Evaluation Guide.

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

IES Lighting Handbook



Photo No. 1

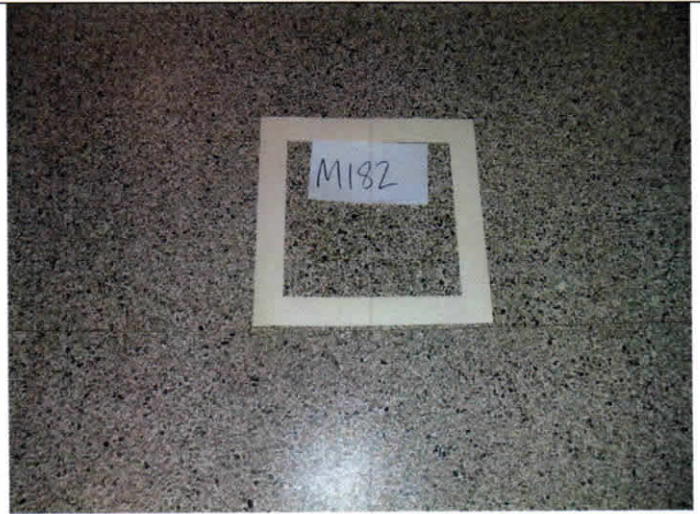


Photo No. 2



Photo No.3

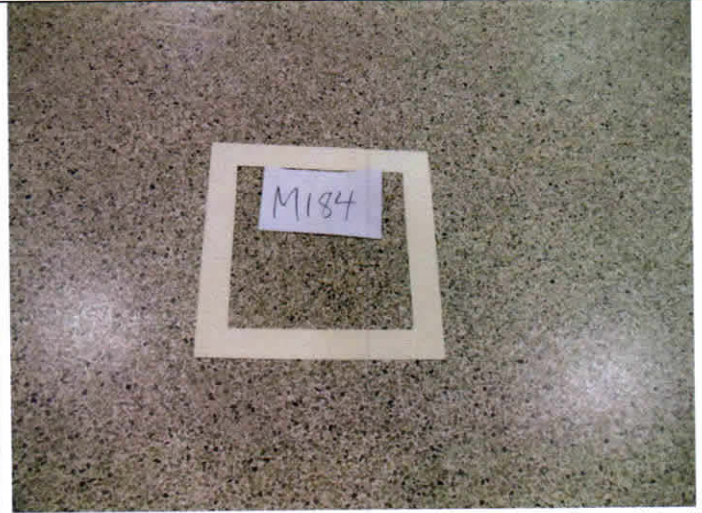


Photo No.4



Photo No.5



Photo No.6

ENCLOSURE 8
Page 1 of 5



Photo No.7



Photo No.8



Photo No.9



Photo No.10



Photo No.11



Photo No.12

ENCLOSURE 8
Page 2 of 5



Photo No.13



Photo No.14



Photo No.15



Photo No.16

ENCLOSURE 8
Page 3 of 5



Photo No.17



Photo No.18



Photo No.19



Photo No. 20

ENCLOSURE 8
Page 4 of 5



Photo No.21



Photo No.22



Photo No.23



Photo No. 24

ENCLOSURE 8
Page 5 of 5

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 22, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SGG
Readiness NCO, 8551 West Venable Street, Crystal River, Florida 34429

Non-
Responsive

SUBJECT: Industrial Hygiene Survey of the Crystal River National Guard Armory,
Crystal River, Florida.

1. References.

a. Report submitted 16 April 2004, Industrial Hygiene Survey, Crystal River Armory,
George Hinchliffe.

b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised
1988.

c. AR 40-5, Preventive Medicine, October 1990.

d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.

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

f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing
Conservation.

g. TB MED 530, The Army Industrial Hygiene Program.

h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-
10, Ventilation.

i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental
Industrial Hygienist, Cincinnati, Ohio.

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering
Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the
Region South Industrial Hygiene Office a service contract was put together to conduct
Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. **Non-Responsive** conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

a. Discontinue use of converted Indoor Firing Range (IFR) by the Family Support Group until the IFR has been properly cleaned of Lead and retested by the Florida State Safety and Occupational Health Office.

b. Clean converted Indoor Firing Range (Supply/Storage room) of lead following NG PAM's 385-15 and 385-16. Keep in mind that EPA and your state may have lead reduction levels lower than the levels recommended in the 385-15 and 385-16.

c. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**CRYSTAL RIVER ARMORY
8551 WEST VENABLE STREET
CRYSTAL RIVER, FLORIDA 34429**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Crystal River Armory
8551 West Venable Street
Crystal River, FL 34429

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Crystal River Armory on 23 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 12800 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	2 to 92 footcandles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Crystal River Armory in Crystal River, Florida on 23 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Crystal River Armory in Crystal River, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 23 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses the 690th MP Company. There are three full time employees at the Crystal River Armory. Total M-Day soldiers drilling at the facility is 90. The armory was built in 1989 and contains 22,287 square feet. The armory is a typical building of this era with an indoor firing range that was converted to a supply/storage room that is currently being utilized by the Family Support group (see photograph after sample photographs). Also Refer to building layout in Appendix F.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SSG Non-Responsive
PH# 352-795-0362.

Lead Wipe Samples: Eighteen wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00CR	FIELD BLANK	UNDETECTED
04-01CR	IFR BEHIND FIRING LINE	93.1
04-02CR	IFR 15' IN FRONT OF FIRING LINE	269.0
04-03CR	IFR TEN FEET IN FRONT OF BULLET TRAP	10300
04-04CR	IFR BULLET TRAP AREA	12900
04-05CR	IFR WALL BEHIND BULLET TRAP/BACKSTOP	208
04-06CR	IFR LEFT WALL MID RANGE	57.4
04-07CR	IFR RIGHT WALL MID RANGE	37.3
04-08CR	IFR FACE OF PLENUM	32.7
04-09CR	IFR WALL BEHIND PLENUM	30.1
04-10CR	DRILL FLOOR SOUTHEAST CORNER	UNDETECTED
04-11CR	DRILL FLOOR CENTER	UNDETECTED
04-12CR	DRILL FLOOR NORTHEAST CORNER	7.61
04-13CR	IFR NORTH END MIDDLE OF FLOOR	UNDETECTED
04-14CR	DRILL FLOOR SOUTHWEST CORNER	UNDETECTED
04-15CR	KITCHEN, TOP OF COOLER ROOM 123	7.78
04-160A	KITCHEN, TOP OF COOLER, ROOM 124	35.0
04-170A	ARMS VAULT, INSIDE DOOR, ON FLOOR	43.5
04-180A	ARMS VAULT, CENTER OF FLOOR	102

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range is a major concern. There are extremely high lead sample readings within the range. The family support group meets in the range to ship items to the deployed troops, lend each other support, and there are signs of food consumption within the range. Most importantly is the presence of toys in the range which leads one to believe several children are playing in this area. The indoor firing range (supply room) should be properly cleaned and decontaminated in accordance with NG PAM 385-18. Wipe samples should be taken after the cleaning and decontamination process to ensure levels are well below the standard of 200 micrograms per square foot. Highly suggest the family support group ceases and desists in utilizing this area, especially if children are present.

Asbestos Suspect Building Material There were no signs of asbestos in the Crystal River Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Crystal River armory ranged from 2 foot-candles to 100 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	28 to 71
Indoor Firing Range (Supply)	2 to 27
Office Areas	51 to 100
Classrooms	35 to 53
Mechanical Rooms	16 to 50
Kitchen	32 to 53

Practically all areas within the Crystal River Armory meet or exceeds the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. The north end of the indoor firing range could be improved with the addition of some light fixtures.

Noise Survey The Crystal River Armory, for its size, is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBA. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Crystal River Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise class that addresses muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Properly clean the contaminated surfaces of the converted indoor firing range by wet mopping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Obtain wipe samples after cleaning to ensure lead level standards have been met.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination level in the indoor firing range through additional light fixtures.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. Ken Fuller, Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

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APPENDIX A
REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Client						Client Project		Laboratory Comments						
Address						Project Location								
City/State Zip Code						Sampler(s) / Phone No.								
Phone / Facsimile No.						Turnaround Time		Standard Rush [] Date Required:						
Contact Person						P.O. # or Invoice To								
Sample Description (10 Characters Only)						Container Size Type No.		Analysis and/or Method Requested		Laboratory Comments				
04-00 CR						13MWA 0935		BLANK (Lead)						
04-01 CR						0930		LEAD						
04-02 CR						0931								
04-03 CR						0935								
04-04 CR						0940								
04-05 CR						0948								
04-06 CR						0945								
04-07 CR						0949								
04-08 CR						0950								
04-09 CR						0955								
04-10 CR						0957								
04-11 CR						V 1000								
Size of Container						40 mL		125 mL		250 mL	500 mL	1000 mL	O - Other (Specify)	
Type of Container						G - Glass (Clear)		AG - Glass (Amber)		F - HDPE	VC - Volatile Core	SC - Soil Core	O - Other (Specify)	
Matrix Code						A - Aqueous		DW - Drinking Water		NA - Non aqueous liquid	SE - Saline Water	S - Solids	O - Other (Specify)	
Preservative Code						A - None		B - HNO ₃		C - H ₂ SO ₄	D - NaOH	E - HCl	O - Other (Specify)	
Reinducted By						Date		Time		Received By		Date	Time	Method of Sampling

Special instructions:

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Copies: White - Client Yellow - PAS, Inc. Pink -  Parker

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Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Client		Non-Responsible		Client Project		Elkridge Army National Guard	
Address		2208 KTH Hawk Court		Project Location		Crystal River	
City, State Zip Code		Springfield, IL 62707		Sample(s) / Phone No.		217-753-2077	
Phone / Facsimile No.		815-555-5555		Turnaround Time		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Date Required:	
Contact Person		Non-Responsible		P.O. # of Invoice To		HINCHCO	
Sample Description (10 Characters Only)	Sampling Date	Time	Container Size	Type / No.	M + P Code	Analysis and / or Method Requested	Laboratory Comments
04-18 CR	13 March	1010	1	1	1	LEAD	
04-13 CR	1	1012	1	1	1		
04-14 CR	1	1015	1	1	1		
04-15 CR	1	1020	1	1	1		
04-16 CR	1	1035	1	1	1		
04-19 CR	1	1046	1	1	1		
04-18 CR	1	1046	1	1	1		
			1	1	1		
			1	1	1		
			1	1	1		
			1	1	1		
			1	1	1		
			1	1	1		
Size of Container	40 mL		125 mL		250 mL	500 mL	1000 mL
Type of Container	G - Glass (Capped)		AG - Glass (Airtight)		P - HDPE	VC - Volatile Core	SC - Sol Core
M = Matrix Code	A - Aqueous		DW - Drinking Water		NA - Non-aqueous liquid	SE - Seawater	S - Solids
P = Preservative Code	A - None		G - HNO ₃		C - H ₂ SO ₄	O - NaOH	F - HCl
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment	
Special Instructions:							Temperature (F)

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FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-001 Collection Date: 3/23/2004 9:25:00 AM

Client Sample ID: 04-00CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	U	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:48:00 AM
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Lab ID: 0403178-002 Collection Date: 3/23/2004 9:30:00 AM

Client Sample ID: 04-01CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	93.1	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:55:00 AM
------	------	---------------	--	-------------------	----	-------------------------------------

Lab ID: 0403178-003 Collection Date: 3/23/2004 9:32:00 AM

Client Sample ID: 04-02CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	269	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 5:03:00 AM
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Lab ID: 0403178-004 Collection Date: 3/23/2004 9:35:00 AM

Client Sample ID: 04-03CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	10300	N7082 375		(N7082) µg/ft²	500	Analyst: MCL 4/2/2004 8:02:00 PM
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Lab ID: 0403178-005 Collection Date: 3/23/2004 9:40:00 AM

Client Sample ID: 04-04CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	12800	N7082 375		(N7082) µg/ft²	500	Analyst: MCL 4/2/2004 8:09:00 PM
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Lab ID: 0403178-006 Collection Date: 3/23/2004 9:42:00 AM

Client Sample ID: 04-05CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	208	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:17:00 PM
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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-007 Collection Date: 3/23/2004 9:45:00 AM

Client Sample ID: 04-06CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	57.4	N7082		{N7082}	10	Analyst: MCL 4/2/2004 8:24:00 PM
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Lab ID: 0403178-008 Collection Date: 3/23/2004 9:47:00 AM

Client Sample ID: 04-07CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead	37.3	N7082		{N7082}	10	Analyst: MCL 4/2/2004 6:03:00 AM
------	------	-------	--	---------	----	-------------------------------------

Lab ID: 0403178-009 Collection Date: 3/23/2004 9:50:00 AM

Client Sample ID: 04-08CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	32.7	N7082		{N7082}	10	Analyst: MCL 4/2/2004 6:11:00 AM
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Lab ID: 0403178-010 Collection Date: 3/23/2004 9:55:00 AM

Client Sample ID: 04-09CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	30.1	N7082		{N7082}	10	Analyst: MCL 4/2/2004 6:18:00 AM
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Lab ID: 0403178-011 Collection Date: 3/23/2004 9:57:00 AM

Client Sample ID: 04-10CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	N7082		{N7082}	10	Analyst: MCL 4/2/2004 6:26:00 AM
------	---	-------	--	---------	----	-------------------------------------

Lab ID: 0403178-012 Collection Date: 3/23/2004 10:00:00 AM

Client Sample ID: 04-11CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	N7082		{N7082}	10	Analyst: MCL 4/2/2004 6:34:00 AM
------	---	-------	--	---------	----	-------------------------------------

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Crystal River Armory

Lab Order: 0403178

Lab ID: 0403178-013 Collection Date: 3/23/2004 10:10:00 AM

Client Sample ID: 04-12CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	7.61	7.50		µg/ft²	10	4/2/2004 6:41:00 AM

Lab ID: 0403178-014 Collection Date: 3/23/2004 10:12:00 AM

Client Sample ID: 04-13CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 6:49:00 AM

Lab ID: 0403178-015 Collection Date: 3/23/2004 10:15:00 AM

Client Sample ID: 04-14CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 6:56:00 AM

Lab ID: 0403178-016 Collection Date: 3/23/2004 10:20:00 AM

Client Sample ID: 04-15CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	7.78	7.50		µg/ft²	10	4/2/2004 7:04:00 AM

Lab ID: 0403178-017 Collection Date: 3/23/2004 10:25:00 AM

Client Sample ID: 04-16CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	35.0	7.50		µg/ft²	10	4/2/2004 7:34:00 AM

Lab ID: 0403178-018 Collection Date: 3/23/2004 11:15:00 AM

Client Sample ID: 04-17CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	43.5	7.50		µg/ft²	10	4/2/2004 7:41:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:	Non-Responsive	Hinchco	Lab Order:	0403178
Project:	Crystal River Armory			

Lab ID: 0403178-019 Collection Date: 3/23/2004 11:20:00 AM

Client Sample ID: 04-18CR Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	102	N7082		(N7082)	10	Analyst: MCL 4/2/2004 7:49:00 AM
------	-----	-------	--	---------	----	-------------------------------------

Prairie Analytical Systems, Inc.

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

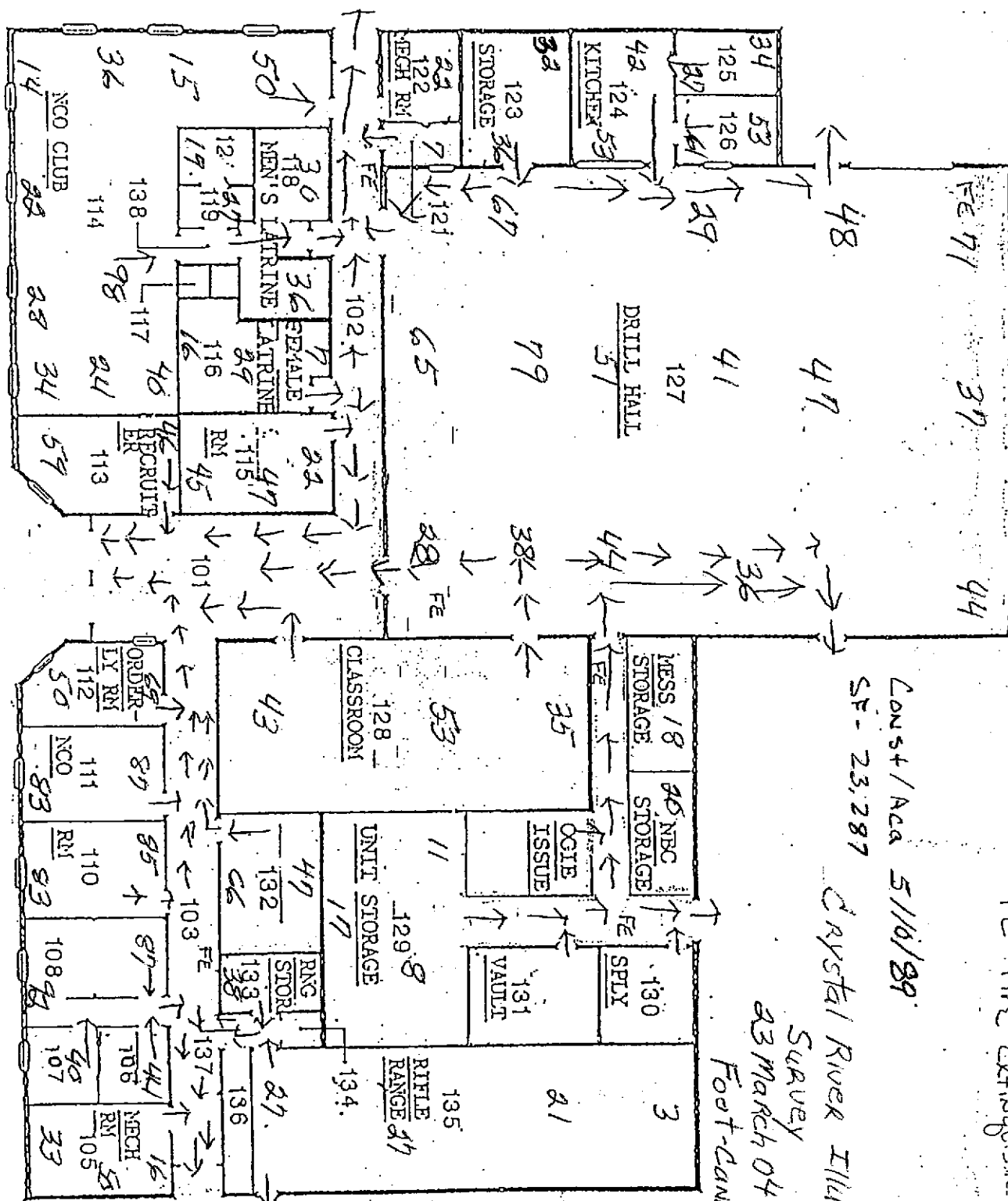
J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

APPENDIX D
ILLUMINATION SURVEY DIAGRAM



Const/ACA 5/10/89
SF- 23,287

Crystal River Illumination
Survey
23 March 04
Foot-candles

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: 690th MP Co / Crystal River, FL

2. Area or rooms where you spend the most time in the building:

The Orderly Room

3. Does any of your work activities produce dust or odor?
Describe:

YES

☒ NO

4. Gender: Male ☒ Female

Age: Under 25 ☒ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over

5. Do you:

Smoke

Y

☒ N

Have fever/pollen allergies

Y

☒ N

Have skin allergies/dermatitis

Y

☒ N

Have a cold/flu

Y

☒ N

Have sinus problems

☒ Y

N

Have other allergies

☒ Y

N

Wear contact lenses

☒ Y

N

Operate video display terminals (computers)

☒ Y

N

Operate photocopiers 10% of the time

☒ Y

N

Use other office machines

☒ Y

N

Specify:

Currently take any medications?

Y

☒ N

Reason:

6. Office Characteristics:

1 Number of persons sharing same room/work area

2 Number of windows in room/work area

Do windows open?

☒ Y

N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

☒ 4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

☒ 4

5

Are there smokers in your area?

Y

☒ N

7. How long have you worked:

2 mos In this room/area

2 mos In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Hearburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

N/A

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Keep the air filters clean and the air at a reasonable temperature.

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

A reasonable temperature in this work environment.

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: 690th MP Co, Crystal River

2. Area or rooms where you spend the most time in the building:

Readiness, Admin Office

3. Does any of your work activities produce dust or odor?
Describe:

YES ☒ NO

4. Gender: Male ☒ Female

Age: ☒ Under 25 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over

5. Do you:

Smoke

☐ Y

☒ N

Have fever/pollen allergies

☒ Y

☐ N

Have skin allergies/dermatitis

☐ Y

☒ N

Have a cold/flu

☐ Y

☒ N

Have sinus problems

☐ Y

☒ N

Have other allergies

☐ Y

☒ N

Wear contact lenses

☐ Y

☒ N

Operate video display terminals (computers)

☒ Y

☐ N

Operate photocopiers 10% of the time

☒ Y

☐ N

Use other office machines

☒ Y

☐ N

Specify:

Currently take any medications?

☐ Y

☒ N

Reason:

6. Office Characteristics:

☒ Number of persons sharing same room/work area

☐ Number of windows in room/work area

Do windows open?

☒ Y

☐ N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

☒ 5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

☒ 5

Are there smokers in your area?

☐ Y

☒ N

7. How long have you worked:

9 mos In this room/area

3 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Hearburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

air ducts not cleaned frequently enough

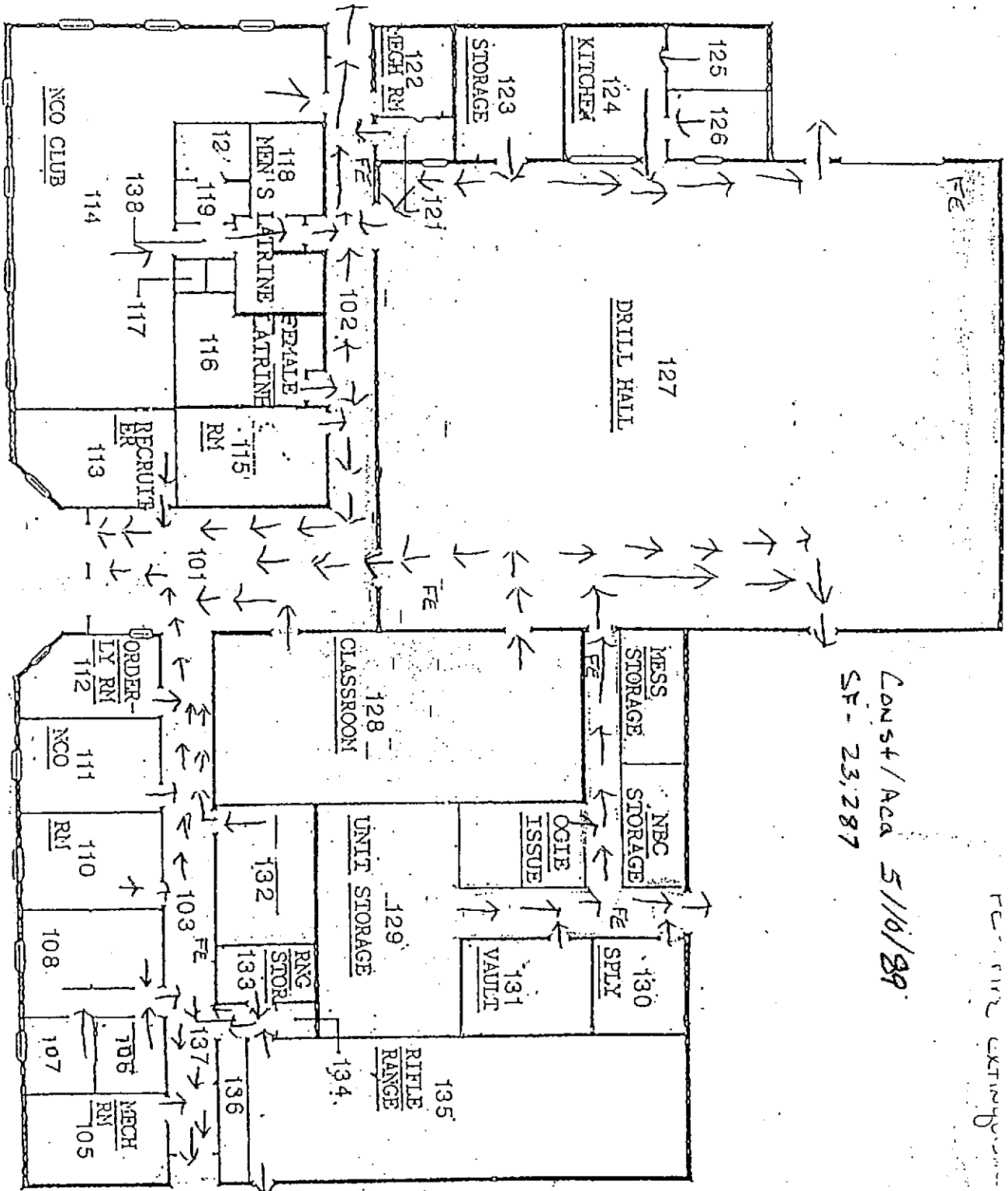
10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL GUARD ARMORY
CRYSTAL RIVER, FLORIDA



Const/ Acca 5/16/89
SF - 23,287

FC 112 EXTENDING

ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Behind Firing Line



Sample # 2 Indoor Firing Range 15' In Front of Firing Line

ARMORY PHOTOGRAPHS



Sample #3 Indoor Firing Range 10' in Front of Bullet Trap

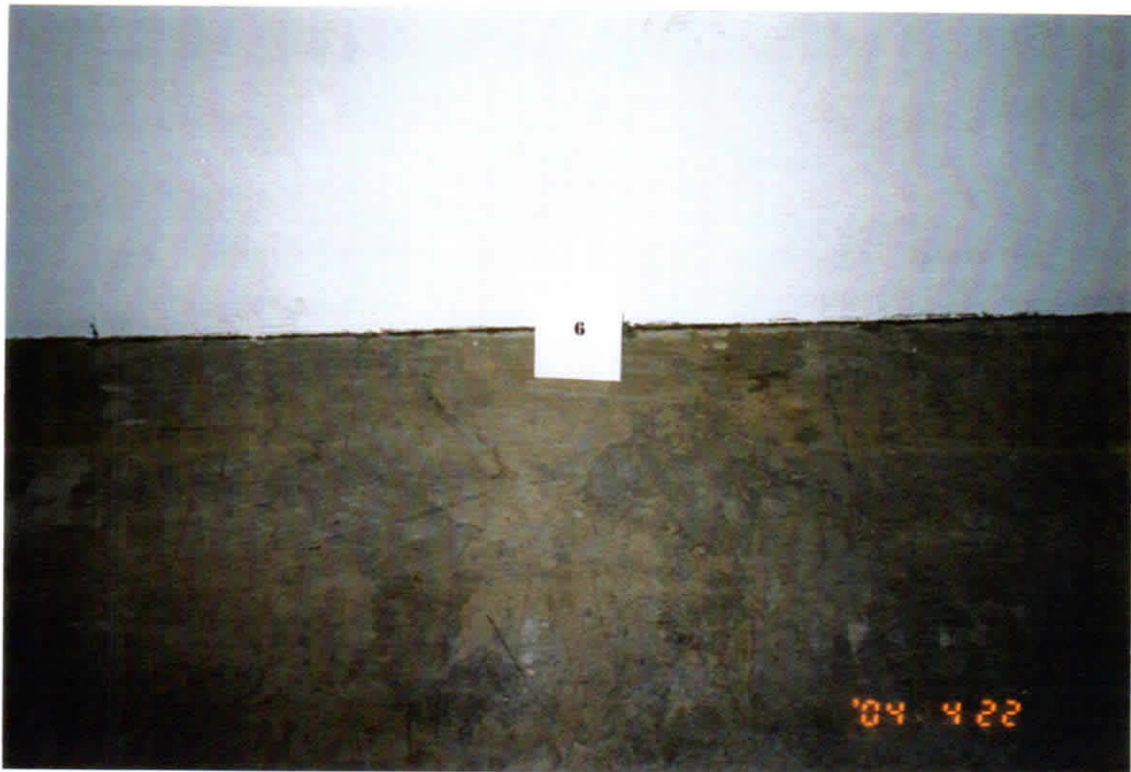


Sample # 4 Indoor Firing Range in Trap Area

ARMORY PHOTOGRAPHS



Sample #5 Indoor Firing Range Wall Behind Backstop



Sample #6 Indoor Firing Range Left Wall Trap Area

ARMORY PHOTOGRAPHS



Sample #7 Indoor Firing Range Right Wall Trap Area

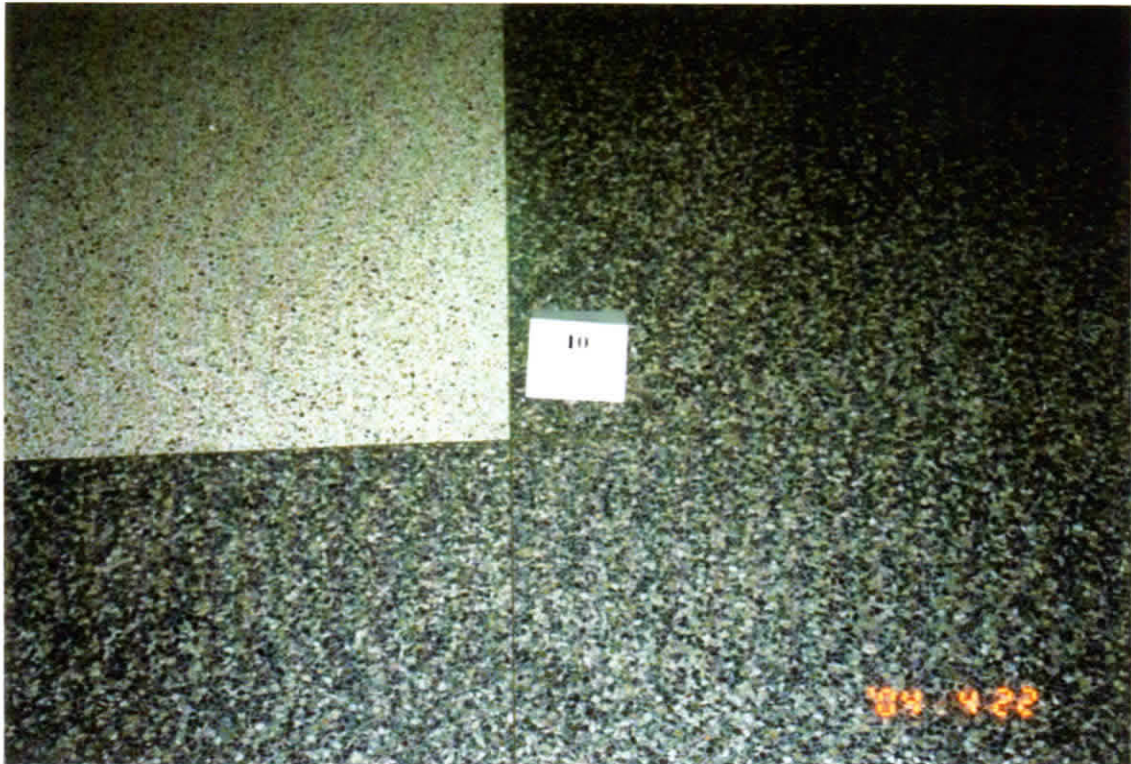


Sample # 8 Indoor Firing Range Plenum Face

ARMORY PHOTOGRAPHS

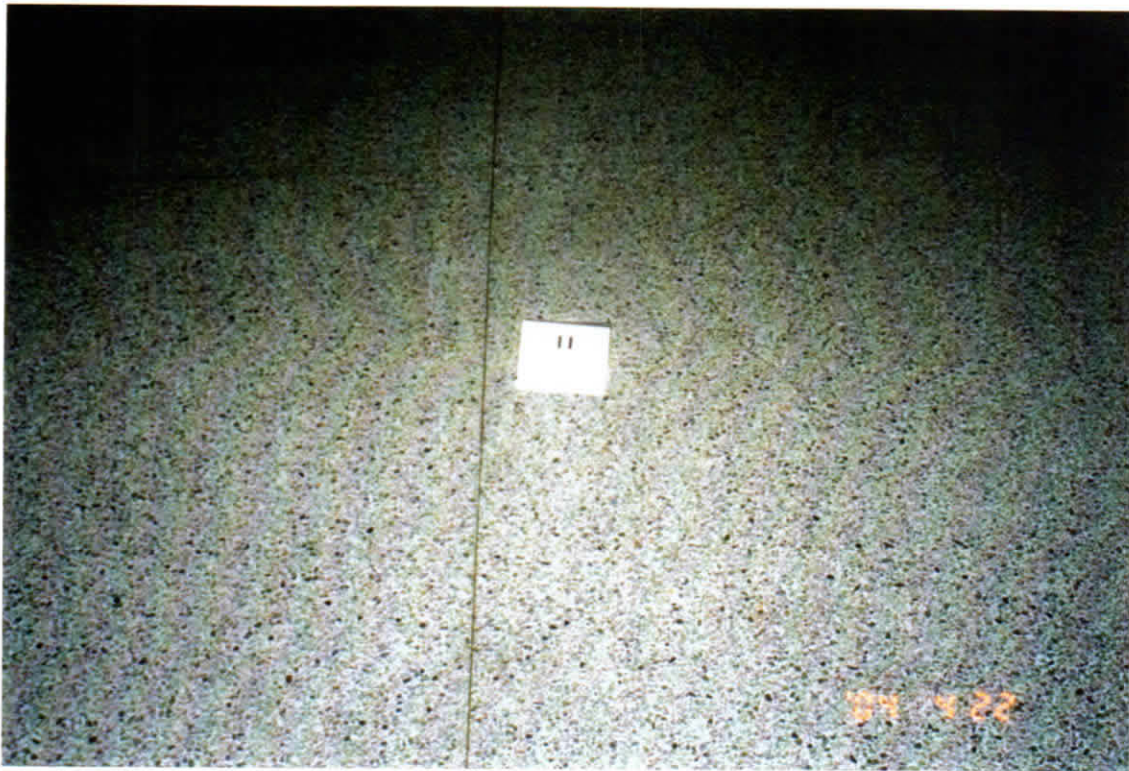


Sample #9 Indoor Firing Range Wall Behind Plenum



Sample # 10 Drill Floor Southeast Corner

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Center



Sample # 12 Drill Floor Northeast Corner

ARMORY PHOTOGRAPHS

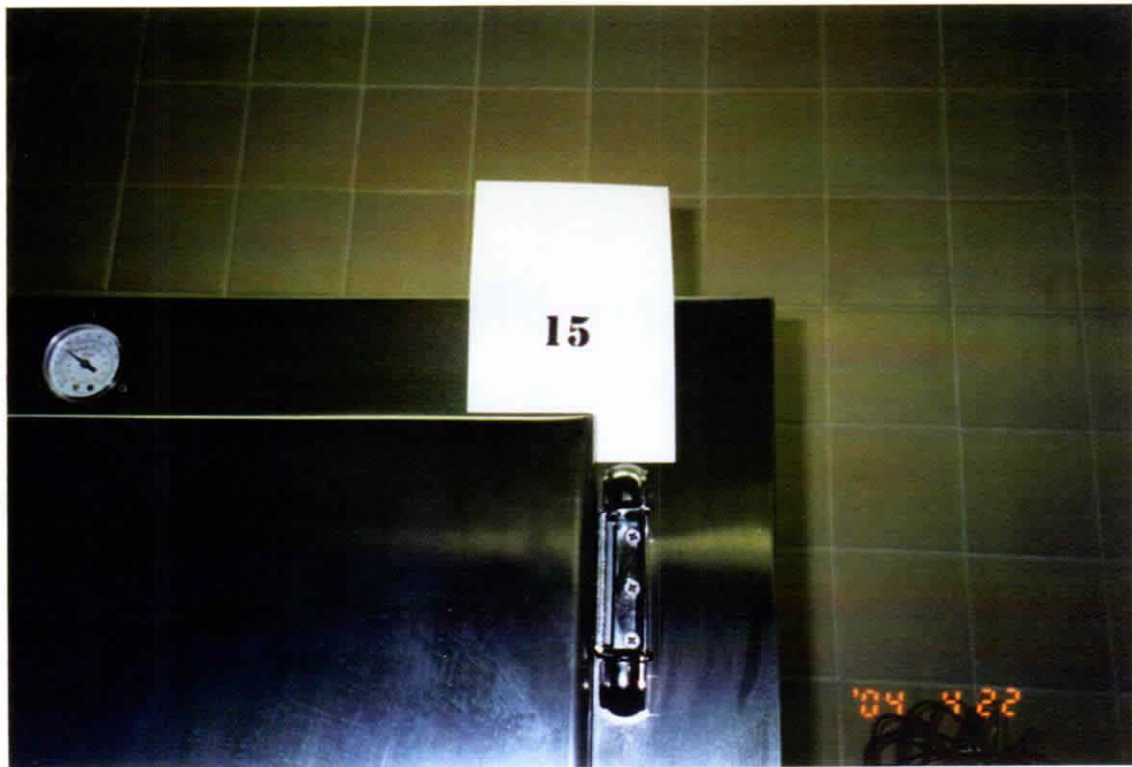


Sample #13 Drill Floor Northwest Corner

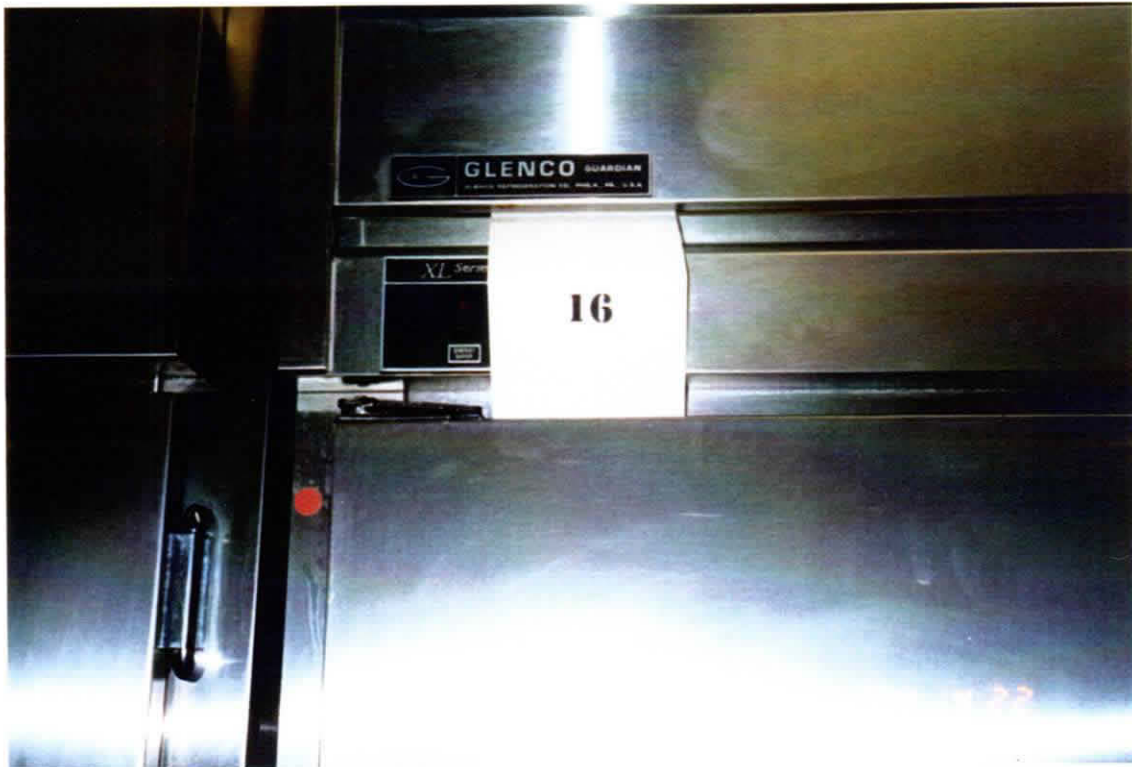


Sample # 14 Drill Floor Southwest Corner

ARMORY PHOTOGRAPHS



Sample #15 Kitchen, Top of Cooler, Room 123



Sample # 16 Kitchen, Top of Cooler, Room 124

ARMORY PHOTOGRAPHS



Sample #17 Arms Vault, Inside Door



Sample # 18 Arms Vault, Center of Floor

ARMORY PHOTOGRAPHS



Photograph, Indoor Firing Range, From Firing Line



Photograph, Crystal River Unit Sign

BEST AVAILABLE COPY

APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET****NAME OF ARMORY: CRYSTAL RIVER ARMORY****LOCATION: 8551 W. VENABLE ST., CRYSTAL RIVER,
FL 34429****YEAR BUILT: 1989****SQUARE FOOTAGE: 23,287****FULL TIME PERS: 3****M-DAY: 90****UNIT(S) DRILLING AT THIS ARMORY:
690TH MP COMPANY****ARMORY UTILIZED BY CIVILIANS: YES NO
WHAT FUNCTIONS: CRAFT SHOWS, ANTIQUE SHOWS,
VARIOUS OTHER - APPROXIMATELY 24 TIMES/YEAR****NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO****POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO****STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO****KNOWN MOLD/MILDEW IN THE ARMORY? YES NO****INDOOR FIRING RANGE IN ARMORY? YES NO**

(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1989, CLEANED AND CONVERTED TO
SUPPLY/STORAGE ROOM (UTILIZED BY FAMILY SUPPORT GROUP)

NUMBER OF VAULTS IN ARMORY: ONE**AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED ON THE DRILL FLOOR**

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 22, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC
Readiness NCO, 38017 Live Oak Ave, Dade City, Florida 33523.

Non-
Responsive

SUBJECT: Industrial Hygiene Survey of the Dade City National Guard Armory, Dade City, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Dade City Armory, George Hinchliffe.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. **Non-Responsive** conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.
- c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- d. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**DADE CITY ARMORY
38017 LIVE OAK AVENUE
DADE CITY, FLORIDA 33523**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Dade City Armory
38017 Live Oak Avenue
Dade City, FL 33523

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Methodology

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Heating Ventilation and Air Conditioning (HVAC).Page 5
Ergonomics.....Page 5
Personal Protection Equipment.....Page 5
Recommendations.....Page 5

Appendices

A. References
B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Dade City Armory on 24 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 65.2 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	Detected	Asbestos Survey Completed in 1996. Survey on file at Armory and State FMO
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	21 to 89 footcandles	No Action
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Dade City Armory in Dade City, Florida on 24 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Dade City Armory in Dade City, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 24 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses B Battery 2-116 Field Artillery. There are three full time employees at the Dade City Armory. Total M-Day soldiers drilling at the facility is 60. The armory was built in 1954 and contains 13,642 square feet. The armory is a typical building of this era with an indoor firing range built into the wall of the armory (see photograph in photo section). Firing took place on the drill floor into the bullet trap in the wall. The firing line was approximately mid-floor on the drill floor.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were several areas within the armory that shows signs of asbestos. There was no friable asbestos observed. An asbestos survey was completed in 1996. Copies survey report are kept in the armory and at the state FMO.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau.

Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions. Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Extech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Non-Responsible PH# 352-521-1433.

Lead Wipe Samples: Fifteen wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00DC	FIELD BLANK	UNDETECTED
04-01DC	IFR BULLET TRAP AREA	UNDETECTED
04-02DC	IFR BULLET TRAP AREA	6.63
04-03DC	IFR LEFT SIDE IN FRONT OF BULLET TRAP	44.8
04-04DC	IFR RIGHT SIDE IN FRONT OF TRAP	50.6
04-05DC	ARMS VAULT, FLOOR, BY DOOR	47.6
04-06DC	ARMS VAULT, FLOOR, MIDDLE OF VAULT	65.2
04-07DC	SUPPLY ROOM, FRONT	52.0
04-08DC	SUPPLY ROOM, REAR	13.3
04-09DC	KITCHEN, TOP OF LOCKER	14.3
04-10DC	KITCHEN, TOP OF COOLER	32.4
04-11DC	DRILL FLOOR SOUTHEAST CORNER	UNDETECTED
04-12DC	DRILL FLOOR CENTER	UNDETECTED
04-13DC	DRILL FLOOR NORTHEAST CORNER	UNDETECTED
04-14DC	DRILL FLOOR NORTHWEST CORNER	UNDETECTED
04-15DC	DRILL FLOOR SOUTHWEST CORNER	UNDETECTED

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

It appears that the indoor firing range cleaning process was a success. There were no readings close to the 200 milligrams per square foot limit. The highest reading was 50.6 (65.2 in arms room). In fact, there were no lead samples that exceeded the standard. However, I would consider wet mopping/wiping the areas that do show concentrations of lead dust. After mopping, suggest utilizing a vacuum with HEPA filter to clean the residue from the floors. This will prevent further accumulations of lead dust that may eventually cause higher levels of lead contamination.

Asbestos Suspect Building Material There were signs of asbestos in the Dade City Armory. There were no areas that showed evidence of friability. An asbestos survey was conducted in 1996 by an independent contractor. The results are kept in the armory and at state FMO.

Illumination Survey Lighting levels throughout the Dade City armory ranged from 21 foot-candles to 89 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	32 to 77
Supply	21 to 26
Office Areas	30 to 89
Classrooms	41 to 44
Mechanical Rooms	68
Kitchen	89

Practically all areas within the Dade City Armory meet or exceeds the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting.

Noise Survey The Dade City Armory, for its location (downtown), is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality. This armory, for its age, is very clean and well kept. One can tell the employees take great pride in their work area. All employees felt there were no indoor air quality issues.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Dade City Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise class that addresses muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Consider cleaning the contaminated surfaces of the indoor firing range by wet mopping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Perform the same operation in arms vault, supply, and kitchen surfaces.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A
REFERENCES

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

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

Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990

Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000

National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996

NGR 385-10, Army National Guard Safety Program, 20 December 1989

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

Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities

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, November 1997

Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

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APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Client		Address		City, State Zip Code		Phone / Facsimile No		Contact Person		Client/Project		Project Location		Sampler(s) / Phone No		Turnaround Time		P.O. # or Invoice No		Standard Rush [] Date Required:		Laboratory Comments	
Non-Responsive		2702 Kitty Hawk Ct		Springfield, IL 62707		217-753-2077		HINCHCO		Florida Army National Guard		Dade City, Army		217-787-2077		Standard		HINCHCO					
Sample Description (10 Characters Only)		Sampling Date		Sampling Time		Container Size		Container Type / No		M / B Code		Analysis and / or Method Requested											
04-20 DC		23 March		1307		1		1		1		BLANK LEAD											
04-01 DC				1315		1		1		1		LEAD											
04-02 DC				1320		1		1		1													
04-03 DC				1325		1		1		1													
04-04 DC				1330		1		1		1													
04-05 DC				1400		1		1		1													
04-06 DC				1403		1		1		1													
04-07 DC				1410		1		1		1													
04-08 DC				1418		1		1		1													
04-09 DC				1420		1		1		1													
04-10 DC				1423		1		1		1													
04-11 DC				1445		1		1		1													
Size of Container		40 mL		125 mL		250 mL		500 mL		1000 mL		O - Other (Specify)											
Type of Container		G - Glass (Clean)		AG - Glass (Amber)		P - HDPE		VC - Vacuette Core		SC - Soil Core		O - Other (Specify)											
M = Matrix Code		A - Aqueous		DW - Drinking Water		NA - Non-aqueous Liquid		SE - Sealed Water		S - Solids		O - Other (Specify)											
P = Preservative Code		A - None		B - HNO ₃		C - H ₂ SO ₄		D - NaOH		E - HCl		O - Other (Specify)											
Relinquished By		Date		Time		Received By		Date		Time		Method of Shipment											

Special Instructions:

All samples taken with 12" x 12" Template

Temp (F) (C)

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1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com

[illegible]

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Dade City Armory

Lab Order: 0403179

Lab ID: 0403179-001 Collection Date: 3/23/2004 1:07:00 PM
 Client Sample ID: 04-00DC (blank) Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/2/2004 8:19:00 AM

Lab ID: 0403179-002 Collection Date: 3/23/2004 1:15:00 PM
 Client Sample ID: 04-01DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/2/2004 8:27:00 AM

Lab ID: 0403179-003 Collection Date: 3/23/2004 1:20:00 PM
 Client Sample ID: 04-02DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 6.63 5.00 µg/ft² 10 4/2/2004 8:35:00 AM

Lab ID: 0403179-004 Collection Date: 3/23/2004 1:25:00 PM
 Client Sample ID: 04-03DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 44.8 5.00 µg/ft² 10 4/2/2004 9:04:00 AM

Lab ID: 0403179-005 Collection Date: 3/23/2004 1:30:00 PM
 Client Sample ID: 04-04DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 50.6 5.00 µg/ft² 10 4/2/2004 9:12:00 AM

Lab ID: 0403179-006 Collection Date: 3/23/2004 2:00:00 PM
 Client Sample ID: 04-05DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 47.6 5.00 µg/ft² 10 4/2/2004 9:20:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403179
 Project: Dade City Armory

Lab ID: 0403179-007 Collection Date: 3/23/2004 2:03:00 PM
 Client Sample ID: 04-06DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS
 Lead 65.2 N7082 (N7082) Analyst: MCL
 7.50 µg/ft² 10 4/2/2004 9:28:00 AM

Lab ID: 0403179-008 Collection Date: 3/23/2004 2:10:00 PM
 Client Sample ID: 04-07DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 52.0 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/2/2004 9:35:00 AM

Lab ID: 0403179-009 Collection Date: 3/23/2004 2:12:00 PM
 Client Sample ID: 04-08DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 13.3 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/2/2004 9:43:00 AM

Lab ID: 0403179-010 Collection Date: 3/23/2004 2:20:00 PM
 Client Sample ID: 04-09DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 14.3 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/2/2004 9:51:00 AM

Lab ID: 0403179-011 Collection Date: 3/23/2004 2:23:00 PM
 Client Sample ID: 04-10DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 32.4 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/2/2004 9:58:00 AM

Lab ID: 0403179-012 Collection Date: 3/23/2004 2:45:00 PM
 Client Sample ID: 04-11DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/2/2004 8:47:00 PM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403179
 Project: Dade City Armory

Lab ID: 0403179-013 Collection Date: 3/23/2004 2:47:00 PM
 Client Sample ID: 04-12DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:16:00 PM

Lab ID: 0403179-014 Collection Date: 3/23/2004 2:50:00 PM
 Client Sample ID: 04-13DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 9:23:00 PM

Lab ID: 0403179-015 Collection Date: 3/23/2004 2:55:00 PM
 Client Sample ID: 04-14DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:30:00 PM

Lab ID: 0403179-016 Collection Date: 3/23/2004 3:00:00 PM
 Client Sample ID: 04-15DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:38:00 PM

Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

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APPENDIX D

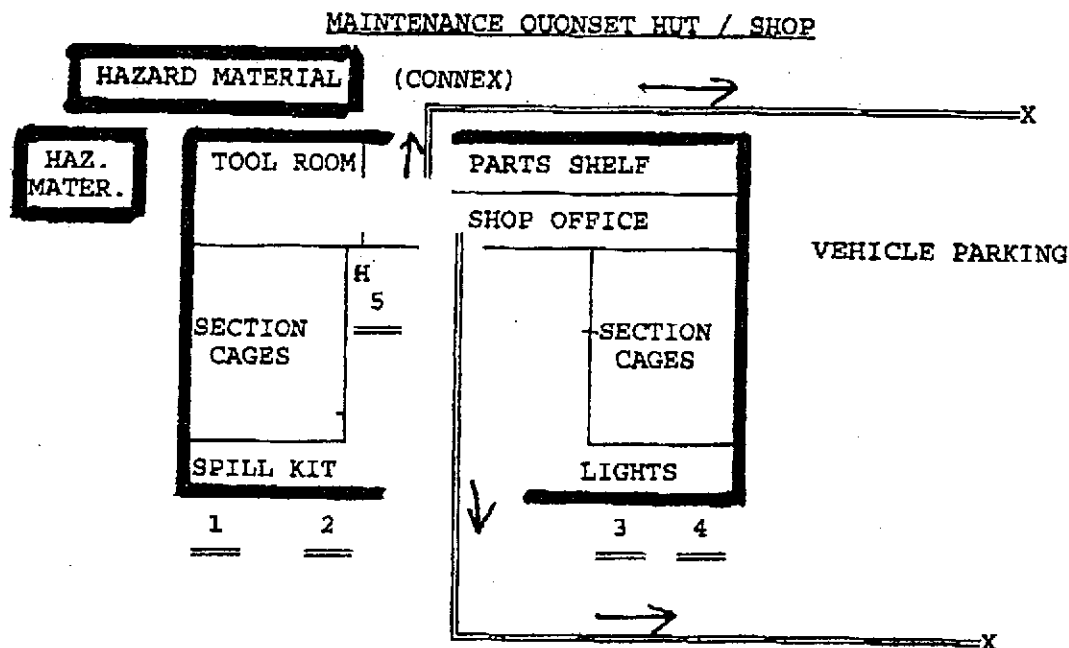
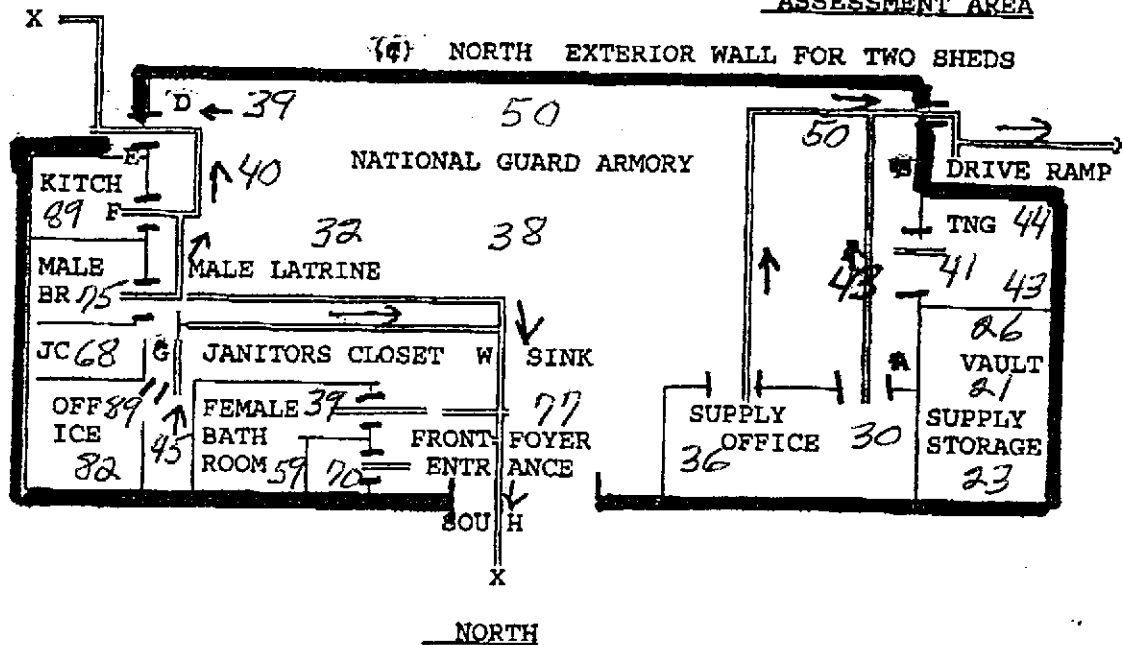
ILLUMINATION SURVEY DIAGRAM

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PART 4A: FACILITY EMERGENCY EVACUATION DIAGRAM

FIRE EXTINGUISHER IDENTIFIED BY ALPHABET LETTER A-H

X- PERSONNEL HOLDING/ ACCOUNTYABILITY / OPERATIONS
ASSESSMENT AREA



X = PERSONNEL HOLDING AREA (INJURY / ACCOUNTABILITY / OPERATIONS)

Dade city Illumination Survey

23 Mar 04

Foot - Candles

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Dade City
2. Area or rooms where you spend the most time in the building:
Supply
3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO
Describe:
Moving Equipment
4. Gender: Male Female
Age: Under 25 25-34 ☒ 35-44 45-54 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have skin allergies/dermatitis | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have a cold/flu | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have sinus problems | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have other allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Wear contact lenses | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
- Specify:
- Currently take any medications? ☒ Y ☐ N
Reason: Sinus
6. Office Characteristics:
- 0 Number of persons sharing same room/work area
2 Number of windows in room/work area
Do windows open? ☒ Y ☐ N
- Rate adequacy of work space per person:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Rate room temperature:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Are there smokers in your area? Y ☒ N
7. How long have you worked:
14 yrs In this room/area
14 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N
When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Pollen

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

N/A

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: DADE CITY
2. Area or rooms where you spend the most time in the building:
RECRUITING OFFICE, TRAINING / ADMIN + COPY ROOM
3. Does any of your work activities produce dust or odor? YES ☐ NO ☒
Describe: _____
4. Gender: ☒ Male ☐ Female
Age: Under 25 ☒ 25-34 35-44 45-54 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | Y | <input checked="" type="radio"/> N |
| Have skin allergies/dermatitis | Y | <input checked="" type="radio"/> N |
| Have a cold/flu | Y | <input checked="" type="radio"/> N |
| Have sinus problems | Y | <input checked="" type="radio"/> N |
| Have other allergies | Y | <input checked="" type="radio"/> N |
| Wear contact lenses | Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate photocopiers 10% of the time | Y | <input checked="" type="radio"/> N |
| Use other office machines | Y | <input checked="" type="radio"/> N |
- Specify: _____
- Currently take any medications? Y ☐ N ☒
Reason: _____
6. Office Characteristics:
- 0 Number of persons sharing same room/work area
3 Number of windows in room/work area
Do windows open? ☒ Y ☐ N
- Rate adequacy of work space per person:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Rate room temperature:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Are there smokers in your area? Y ☐ N ☒
7. How long have you worked:
2 yrs In this room/area
2 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms? N/A

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

N/A

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

N/A

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility:

2. Area or rooms where you spend the most time in the building:

TRAINING OFFICE3. Does any of your work activities produce dust or odor?
Describe:YES NO4. Gender: Male FemaleAge: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

Y

N

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

Y

N

Have other allergies

Y

N

Wear contact lenses

Y

N

Operate video display terminals (computers)

YN

Operate photocopiers 10% of the time

Y

N

Use other office machines

Y

N

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

0 Number of persons sharing same room/work area5 Number of windows in room/work area

Do windows open?

YN

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

9 YRS In this room/area9 YRS In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y

N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

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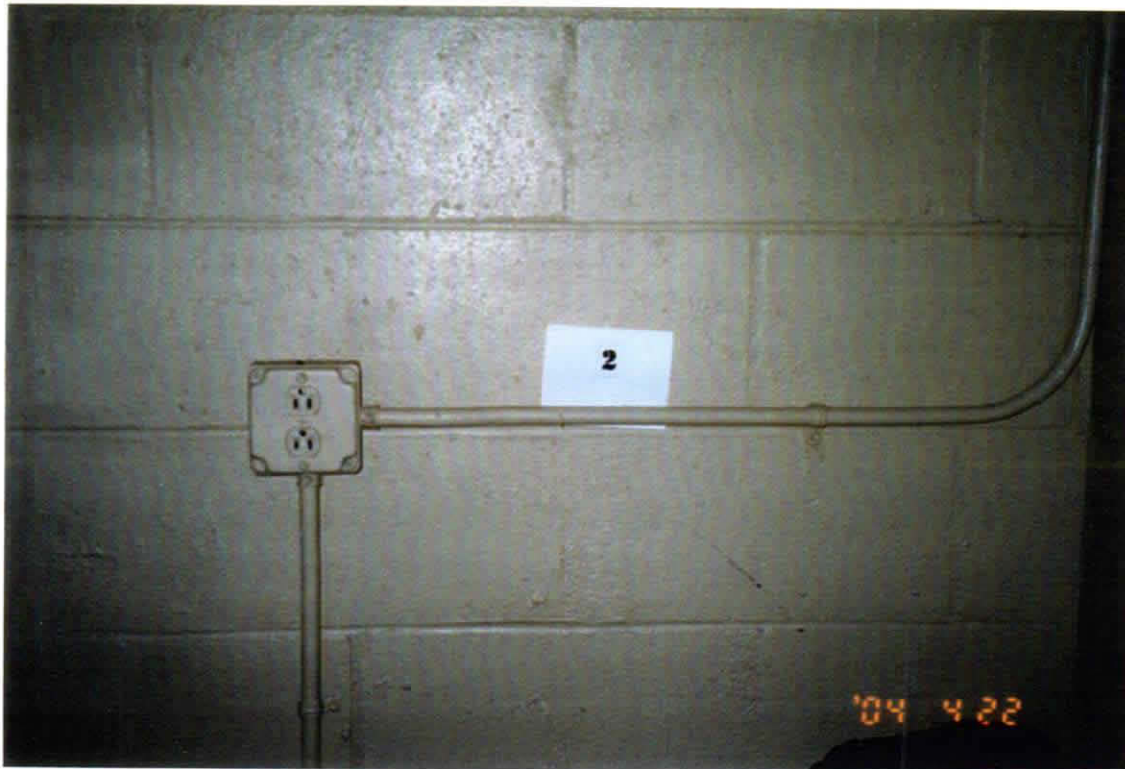
APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Left Side in Front of Backstop



Sample #2 Indoor Firing Range Right Side in Front of Backstop

ARMORY PHOTOGRAPHS



Sample #3 Indoor Firing Range Left Side in Front of Bullet Trap



Sample #4 Indoor Firing Range Right Side in Front of Bullet Trap

ARMORY PHOTOGRAPHS



Sample #5 Arms Vault, in Front of Door



Sample #6 Arms Vault, Middle of Vault

ARMORY PHOTOGRAPHS



Sample #7 Supply Room, Front Section



Sample #8 Supply Room, Rear Area

ARMORY PHOTOGRAPHS

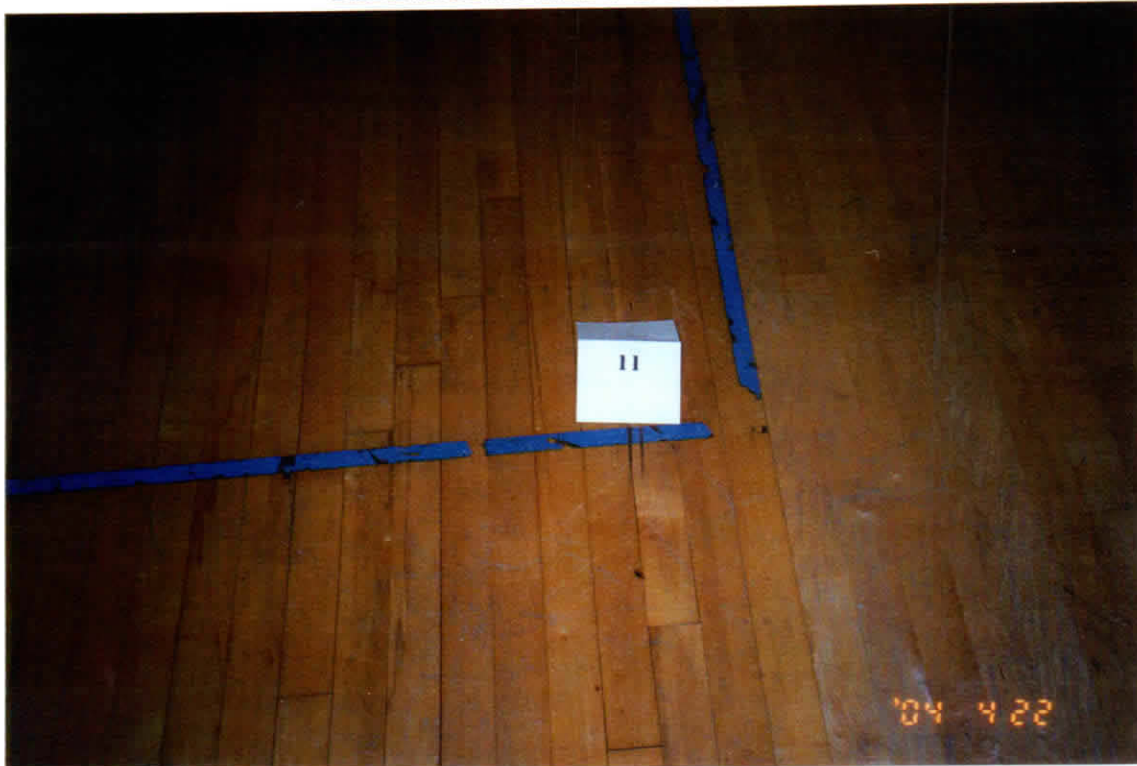


Sample #9 Kitchen, Top of Locker

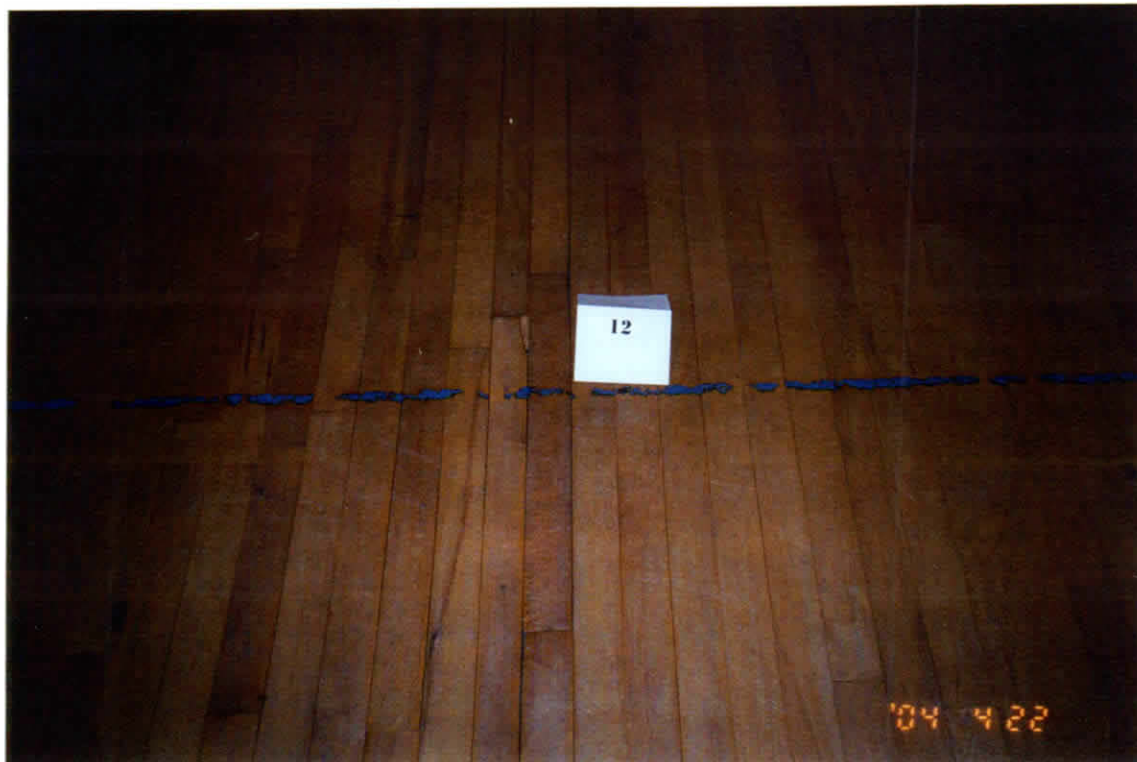


Sample #10 Kitchen, Top of Cooler

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Southeast Corner



Sample #12 Drill Floor Center

ARMORY PHOTOGRAPHS



Sample #13 Drill Floor Northeast Corner



Sample #14 Drill Floor Northwest Corner

ARMORY PHOTOGRAPHS



Sample #15 Drill Floor Southwest Corner



Photograph of Indoor Firing Range

ARMORY PHOTOGRAPHS



Photograph of Drill Floor

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APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET****NAME OF ARMORY: DADE CITY ARMORY****LOCATION: 38017 LIVE OAK AVE., DADE CITY, FL 33523****YEAR BUILT: 1954****SQUARE FOOTAGE: 13,642****FULL TIME PERS: 3****M-DAY: 60****UNIT(S) DRILLING AT THIS ARMORY:
B BATTERY 2-116 FIELD ARTILLERY****ARMORY UTILIZED BY CIVILIANS: YES NO****WHAT FUNCTIONS: FISH FRYS, DANCES, CRAFT SHOWS
VARIOUS OTHER - APPROXIMATELY 6-8 TIMES/YEAR****NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO****POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO****STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO****KNOWN MOLD/MILDEW IN THE ARMORY? YES NO****INDOOR FIRING RANGE IN ARMORY? YES NO****(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1980'S, CLEANED****NUMBER OF VAULTS IN ARMORY: ONE****AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS CLEANED ON THE DRILL FLOOR**

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 22, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
Readiness NCO, 38017 Live Oak Ave, Dade City, Florida 33523.

SUBJECT: Industrial Hygiene Survey of the Dade City National Guard Armory, Dade City, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Dade City Armory, George Hinchliffe.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

- b. Mr [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.
- c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- d. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR **Non-Res** COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**DADE CITY ARMORY
38017 LIVE OAK AVENUE
DADE CITY, FLORIDA 33523**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Dade City Armory
38017 Live Oak Avenue
Dade City, FL 33523

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Personal Protection Equipment.....Page 5
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Appendices

A. References
B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Dade City Armory on 24 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 65.2 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	Detected	Asbestos Survey Completed in 1996. Survey on file at Armory and State FMO
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	21 to 89 footcandles	No Action
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Dade City Armory in Dade City, Florida on 24 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Dade City Armory in Dade City, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 24 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses B Battery 2-116 Field Artillery. There are three full time employees at the Dade City Armory. Total M-Day soldiers drilling at the facility is 60. The armory was built in 1954 and contains 13,642 square feet. The armory is a typical building of this era with an indoor firing range built into the wall of the armory (see photograph in photo section). Firing took place on the drill floor into the bullet trap in the wall. The firing line was approximately mid-floor on the drill floor.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were several areas within the armory that shows signs of asbestos. There was no friable asbestos observed. An asbestos survey was completed in 1996. Copies survey report are kept in the armory and at the state FMO.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau.

Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions. Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Extech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Randal Sikes, PH# 352-521-1433.

Lead Wipe Samples: Fifteen wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00DC	FIELD BLANK	UNDETECTED
04-01DC	IFR BULLET TRAP AREA	UNDETECTED
04-02DC	IFR BULLET TRAP AREA	6.63
04-03DC	IFR LEFT SIDE IN FRONT OF BULLET TRAP	44.8
04-04DC	IFR RIGHT SIDE IN FRONT OF TRAP	50.6
04-05DC	ARMS VAULT, FLOOR, BY DOOR	47.6
04-06DC	ARMS VAULT, FLOOR, MIDDLE OF VAULT	65.2
04-07DC	SUPPLY ROOM, FRONT	52.0
04-08DC	SUPPLY ROOM, REAR	13.3
04-09DC	KITCHEN, TOP OF LOCKER	14.3
04-10DC	KITCHEN, TOP OF COOLER	32.4
04-11DC	DRILL FLOOR SOUTHEAST CORNER	UNDETECTED
04-12DC	DRILL FLOOR CENTER	UNDETECTED
04-13DC	DRILL FLOOR NORTHEAST CORNER	UNDETECTED
04-14DC	DRILL FLOOR NORTHWEST CORNER	UNDETECTED
04-15DC	DRILL FLOOR SOUTHWEST CORNER	UNDETECTED

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

It appears that the indoor firing range cleaning process was a success. There were no readings close to the 200 milligrams per square foot limit. The highest reading was 50.6 (65.2 in arms room). In fact, there were no lead samples that exceeded the standard. However, I would consider wet mopping/wiping the areas that do show concentrations of lead dust. After mopping, suggest utilizing a vacuum with HEPA filter to clean the residue from the floors. This will prevent further accumulations of lead dust that may eventually cause higher levels of lead contamination.

Asbestos Suspect Building Material There were signs of asbestos in the Dade City Armory. There were no areas that showed evidence of friability. An asbestos survey was conducted in 1996 by an independent contractor. The results are kept in the armory and at state FMO.

Illumination Survey Lighting levels throughout the Dade City armory ranged from 21 foot-candles to 89 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	32 to 77
Supply	21 to 26
Office Areas	30 to 89
Classrooms	41 to 44
Mechanical Rooms	68
Kitchen	89

Practically all areas within the Dade City Armory meet or exceeds the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting.

Noise Survey The Dade City Armory, for its location (downtown), is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality. This armory, for its age, is very clean and well kept. One can tell the employees take great pride in their work area. All employees felt there were no indoor air quality issues.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Dade City Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise class that addresses muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Consider cleaning the contaminated surfaces of the indoor firing range by wet mopping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Perform the same operation in arms vault, supply, and kitchen surfaces.

2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A
REFERENCES

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

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

Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990

Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000

National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996

NGR 385-10, Army National Guard Safety Program, 20 December 1989

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

Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities

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, November 1997

Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Client		Non-Responsive		HINCHCO		Client Project		Florida Army National Guard	
Address		2702 Kitty Hawk Ct		Project Location		Dade City, Army			
City, State, Zip Code		Springfield, IL 62707		Sampler(s) / Phone No.		217-987-2077			
Phone / Facsimile No.		217-987-2077		Turnaround Time		Standard 48 Rush ()		Date Required:	
Contact Person		Non-Responsive		P.O. # or Invoice to		HINCHCO			
Sample Description (10 Characters Only)	Sampling Date	Time	Container Size	Type No.	M/P Code	Analysis and/or Method Requested		Laboratory Comments	
04-20 DC	23 Nov 07	1307	1	1	1	BLANK LEAD			
04-01 DC		1315	1	1	1	LEAD			
04-02 DC		1320	1	1	1				
04-03 DC		1325	1	1	1				
04-04 DC		1330	1	1	1				
04-05 DC		1400	1	1	1				
04-06 DC		1403	1	1	1				
04-07 DC		1410	1	1	1				
04-08 DC		1418	1	1	1				
04-09 DC		1420	1	1	1				
04-10 DC		1423	1	1	1				
04-11 DC		1445	1	1	1				
Size of Container	40 mL		125 mL		250 mL		500 mL		Other (Specify)
Type of Container	G - Glass (Clear)		AG - Glass (Amber)		P - HDPE		VC - Volatile Core		SC - Soil Core
M = Matrix Code	A - Aqueous		DW - Drinking Water		NA - Non-aqueous Liquid		SE - Sealing Water		S - Solids
P = Preservative Code	A - None		B - HNO ₃		C - H ₂ SO ₄		D - NaOH		E - HCl
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment			
Special Instructions:									
All samples taken with 18"x18" Template									
Temperature (C)									

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FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

Page 288 of 1021

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@praireanalytical.com

[illegible]

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403179
 Project: Dade City Armory

Lab ID: 0403179-001 Collection Date: 3/23/2004 1:07:00 PM
 Client Sample ID: 04-00DC (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 8:19:00 AM

Lab ID: 0403179-002 Collection Date: 3/23/2004 1:15:00 PM
 Client Sample ID: 04-01DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 8:27:00 AM

Lab ID: 0403179-003 Collection Date: 3/23/2004 1:20:00 PM
 Client Sample ID: 04-02DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	6.63	5.00		µg/ft²	10	4/2/2004 8:35:00 AM

Lab ID: 0403179-004 Collection Date: 3/23/2004 1:25:00 PM
 Client Sample ID: 04-03DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	44.8	5.00		µg/ft²	10	4/2/2004 9:04:00 AM

Lab ID: 0403179-005 Collection Date: 3/23/2004 1:30:00 PM
 Client Sample ID: 04-04DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	50.6	5.00		µg/ft²	10	4/2/2004 9:12:00 AM

Lab ID: 0403179-006 Collection Date: 3/23/2004 2:00:00 PM
 Client Sample ID: 04-05DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	47.6	5.00		µg/ft²	10	4/2/2004 9:20:00 AM

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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403179
 Project: Dade City Armory

Lab ID: 0403179-007 Collection Date: 3/23/2004 2:03:00 PM
 Client Sample ID: 04-06DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 65.2 7.50 µg/ft² 10 4/2/2004 9:28:00 AM

Lab ID: 0403179-008 Collection Date: 3/23/2004 2:10:00 PM
 Client Sample ID: 04-07DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 52.0 5.00 µg/ft² 10 4/2/2004 9:35:00 AM

Lab ID: 0403179-009 Collection Date: 3/23/2004 2:12:00 PM
 Client Sample ID: 04-08DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 13.3 5.00 µg/ft² 10 4/2/2004 9:43:00 AM

Lab ID: 0403179-010 Collection Date: 3/23/2004 2:20:00 PM
 Client Sample ID: 04-09DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 14.3 5.00 µg/ft² 10 4/2/2004 9:51:00 AM

Lab ID: 0403179-011 Collection Date: 3/23/2004 2:23:00 PM
 Client Sample ID: 04-10DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 32.4 5.00 µg/ft² 10 4/2/2004 9:58:00 AM

Lab ID: 0403179-012 Collection Date: 3/23/2004 2:45:00 PM
 Client Sample ID: 04-11DC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/2/2004 8:47:00 PM

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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Dade City Armory

Lab Order: 0403179

Lab ID: 0403179-013 Collection Date: 3/23/2004 2:47:00 PM

Client Sample ID: 04-12DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:16:00 PM

Lab ID: 0403179-014 Collection Date: 3/23/2004 2:50:00 PM

Client Sample ID: 04-13DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	7.50		µg/ft²	10	4/2/2004 9:23:00 PM

Lab ID: 0403179-015 Collection Date: 3/23/2004 2:55:00 PM

Client Sample ID: 04-14DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:30:00 PM

Lab ID: 0403179-016 Collection Date: 3/23/2004 3:00:00 PM

Client Sample ID: 04-15DC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/2/2004 9:38:00 PM

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Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

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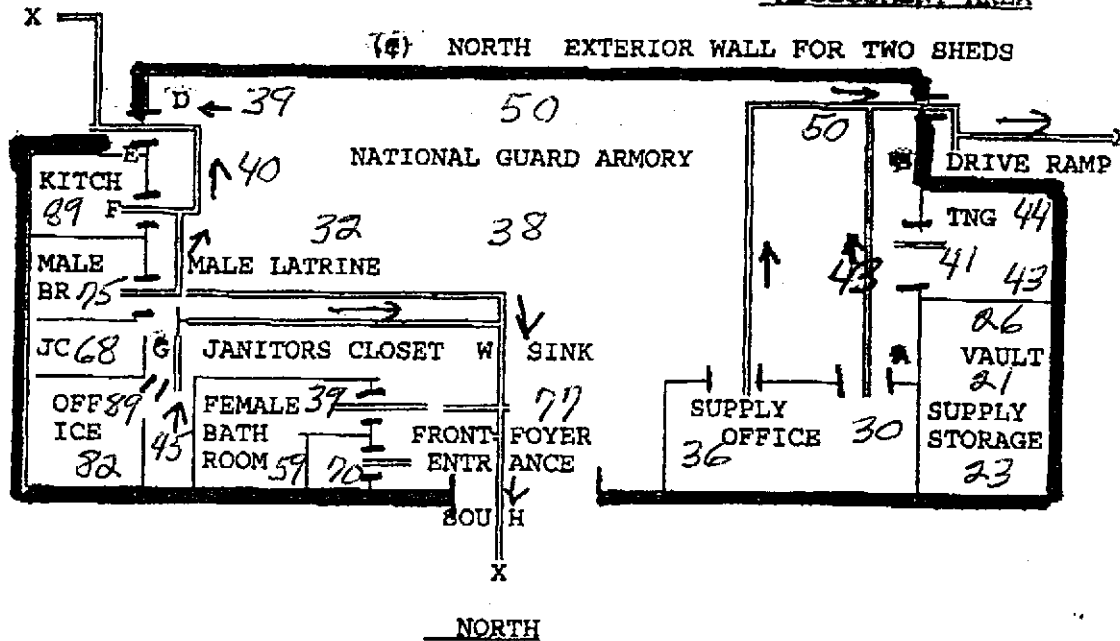
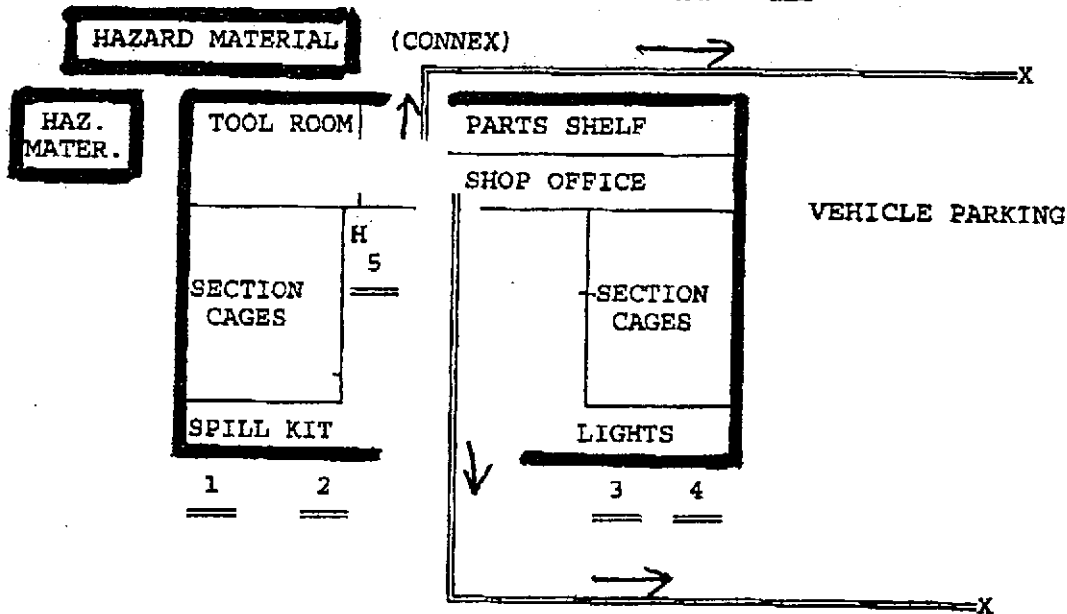
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APPENDIX D

ILLUMINATION SURVEY DIAGRAM

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PART 4A: FACILITY EMERGENCY EVACUATION DIAGRAMFIRE EXTINGUISHER IDENTIFIED BY ALPHABET LETTER A-HX- PERSONNEL HOLDING/ ACCOUNTABILITY / OPERATIONS
ASSESSMENT AREAMAINTENANCE QUONSET HUT / SHOP

X = PERSONNEL HOLDING AREA (INJURY / ACCOUNTABILITY / OPERATIONS)

Dade City Illumination Survey

23 Mar 04

Foot - Candles

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APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

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OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Dade City
2. Area or rooms where you spend the most time in the building:
Supply
3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO
Describe:
Moving Equipment
4. Gender: Male Female
Age: Under 25 25-34 ☒ 35-44 45-54 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have skin allergies/dermatitis | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have a cold/flu | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have sinus problems | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have other allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Wear contact lenses | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
- Specify:
- Currently take any medications? ☒ Y ☐ N
Reason: Sinus
6. Office Characteristics:
- 0 Number of persons sharing same room/work area
2 Number of windows in room/work area
Do windows open? ☒ Y ☐ N
- Rate adequacy of work space per person:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Rate room temperature:
- | Poor | Average | | Excellent |
|------|---------|---|------------------------------------|
| 1 | 2 | 3 | 4 |
| | | | <input checked="" type="radio"/> 5 |
- Are there smokers in your area? Y ☒ N
7. How long have you worked:
14 yrs In this room/area
14 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Hearburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N
When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Pollen

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

N/A

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: DADE CITY

2. Area or rooms where you spend the most time in the building:

RECRUITING OFFICE, TRAINING/ADMIN + COPY ROOM3. Does any of your work activities produce dust or odor?
Describe:YES NO4. Gender: Male FemaleAge: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

Y

N

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

Y

N

Have other allergies

Y

N

Wear contact lenses

Y

N

Operate video display terminals (computers)

YN

Operate photocopiers 10% of the time

Y

N

Use other office machines

Y

N

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

0 Number of persons sharing same room/work area3 Number of windows in room/work area

Do windows open?

YN

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

2 yrs In this room/area2 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms? N/A

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

N/A

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

N/A

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility:

2. Area or rooms where you spend the most time in the building:

TRAINING OFFICE3. Does any of your work activities produce dust or odor?
Describe:YES NO4. Gender: Male FemaleAge: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

Y

N

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

Y

N

Have other allergies

Y

N

Wear contact lenses

Y

N

Operate video display terminals (computers)

YN

Operate photocopiers 10% of the time

Y

N

Use other office machines

Y

N

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

0 Number of persons sharing same room/work area5 Number of windows in room/work area

Do windows open?

YN

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

9 yrs In this room/area9 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N/A N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

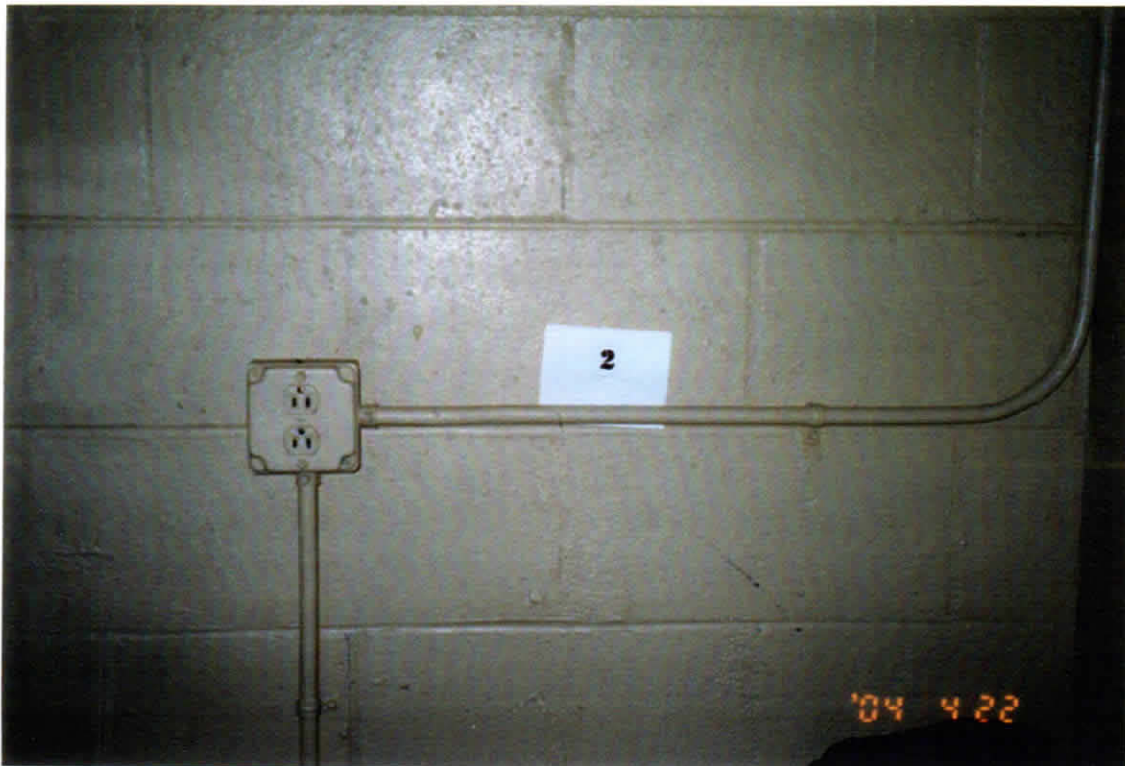
APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Left Side in Front of Backstop

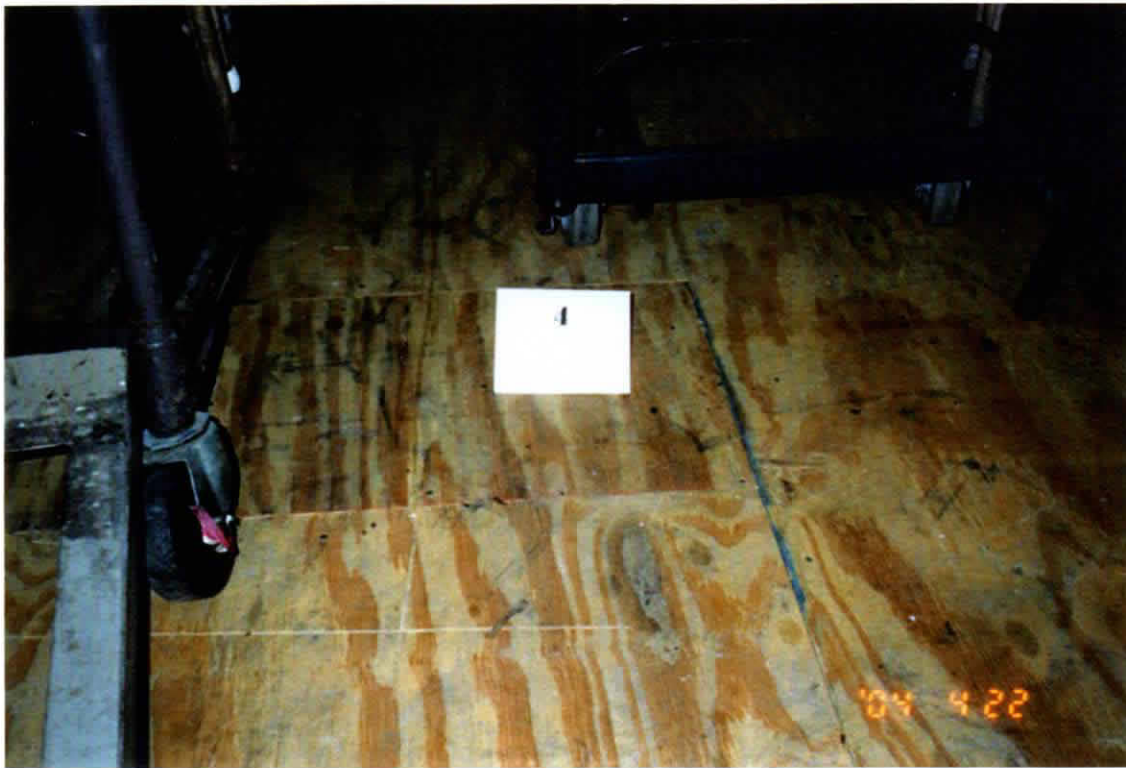


Sample #2 Indoor Firing Range Right Side in Front of Backstop

ARMORY PHOTOGRAPHS



Sample #3 Indoor Firing Range Left Side in Front of Bullet Trap



Sample #4 Indoor Firing Range Right Side in Front of Bullet Trap

ARMORY PHOTOGRAPHS



Sample #5 Arms Vault, in Front of Door



Sample #6 Arms Vault, Middle of Vault

ARMORY PHOTOGRAPHS



Sample #7 Supply Room, Front Section

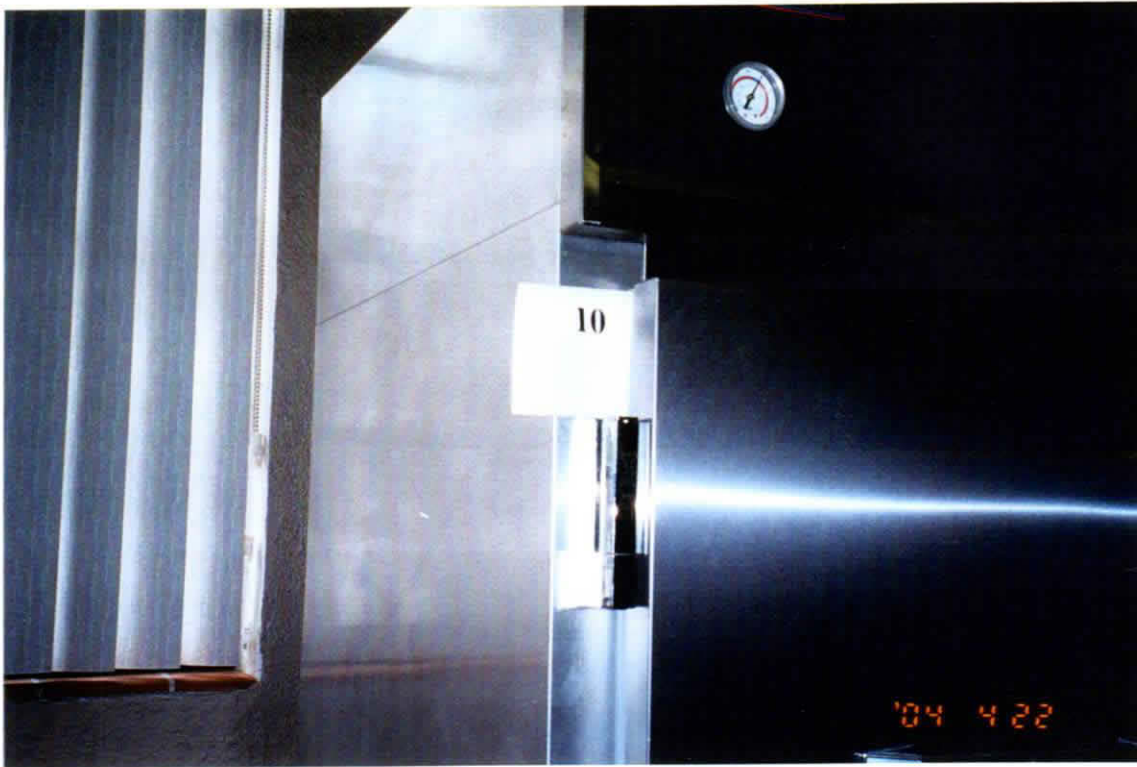


Sample #8 Supply Room, Rear Area

ARMORY PHOTOGRAPHS

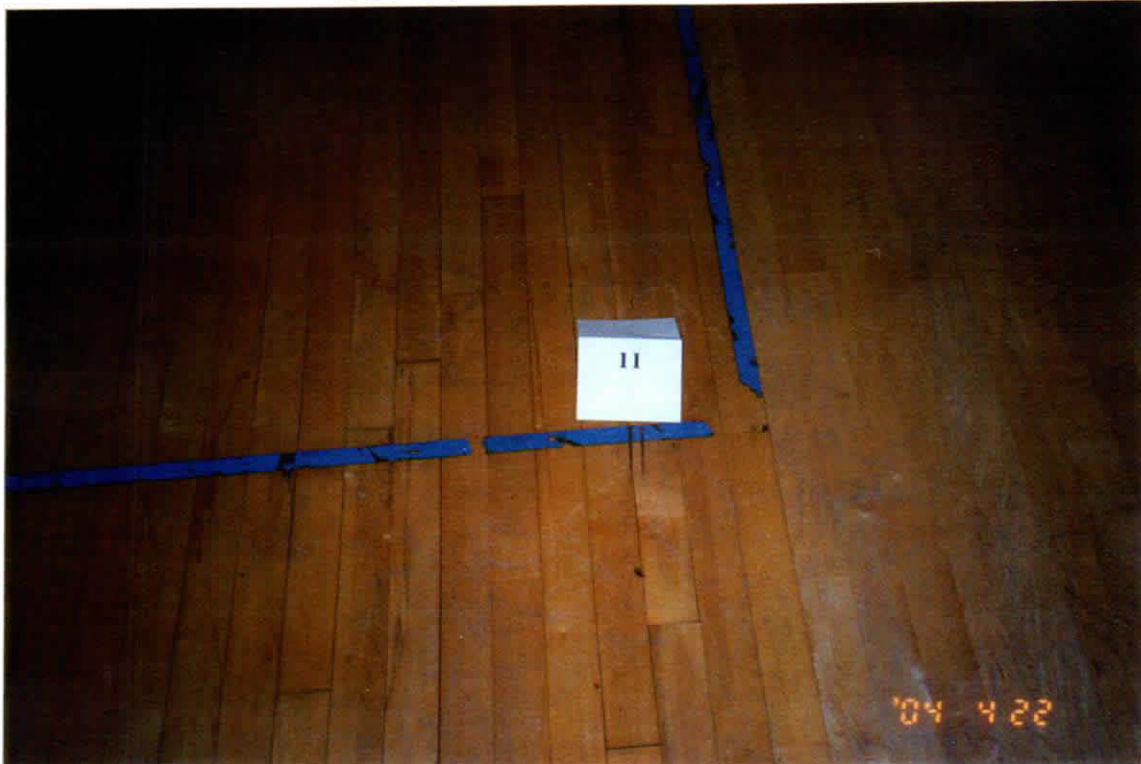


Sample #9 Kitchen, Top of Locker

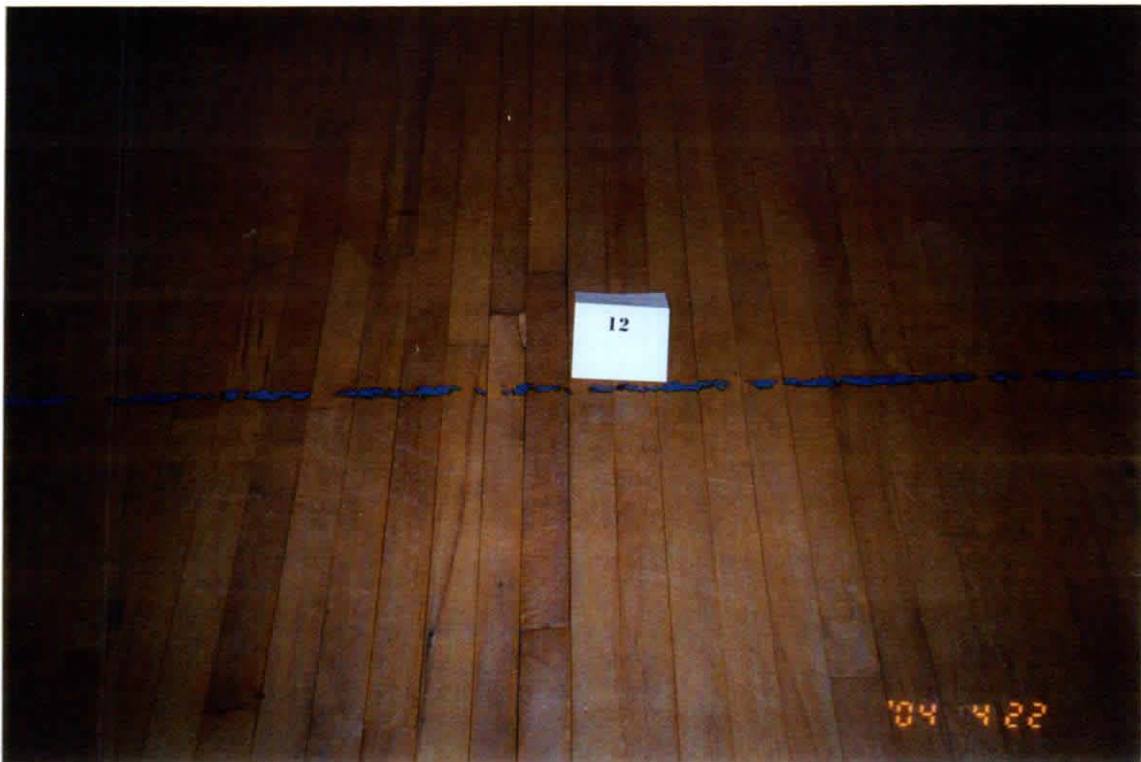


Sample #10 Kitchen, Top of Cooler

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Southeast Corner



Sample #12 Drill Floor Center

ARMORY PHOTOGRAPHS



Sample #13 Drill Floor Northeast Corner



Sample #14 Drill Floor Northwest Corner

ARMORY PHOTOGRAPHS



Sample #15 Drill Floor Southwest Corner



Photograph of Indoor Firing Range

ARMORY PHOTOGRAPHS



Photograph of Drill Floor

BEST AVAILABLE COPY

APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET****NAME OF ARMORY: DADE CITY ARMORY****LOCATION: 38017 LIVE OAK AVE., DADE CITY, FL 33523****YEAR BUILT: 1954****SQUARE FOOTAGE: 13,642****FULL TIME PERS: 3****M-DAY: 60****UNIT(S) DRILLING AT THIS ARMORY:
B BATTERY 2-116 FIELD ARTILLERY****ARMORY UTILIZED BY CIVILIANS: YES NO
WHAT FUNCTIONS: FISH FRYS, DANCES, CRAFT SHOWS
VARIOUS OTHER - APPROXIMATELY 6-8 TIMES/YEAR****NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO****POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO****STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO****KNOWN MOLD/MILDEW IN THE ARMORY? YES NO****INDOOR FIRING RANGE IN ARMORY? YES NO****(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1980'S, CLEANED****NUMBER OF VAULTS IN ARMORY: ONE****AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS CLEANED ON THE DRILL FLOOR**

NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349

20 June 2002

NGB-AVN-SI

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC. [Redacted]
[Redacted] Readiness NCO, B Btry, 1st 265 ADA, 401 South Alabama Avenue, De Land,
Florida 32724.

SUBJECT: Industrial Hygiene Survey of the De Land National Guard Armory, De Land,
Florida.

1. References.

a. Report submitted 11 June 2002, Industrial Hygiene Survey, Aiken Global
Environmental Services, L.L.C.
b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised
1988.

c. AR 40-5, Preventive Medicine, October 1990.

d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.

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

f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing
Conservation.

g. TB MED 530, The Army Industrial Hygiene Program.

h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-
10, Ventilation.

i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental
Industrial Hygienist, Cincinnati, Ohio.

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering
Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the
Region South Industrial Hygiene Office a Service Contract was put together to conduct
Health Hazard Information module (HHIM) Field surveys and IH surveys at the Florida
National Guard Armories.

b. Ms. [Redacted] of Aiken Global Environmental Services, L.L.C. **Non-Responsive**

CF: Office of the Adjutant General, ATTN: MAJ. [REDACTED] Non-Responsive
 Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St.
 Augustine, FL 32085-1008

Regional Industrial Hygienist
 [REDACTED] Non-Responsive

5. If additional information is needed about the contractors report, please contact
 Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR
 COMMERCIAL (404) 559-4174. [REDACTED] Non-Responsive

- d To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- c. Discuss the high Lead level with the Safety and Occupational Health Office, the Facility Management Office and the Environmental Office. Use NG PAM 385-15 and NG PAM 385-16 as guides to clean and convert the indoor firing range.
- b. Use the report to help in correcting all deficiencies noted by the contractor.
- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

4. Recommendations.

3. Findings. All HHM field survey forms and survey findings of the report are enclosed.
 conducted the survey.
 (See ENCL. 1)

3475 North Desert Drive
Building 1, Suite 100
Atlanta, Georgia 30344
(404) 684-7172 Business
(404) 684-7173 Fax
www.aiken@aikenglobal.com

Florida National Guard
St. Francis Barracks
Occupational Health Office
Attention: MA
82 Marine Street
St. Augustine, Florida 32084

Prepared for

B Btry, 1st 265 ADA
401 South Alabama Avenue
De Land, Florida 32724

INDUSTRIAL HYGIENE SURVEY



- MEMORANDUM FOR: Florida Army National Guard, ATTN: SFC [REDACTED] Non-Responsive 32/24
 Readiness NCO, B Btry, 1st 265 ADA, 401 South Alabama Avenue, De Land, Florida 32724
- SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module (HHIM) Survey of De Land, Florida National Guard Armory.
1. **REFERENCES:**
- a). Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
 - b). Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990
 - c). AR 385-10, 23 May 1988, Army Safety Program
 - d). Technical Bulletin Medical (TB MED) 503, 1 February 1985, The Army Industrial Hygiene Program
 - e). National Guard Regulation (NGR) 385-10, 20 December 1989, Army National Guard Safety and Occupational Health Program
 - f). Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio
 - g). National Guard Pamphlet (NG Pam) AR 385-16, Safety Guidelines for Converting Indoor Firing Ranges to Other Uses.
 - h). National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975
2. **Purpose:** The purpose of this survey was to conduct an Industrial Hygiene survey of the B Btry, 1st 265 ADA National Guard Armory. The facility was observed and Sergeant Richard Campbell provided assistance during the survey. A diagram of the building can be found in Enclosure 1. Photos of the deactivated Indoor Firing Range can be found in Enclosure 2. Laboratory results can be found in Enclosure 3. Photographs of the facility can be found in Enclosure 4. Health Hazard Information Module can be found in Enclosure 5. A listing of De Land Armory personnel is shown in Enclosure 6.



Background: At the request of [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an industrial hygiene survey was conducted at the De Land National Guard Armory in De Land, Florida on 31 May 2002 by [Non-Responsive] of Aiken Global Environment Services L.L.C.

Facility Description. The Armory has three (3) full time personnel. The personnel perform administrative duties Monday-Friday 0730 to 1700. The armory is utilized for military drills on weekend. The building was erected in 1954 and houses four (4) administrative offices, kitchen/mess hall, Drill hall, Supply room, Petroleum Oil and Lubricant (POL) storage, Arms Room, Boiler Room, two (2) class/training rooms, and a converted indoor firing range used for storage which was converted in 1999.

Findings:

a). A converted Indoor Firing Range is located at the rear of the Drill Hall. There are three (3) panel doors that allow access to the range pit. The range pit has been converted to storage of ARTCAT planes for target shooting, office desks, and empty boxes. The range was decontaminated in 1999 and certified for closure by GLE Associates Inc. of Tampa, Florida. This report was review at the time of the survey. Six (6) wipe samples for lead were taken (Table 1). One of the six samples was above the action level for lead (200mg/H2) as indicated in reference g.

TABLE 1

SAMPLE LOCATION		RESULTS
Floor of pit (wood and sand)	5,950 ug/H2	
Right Wall Cinder block of pit	Below Reporting Limits (BRL)	
Left Wall Cinder block of pit	BRL	
Rear of Cinder Wall	BRL	
Ceiling of pit	BRL	
Floor of pit (sand)	BRL	

b). Material Safety Data Sheets (MSDS) were on file and readily available for each person at this Armory. Sergeant Danny Fugua, Hazardous Materials Specialist for the Armory maintains the MSDS's. Personnel have not received Hazard Communication (HAZCOM) training as required by OSHA.

c) The Supply room house an Arms and T/A/50 room, and there is a separate storage room for storage of communication equipment and night vision equipment. RADAC meters/alarms and other items with a radioactive source are stored in the communication equipment storage room with the appropriate signage posted stating "Warning Radioactive Hazard". Personnel stated that accountability and issuing of weapons is only performed in the Arms room. Personnel stated there are no weapons repair performed in this room. Personnel was informed regarding the proper hygiene after handling weapons and the potential risk of weapon repair in non ventilated areas. Personnel stated there is no

6. **Recommendations:**
- a) Contact the Construction and Facility Management Office (CW2) [Redacted] Environmental Protection Specialist, St. Augustine, Florida review the lead wipe sample results of facility to determine if range was properly decontaminated and recommend any other corrective action. The results (5,950ug/ft2) indicated a high exposure over the allowable limit (reference g). Due to the over exposure lead wipes results from the old indoor firing range (5,950 mg/ft2), it is recommended that the walls and floor be wet mopped with an industrial cleaner using tri-phosphates. Also, clean any items stored that may be used on a daily basis.
 - b) Continue updating Hazardous Chemicals inventory with current MSDS. All chemicals must have an index where it includes not only the nomenclature and MSDS availability but also the quantity, national stock number and type of storage container. The need for Hazard Communication (HAZCOM) Training should be addressed with the Hazardous Materials Specialist. A sample HAZCOM SOP and HAZCOM listing was provided at the time of the survey to Sgt. [Redacted] Non-Responsive
 - c) Inventory controls for POL materials should be in place. An inventory of the chemicals in the POL storage room should be conducted. Ensure all chemicals known to be hazardous have a MSDS and are included on the chemical inventory. Dispose of all excess POLs known to be hazardous chemicals through the local environmental office or contact the Florida Safety and Health office for technical assistance.

- d) The Drill Hall is used for military drills. This area was visually inspected and no violations were noted.
- e) POLs are stored in a room located outside the rear exit of the Drill Hall.
- f) The mess hall is currently under renovation. Asbestos samples were taken from this area. Personnel stated there was recently a new ceiling and roof installed. There was a sign posted by the renovation contractor stating entire area was under abatement and renovation. See Enclosure 3 for results. There was no fibrous asbestos noted in this area.
- g) The boiler room is located next to the ladies restroom and visually inspected. Asbestos samples were taken in the boiler room. No fibrous asbestos was noted in the boiler room.
- h) There are 40 tactical vehicles stored on 3 acres at the rear of facility. There is nominal maintenance performed on these vehicles. All vehicle maintenance is performed at OMS.

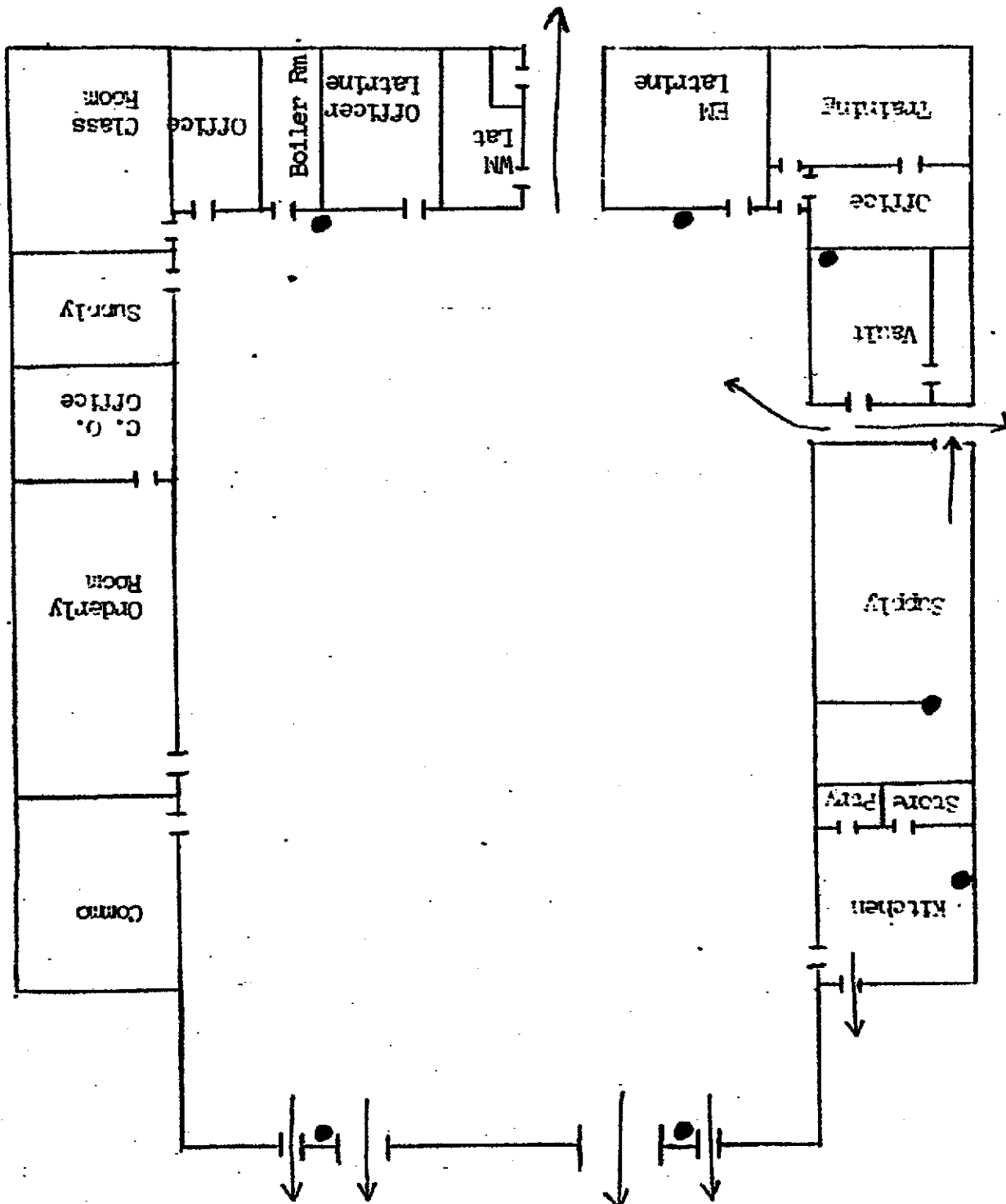
7. **Technical Assistance.** For technical assistance regarding information found in this report please contact [Redacted] 326-0262.

- Enclosures
1. Building Diagram
 2. Photos of Deactivated Range
 3. Laboratory Results
 4. Facility Photographs
 5. HHM
 6. Listing of personnel

CF: Florida Army National Guard
St. Francis Barracks
Occupational Health Office
ATTN: MAJ [Redacted]
82 Marine Street
St. Augustine, Florida 32084

[Redacted]
Non-Responsive
Industrial Hygienist

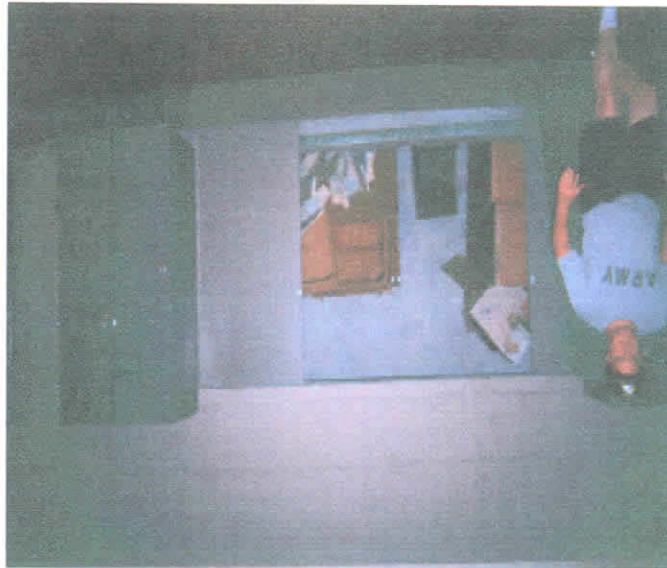
ENCLOSURE 1



EVACUATION PLAN AND LOCATION OF FIRE EXTINGUISHERS
 ● Shows location of fire extinguishers
 ↓ Shows all exits to outside

ENCLOSURE 2

Panel doors removed from entrance to deactivated range pit



Entrance to deactivated range pit



Right wall cinder block of range pit



Ceiling of deactivated range pit



Floor of deactivated range pit



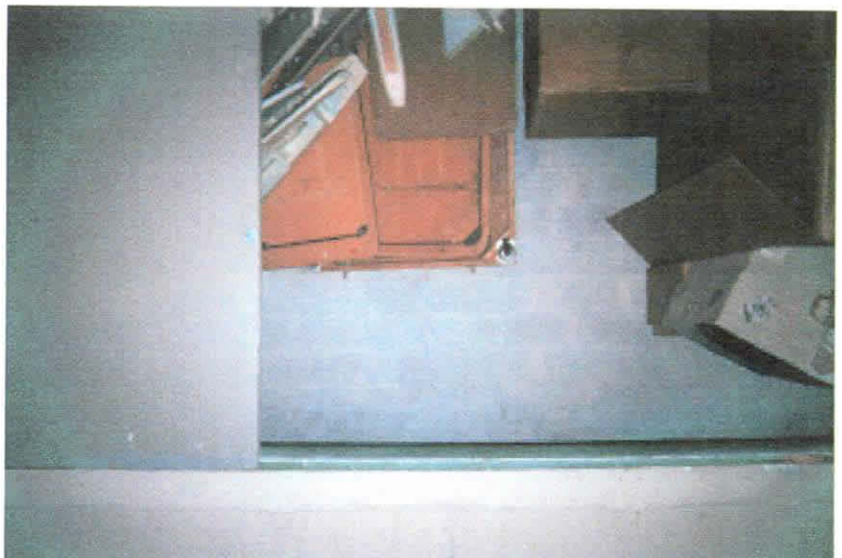
Outside rear of deactivated range pit



Floor and bottom front wall
of deactivated range pit




Rear wall of deactivated range pit



ENCLOSURE 3

Lab Sample #	Client Sample ID	Sample Supply	Collected
M0206042-01	265ADA-01	Other	6/1/02
M0206042-02	265ADA-02	Other	6/1/02
M0206042-03	265ADA-03	Other	6/1/02
M0206042-04	265ADA-04	Other	6/1/02
M0206042-05	265ADA-05	Other	6/1/02
M0206042-06	265ADA-06	Other	6/1/02
M0206042-07	Blank	Other	6/1/02

Sample Identification

Respectively Submitted:

 Hygeia Laboratories, Inc.
 Non-Responsive

Non-Responsive

Reviewed By:

1. The sample holding times were met for all analyses.
2. Where applicable, results & reporting limits are based on wet weight.
3. The temperature of the sample cooler as received by the laboratory was at room temperature.

Case Narrative

Client Name: Aiken Global Environmental Services, LLC
 Address: 3475 N. Desert Drive
 Building 7
 Suite 100
 Atlanta, GA 30344
 Project Name: None
 Project ID: None
 Receipt Date: 6/5/2002

Report Date: 6/10/02 1 of 3

M0206042

Lab Project No.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-0299 - (770) 514-6933, FAX (770) 514-6966

HYGEIA LABORATORIES, INC.



Total Lead by Flame AA									
Matrix: Wipe									
Lab Sample #: M0206042-01									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-01									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
180									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-02									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-02									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
180									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-03									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-03									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
180									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-04									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-04									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
180									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-05									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-05									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
180									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-06									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: 265ADA-06									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: ug/l2									
7439-92-1									
BRL									
360									
Total Lead									
Matrix: Wipe									
Lab Sample #: M0206042-07									
Analysis Date: 6/7/2002									
Prep Date: 6/7/2002									
Client ID: Blank									
CAS #									
Result									
Report Limit									
Flag Code									
Method #: EPA_7420A(MOD)									
Units: Total ug									
20									
Total Lead									

2 of 3

Report Date: 6/10/02

M0206042

Lab Project No.

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American Association for Laboratory Accreditation, A21 A - No. 330.01;
American Industrial Hygiene Association, A111A - 1st ID 100649; NCIAC - State of Florida D011, No. 157257

Accreditations

Alabama - Lab ID 40910, Arkansas - No. 211 0208; Delaware - GA040; Georgia - No. 801; Indiana - Lab ID C-GA-01
Kentucky - Lab ID 90053, LST - No. 0005; Louisiana - No. 293; Massachusetts No. M - (A040); North Carolina - No. 409
Rhode Island, License No. 245; South Carolina - No. 98012001; Tennessee - Lab ID 02837; Virginia - Lab ID 00024
South Carolina - No. 98012, Tennessee - (Lab ID) 02837 (FW), UTI Program, Virginia - Lab ID 0024

Certifications

- Results relate only to the samples tested as received (See Chain-of-Custody).
- BRL = "Below Reporting Limit"
- RL = "Reporting Limit"
- E = "Estimated Result"
- Dates are presented in the format "month/day/year"

NOTES

Report Date: 6/10/02 3 of 3

M0206042

Lab Project No.

Bulk Asbestos Worksheet

HYGELA Laboratories Inc.

1300 Williams Drive, Marietta, GA 30066

Page 1 of 2

Project #:	Project Name:	Anal	Non-Responsible	Date:																						
1300 Williams Drive, Marietta, GA 30066	Aiken Global Env.			6/5/02																						
Sample ID.	Client Sample ID.	Homogeneity	Texture	Color	Estimated % Asbestos	Morphology	Extinction Angle	Sign of Elongation	Birefringence	Transmitted Color	Pleochroism	R.I. Parallel	R.I. Perpendicular	D.S. Parallel	D.S. Perpendicular	Chrysotile	Amosite (Asbest)	(Other)	Cellulose	Glass Fibers	Synthetic Fibers	(Other)	Perlite	Vermiculite	Blends/Filler	(Other)
	265ADA - BR	no	fibrous	tan	tan														W							15
	265-ADA - MB	no	fibrous	tan	tan														W							6
	BN265 - ADA - LIBRARY	no	canal	tan	tan																					96
	BN-265 - ADA - BR	no	fibrous	tan	tan														W							40
	BN-116 - MB	yes	fibrous	tan	tan														I							15

File → 4% Chry. Mastig → 8% Chry

It is required that at least one optical property be recorded for non-asbestos fibers, which distinguishes them from asbestos:
M = Morphology I = Isotropic H = Melts when heated R > = RI is too high R < = RI is too low B = Birefringence A = Soluble in acid C = color
HYGELA Laboratories Inc. 1300 Williams Drive, Marietta, GA 30066 (Phone: (770) 427-9456 / Fax: (770) 427-1897)

ENCLOSURE 4

Boiler Room (bulk asbestos samples taken)



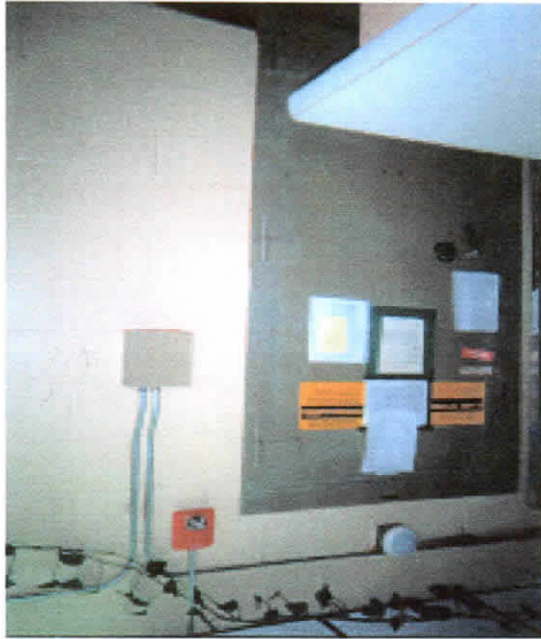
Motor pool



Ceiling of mess hall



Arms Room



Supply room



Commo storage



POL Storage



ENCLOSURE 5

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

PRIVACY ACT STATEMENT

SECTION 6: COMMENTS

SECTION 5: PERSONNEL DATASECTION 4: HAZARD INVENTORY DATA

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HHIM REPORT/COMMENT SECTION:

ENCLOSURE 6

Enclosure 6
Btry B/ 1-265th ADA
Personnel Roster

Personnel	SSN	Job/MOS	Sex	Civ/Mil
Non-Responsive				
		14M	M	M
		92Y	M	M
		00E	M	M

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

13 February 2002

MEMORANDUM FOR The Florida Army National Guard, ATTN: CPT. [Non-Responsive]
Commander, Company C, Detachment 1, 3rd Battalion, 124th Infantry, 435 North 9th
Street, DeFuniak Springs, Florida 32433-1733

SUBJECT: Industrial Hygiene Survey of the DeFuniak National Guard Armory,
DeFuniak Springs, Florida .

1. References.

- a. Report submitted 23 December 2001, Industrial Hygiene Survey, Minckler and Associates.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a Service Contract was put together to conduct Health Hazard Information module (HHIM) Field surveys and IH surveys at the Florida National Guard Armories.

- b. Mr. [Non-Responsive] of Minckler and Associates conducted the survey.

3. Findings. All IIIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (II) services where needed to complete the recommendations.

b. Use the report to help in correcting all deficiencies noted by the contractor.

c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

d. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR **Non-Responsive** COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: NBG-AVN-SH

Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

23 December 2001

MEMORANDUM FOR: Florida Army National Guard, ATTN: CPT **Non-Responsive** Commander,
Company C, Detachment 1, 3rd Battalion, 124th Infantry, 435 North 9th Street, DeFuniak Springs,
Florida 32433-1733

SUBJECT: Industrial Hygiene Consultation and Health Hazard Information Module (HHIM)
Survey, Army National Guard, Defuniak Springs, Florida

1. REFERENCES:

- a) Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b) Army Regulation (AR) 40-5, 15 October 1990, Medical Service, Preventive.
- c) AR 11-34, 15 February 1990, The Army Respiratory Program.
- d) AR 385-10, 23 May 1988, Army Safety Program.
- e) FC-Reg. 385-2, 1 July 1999, Ionizing and Nonionizing Radiation Protection Program
- f) Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g) Technical Bulletin Medical (TB MED) 503, 1 February 1985, The Army Industrial Hygiene Program.
- h) Technical Bulletin Medical (TB MED) 530, 1 January 1991, Food Service Sanitation
- i) National Guard Regulation (NGR) 385-10, 20 December 1989, Army National Guard Safety and Occupational Health Program.
- j) Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- k) IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.
- l) National Electrical Code Handbook Eighth Edition, 1999

2. BACKGROUND: At the request of Mr. **Non-Responsive** National Guard Bureau Regional Industrial Hygienist, Atlanta, Georgia, an Industrial Hygiene Consultation and Health Hazard Information Module Field Survey was performed at Company C, Detachment 1, 3rd Battalion, 124th Infantry, Army National Guard Armory, Defuniak Springs, Florida on December 3, 2001 (See appendix 1, photo 1). The purpose of the survey was to perform noise surveys, ventilation surveys, Illuminations surveys, and complete HHIM field survey forms on all industrial operations at the facility (See encl. 1 for completed HHIM Survey forms).

3. **INSTRUMENTATION:** The following survey instrumentation was either provided by the National Guard Bureau or the contractor and was used to obtain noise, ventilation, minor electrical and illumination measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

- a) Sper Scientific 840021, Light Meter, S/N: 02997, calibrated January 1, 2000
- b) Sper Scientific 840020, Light Meter, S/N: 025432, calibrated
- c) Bruel & Kjaer, Type 2234, Noise Analyzer, calibrated June 27, 2001
- d) Bruel & Kjaer, Type 4231, Calibrator, calibrated June 27, 2001
- e) TSI Model 8360 (Veloci Calc), Air Velocity Meter, S/N: 408077 calibrated November 16, 2000.
- f) 61-051 Circuit Tester

4. **Findings:**

- a) **Company C, Detachment 1, 3rd Battalion, 124th Infantry:**
 - i) Material Safety Data Sheets (MSDS) were on file and readily available on all chemicals and hazards used in the facility maintenance shop. A chemical inventory sheet was sent to the facility coordinator. All employees must be initially trained in the Federal Hazardous Communication Program IAW 1910.1200 (See incl. 2 for a listing of the hazardous chemicals/materials at the section).
 - ii) One AGR (Active Guard Regular) personnel and one technician were assigned to the detachment. The AGR are paid through the federal government; however, they work for the governor. Thirty-six troops train once a month at the facility. Under 40 physicals were conducted every 5 years and over 40 physicals are conducted every three years at MacDill or Blanding Air Force Bases or a mobile medical unit (Det 3) in Orlando. The weapons and NBC masks were stored at the armory in Chipley. 2 1/2 tons were stored on the facility grounds.
 - iii) Drill Hall: The hall was rented out to tool shows, community events and other activities (See appendix 1, photo 2). An old indoor firing range had been renovated and thoroughly cleaned out of any lead residue. Also, metal deflectors, heat ceiling tiles and baffles had been removed from the range per conversation with the facility manager. Three lead sample wipes had been taken in the old indoor firing range. The results were within the standards of 100 micrograms/SQ FT (See incl.3 for results). Also, a paint chip sample for lead was taken off the wall next to the indoor firing range. The results were within the Florida State standards of 0.5 % (See incl. 3 for results). The old indoor range was converted into a storage area (See appendix 1, photo 2). Four new ceiling gas heaters had recently been installed. Illumination levels range from 31 to 79 FC (foot-candles). Eight light covers were missing and two long fluorescent tubes were out. Also, five, 1500 watt lamps were burned out. The local fire department helps replace the lights. Three air supply units and two general mechanical exhaust vents were located on the west-side wall.

- iv) Supply Room: A ceiling asbestos sample was taken (See appendix 2, photo1) near an opening. No asbestos was detected (See encl.3 for results).
- v) The classroom next to the drill hall had illumination levels ranging from 54-175 FC's.
- vi) Kitchen: The gas stove was turned off, due to possible gas leak (appendix 2, photo 2). The utility company already checked the gas lines. Fluorescent tubes were burned out.
- vii) Due to the low noise levels (administrative areas) there was no requirement for a Hearing Conservation Program. Monthly drill soldiers (motor pool) had earplugs and earmuffs available for use.
- viii) A general noise evaluation survey is attached as encl. 4.
- ix) A listing of DeFuniak Armory personnel is shown in encl. 5.
- x) A design drawing of the building is attached as encl. 6.
- xi) A Sample HAZCOM SOP is attached as encl. 7.

5. ILLUMINATION SURVEY RESULTS:

a. Illumination Levels: The following additional illumination level readings were taken during the survey and are reported below in foot candles (FC's).

<u>AREA/LOCATION</u>	<u>FOOT CANDLES (FC)</u>
Drill Hall	31-79
Offices	25-180
Administration Office	56-110
Classroom	53-187
Supply Office	28-50
Storage Closet	9-26
Kitchen	6-52
Cook's Paper Work Room	4-5
Women's Restroom	6-7
Men's Restroom	10-57

As indicated in the IES Lighting Handbook, Application Volume 1987, Offices: 50-100 FC's, Supply and Publication Areas: 20-50 FC's, Auditorium 10-20 FC's, Restroom: 5-10 FC's, Classrooms: 50-100 FC's, Kitchen: 20-50 FC's, FC's, Library: 50-100 FC's, Storage Rooms: 10-20 FC's, Mail Room: 20-50 FC's.

6. Recommendations:

- a) All employees need to be trained in the Federal Hazardous Communication Program. MSDS's from the motor pool and armory must be centrally located for easy access. An updated HAZCOM SOP is included in the report (See encl. 7). All chemicals must have an index where it includes not only the nomenclature and MSDS availability but also the quantity, national stock number and type of container (See encl.8).
- b) Submit a work order to replace the light covers, fluorescent tubes and large ceiling lamps in the drill hall. Ensure that all light fixtures and covers are routinely maintained and cleaned.
- c) Submit a work order to have the fluorescent light fixed in the cook's paper work room and increase the illumination levels in the office supply room to at least 20 FC's.
- d) Submit a work order to have the gas stove fixed.

7. TECHNICAL ASSISTANCE:

POC for further assistance concerning this evaluation is

Non-Responsive

Non-Responsive

Industrial Hygiene Technician

CF:

Florida Army National Guard
St. Francis Barracks
Occupational Health Office ATTN: MAJ
82 Marine St.
St. Augustine, Florida 32084

Non-Responsive

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

*SEE PRIVACY ACT STATEMENT ON REVERSE
(For use of this form, see FOIEM User's Instructions.)

SECTION 1.

DEMOGRAPHIC DATA

1. ARLC 12000 2. INSTALLATION FL ARNG 3. BLDG/RM NUMBER DeFuniak Armory
4. LOCATION/CODE AA 5. OPERATION/CODE ADOI 6. DESCRIPTION Administrative
SUPPORT SUCH AS PERSONNEL AND SUPPLIES WERE CONDUCTED ON A LIMITED
BASIS.
7. MACOM/CODE NG 8. SUBMACOM/CODE XX 9. SUPERVISOR S6T **Non-**
10. TELEPHONE/AUTOVON NUMBER (850) 89218095 11. RAC Non-
12. NO CIV(S) 1 13. NO MIL 1 14. NO CONTRACTOR(S) 1 15. FREQUENCY (Hrs Per Day) 9 HRS/DY
16. NO LOC(S) 1 17. NO OTHER 1

SECTION 2.

IH STAFFING DATA

18. LAB HOODS 1 19. VAPOR DECREASERS 1 20. MAINTENANCE BAYS 1 21. SPRAY BOOTHS 1
22. OPEN SURFACE TANKS 1 23. VENTILATION UNITS 1

SECTION 3.

SURVEY DATA

24. SURVEY DATE 3 Dec 200125. EVALUATOR (INITIALS) Non-
Responsiv

26. CONTROLS PRESENT	27. EVALUATION	28. UNIT CODE	29. CONTROLS REQUIRED	30. STATUS
OTH (OFFICES)	57-185 FC ADEQUATE	FTC	50 FC (50-100 FC nominal)	ACCOM
OTH (Drill Hall)	31-79 FC ADEQUATE	FTC	20 FC (20-50 FC nominal)	ACCOM
OTH (CLASSROOM)	54-188 FC ADEQUATE	FTC	50 FC (50-100 FC nominal)	ACCOM
OTH (Kitchen)	14-52 FC ADEQUATE	FTC	20 FC (20-50 FC nominal)	ACCOM
GMV		GMV		

31. PERSONAL PROTECTIVE EQUIPMENT (N-REQUIRED; A-AVAILABLE)

32. RESPIRATOR

DISPOSABLE
1/2 FACE AIR PURIFYING
3/4 FACE AIR PURIFYING
FULL FACE AIR PURIFYING
POWERED AIR PURIFYING
AIRLINE
SELF-CONTAINED
ABRASIVE BLASTING HOOD

MANUFACTURER

NIOSH TC NO

R/A

33. GLOVES	R/A	34. EYES/FACE	R/A	35. HEARING	R/A	36. BODY	R/A	37. HEAD/FOOT	R/A
ACID	/	CHEMICAL/SPLASH	/	MUFFS	/	APRONS	/	HARD HATS	/
OIL	/	SAFETY/IMPACT	/	EARPLUGS	X/X	COVERALLS	/	IMPERMEABLE BOOTS	/
SOLVENTS	/	CHEMICAL/SAFETY	/	CANAL CAPS	/	FULL BODY SUIT	/	SAFETY CONDUCT SHOES	/
HOT SURFACES	/	FULL FACE SHIELD	/	HELMETS	/	SAFETY BELT/HARNES	/	SAFETY/NONCONDUCTIVE SHOES	/
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/					BDM	X/X		

SECTION 4.

HAZARD INVENTORY DATA

38. CAS CODE	39. HAZARD DESCRIPTION	40. PAC or EPC	41. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
7439-92-1	LEAD, INORGANIC DUSTS & FUMES, AS PB	3A	NO

Enclosure 2

Hazardous Material Inventory Sheet

Facility Name: DeFuniak Armory

Date: December 3, 2001

Storage Areas: Storage Closet

MSDS Trade Name Nomenclature

Yes	UC-758 ULTRA CONCENTRATED ALL PURPOSE CLEANER
Yes	UC-215 BATH RENOVATOR-ULTRA CHEMICAL COMPANY
Yes	LIQUID ALIVE BACTERIAL CLEANER
Yes	NDC 101323- STATE INDUSTRIAL COMPANY
Yes	HANDS ON-STATE CHEM. MANUF. CO.
Yes	CLEAN N FRESH-CARROLL COMPANY
Yes	PROLINE CITRUS CLEANER
Yes	CRYSTAL URINAL BLOCKS
	REFRESH (SPRAY ON FLOOR TO MAKE IT SMELL BETTER)
	TILE-NU (CLEANING TILES IN LATRINES)
	GERM-AID (PORCELAIN CLEANER-URINALS)
	IT'S ALIVE (BACTERIAL CLEANER)
	BLEACH
	JUGGERNAUT (FLOOR STRIPPER)
	LEMON OIL FURNISHER POLISH

Enclosure 3

GENERAL AREA EXPOSURE MONITORING RESULTS

Location	Material Sampled	Results	Permissible Std.
Indoor Firing Range (1A)	Lead	< = 17 ug / SQ FT	100 ug / SQ FT
Indoor Firing Range (2B)	Lead	< = 17 ug / SQ FT	100 ug / SQ FT
Indoor Firing Range (3C)	Lead	55 ug / SQ FT	100 ug / SQ FT
Drill Hall Wall	Lead in Paint Chips	0.02 %	0.5 %
Supply Room	Asbestos in Ceiling Material	ND	

01/10/2002 16:06 WOHL OFFICE MDSN WI -> 815097574846

NO. 050 0001

**Wisconsin Occupational
Health Laboratory**Mail:
P.O. Box 7996
Madison, WI 53707-7996
Phone: (800) 446-0403Packages:
2601 Agriculture Dr.
Madison, WI 53718
Fax: (608) 224-6213

Wisconsin State Laboratory of Hygiene

University of Wisconsin

January 10, 2002

Non-ResponsiveMINCKLER ASSOCIATES
1503 ZAIGER DR
COLORADO SPRINGS CO 80915-2240

Company #: 6776

DEFUNIAKSPRINGSARMO

The results for the samples received by the lab on 01/02/02
are as follows:

Lab#	Field#	%	ug/wipe	Analyte
931595	TLM2001101	0.02		Lead

Lab#	Field#	Value	Unit	Analyte
931596	1A	<=17	ug/wipe	Lead
931597	2B	<=17	ug/wipe	Lead
931598	3C	55	ug/wipe	Lead

Report contains 1 page(s).

If you have any questions about these results, please call the lab at
(800) 446-0403**Non-Responsive**_____
_____, Chemist Supervisor

01/10/2002

16:06

WOHL OFFICE MDSN WI → 815097574846

NO.050 D007

BULK SAMPLE DATA				
For use of this form see USAEBA TG 16; the proponent is ESHB-LO.				
Return Address (complete address including Zip Code) Non-Responsive 2000 Ziegler Dr Colorado Springs, CO 80915-2340			Point of Contact (name/AUTOFON) Non-Responsive (119) 570-9639	
Sampled Installation <u>DeFuria Springs Armory, Florida</u>		Project Number		ARLOS <u>12000</u>
Samples Collected By Non-Responsive		Date Collected <u>Dec 19, 2001</u>	Date Shipped <u>Dec 26, 2001</u>	
Description of Operation <u>LEAD WIPE SAMPLING OF Inactive Indoor Firing Range</u>			Location (ALOG/AREA) <u>old Indoor Firing Range</u>	
Associated Complaints (be specific) <u>NONE</u>				
Associated Air Samples If yes, list sample numbers <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Label Information				
Trade Name		NSN	Manufacturer	
Address			MSDS Attached <input type="checkbox"/> Yes <input type="checkbox"/> No	
Analysis Desired <u>MISCELLANEOUS</u>				
Lab Use Only	Sample No.	Constituents	Results	Remarks
931596	1 (A)	left wall-indoor firing range		
931597	2 (B)	center wall-indoor firing range		
931598	3 (C)	right wall-indoor firing range		
Comments to Lab:				
Lab Use Only				
Analyst (initials)		Reviewed By (initials)		Date Received
Procedures Performed		Comments:		

AEHA Form B-R, 1 Oct 84

Replaces AEHA Form B, 1 Oct 80 which is obsolete.

M9731
bulk

JAN 2 - RECD



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Wisconsin Occupational
Health Laboratory

Mail:
P.O. Box 7996
Madison, WI 53707-7996
Phone: (800) 446-0403

Packages:
2601 Agriculture Dr.
Madison, WI 53718
Fax: (608) 224-6213

Wisconsin State Laboratory of Hygiene

University of Wisconsin

January 8, 2002

Page 1 of 1

Non-Responsive

MINCKLER ASSOCIATES
1503 ZAIGER DR
COLORADO SPRINGS CO 80915-2240

Company #: 6776

DEFUNIAKSPRINGSARMO

The results for the analyses of the Bulk Asbestos samples we received on 01/02/02 are as follows:

Lab#	Field#	Sample Description	Value	Unit	Analysis
931594	TLM2001100	BEIGE GRANULAR STRIPS	ND		Bulk Asbestos
COMMENT: CONSISTS OF 75% WOOD FIBER, WITH A MINERAL GRAIN COATING.					
ANALYSIS DATE: 1/7/02					

If you have any questions, please call the lab at (800) 446-0403

Non-Responsive

Chemist Supervisor

1-8-02
date

nvlap

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This report relates only to the items tested and shall not be used to claim product endorsement by NVLAP or any agency of the US GOV'T

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FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 367 of 1021

6776

BULK SAMPLE DATA				
For use of this form see USAEHA TG 14; the proponent is ESHB-LO.				
Return Address (complete address including Zip Code) Non-Responsive Colorado Springs, CO 80915-2240			Point of Contact (name/AUTOVON) Non-Responsive (719) 570-9659	
Sampled Installation DeFuniak Springs Armory, FL		Project Number ARLOC		12000
Samples Collected By Non-Responsive		Date Collected Dec 3, 2001		Date Shipped Dec. 26, 2001
Description of Operation Asbestos sample taken From DeFuniak Springs Armory Supply Rm			Location (BLDG/AREA) DeFuniak Springs Armory	
Associated Complaints (be specific) Ceiling near water pipe is partially crumbly				
Associated Air Samples If yes, list sample numbers <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Label Information				
Trade Name		NSN	Manufacturer	
Address		MSDS Attached <input type="checkbox"/> Yes <input type="checkbox"/> No		
Analysis Desired Asbestos				
Lab Use Only	Sample No.	Constituents	Results	Remarks
A9933	TLM 2001-100	1 inch x 1 inch taken from ceiling		
bulk	931594			
Comments to Lab:				
Lab Use Only				
Analyst (initials)		Reviewed By (initials)		Date Received
Procedures Performed		Comments:		

AEHA Form 8-R, 1 Oct 84

Replaces AEHA Form 8, 1 Oct 80 which is obsolete.

BEST AVAILABLE COPY

NOISE SURVEY (Sound Level Meter Survey)											
DATE (Year Month Day) 01 12 03				TYPE SURVEY <input checked="" type="checkbox"/> 1-INITIAL SURVEY <input type="checkbox"/> 2-RE-SURVEY <input type="checkbox"/> 3-OTHER							
SOUND LEVEL METER				MICROPHONE				CALIBRATOR			
MANUFACTURER Brüel & Kjaer				MANUFACTURER				MANUFACTURER Brüel & Kjaer			
MODEL TYPE 2236		SERIAL NO		MODEL		SERIAL NO		MODEL TYPE 2236		SERIAL NO	
LAST ELECTROACOUSTIC CALIB DATE 01 06 27				LAST ELECTROACOUSTIC CALIB DATE				LAST ELECTROACOUSTIC CALIB DATE 01 06 27			
WIND SCREEN <input type="checkbox"/> USED <input checked="" type="checkbox"/> NOT USED				MEASUREMENTS OBTAINED <input type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS							
DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) Florida Army National Guard DeFuniak Armory Company C, Detachment 1, 3 Battalion, 124th INFANTRY DeFuniak, Florida								PRIMARY SOURCE OF NOISE See item description below			
SECONDARY SOURCE OF NOISE											
SOUND LEVEL DATA					PROTECTION REQUIRED (re: dBA Level)						
LOCATION	METER ACTION	dBC	dBA	RISK ASSESSMENT CODE	NONE less than 85	PLUG OR MUFF 85-108	PLUG AND MUFF 108-118	PLUG + MUFF + TIME LIMIT greater than 118			
Drill Hall Exhaust FANS	S		78	IVC	X						
NOTES: Range of levels noted by /; i.e., 102/109. At operator work stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.											
REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.)											
Cal pre & post											
MORE DETAILED NOISE EVALUATION REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "YES", identify type evaluation needed.)											
Noise evaluation was PERFORMED AT THE SOURCE											
NAME(S) OF PERSONS IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form)											
See PERSONNEL ROSTER											
NAME, PHONE NO. AND ORGANIZATION OF SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION											
Non-Responsive [Redacted] NCOIC, Co. C, Det 1, 3 Bn, 124th INF. (850) 892-8095											
SURVEY PERFORMED BY (Last Name, First Name, MI)					HEARING CONSERVATION MONITOR (Last Name, First Name, MI)						
Non-Responsive [Redacted]					Non-Responsive [Redacted] MAJ						
Best Available Copy Form 15-0085 (FL) Issued by National Guard Bureau Page 369 of 1021											

Enclosure 5

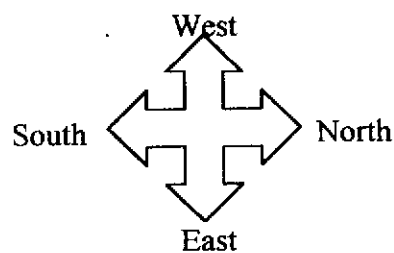
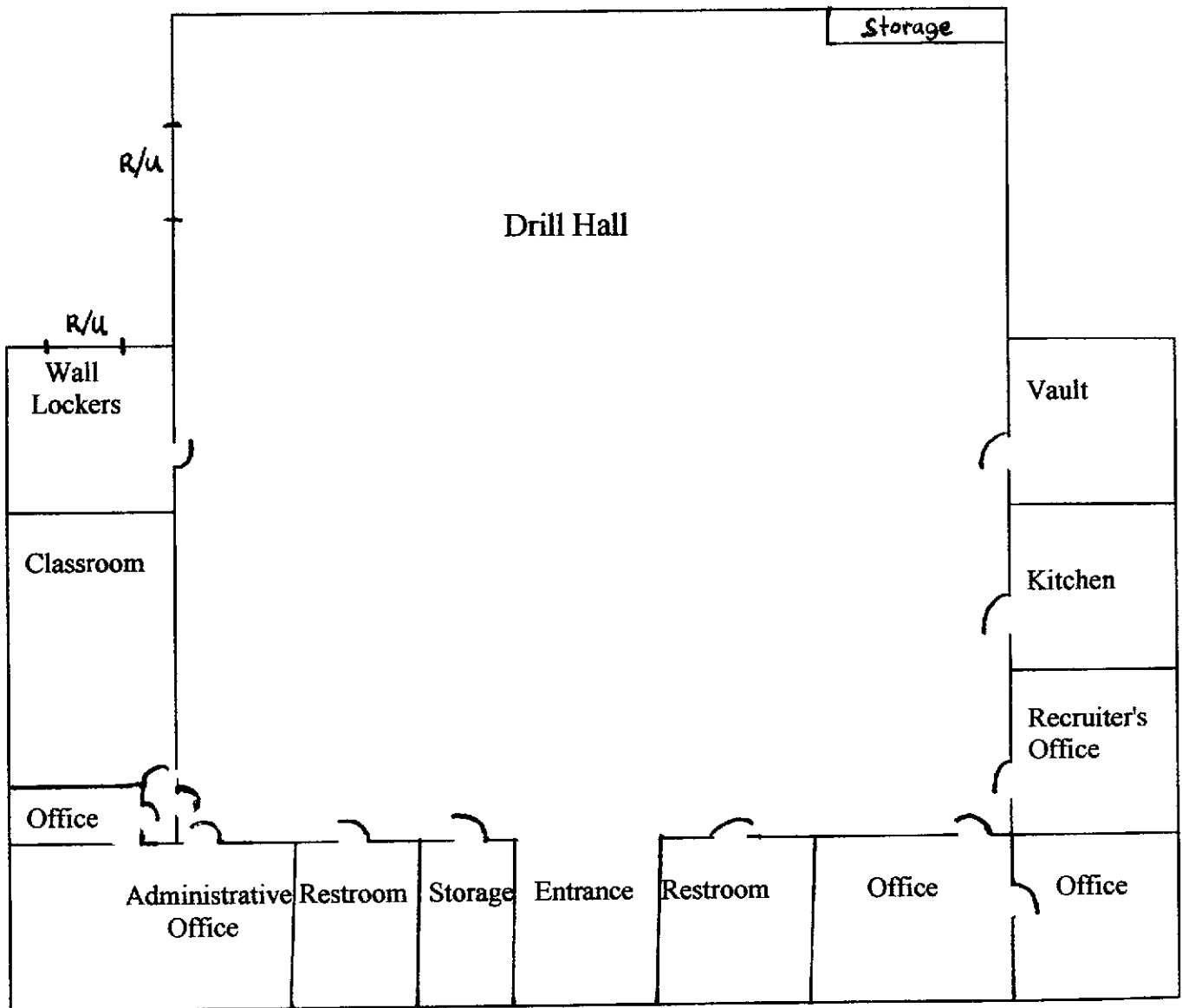
Company C, Detachment 1, 3rd Battalion, 124th Infantry
Personnel Roster

<u>Personnel</u>		<u>LAST 4 SSN</u>	<u>Rank</u>	<u>Job/Title</u>
1. Non-Responsive	(Tech)	Non-Responsive	SGT	NCOIC
2. [REDACTED]	(AGR)		SFC	Recruiter

AGR: Active Guard
Reserve

Company C, Detachment 1, 3 Bn, 124th Inf

DeFuniak Armory



Enclosure 7

HAZARD COMMUNICATION
SAMPLE WRITTEN PROGRAM

NOTE: The written program must include the specific methods that are used to achieve compliance with the requirements of the Hazard Communication Standard (29 CFR 1910.1200). The specific methods described in this sample written program are for illustrative purposes, and other effective methods may be substituted to satisfy local needs or practices.

I. General

The purpose of this instruction is to ensure that (facility name) is in compliance with the OSHA Hazard Communication Standard (HCS) 29 CFR 1910.1200.

The [occupational safety and health manager (OS&H) manager] or other technically qualified designee is the overall coordinator of the facility program acting as the representative of [senior facility official], who has overall responsibility.

In general, each employee in the facility will be appraised of the substance of the HCS, the hazardous properties of chemicals they work with, and measures to take to protect themselves from these chemicals.

II. List of Hazardous Chemicals

The [OS&H manager or designee] will maintain list of all hazardous chemicals used in the facility, and update the list as necessary. The hazardous chemical list will be updated upon receipt of hazardous chemicals at the facility. The list of hazardous chemicals is maintained at [location].

III. Material Safety Data Sheets (MSDS's)

The [OS&H manager or designee] will maintain an MSDS library on every substance on the list of hazardous chemicals in the [location]. The MSDS will consist of a fully completed OSHA Form 174 or equivalent. The [location manager or supervisor] will ensure that each [work area or shop] maintains an MSDS for hazardous materials used in that area. MSDS's will be readily available to all employees.

The [local OS&H manager or designee] is responsible for acquiring and updated MSDS's. The [local OS&H manager or designee] will review each MSDS for accuracy and completeness and will consult with the [Area/Region/Headquarters OS&H manager] if additional research is necessary. The [local OS&H manager or designee] must clear all new procurements for the facility. Whenever possible, the least hazardous substance will be procured.

IV. Contractor Employers

The [local OS&H manager or designee], upon notification from the [responsible supervisor], will advise outside contractors of any chemical hazards which may be encountered in the normal course of their work on the premises.

V. Non-Routine Tasks

[Maintenance or other supervisors] contemplating a non-routine task, e.g. boiler repair, will consult with the [local OS&H manager or designee] and will ensure that employees are informed of chemical hazards associated with the performance of these tasks and appropriate protective measures. This will be accomplished by a meeting of supervisors and the OS&H manager with affected employees before such work is begun.

VI. Additional Information

Further information on this written program, the hazard communication standard, and applicable MSDS's is available at [location/telephone number].

Date:

Storage Areas:

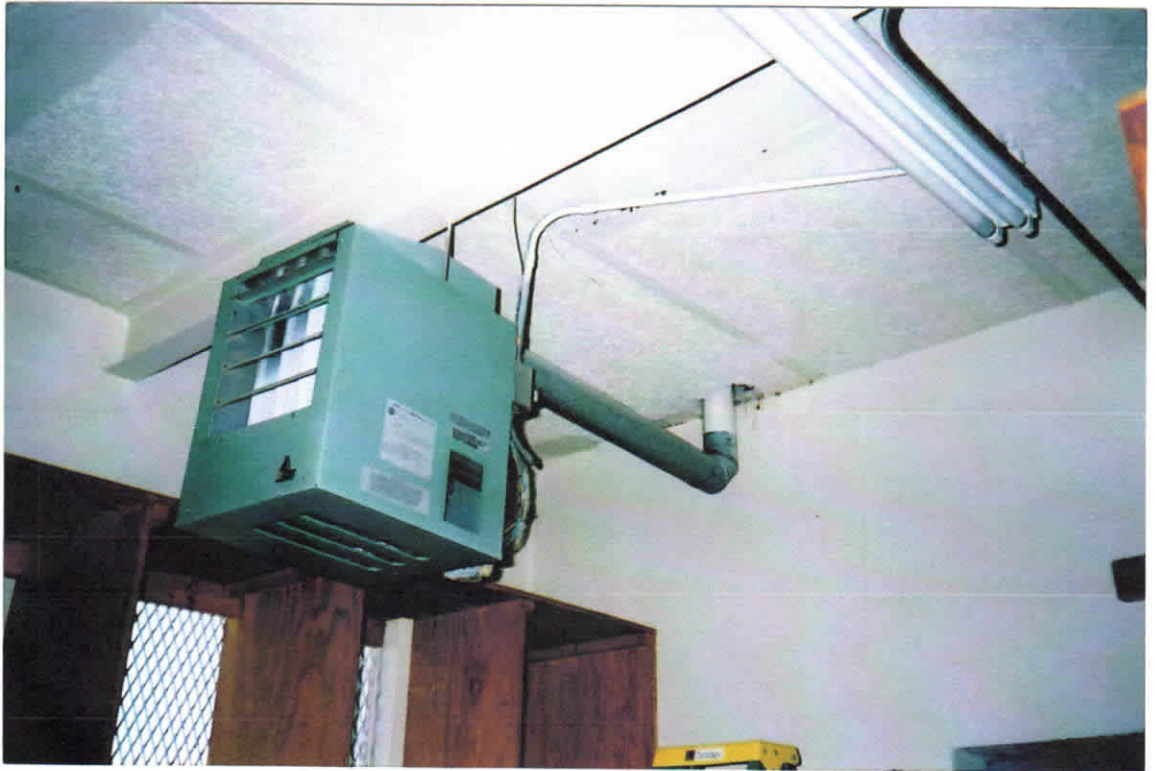


photo 2



Appendix 1, photo 1



photo 2



**INDUSTRIAL HYGIENE REGION SOUTHEAST
ARMY NATIONAL GUARD
510 AIRPORT PLAZA, SUITE 1530
COLLEGE PARK, GEORGIA 30349-6021**

NGB-AVN-SI SE

May 12, 2004

MEMORANDUM FOR: HQ 2-124th Inf Orlando, Florida

SUBJECT: Industrial Hygiene Survey of Fern Creek National Guard Armory Orlando, Florida.

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. Industrial Ventilation, 22nd, Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- i. National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- j. Title 40, Code of Federal Regulations (CFR) Part 745, Lead, Identification of Dangerous Levels of Lead: Final rule.

SUBJECT: Industrial Hygiene Survey of Fern Creek National Guard Armory, Orlando, Florida

1. **Purpose** The purpose of the survey was to perform an Industrial Hygiene Survey of the Fern Creek Armory. The Facility was visually examined and noise surveys, ventilation surveys and Illuminations surveys were conducted.
2. **Background**: At the request of The Florida Safety & Occupational Health Office, an Industrial Hygiene Consultation and Health Hazard Information Module Field Survey was performed at HQ 2-124th INF Orlando, Florida, on March 17, 2004 (See appendix 1, photo 1). Ms. Non-Responsive conducted the survey.
3. **Facility Description**: This facility currently house HHC 2-124th and C 2-124 INF. The Armory has a total of 12 full time soldiers plus 3 Recruiters. The soldiers perform administrative duties Monday through Friday between 0730 to 1700 hours one weekend per month. The Armory houses administrative areas, Supply Rooms, an Arms room and drill hall. A Recruiter office and testing site for military entry is conducted every Thursdays.
4. **Findings.**
 - i) All Material Safety Data Sheets (MSDS) were on file and readily available on chemicals and hazards used in the Armory.
 - ii) **Drill Hall**: This large area is used for both unit drill activity and gym. All weapons are cleaned outside at a cleaning station. Illumination levels were poor 42.2 FC's
 - iii) **Kitchen**: All fluorescent tubes were working. Illumination levels ranged from 58-63 FC's.
 - iv) **Supply Room**: Stored in this area are M40 Gas Masks, equipment and general office supplies. Illumination levels 34.2 FC's
 - v) **Indoor Firing Range**: There no indoor firings range. It was converted to a Classroom and distant learning/media center in 2002. Illumination levels 79-84 FC
 - vi) **Administrative Offices**: Illumination levels 47-67 FC's. Fluorescent lights are being used.
 - vii) **Weight Room**: There were broken and stain ceiling tile. Illumination levels 37 FC.

5. Table #1

Noise

Sample #	Sample Location	Results
1	Drill Hall	76.3db
2	Kitchen	65.9db
3	Supply Room	53.6
4	Weight Room	38db
5	Supply Room Office	36db
6	Classroom large	73 db
7	Classroom Small	67.7 db
8	Hallway	73db
9	Conference Room	39.2
10	Administrative Offices	43 db

6. **INSTRUMENTATION:** The following survey instrumentation was provided by the National Guard Bureau and was used to obtain noise, ventilation, and illumination measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

- ✓ Extech Instruments, 407026 Light Meter, S/N: Q009392, Calibrated July 03**
- ✓ Bruel & Kjaer, Type 2236, Noise Analyzer, S/N 1942775 Calibrated Oct 3**
- ✓ Bruel & Kjaer, Type 4231, Calibrator, S/N 1944723 Calibrated Oct 03*
- ✓ Gray Wolf Model AS-201, S/N: 02-229 calibrated Sep 03.
- ✓ Compaq iPAQ S/N 4G28DW3370M4

7. **Recommendations.**

- a. Replace all broken and stain tile all over this building
- b. Keep up the good housekeeping plus regular maintenance of the Armory, ventilation system and all other area as needed.

8. If additional information is needed about this report, please contact **Non-Responsive**
 Regional Industrial Hygienist/ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404)
 559-4174.

Non-Responsive

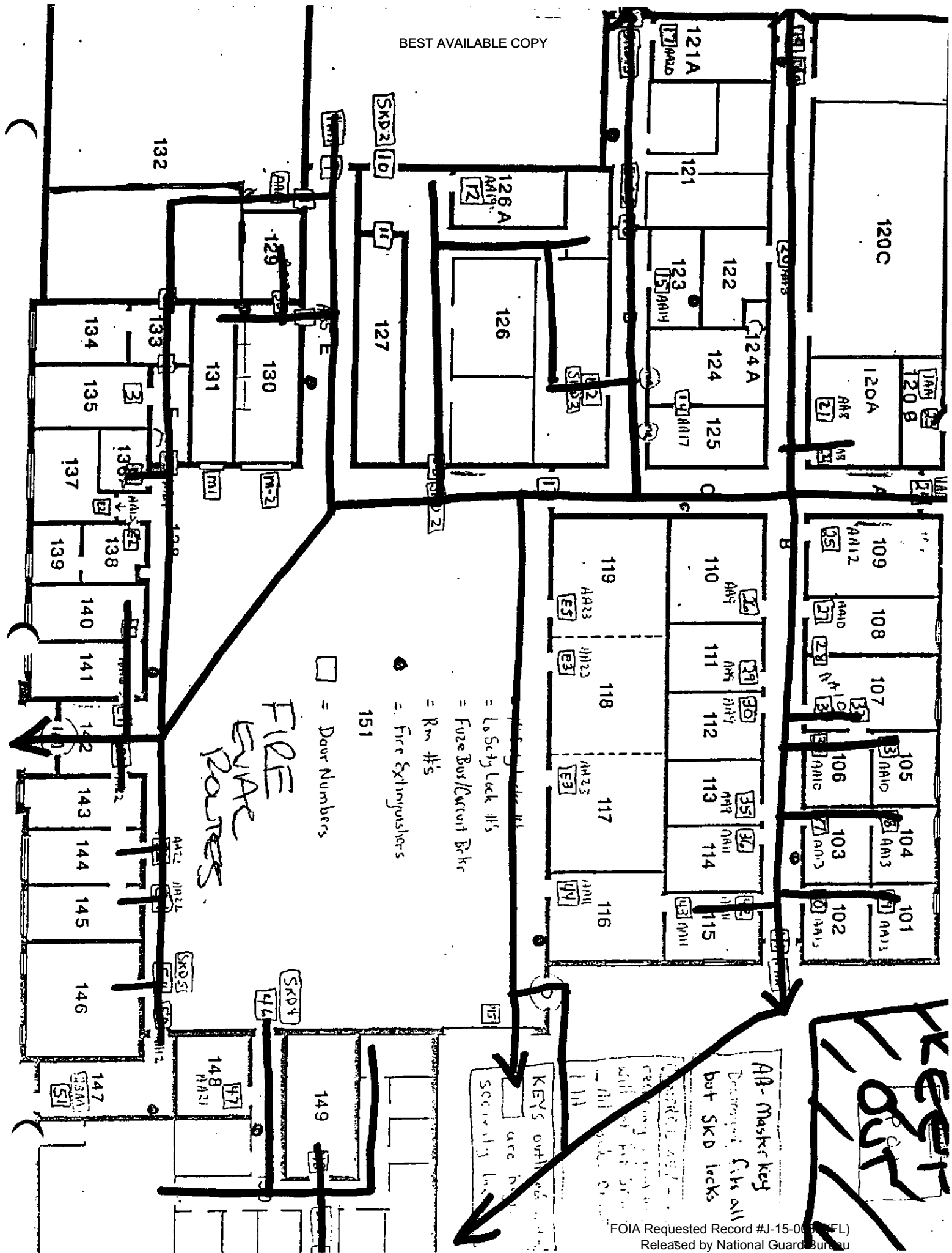
Regional Industrial Hygienist

CF: State Safety and Occupation Health Office Florida National Guard

Enclosures

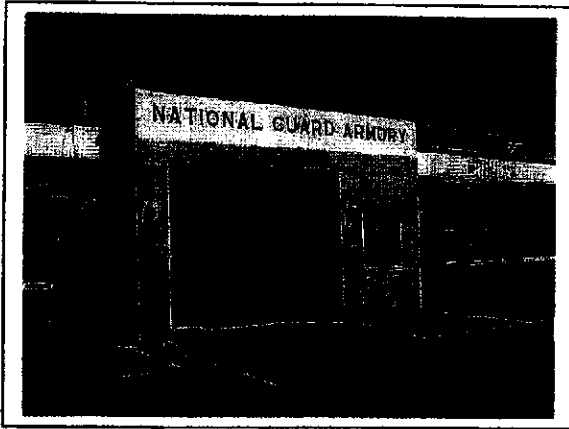
Diagram layout of Facility
Facility Photos
Wipe Sample Results
Health Hazard Inventories
Personnel List

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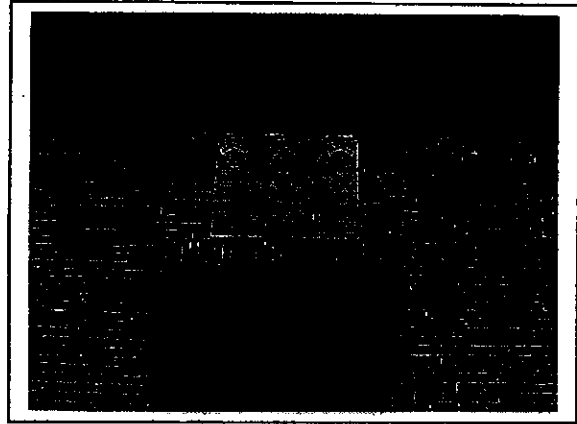


FOIA Requested Record #J-15-003 (FL)
Released by National Guard Bureau
Page 385 of 1021

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Ferm Creek Amory



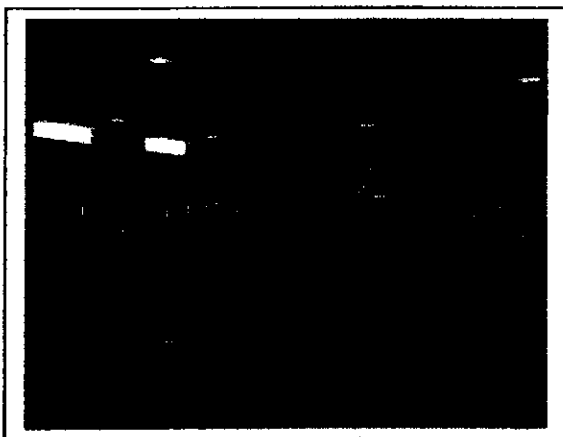
Ferm Creek Armory



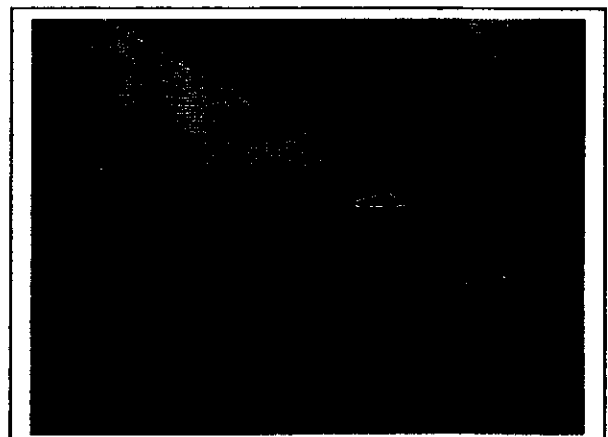
Administrative Offices



Administrative Offices



Drill Hall and Gym



Broken Ceiling Tile



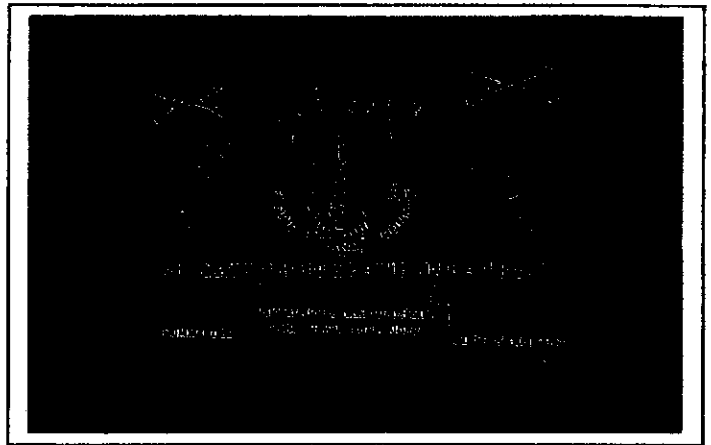
Dark Weight Room



Small Class room (Old IFR)



Distant Class Room (Old IFR)



Armory outside parking lot



Q- Huts

BEST AVAILABLE COPY

Analytical Environmental Services, Inc.**Date:** 3/31/2004**TOTAL LEAD IN WIPE SAMPLES
N7082**

CLIENT: National Guard Bureau Region-South IH
Project: Fern Creek Armory
Project No: Fern Creek Arm
PO No:

Lab Order: 0403C15
Date Received: 3/25/2004 11:25:
Matrix: Wipe
Analyst: Non-
 Recn

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403C15-001A	1	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-002A	2	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-003A	3	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-004A	4	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-005A	5	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-006A	6	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-007A	7	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-008A	8	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-009A	9	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-010A	10	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-011A	11	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-012A	12	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-013A	13	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-014A	14	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-015A	15	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004

Qualifiers:

MDL - Method Detection Limit

DF - Dilution Factor

ND - Not Detected at the Reporting Limit

Industrial Hygiene Surface Wipe Sample Sheet

Return Address **Non-Responsive** Point of Contact (name & phone)
 NGB/IH 558-11174
 510 Plaza Drive, Suite 1530 **Non-Responsive**
 College Park, GA 30349 **Non-Responsive**
 Samples Collected By **Non-Responsive**

Sampled Facility **Fern Creek Armory** City **Orlando** State **FL** Location (bldg/area)

Description of Operation Date Collected **17 Mar 04** Date Shipped **23 Mar 04**

Analysis Desired **Lead**

Sampling Data **Lead**

Lab Use Only	Sample #	Results	Remarks
	1		Large Class Room Distance Learning Center Left Side Wall
	2		Large Class Room Distance Learning Center Right Side Wall Front
	3		Large Class Room Distance Learning Center Left Side Center Wall
	4		Learning Center Right Side Middle Desk
	5		Small Classroom Lower Center Back Wall
	6		Small Classroom Center Top Back Wall
	7		Inside of Door Small Classroom
	8		Outside Door Arms Room
	9		Inside Door Arms Room
	10		Door in Arms Room Outside of Door
	11		Arms Room Weapon Rack Left
	12		Red Foot Locker for Storage

Comments to Lab:

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 395 of 1021

Analytical Environmental Services, Inc.

Date: 3/31/2004

**TOTAL LEAD IN WIPE SAMPLES
N7082**

CLIENT: National Guard Bureau Region-South IH
Project: Fern Creek Armory
Project No: Fern Creek Arm
PO No:

Lab Order: 0403C15
Date Received: 3/25/2004 11:25:
Matrix: Wipe
Analyst: Non-
 Person

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403C15-001A	1	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
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0403C15-006A	6	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-007A	7	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-008A	8	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-009A	9	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
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Qualifiers: MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

SECTION 1. DEMOGRAPHIC DATA

SECTION 2. IN STAFFING DATA

SECTION 3. SURVEY DATA

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FT	R/U
CHEMICAL/SPASH	/	EARMU CAPS	X/X	APRONS	/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	X/X	EAR PLUGS	X/X	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	X/X	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBINATION	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NON-CONDUCTIVE SHOES	/
		MUFF/EARPLUG WITH TIME/LIMIT	/	SAFETY BELT/HARNES	/		

SECTION 4. HAZARD INVENTORY DATA

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SECTION 8. COMMENTS (Add blank sheet of paper if necessary)

Released by National Guard Bureau
Page 401 of 1021

**INDUSTRIAL HYGIENE REGION SOUTHEAST
ARMY NATIONAL GUARD
510 AIRPORT PLAZA, SUITE 1530
COLLEGE PARK, GEORGIA 30349-6021**

NGB-AVN-SI SE

May 12, 2004

MEMORANDUM FOR: HQ 2-124th Inf Orlando, Florida

SUBJECT: Industrial Hygiene Survey of Fern Creek National Guard Armory Orlando, Florida.

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
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- ✓ Compaq iPAQ S/N 4G28DW3370M4

7. **Recommendations.**

- a. Replace all broken and stain tile all over this building
- b. Keep up the good housekeeping plus regular maintenance of the Armory, ventilation system and all other area as needed.

8. If additional information is needed about this report, please contact **Non-Responsive**
Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: State Safety and Occupation Health Office Florida National Guard

Enclosures

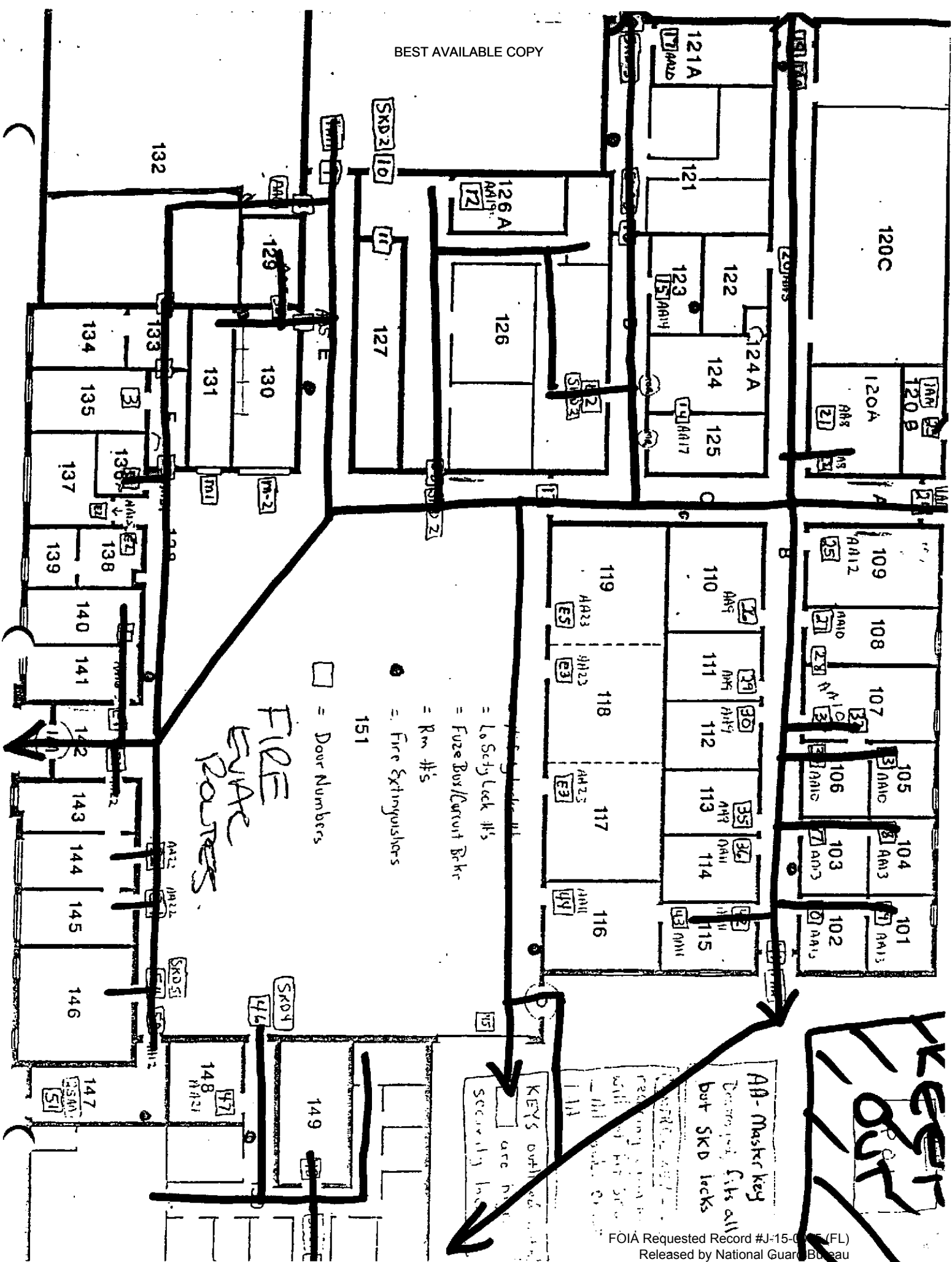
Diagram layout of Facility

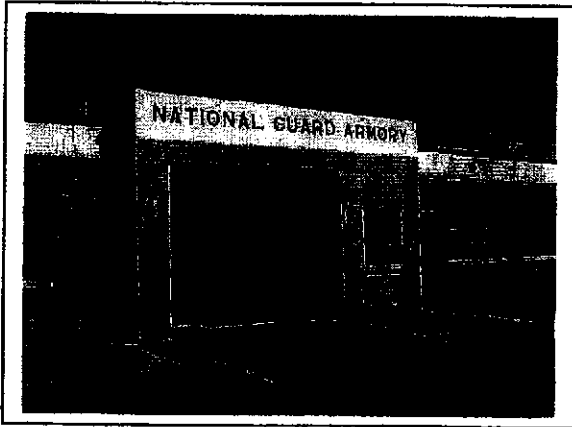
Facility Photos

Wipe Sample Results

Health Hazard Inventories

Personnel List





Ferm Creek Amory



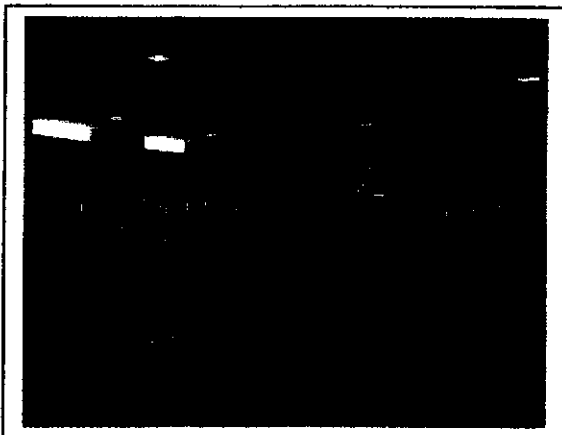
Ferm Creek Armory



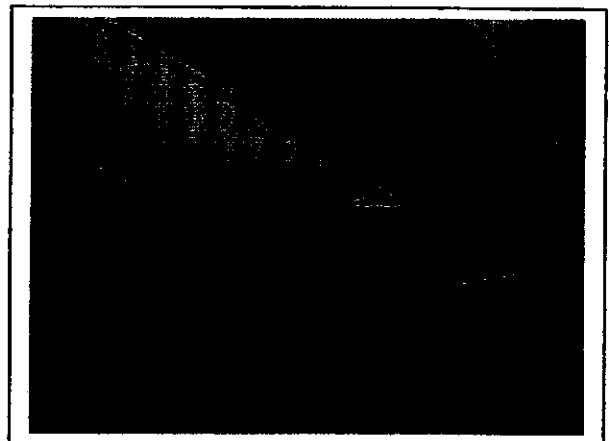
Administrative Offices



Administrative Offices

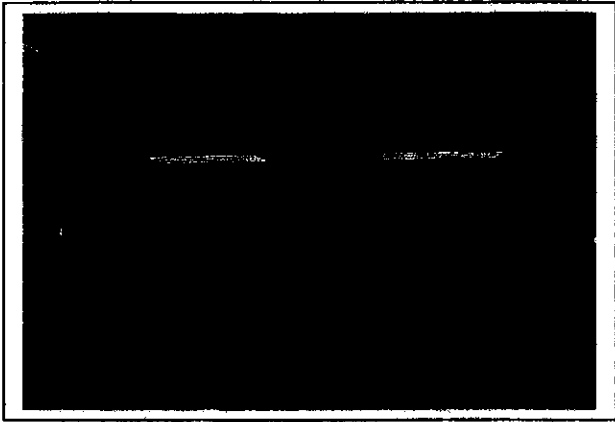


Drill Hall and Gym



Broken Ceiling Tile

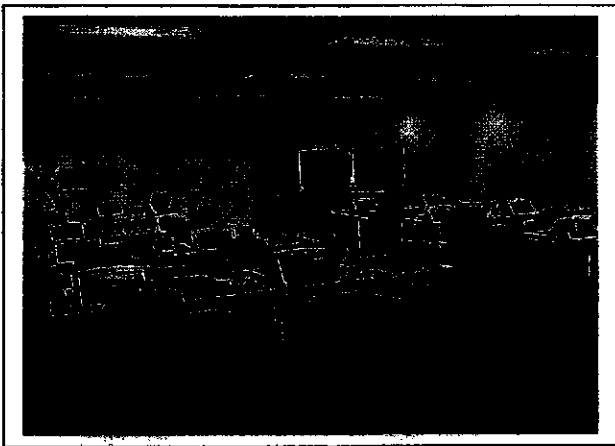
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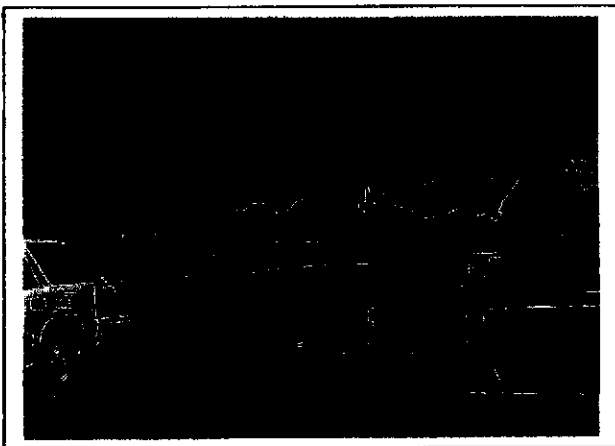
Dark Weight Room



Small Class room (Old IFR)



Distant Class Room (Old IFR)



Armory outside parking lot



Q- Huts

BEST AVAILABLE COPY

Analytical Environmental Services, Inc.

Date: 3/31/2004

**TOTAL LEAD IN WIPE SAMPLES
N7082**

CLIENT: National Guard Bureau Region-South IH
Project: Fern Creek Armory
Project No: Fern Creek Arm
PO No:

Lab Order: 0403C15
Date Received: 3/25/2004 11:25:
Matrix: Wipe
Analyst: Non-

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
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0403C15-015A	15	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004

Qualifiers: MDL - Method Detection Limit
ND - Not Detected at the Reporting Limit

DF - Dilution Factor

BEST AVAILABLE COPY

Industrial Hygiene Surface Wipe Sample Sheet

Return Address **Non-Responsive**
 NGB/IH
 510 Plaza Drive, Suite 1530
 College Park, GA 30349

Point of Contact (name & phone)
 #004 559-1174
Non-Responsive
Samples Collected By
Non-Responsive

Sampled Facility **City** **State** **Location (bldg/area)**
 Fern Creek Armory Orlando FL

Description of Operation **Date Collected** **Date Shipped**
 17 Nov 04 23 Mar 04

Analysis Desired Lead

Sampling Data Lead

Lab Use Only	Sample #	Results	Remarks
	1		Large Class Room Distance Learning Center Left Side Wall
	2		Large Class Room Distance Learning Center Right Side Wall Front
	3		Large Class Room Distance Learning Center Left Side Center Wall
	4		Learning Center Right Side Middle Desk
	5		Small Classroom Lower Center Back Wall
	6		Small Class Room Center Top Back Wall
	7		Inside of Door Small Class Room
	8		Outside Door Arms Room
	9		Inside Door Arms Room
	10		Outside Arms Room Outside of Door
	11		Arms Room Weapon Rack Loft
	12		Red Foot Locker for Storage

Comments to Lab:

Industrial Hygiene Surface Wipe Sample Sheet

Return Address

Non-Responsive

NGB/IH
510 Plaza Drive, Suite 1530
College Park, GA 30349

Point of Contact (name & phone)

#1104 550-21174/172

Non-Responsive

Samples Collected By

Non-Responsive

Sampled Facility

FERN CREEK Armory

City

Orlando

State

FL

Location (bldg/area)

Description of Operation

Date
Collected
17 Mar 04

Date Shipped

23 Mar 04

Analysis Desired

LEAD

Sampling Data

Lab Use Only

Sample #

Results

Remarks

13

RACK NEAR DOOR

14

GRAY LOCKER MIDDLE

15

BLANK

Comments to Lab:

Analytical Environmental Services, Inc.

Date: 3/31/2004

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: National Guard Bureau Region-South III
 Project: Ferm Creek Armory
 Project No: Ferm Creek Ann
 PO No:

Lab Order: 0403C15
 Date Received: 3/25/2004 11:25:
 Matrix: Wipe
 Analyst: Non-

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403C15-001A	1	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-002A	2	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-003A	3	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-004A	4	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-005A	5	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-006A	6	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-007A	7	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-008A	8	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-009A	9	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-010A	10	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-011A	11	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-012A	12	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-013A	13	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-014A	14	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-015A	15	BRL	µg, Total	2.83	1	3/17/2004	3/30/2004

Qualifiers:

MDL - Method Detection Limit

DF - Dilution Factor

ND - Not Detected at the Reporting Limit

DC 1200		INSTALLATION		FL NATIONAL Guard		BLDG/RM NO. FERN GREEK	
DESCRIPTION Administration, Training, Supply				OPERATION/CODE ADD/SAH			
UNIT/ORGANIZATION HHC 2-124 AND C 2-124							
MACOM/CODE NG		SUBMACOM/CODE XX		SUPERVISOR SFC		Non-Responsible	
TELEPHONE/AUTOVON NO. 407 897-2713/14		RAC 3		FREQUENCY (Hrs Per Day) 8 HRS/Day			
NO. CIV(S) 0		NO. MIL 12		NO. CONTRACTOR(S) 0		NO. LOC(S) 0	
						NO. OTHER 0	

LAB HOODS	6	VAPOR DEGREASERS	6	MAINTENANCE BAYS	6
SPRAY BOOTHS	6	OPEN SURFACE TANKS	6	VENTILATION UNITS	

SURVEY DATE		EVALUATOR (Initials)		Non-Responsive	
CONTROLS PRESENT		EVALUATION		UNIT CODE	
OTH (Drill Hall)	Adequate 42-50 FC	FTC	50 FTC (20-50 Normal Range)	ACCOM	
OTH (Old IFR) (Passing)	Adequate 79-84 FC	FTC	20 FTC (10-70 Normal Range)	ACCOM	
OTH (Supply Area)	Inadequate 15-34 FC	FTC	50 FTC (20-50 Normal Range)	RECOM	
OTH (Weight Room)	Inadequate 23-37 FC	FTC	50 FTC (20-50 Normal Range)	RECOM	

PPE (N = Required, U = Utilized)					
GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIRLINE			/
COLD SURFACES	/	ABRASIVE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
AGENTS	X / X	FULL FACE AIR PURIFYING			/
OIL	X / X	1/2 FACE AIR PURIFYING			/
SOLVENTS	X / X	POWERED AIR PURIFYING			/
SURGICAL GLOVES	/	1/4 FACE AIR PURIFYING			/
		SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FT	R/U
CHEMICAL/SPLASH	/	CANAL CAPS	X/X	APRONS	/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	X/X	EAR PLUGS	X/X	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	X/X	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBINATION	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NON-CONDUCTIVE SHOES	/
		MUFF/EARPLUG WITH TIME/LIMIT	/	SAFETY BELT/HARNES	/		

[illegible]

SECTION 5. PERSONNEL DATA

LAST NAME

Non-Responsive

NAME

MI

SEX

SSN

CATEGORY

R M
C M
E M
E M
S M
D M
M M
T M
C M
C M
M
M

Non-Responsive

SECTION 8. COMMENTS (Add blank sheet of paper if necessary)

PRIVACY ACT STATEMENT

Title 5 US Code, Section 552; Executive Order 9397 authorizes the use of your Social Security Number as an identification number. The purpose of this information is to identify and monitor data relating each DA civilian and military employee exposed to a hazardous workplace or operation. The use of this information is to provide histories of exposures for any given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in untimely provision of proper medical monitoring.

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FOIA Requested Record #15-0005 (FL)

Released by National Guard Bureau

Page 427 of 1021

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 22, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
[Non-Responsive] Readiness NCO, 3405 Marion Street, Fort Myers, Florida 33916.

SUBJECT: Industrial Hygiene Survey of the Fort Myers National Guard Armory, Fort Myers, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Fort Myers Armory, George Hinchliffe.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

- b. Mr. [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.
- c. **Seriously consider abating the friable Asbestos issues in the Armory.**
- d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- e. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**FORT MYERS ARMORY
3405 MARION STREET
FORT MYERS, FLORIDA 33916**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Fort Myers Armory
3405 Marion Street
Fort Myers, FL 33916

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Site Description
Scope of Work
Methodology

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B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Fort Myers Armory on 26 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 78.9 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	Detected, friable areas on drill floor	Asbestos survey conducted by independent contractor, 1996, on file
Noise Survey	No Sources identified. Noise Levels well below 85 dBA limit	No Action
Illumination Survey	2 to 76 foot-candles	Consider increasing light levels in several of the offices as per diagram
HVAC/IAQ	Poor ventilation reported, inadequate heating cooling system	Consider HVAC upgrade along with electrical upgrading
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	Complaints of allergies, sinus, etc.	Consider HVAC upgrade

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Fort Myers Armory in Fort Myers, Florida on 26 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Fort Myers Armory in Fort Myers, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 26 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses Battery B 3-265th ADA. There are three (3) full time employees. Total M-Day soldiers drilling at the facility is 100. The armory was built in 1955 and contains 10,190 square feet. The armory is a typical building of this era with an indoor firing range that was built into the wall. Firing took place on the drill floor toward the bullet trap area that is recessed into the wall. The range was not converted for any other use, but according to the lead wipe results, it has been cleaned. Refer to building layout in Appendix F.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There are several areas within the armory that has signs of asbestos in solid state or friable. An asbestos survey of the armory was completed by an independent contractor in 1996. Results of this survey are in the armory and at FMO in state headquarters. Since this report is on file, no bulk samples were taken. (See photographs of friable areas on the drill floor.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC
Non-Responsive PH# 239-332-6986.

Lead Wipe Samples: Seventeen (17) wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00FM	FIELD BLANK	UNDETECTED
04-01FM	SUPPLY ROOM, AT DOOR	5.10
04-02FM	SUPPLY ROOM, MIDDLE OF FLOOR	13.0
04-03FM	ARMS VAULT, FLOOR, INSIDE DOOR	7.57
04-04FM	ARMS VAULT, MIDDLE OF FLOOR	59.0
04-05FM	KITCHEN, TOP OF ICE MAKER	18.0
04-06FM	KITCHEN, TOP OF COOLER	6.81
04-07FM	DRILL FLOOR, NORTHEAST CORNER	UNDETECTED
04-08FM	DRILL FLOOR, CENTER OF FLOOR	UNDETECTED
04-09FM	DRILL FLOOR, NORTHWEST CORNER	UNDETECTED
04-10FM	DRILL FLOOR, SOUTHWEST CORNER	UNDETECTED
04-11FM	DRILL FLOOR, SOUTHEAST CORNER	UNDETECTED
04-12FM	IFR, LEFT SIDE WALL	78.9
04-13FM	IFR, RIGHT SIDE WALL	13.6
04-14FM	IFR, LEFT SIDE, IN FRONT OF TRAP	16.1
04-15FM	IFR, RIGHT SIDE IN FRONT OF TRAP	47.5
04-16FM	IFR, REAR WALL BEHIND BULLET STOP	UNDETECTED
04-17FM	MIDDLE EXHAUST FAN, BLADE	24.9

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

It appears, from the lead wipe results, that the indoor firing range was cleaned. No one in the Fort Myers Armory knows when the indoor firing range was cleaned or when it was last fired upon. The major concern is ensuring that children participating in the "About Face" program do not climb into the range area (See photographs of range and range opening behind the stage). There are no areas within the armory that exceeds the lead abatement action level.

Asbestos Suspect Building Material There are signs of solid and friable asbestos in the Fort Myers Armory. The drill floor has friable asbestos near the door thresholds and in areas throughout the surface. Several tiles have been replaced with a newer and most probably not an asbestos content. Again, the concern here is centered around the "About Face" program and other usage of the armory by the civilian sector and our full time and M-Day soldiers.

Illumination Survey Lighting levels throughout the Fort Myers armory ranged from 2 foot-candles to 76 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	19 to 76
Supply	29 to 31
Office Areas	10 to 46
Classrooms	40 to 48
Mechanical Rooms	5 to 15
Kitchen	24 to 46

There are several areas within the Fort Myers Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1.

There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination. Consider increasing the illumination in the office areas.

Noise Survey The Fort Myers Armory is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling units. The system is old and is in need of replacement or upgrading. Employees complain of allergies, sinus problems, and building being too hot. Also recommend an electrical update to the Fort Myers armory.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Fort Myers Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise program to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Address the friable asbestos within the Fort Myers armory. This should be a priority item to protect not only our soldiers but also the general public that utilizes the armory for their functions.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels where recommended and as depicted on the illumination survey diagram.
4. Ensure the indoor firing range trap area is sealed off and no child can enter the area.
5. Consider an electrical and heating and air conditioning upgrade or replacement for the armory.

Technical Assistance: For technical assistance regarding information contained in this report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Non-Responsive

Client		2708 Kitty Hawk Dr Springfield, IL 62901 217-787-8099		Client/Project		Florida Army National Guard	
Address				Project Location		EFT Myers Army	
City, State Zip Code				Sampler(s) / Phone No		217-787-8099	
Phone / Facsimile No				Turnaround Time		Standard [X] Rush [] Date Required:	
Contact Person		Non-Responsive		P.O. # or Invoice No		HINCHCO	
Sample Description (10 Characters Only)	Sampling Date	Sampling Time	Container Size	Container Type	M.P. Code	Analysis and/or Method Requested	Laboratory Comments
04-00 FM	26 March	0800	1	1	1	Blank (Lead)	
04-01 FM		0805	1	1	1	LEAD	
04-02 FM		0807	1	1	1		
04-03 FM		0810	1	1	1		
04-04 FM		0812	1	1	1		
04-05 FM		0815	1	1	1		
04-06 FM		0817	1	1	1		
04-07 FM		0838	1	1	1		
04-08 FM		0840	1	1	1		
04-09 FM		0842	1	1	1		
04-10 FM		0844	1	1	1		
04-11 FM		0846	1	1	1		
1 Size of Container	40 mL	125 mL	250 mL	500 mL	1000 mL	0 - Other (Specify)	
2 Type of Container	G - Glass (Clear)	AG - Glass (Amber)	P - HDPE	VC - Vial/Seal Cap	SG - Sol. Corb	0 - Other (Specify)	
3 M = Matrix Code	A - Aqueous	DW - Drinking Water	NV - Non-aqueous Liquid	SE - Sealing Water	S - Solids	0 - Other (Specify)	
4 P = Preservative Code	A - None	B - HNO ₃	C - H ₂ SO ₄	D - NaOH	E - HCl	0 - Other (Specify)	
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment	

Special Instructions:

All samples taken with 18" X 18" Template

BEST AVAILABLE COPY

BEST AVAILABLE COPY

800-441-6872 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Analytical HPLC Systems, INCORPORATE

[illegible]

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Ft. Myers Armory

Lab Order: 0403181

Lab ID: 0403181-001 Collection Date: 3/26/2004 8:00:00 AM
 Client Sample ID: 04-00FM (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 3:27:00 AM

Lab ID: 0403181-002 Collection Date: 3/26/2004 8:05:00 AM
 Client Sample ID: 04-01FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	5.10	5.00		µg/ft²	10	4/3/2004 3:35:00 AM

Lab ID: 0403181-003 Collection Date: 3/26/2004 8:07:00 AM
 Client Sample ID: 04-02FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	13.0	5.00		µg/ft²	10	4/3/2004 3:42:00 AM

Lab ID: 0403181-004 Collection Date: 3/26/2004 8:10:00 AM
 Client Sample ID: 04-03FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	7.57	5.00		µg/ft²	10	4/3/2004 3:49:00 AM

Lab ID: 0403181-005 Collection Date: 3/26/2004 8:12:00 AM
 Client Sample ID: 04-04FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	59.0	5.00		µg/ft²	10	4/3/2004 3:57:00 AM

Lab ID: 0403181-006 Collection Date: 3/26/2004 8:25:00 AM
 Client Sample ID: 04-05FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	18.0	5.00		µg/ft²	10	4/3/2004 4:04:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Ft. Myers Armory

Lab Order: 0403181

Lab ID: 0403181-007 Collection Date: 3/26/2004 8:27:00 AM

Client Sample ID: 04-06FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	6.81	5.00		µg/ft²	10	4/3/2004 4:12:00 AM

Lab ID: 0403181-008 Collection Date: 3/26/2004 8:38:00 AM

Client Sample ID: 04-07FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 4:41:00 AM

Lab ID: 0403181-009 Collection Date: 3/26/2004 8:40:00 AM

Client Sample ID: 04-08FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 4:49:00 AM

Lab ID: 0403181-010 Collection Date: 3/26/2004 8:42:00 AM

Client Sample ID: 04-09FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 4:56:00 AM

Lab ID: 0403181-011 Collection Date: 3/26/2004 8:44:00 AM

Client Sample ID: 04-10FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 5:04:00 AM

Lab ID: 0403181-012 Collection Date: 3/26/2004 8:46:00 AM

Client Sample ID: 04-11FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS			N7082	(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 5:11:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403181
 Project: Ft. Myers Armory

Lab ID: 0403181-013 Collection Date: 3/26/2004 9:05:00 AM
 Client Sample ID: 04-12FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 78.9 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 5:19:00 AM

Lab ID: 0403181-014 Collection Date: 3/26/2004 9:10:00 AM
 Client Sample ID: 04-13FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 13.6 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 5:26:00 AM

Lab ID: 0403181-015 Collection Date: 3/26/2004 9:12:00 AM
 Client Sample ID: 04-14FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 16.1 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 5:33:00 AM

Lab ID: 0403181-016 Collection Date: 3/26/2004 9:15:00 AM
 Client Sample ID: 04-15FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 47.5 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 5:41:00 AM

Lab ID: 0403181-017 Collection Date: 3/26/2004 9:17:00 AM
 Client Sample ID: 04-16FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 6:10:00 AM

Lab ID: 0403181-018 Collection Date: 3/26/2004 9:20:00 AM
 Client Sample ID: 04-17FM Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 24.9 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 6:18:00 AM

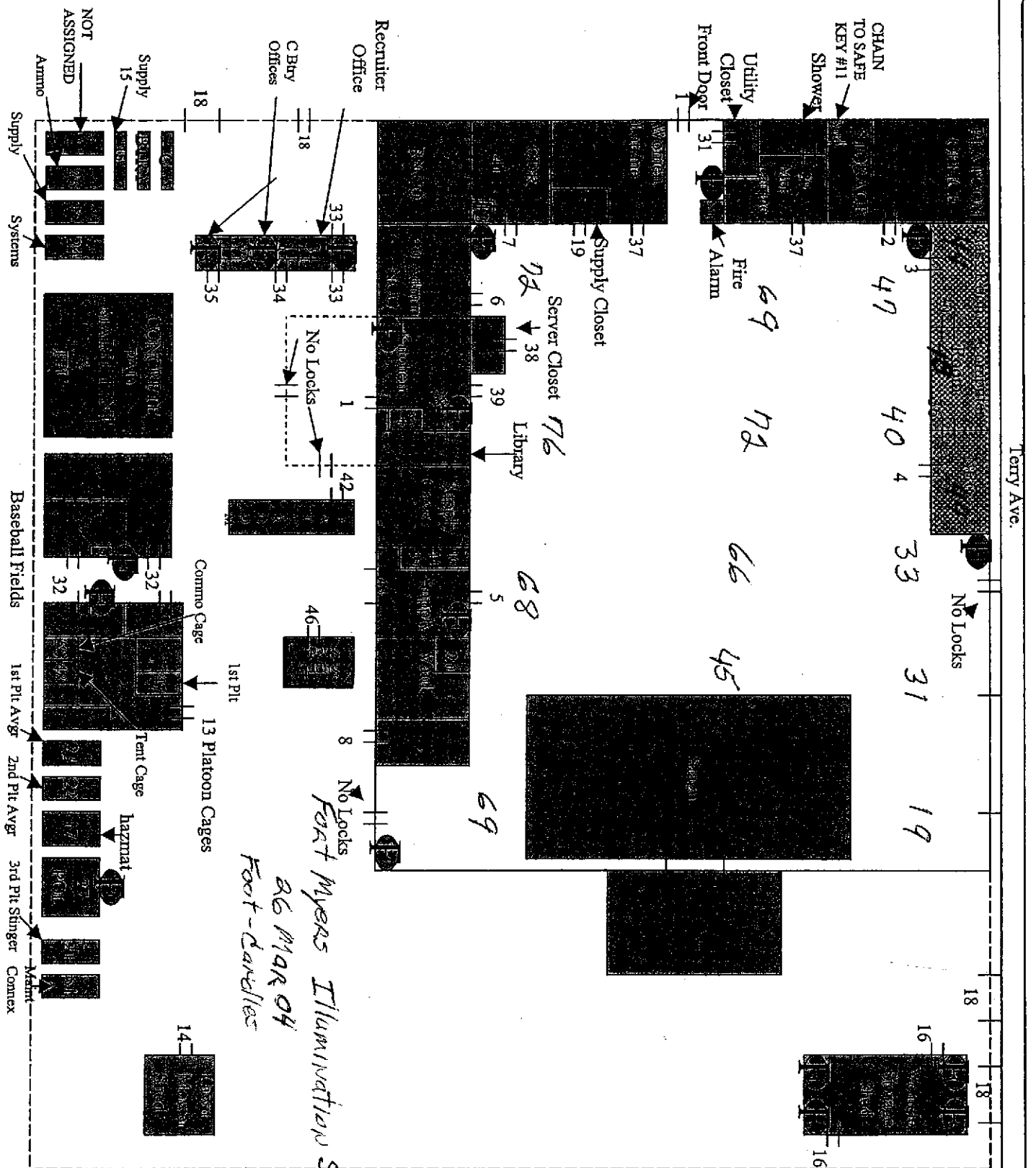
Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

APPENDIX D
ILLUMINATION SURVEY DIAGRAM

Shadd Oskas Park



Fort Myers Illumination Survey
26 MAR 04
Foot-Candles

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility:

2. Area or rooms where you spend the most time in the building:

Drill hall Floor, office

3. Does any of your work activities produce dust or odor? YES NO

Describe:

Cleaning Armory

4. Gender: Male Female

Age: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

Y

N

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

Y

N

Have other allergies

Y

N

Wear contact lenses

Y

N

Operate video display terminals (computers)

Y

N

Operate photocopiers 10% of the time

Y

N

Use other office machines

Y

N

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

0 Number of persons sharing same room/work area

1 Number of windows in room/work area

Do windows open?

Y

N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

1 yr In this room/area

1.2 yr In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y (N) N/A

When do you experience relief from these symptoms? *When at home or all Day*

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: (S) M T W T F (S)

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? (Y) N

When: *Occasional Symptoms occur*

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Broken Floor, Broken Ceiling tiles

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

Floor is coming Apart Electrical wiring is old, water Quality is poor. Overall condition of Building is poor

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: FORT MYERS ARMORY
2. Area or rooms where you spend the most time in the building:
office area
3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO
Describe:
There is a lot of generated while work in the supply area and Drill Hall
4. Gender: ☒ Male ☐ Female
Age: Under 25 25-34 ☒ 35-44 45-54 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Have skin allergies/dermatitis | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Have a cold/flu | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Have sinus problems | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Have other allergies | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Wear contact lenses | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | <input type="radio"/> N |
- Specify:
Fax and scanning machine
- Currently take any medications? ☒ Y ☐ N
Reason: allergies to dust
6. Office Characteristics:
- 2 Number of persons sharing same room/work area
2 Number of windows in room/work area
Do windows open? ☐ Y ☒ N
- Rate adequacy of work space per person:
- | Poor | Average | | Excellent |
|------|---------|------------------------------------|-----------|
| 1 | 2 | <input checked="" type="radio"/> 3 | 4 5 |
- Rate room temperature:
- | Poor | Average | | Excellent |
|------|---------|------------------------------------|-----------|
| 1 | 2 | <input checked="" type="radio"/> 3 | 4 5 |
- Are there smokers in your area? ☐ Y ☒ N
7. How long have you worked:
- 2y In this room/area
2y In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	<input type="radio"/>	<input checked="" type="radio"/>	N/A	SW	PW
Aching joints	<input checked="" type="radio"/>	F	N/A	SW	PW
Muscle twitching	<input checked="" type="radio"/>	F	N/A	SW	PW
Back pain	<input checked="" type="radio"/>	F	N/A	SW	PW
Hearing problems	<input type="radio"/>	F	N/A	SW	PW
Dizziness	<input type="radio"/>	F	N/A	SW	PW
Dry, flaking skin	<input type="radio"/>	F	N/A	SW	PW
Discolored skin	<input type="radio"/>	F	N/A	SW	PW
Skin irritation	<input type="radio"/>	F	N/A	SW	PW
Itching	<input type="radio"/>	F	N/A	SW	PW
Heartburn	<input type="radio"/>	F	N/A	SW	PW
Nausea	<input type="radio"/>	F	N/A	SW	PW
Noticeable odors	<input type="radio"/>	F	N/A	SW	PW
Sinus congestion	<input type="radio"/>	F	N/A	SW	PW
Sneezing	<input type="radio"/>	F	N/A	SW	PW
High stress levels	<input type="radio"/>	F	N/A	SW	PW
Chest tightness	<input checked="" type="radio"/>	F	N/A	SW	PW
Eye irritation	<input type="radio"/>	F	N/A	SW	PW
Fainting	<input type="radio"/>	F	N/A	SW	PW
Hyperventilation	<input type="radio"/>	F	N/A	SW	PW
Problems with contacts	<input type="radio"/>	F	N/A	SW	PW
Headache	<input type="radio"/>	F	N/A	SW	PW
Fatigue/drowsiness	<input checked="" type="radio"/>	F	N/A	SW	PW
Temperature too hot	<input type="radio"/>	<input checked="" type="radio"/>	N/A	SW	PW
Temperature too cold	<input type="radio"/>	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

☒ Y

N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon ☒ Evening

DAY OF WEEK: S M T W T ☒ F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall ☒ Winter

Do symptoms disappear?

☒ Y

N

When:

I have not been at work for a few weeks

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

The floors, walls and poor ventilation system

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

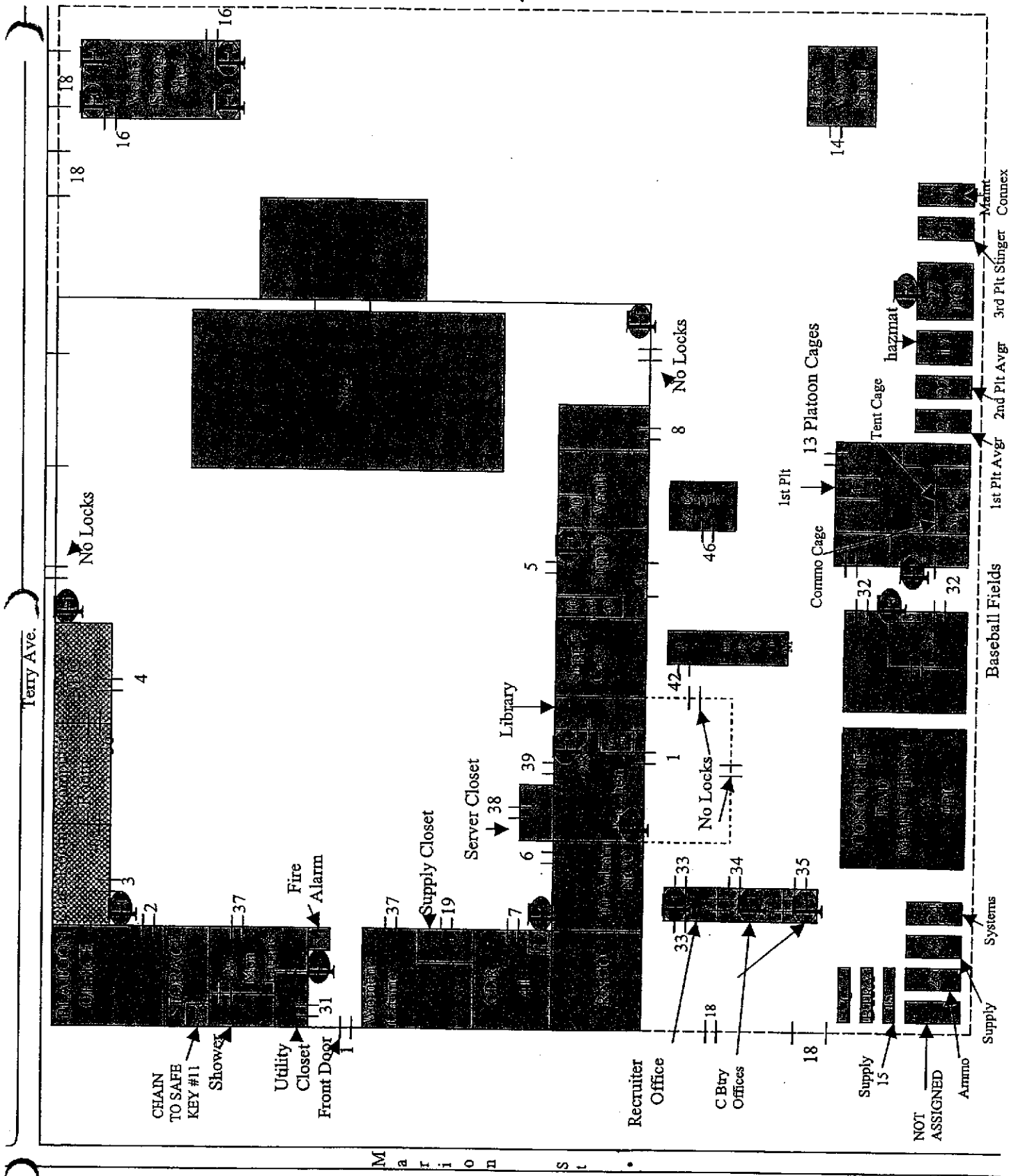
The building is an old building with asbestos floors, it still has an high lead level from the indoor range

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

N



Shady Oaks Park

ARMORY PHOTOGRAPHS



Sample #1 Supply Room, at Door (Inside)



Sample #2 Supply Room, Middle of Floor

ARMORY PHOTOGRAPHS



Sample #3 Arms Vault, at Door (Inside)

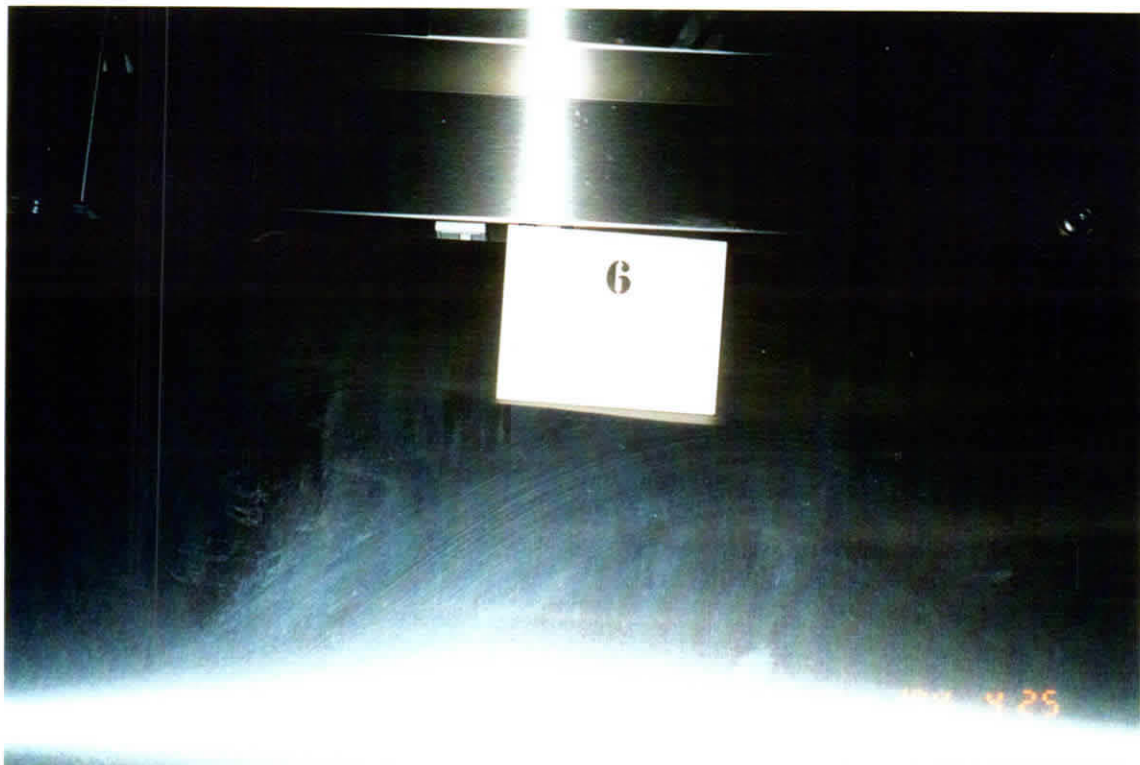


Sample #4 Arms Vault Middle of Floor

ARMORY PHOTOGRAPHS



Sample #5 Kitchen, Top of Ice Maker

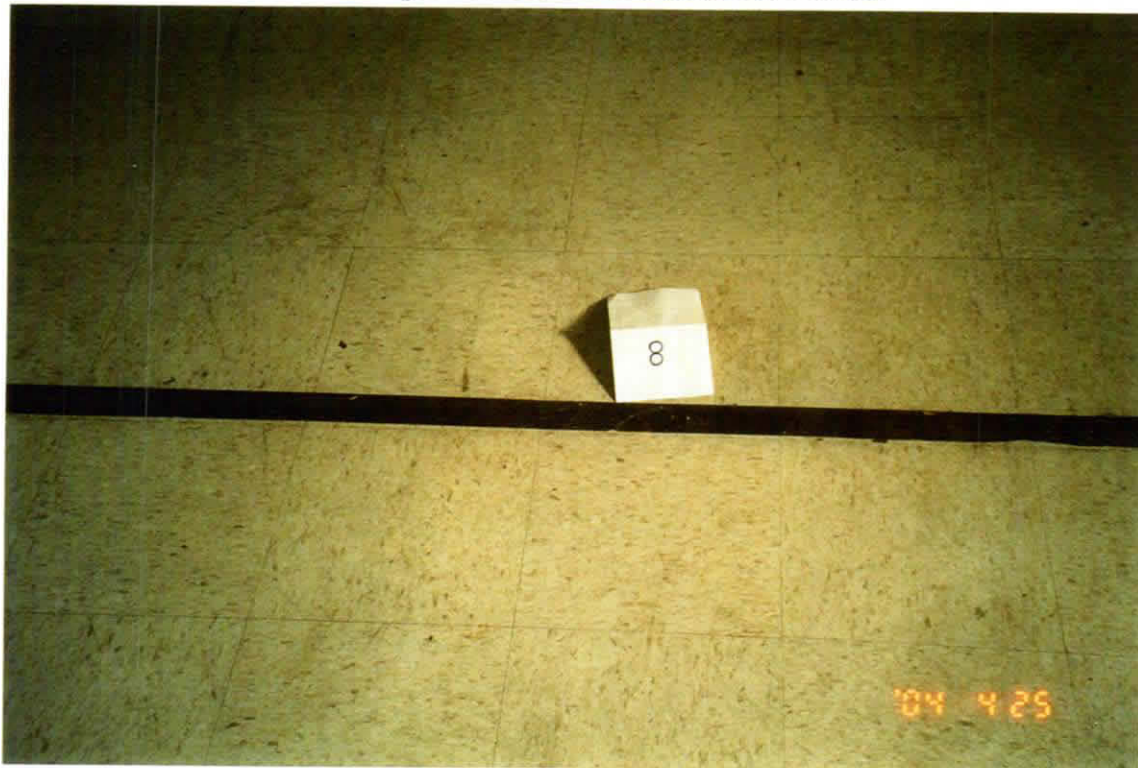


Sample #6 Kitchen, Top of Cooler

ARMORY PHOTOGRAPHS



Sample #7 Drill Floor Northeast Corner



Sample #8 Drill Floor Center

ARMORY PHOTOGRAPHS



Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Southwest Corner

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Southeast Corner



Sample #12 Indoor Firing Range Left Side Wall

ARMORY PHOTOGRAPHS



Sample #13 Indoor Firing Range Right Side Wall



Sample #14 Indoor Firing Range Left Side in Front of Trap

ARMORY PHOTOGRAPHS

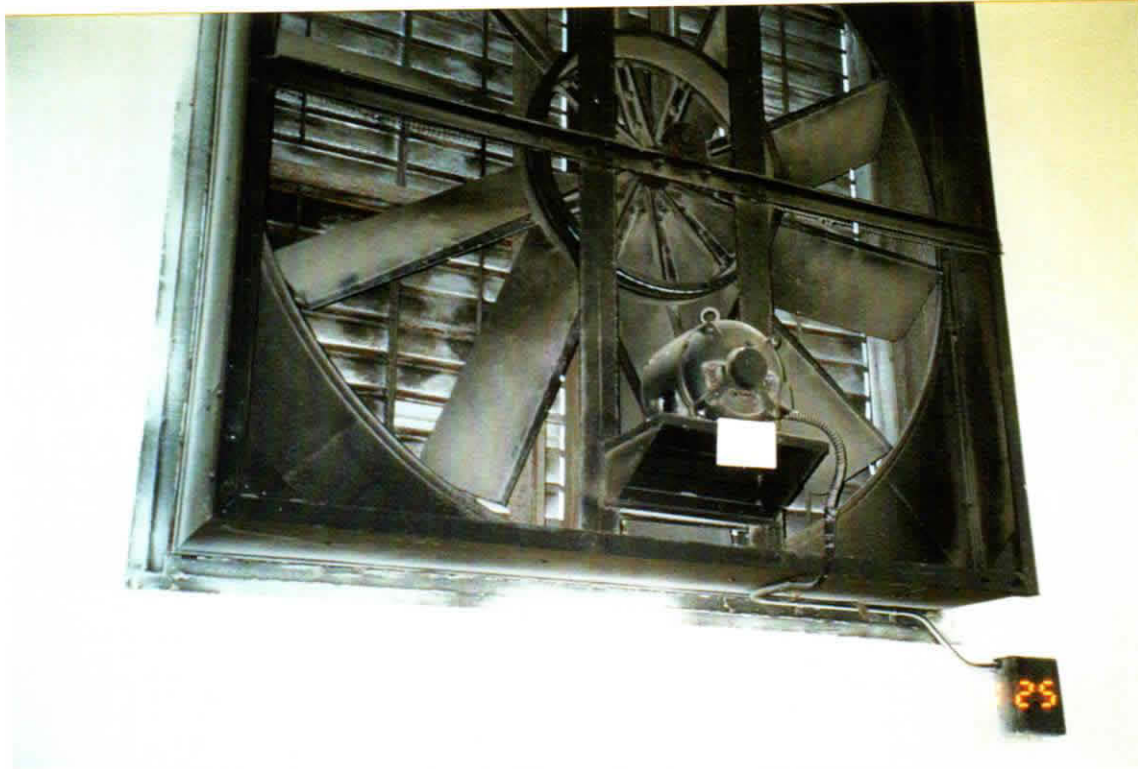


Sample #15 Indoor Firing Range Right Side in Front of Trap



Sample #16 Indoor Firing Range Rear Wall

ARMORY PHOTOGRAPHS

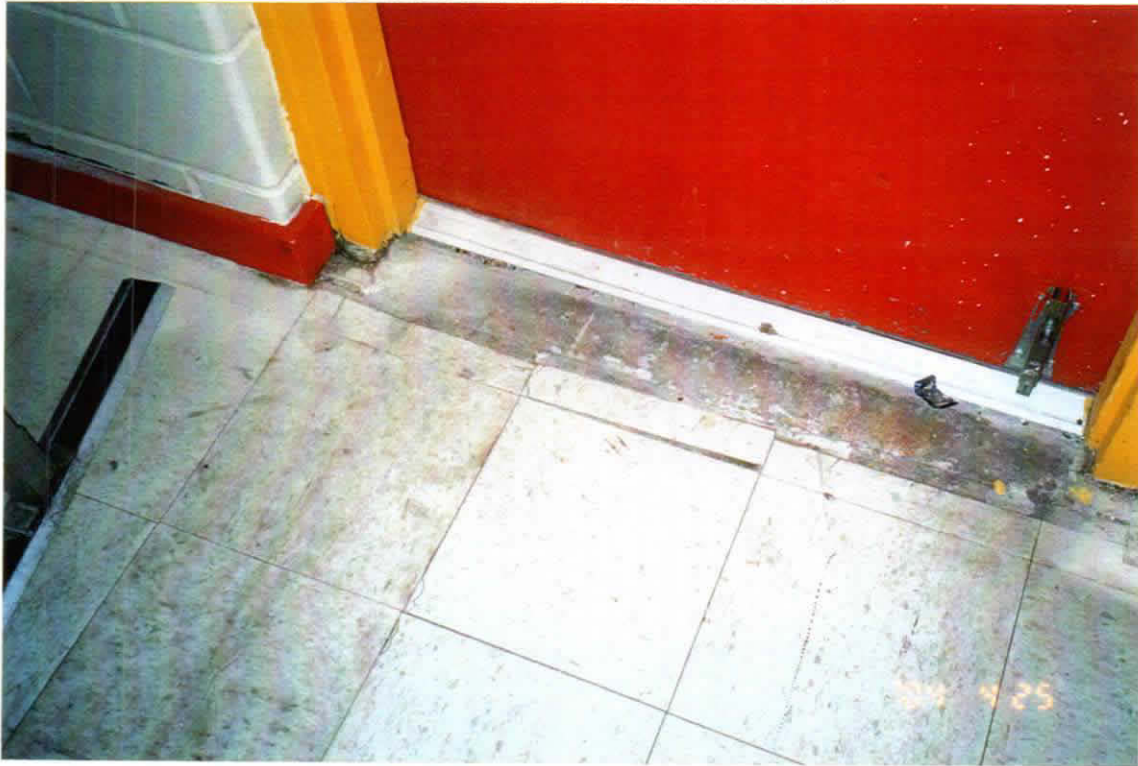


Sample #17 Indoor Firing Range Blade on Middle Exhaust Fan



Photograph, Drill Floor Depicting Range and Fans

ARMORY PHOTOGRAPHS



Photograph, Depicting Broken/Friable Asbestos Tiles



Photograph, Depicting Broken/Friable Asbestos Tiles

BEST AVAILABLE COPY

APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: FORT MYERS ARMORY

LOCATION: 3405 MARION ST., FORT MYERS, FL 33916

YEAR BUILT: 1955

SQUARE FOOTAGE: 10,190

FULL TIME PERS: 3

M-DAY: 100

UNIT(S) DRILLING AT THIS ARMORY:
BATTERY B, 3-265TH ADA

ARMORY POC/PH#: SFC JOSCELYN HUDSON 239-332-6986

ARMORY UTILIZED BY CIVILIANS: YES NO

WHAT FUNCTIONS: ABOUT FACE PROGRAM, REGIONAL REP 63 TRNG SITE,
WEDDINGS/RECEPTIONS, VARIOUS OTHER

NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO

POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO

STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO

KNOWN MOLD/MILDEW IN THE ARMORY? YES NO

INDOOR FIRING RANGE IN ARMORY? YES NO
(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED, CLEANED

NUMBER OF VAULTS IN ARMORY: ONE

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED? DRILL
FLOOR



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

ARNG-CSG-P

25 April 2011

MEMORANDUM TO CW2 [Non-] Florida Army National Guard, 1107 West
Commerce Ave, Haines City, FL 33830.

SUBJECT: Executive Summary (EXSUM) for the Industrial Hygiene (IH) Survey of the
Haines City Armory conducted 30 March 2011.

i. Purpose.

a. At the request of the Florida Safety and Occupational and Health Office and the
Southeast Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was
put together to conduct a baseline IH survey at the Haines City Armory.

b. This IH survey was conducted to 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. **There were no major findings found and noted during this IH survey.**

3. Recommendations.

a. Maintain the Hearing Conservation Program for all personnel. **(RAC 3)**

b. Contact the buildings HVAC consultant to inspect interior components of the AC
system susceptible to mold growth (e.g., drip pans, condensate pumps and hoses). Clean,
disinfect and/or replace as necessary. **(RAC 3)**

c. Follow the remaining recommendations listed by the contractor.

4. The technical point of contact is [Non-Responsive] of the Region Southeast Industrial
Hygiene Office, at commercial 404-559-4174, or [Non-Responsive]@us.army.mil. For State
follow up, contact MAJ [Non-Responsive] Occupational Health Manager at commercial
904-823-0470 or the Safety and Occupational Health Office.

SE Regional Industrial Hygienist

CF: Non-Responsive Chief, Industrial Hygiene, 301 IH Old Bay Lane, Havre de Grace, MD 21078. (EXSUM only)

Office of the Adjutant General, ATTN: MAJ Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

LTC Non-Responsive Deputy State Surgeon, Florida Army National Guard, 2305 State Road, St. Augustine, Florida 32086. (EXSUM only)

MAJ Non-Responsive SSMO, Route 1, Box 478, Camp Blanding, Starke Florida 32091-9708 (EXSUM only)

MAJ Non-Responsive Chief, NGB Occupational Health, Office of the Chief Surgeon, ARNG ARNG-CSG, 111 South George Mason Drive Arlington, VA 22204-1382 (EXSUM only)

LTC Non-Responsive CFMO, 2305 SR 207, St. Augustine, FL 32086 ((EXSUM only)

**Industrial Hygiene Survey Report
For
CW2 [Non-Responsive]
FLORIDA Army National Guard
(FLARNG)
at
1107 WEST COMMERCE AVE.
HAINES CITY FL 33830**

Thru

**Mr. [Non-Responsive], Region South
Industrial Hygiene Office, 510 Plaza Drive, Suite 1530,
College Park, GA 30348**

[Non-Responsive]

**Canute Lobban, Bsc. AAsc.
Ramassa Environmental Technologies Inc.
580 Parkside Pointe Blvd
Apopka FL 32712
Ph. 407 880 9420**

13 Apr 2011

1.0 INTRODUCTION

At the request of Mr. **Non-Responsive** of the National Guard Bureau (ARNG) Region South Industrial Hygiene Office, **Non-Responsive** Industrial Hygienist, of Ramassa Environmental Technologies Inc. (Ramtech) conducted a Baseline Industrial Hygiene Survey and walk through evaluation at the Florida ARNG located at 1107 West Commerce Ave. Haines City FL 33844 on March 30th 2011. The purpose of the survey was to evaluate health hazards and controls present in the workplace, collect bulk samples and or wipe samples (if necessary) to determine lead and or asbestos exposures, perform illumination, ventilation, and noise surveys, and make recommendations regarding health hazards associated with work at the site.

The facility was visually examined and site personnel interviewed regarding work activities, and types of materials/chemicals used during typical/atypical workdays, or stored on site.

Pre and post Industrial Hygiene Survey (IHS) opening and closing meetings were held with SGT **Non-Responsive**

The writer wishes to acknowledge the assistance and cooperation extended to him by the site's population in general, and takes this opportunity to express his, and Ramassa Environmental Tech's gratitude to all personnel.

2.0. FACILITY DESCRIPTION

This is a one story building approximately 17,000 square foot which was constructed with cement block walls and concrete flooring and totally refurbished within the last five years. The Point of contact (POC) for the site could not give a definite date when it was refurbished. The building contains offices, a conference room, two bathrooms, drill hall, kitchen, janitor's closet, and a vault. There are no service bays. The facility had an indoor firing range which has been converted to a number of adjoining storage areas. None of these areas are being used as offices. There is an empty vault which has not been used in over four years because neither weapons nor ammunition are kept at the site. Flooring throughout is a combination of concrete, terrazzo, ceramic tiles, vinyl tiles (all intact) and carpeting.

All walls are painted dry wall or painted cement blocks and ceilings are 24 inch drop panels. Illumination is provided by fluorescence bulbs. There is no battery charging area.

3.0 INSTRUMENTATION

The following instrumentation and/or sampling media were provided by the contractor and where necessary were used to obtain lead wipe dust samples, asbestos bulk samples, paint chip samples, and illumination and noise measurements.

EXTECH Foot Candle/ Lux Meter, Model 407026 Serial # 13588 calibrated 8/2009

Quest SLM Sound Pro S/N BG1070014 calibrated 08/27/2010

Quest Acoustic Calibrator QC 10 SN QIE030106 calibrated 6/11/2009

TSI 9555 Velocity Meter S/N 0912014 calibrated 05/21/2010

"Ghost Wipe" lead dust wipes; Expiration date: None

Quest Noise Pro Dosimeters On site calibration 11/02/2010

Instrumentation and sampling media were used/operated in accordance with manufacturers' recommendations.

4 FINDINGS

4.1 FLARNG OFFICE SPACES.

Offices in the facility are similarly equipped with desks, chairs and computer stations which are adjustable for optimum ergonomic balance. Employee interviewed suggest that temperature and humidity are very comfortable. Office floors are carpeted, walls are clean, and

there is no indication of mold or water intrusion. Working surfaces which accommodate computers, telephones and other supporting administrative efforts are more than adequate. The HVAC systems effectively monitors and controls temperature and humidity.

4.1.2 BATH ROOMS

Bath rooms in the buildings were clean. The floors and walls in shower areas are all ceramic tiles. There was no evidence of mold or water intrusion.

4.1.2A COPYING AREA

This area contains a copier and a fax machine. Ceiling tiles showed no stains from water intrusion. The vinyl floor tiles and painted over concrete block walls were in excellent condition.

4.1.3 Break Room

There is no dedicated break room at this facility. Personnel use the conference room for lunch.

4.1.3A Kitchen

The kitchen is in excellent condition and is seldom used. There is floor to ceiling ceramic tiled walls; floors are also ceramic tiles. Appliances are in like new condition because they are seldom used.

4.1.4 Conference Room

The conference room is carpeted and has painted dry walls. No water leaks or other discrepancies were visible. Ventilation is supplied by the central HVAC system. Illumination is provided by overhead fluorescence fixtures. All light fixtures are operational. Chairs and desks/tables are ergonomically correct.

4.1.5 Supply Room

There is no supply room at this facility. Office supplies are kept in a

locker beside the copying machine. Because there are only two administrative personnel at the facility office supplies last a long time since personnel spend most days at another armory. Additionally there are no field operations originating from this facility so field gear and motor vehicles are not kept at this site.

4.1.5A Janitors Closet

There is one cabinet labeled "corrosives" and a storage shelf in this closet along with mops, brooms and garbage pails. The cabinet contains soap solutions and commercially available surface cleaners. The storage shelf contains cartons of bathroom tissue. There is a haz-mat inventory on the cabinet exterior.

4.1.6 Vault

There is an arms room at the facility but it has not been used in over four years. Nothing is kept in this vault other than an old safe to be discarded. Surfaces were swipe sampled for lead and analytical results were within all regulatory standards. See attachment for results.

4.1.7 Drill Hall

The facility's drill hall is approximately 100 x 55 x 15 feet high. The flooring is terrazzo and the walls are painted cement composite. There were no signs of water stains or mold.

4.1.7a Maintenance Bays

There are no bays at this facility; all vehicular maintenance is done at the FMS in Haines City.

4.1.8 OUT BUILDINGS

There are no out buildings. This facility does not engage in any maintenance activities so there is no need for storage of POLs, engine oils, coolants etc.

5.1 Noise Level

Sim readings averaged 55 to 60 decibels "slow A scale" throughout the facility because there was no activity other than one member using the telephone and computer.

5.2 ASBESTOS

Throughout the facility there was no exposed piping no insulated boilers and no chipped vinyl tiles.

5.3 RADIATION

Not applicable

5.4 ILLUMINATION

See table below for illumination values. These values show that some areas do not meet the recommended illumination values. The following table reflects foot candle measurements noted during the survey.

Location		Foot Candles		IES Recommen ded values
Storage Areas		70		40-75
Offices		60		50-100
SPVSR Office		Ave 72		50-100
Conference Rooms		Ave 90		50-75
Men's restroom		80		20-40
Ladies room		75		20-40
Locker rooms		68		50-75
Kitchen		65		50-100
Drill hall		68		50-100
Copy area		85		10/20/11

6.0 Indoor Air Quality (IAQ)

Based on interviews, measurements and observations overall there is no technical or instrumental basis for IAQ concerns in this facility. No evidence of mold, extreme particulate build up or condensation on walls or floors. There are no obvious roof leaks. Through out the building the average temperature was 75.^{0F} and the average humidity was 55. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels range from 20 percent to 60 percent year round. Elevated humidity can promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Relative humidity should be maintained between 30-50 percent. Carbon Dioxide levels were very low and is a measure as to whether adequate volumes of fresh outdoor air are being introduced into indoor air. Outdoor levels of carbon Dioxide is usually 300-400 parts per million and indoor levels should be between 600-800 parts per million. The carbon dioxide levels in this facility did not exceed 300 parts per million.

6.1 Ergonomics.

Evaluation was on work areas such as desk heights, computer locations, line of vision and angling of hands and fingers. Interviews with ARNG member indicates that there is no cause for concern in this area. Computers are angled for maximum eye contact and angled wrist pads have been in use to minimize the onset of carpal tunnel syndrome.

6.2 HAZARDOUS MATERIALS

Materials used at this site are standard house keeping materials used in most Armory sites. Haz-mat inventories are posted in the janitor's closet.

7.0 RETIRED INDOOR RIFLE RANGE

This facility had an indoor firing range which has been retired and refurbished in 09/12/2008 as per construction seals on the as built drawings. The entire range was demolished and re-built from the ground up including a new HVAC system. The drawings show that the range area was refurbished and partitioned primarily for separate storage areas, a weight room, a vending area and an office. With the exception of the vending area all other areas are being used for storage of miscellaneous items none of which can be classified as military issue. The pictures attachment details the storage areas and their contents. All of these areas were sampled for lead and the results were below regulatory standards.

7. 0.1 VENTILATION

The new ventilation system is in excellent condition and maintains a comfortable working environment through out the facility. A maintenance program with standard operating instructions reflecting filter changes etc. was not available. Freshly heated or cooled air is supplied to all occupied areas by air-handling units (AHUs) suspended from the ceiling. Fresh air is drawn into the AHUs through air intakes located on the exterior of the building. Ceiling-mounted air diffusers ducted to the AHUs distribute fresh tempered air to the occupied areas. Return air is drawn into ceiling-mounted vents. Some return air is ducted back to AHUs, where it is mixed with fresh air and redistributed to the office space. Air is also exhausted out of the building through vents located on the exterior of the building.

8.1 TECHNICAL ASSISTANCE

For technical assistance regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office at 404-559-4174.

8.2 References

Lighting Handbook, Illuminating Engineering Society of North America, 8th Ed 1993.

Industrial Lighting, ANSI/IES RP7, 1991

USACHPPM Technical Guide 277, *Army Facilities Management*

Information Document on Mold remediation Issues, February 2002

American Industrial Hygiene Association, *Report of microbial Growth Taskforce*, May, 2001

29 CFR 1926.62, & 29 CFR 1910.1025

24 CFR 35.61

OSHA Asbestos regulations: 29 CFR 1926.1101, & 1926. 1001
EPA, Guidance For Controlling asbestos-Containing Materials In
Buildings, June 1985
EPA NESHAP Asbestos Regulation (40 CFR 61, Subpart M)

ASHRAE. 1989. Ventilation for Acceptable Indoor Air Quality. American Society of Heating,
Refrigeration and Air Conditioning Engineers. ANSI/ASHRAE 62-1989

US EPA. 2006. National Ambient Air Quality Standards (NAAQS). US
Environmental Protection Agency, Office of Air Quality Planning and Standards,
Washington, DC.

Army Regulation (AR) 11-34 Respiratory protection Program

" " (AR) 40-5 Preventative Medicine

" " (AR) 385-10 Army Safety Program

NGR 385-10 National Guard Safety and Occupational Health Program

TB MED 503 Army Industrial Program

ATTACHMENT 1

RECOMMENDATIONS

Based on reports from facility occupants, observations by Ramassa Environmental Technologies' staff and IAQ measurements, it appears that the overall condition of this facility is good .

- Contact the building's HVAC consultant to inspect interior components of the AC system susceptible to mold growth (e.g., drip pans, condensate pumps and hoses). Clean, disinfect and/or replace as necessary. This should be done as part of a preventative maintenance program prior to the start of the cooling season. **RAC 3**
-
- Refer to resource manuals and other related indoor air quality documents for further building-wide evaluations and advice.
- Management, administration, HVAC vendor and Facilities staff to achieve/maintain optimal comfort levels.
- Maintain the Hearing Conservation Program for all personnel **RAC 3**

ATTACHMENT 2

HAZARDOUS MATERIAL STORAGE INVENTORY

ATTACHMENT 3

LEAD ANALYTICAL RESULTS



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

April 08, 2011

Non-Responsive

Ramassa
580 Parkside Pt. Blvd
Apopka FL 32712

TEL: (407) 880-9420
FAX: (407) 880-9420

RE: ARMORY Haines City

Dear Non-Responsive

Order No: 1104313

Analytical Environmental Services, Inc. received 9 samples on 4/5/2011 12:30:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager

Analytical Environmental Services, Inc

Date: 11-Apr-11

Client: Ramassa
Project: ARMORY Haines City
Lab ID: 1104313

Case Narrative

A collection date of "3/30/11" was used for all samples.

Analytical Environmental Services, Inc

Date: 11-Apr-11

Lab Order: 1104313
Client: Ramassa
Project: ARMORY Haines City
Matrix: Wipe
Date Received: 4/5/2011 12:30:00 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1104313-001A	HCVF	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-002A	HCR 111 K	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-003A	HCR 114	51	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-004A	HCR 115	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-005A	HCR 117	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-006A	HCR 118	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-007A	HCR 120	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-008A	HCRV 121	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-009A	HCR BLANK	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client RamassaWork Order Number 1104313Checklist completed by Non-Responsive
SignatureDate 4-5-11Carrier name: FedEx ☐ UPS ☐ Courier ☐ Client ☒ US Mail ☒ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C ± 2)* Yes ☒ No ☐Cooler #1 Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☒ No ☐

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

ATTACHMENT 4

PHOTOS



Haines City Armory.



Other view of armory.



POC's office. Ceramic tile flooring.



Shower area..typical for both men and women.



Locker room..typical for both men and women.



Copying area with storage cabinet



Kitchen area



Kitchen area.



Conference and break/lunch room.



Common hallway.



Janitors closet..shelves with bathroom tissues.



Cabinet labeled "corrosive" in janitors closet.



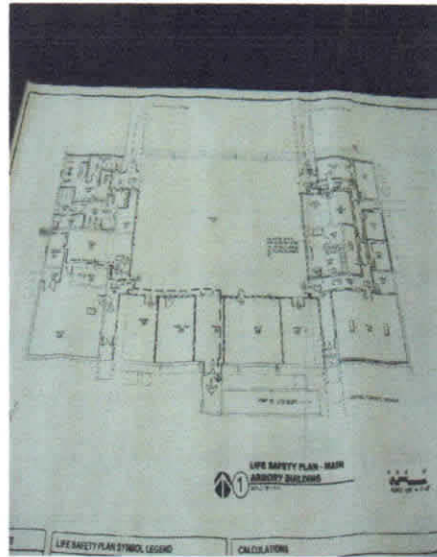
Contents of corrosive cabinet..skin soap, all purpose cleaner.



The drill hall



Another view of the drill hall showing doors leading into the refurbished indoor rifle range storage areas.



As built schematic showing layouts of storage areas from the refurbished indoor rifle range.



Storage in refurbished rifle range.



Another storage area.



Still another storage area.



More storage



Man lift in another storage area.



Storage in refurbished range.

ATTACHMENT 5

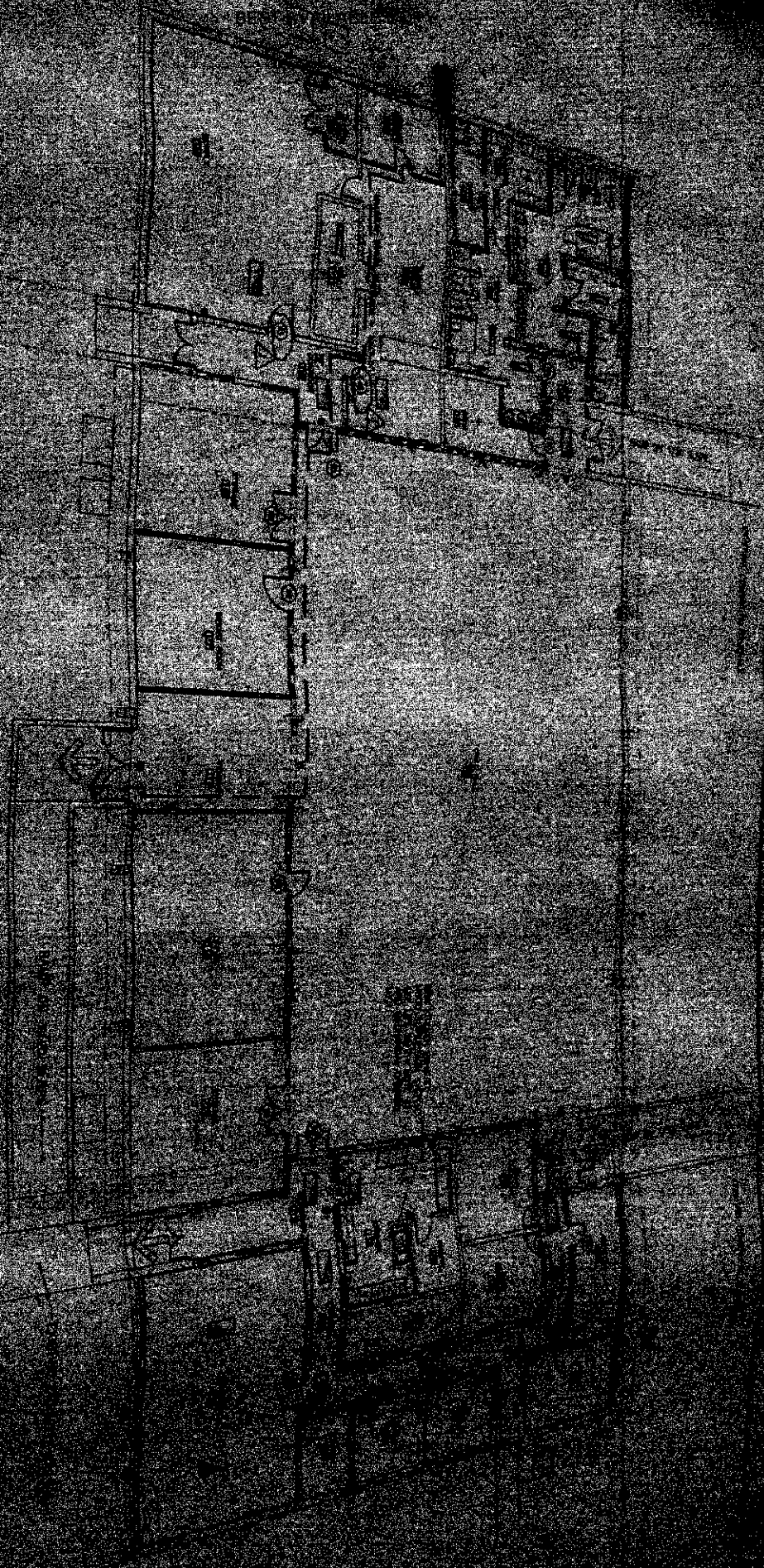
SITE SCHEMATIC

PROPERTY PLAN SHEET LEGEND

CONTOUR LINE



PROPERTY PLAN SHEET
ANNUAL SURVEY
1961



**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

18 July 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: LTC [Non-Responsive]
[Non-Responsive] Safety Manager, Safety and Occupational Health Office, St. Francis Barracks, 82
Marine Street, St. Augustine, FL 32085-1008

SUBJECT: Industrial Hygiene Survey of the Florida Army National Guard, Haines City
Armory, 107 Commerce Ave, Haines City, Florida 33844-3203.

1. References.

- a. Report submitted 11 July 2003, Industrial Hygiene Survey, Tammer Sciences, Inc.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office a Service Contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. [Non-Responsive] of Tammer Sciences, Inc. conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Ensure the Armory Commander get a copy of this report.

c. Discuss the high lead samples taken in the Armory with the Safety and Occupational Health Office, the Facility Management Office and the Environmental Office. Request help in eliminating possible employee lead exposures. Be prepared to educate personnel on proper lead clean-up procedures.

d. Use the report to help in correcting all deficiencies noted by the contractor.

e. Consider additional Industrial Hygiene services to conduct a follow up or monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

5. If additional information is needed about the contractors report, please contact **No**
Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR
COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

Industrial Hygiene Baseline Survey Report
For
Florida Army National Guard
(FLARNG)

At
Haines City Armory
107 Commerce Avenue
Haines City, FL 33844- 3203

Prepared for:

Department of the Army and the Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By
Non-Responsive CIH PE
Tammer Sciences, Inc.

June 30, 2003

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F. Copy of the Asbestos Management Plan.	

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Haines City Armory on 22 April 2003 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality, and a review of several industrial hygiene programs such as hazard communication, ergonomics, personal protection equipment, and posting of forms and bulletins.

The following table summarizes the survey findings and recommendations for each topic surveyed.

Topic	Summary of Findings	Recommendations
Lead Wipe Samples	<10 to 1300 microgram per square foot	Clean contaminated surface in the IFR Area and drill hall.
Asbestos Bulk Samples	Facility surveyed in 1998.	No action.
Noise Survey	No sources identified. Noise levels are estimated to well below the 85 dBA limit	No action
Illumination Survey	19 to 75 footcandles.	Consider increasing the lighting levels in the drill hall.
HVAC/IAQ	No issues observed or documented.	No action.
Hazcom	No issues.	No action.
Ergonomics	No issues.	Consider offering ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
PPE	No issues.	No action
Posters & Bulletins	No issues.	No action

Haines City Armory

Survey Date: 22 APRIL 2003

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Haines City Armory in Haines City, Florida on 22 April 2003

BACKGROUND:

Introduction. At the request of Mr. [Non-] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Haines City Armory in Haines City, Florida. Sgt. [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 22 April 2003. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards present at the armory.

Site Description. The facility houses Det 1, HHSB, 2nd Bn, 116th Field Artillery (FA) and has 6 full time employees. The armory building, which was built in 1976, is a one-story structure similar to the Bartow and Lakeland City Armories. The Armory layout is typical and consists of a drill hall, administrative office areas, kitchen, mess hall, a classroom, a drill hall, a supply room, a break room/lounge, and a converted indoor firing range area used for storage. Refer to Building layout drawing and photos in Appendix D.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, and an evaluation of the ventilation system as it pertains to indoor air quality. A list of occupational health programs and procedures were verbally covered with the Armory designated safety officer. The list included programs such as Hazard Communication, Ergonomics, and Personal protection Equipment. Procedures included posting of applicable posters and bulletins, training, and posting of warning signs and labels. No bulk asbestos samples were collected because the facility was surveyed for asbestos in 1998.

Methodology Lead wipe samples were collected from surfaces that showed signs of lead contamination in Armories that have a renovated, inactive, or closed indoor firing range (IFR). The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Illumination readings were collected using a Davis light meter Model L595339. Illumination readings were taken on work surfaces and approximately four feet from the floor.

Haines City Armory

Survey Date: 22 APRIL 2003

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SGT Non-Responsive (863) 499-2217.

Lead Wipe Samples: Nine wipe samples were collected from the converted indoor firing range area and other administrative areas as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
HC001	Top of field medical aid station stored in trap area of the converted IFR.	330
HC002	Top of steel beam above the trap area in the converted IFR.	1300
HC003	Top of air intake to air handler above the firing line in the converted IFR.	1100
HC004	Top of locker cabinet in the converted IFR by the firing line.	150
HC005	Top of shelf in the kitchen.	36
HC006	Top of candy machine in the drill hall.	540
HC007	Top of tool box in electronics repair shop.	<10
HC008	Supply air diffuser in recruiting office.	200
HC009	Supply air diffuser in administrative office.	45
HC010	Field blank	<10

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

The indoor firing range should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18. Appendix E contains recommended guidelines for cleaning and decontaminating indoor firing range.

Asbestos Suspect Building Material As a result of an asbestos survey that was performed in 1998, the building asbestos operations and maintenance plan identified the floor tiles as containing 3% chrysotile asbestos and black duct mastic as also containing

asbestos. A copy of the survey findings and asbestos plan are included in Appendix F. No new suspect materials were identified in this survey.

Noise Survey Due to the lack of noise sources, area noise level readings were not measured. Based on experience noise levels in the armory could range from 60 decibels on the A scale (dBA) to 75 dBA depending on the activity or background noise source.

Illumination Survey Lighting levels throughout the Armory ranged between 19 foot-candles to 70 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Converted Firing Range	19 to 22
Drill hall	10 to 15
Administrative Office Areas	55 to 60
Kitchen	65 to 70
Utility Storage	55 to 60
Electronics Repair	55 to 60
Mechanical Room	45 to 50

Except for the drill hall, all readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Armory is heated with three forced air heating and cooling air-handling units. An opening in the roof of the mechanical room provides outside makeup air to air handlers. No complaints of indoor air quality issues were documented or communicated to the POC.

Hazard Communication Standard All full time employees have received their annual hazard communication training. Material Safety Data Sheets (MSDSs) for the cleaning supplies are kept in a binder in the cleaning supplies storage room. No other chemicals are used or stored at the Armory.

Ergonomics No ergonomic related injuries or concerns were expressed by the full time employees that work at the Armory. Consideration should be given to provide all full time employees that spend the majority of their working time working at a computer

terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

Personal Protection Equipment (PPE) Normal duties of the full time employees at the Armory do not require the use of PPE. However, all full time employees are issued safety glasses and personal earplugs as part of their field duties.

Posters and Bulletin Posting The Department of Defense Safety and Occupational Health Protection Program, DD Form 2272, were posted. Employee Report of Alleged Unsafe or Unhealthful Working Conditions, DA Form 4755 was not posted. Safety related bulletins and information issued by State Headquarters were also posted.

Recommendations:

1. Clean the contaminated surfaces in the converted IFR, and drill hall by wet wiping and vacuuming using a High Efficiency Particulate Air (HEPA) filter.
2. Consider increasing the lighting levels in the drill hall.
3. Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.

Technical Assistance: For technical assistance regarding information found in this report or the performed survey please contact Mr. Non- Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

BEST AVAILABLE COPY

APPENDIX A

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

Army Regulation (AR) 11-34, The Army Respiratory Protection Program, 1990

Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990.

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

National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustibles Liquid Code, 1996.

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

NGR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

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

Title 29, Code Of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.

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

APPENDIX B

3 Cooper St., Westmont, NJ 08108

Phone: (656) 858-4800 Fax: (656) 858-9551 Email: gmiller1@emsl.com

EMSL

Attn: **Non-**Tammer Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project: Haines City

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:10 AM

EMSL Order: 200304249

EMSL Project ID:

Lead in Wipes by Flame AAS (SW 846, 7420)

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
HC001 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/9/03	144 in ²	330.0 µg/ft ²
HC002	0002	5/9/03	144 in ²	1300.0 µg/ft ²
HC003	0003	5/9/03	144 in ²	1100.0 µg/ft ²
HC004	0004	5/9/03	144 in ²	150.0 µg/ft ²
HC005	0005	5/9/03	144 in ²	36.0 µg/ft ²
HC006	0006	5/9/03	144 in ²	540.0 µg/ft ²
HC007	0007	5/9/03	144 in ²	<10.0 µg/ft ²
HC008	0008	5/9/03	144 in ²	200.0 µg/ft ²
HC009	0009	5/9/03	144 in ²	45.0 µg/ft ²
HC010	0010	5/9/03	144 in ²	<10.0 µg/ft ²

Non-Responsive

Laboratory Director
NJ-NELAP: 04653
AIHA: 100194
or other approved signatory

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA, unless specifically indicated otherwise in the comment section.

ACCREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Date Printed: 5/9/03 3:33:41 PM

THIS IS THE LAST PAGE OF THE REPORT

Page 1 of 1

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APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

20304249

LEAD

Revised 7/1/99

EMSL Rep:

Your Company

Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project

Name/Number:

DATE:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase

Order #:

Third party billing requires written authorization:
from third party

Same

Zip:

Tommer Sciences, Inc.

Non-Responsive

3744 Lawrence Dr

Naperville

Zip: IL

Non-Responsive

630 369 7956

Non-Responsive

630-369-7957

MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chlps*	SW846-7420 or AOAC 5.009 (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
	or NIOSH 7300	ICP	3.0 ug/filter	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	10 ug/wipe	6-10 days
	or SW846-6010	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
Lead Soil +			0.3 mg/kg (ppm) soil	
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - 3 hours, 6 hours, Please call ahead to schedule.

12 hours (must arrive by 11:00 a.m.),

24 hours (1 day), 48 hours (2 days), 72 hours, 96 hours (3 days), 120 hours (4 days), 144 + hours (6-10 days)

* ** *** **** +, ++ Please Refer to Price Quote

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW001		144 in ²	
BTW002			
BTW003			
BTW004			
Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date: 4/26/03		Date: 4/27/03 11:10 am	

Note: Please duplicate this form and use additional sheets if necessary.

Page 1 of 3

EMSL ANALYTICAL

CHAIN OF CUSTODY

200304249

LEAD

Revised 7/1/99

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW 005		144 in ²	
BTW 006			
BTW 007			
BTW 008			
BTW 009			
LW 001			
LW 002			
LW 003			
LW 004			
LW 005			
LW 006			
LW 007			
LW 008			
LW 009			
HC 001			64249-1
HC 002			-2
HC 003			-3
HC 004			-4
HC 005			-5
HC 006			-6
HC 007			-7
HC 008			-8
HC 009			-9
HC 010			-10
LH 001			
LH 002			
LH 003			
LH 004			
LH 005			
LH 006			
LH 007			
LH 008			
LH 009			
LH 010			

Relinquished By: (Person) Non-Responsive

Received at EMSL By:

Non-Responsive

Date 4/26/03

Date

5/25/03 11:02 AM

Note: Please duplicate this form and use additional sheets if necessary.

* Separate Report

Page 2 of 3

APPENDIX D

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APPENDIX E

Evans Environmental & Geosciences
EE&G 8049 Arlington Expressway
 Jacksonville, Florida 32211
 Phone (804) 727-3504 Fax 727-3412

PROJECT No.	11/200
DATE	11/200
DESIGNED BY	G. REED
DRAWN BY	ED
CHECKED BY	G. REED
CAD FILE	
ISSUED DATE	
DWG. SCALE	NONE

FOIA Requested Record #J-15-0065 (FL)
Released by National Guard Bureau
Page 517 of 1021

SHEET:

1

Indoor Firing Range Cleaning Guidance

1. Introduction - This document describes procedures to be employed in cleaning a range for non-lead use. All lead hazard control activities can produce dangerous quantities of leaded dust. Unless this dust is properly removed, a facility will be more hazardous after the work is completed than it was originally. Once deposited, leaded dust is difficult to remove effectively. Whenever possible, ongoing and daily cleaning of leaded dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures. Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead hazards in a space will not make the space safe unless excessive levels of leaded dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.

2. Difficulties in Cleaning - While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail. Several common reasons for this failure include worker inexperience, high dust-producing methods, and deadlines.

3. Performance Standard - Although the cleaning methods described in this document are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both occupants and workers.

4. Clearance Standard - 200 µg/ft² on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/ft² for exterior concrete (a HUD interim recommendation and serves as a useful guideline). These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied as a non-lead work area after the completion of a lead hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.

5. Worker Inexperience - To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.

6. Equipment Needed for Cleaning - The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice tools), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).

7. Waste Disposal - Regulations governing hazardous and non-hazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.

8. Containment - Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containments or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area.

9. Pre-cleaning Procedures - Pre cleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in facilities that are heavily contaminated with debris/paint chips, etc. Pre cleaning involves removing large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant furniture or carpeting (rugs or carpets or any porous item in the firing range is not recommended due to the difficulty in cleaning these items effectively), depending on the worksite preparation. Carpeting (if present) should always be misted before its removal to control the generation of hazardous dust. However, if necessary, owners or project management should be prepared to remove furniture before lead hazard control work begins.

10. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques - Because leaded dust adheres tenaciously, especially to rough or porous materials like weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time. The typical cleaning method uses a special vacuum cleaner equipped with a HEPA filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum. Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the Alternatives Methods section in this document, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.

a. HEPA Vacuuming - HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small particles. These filters can remove particles of 0.3 microns or greater from air with 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is capable of filtering out particles of 0.13 microns or greater at 99.9995 percent efficiency. However, ULPA filters are slightly more expensive and may be less available than HEPA filters. Vacuuming with conventional vacuum machines is unlikely to be effective because much of the fine dust will be exhausted back into the environment where it can settle on surfaces. Considerations for the proper use of a HEPA vacuum are listed below.

(1) Operating Instructions - There are a several manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, carefully follow the manufacturer's operating instructions and, if possible, arrange training sessions with the manufacturer's representative. Although HEPA vacuums have the same suction capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.

(2) Special Attachments - Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces such as brushes of various sizes, crevice tools, and angular tools.

(3) Selecting Appropriate Size(s) - HEPA vacuums are available in several sizes, ranging from a small lunch bucket-sized unit to track-mounted systems. Two criteria for size selection are the size of the job and the type of electrical power available. Manufacturer recommendations should be followed.

(4) Wet-Dry HEPA Vacuums - Some hazard control contractors have found the wet-dry HEPA vacuums to be particularly effective in meeting clearance standards. These vacuums are equipped with a special shut-off float switch to protect the electrical motor from water contact.

(5) Prefilters - HEPA filters are usually used in conjunction with a pre filter or series of pre filters that trap the bulk of the dust in the exhaust air stream, particularly the larger particles. The HEPA filter traps most of the remaining small particles that have passed through the pre filter(s). All filters must be maintained and replaced or cleaned as specified in the manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

(6) HEPA Vacuuming Procedures - Surfaces to be vacuumed include ceilings, walls, floors, doors, heating, ventilation, and air conditioning (HVAC) equipment (heating diffusers, radiators, pipes, and vents), fixtures of any kind (light), built-in cabinets, and appliances. All rooms and surfaces should be included in the HEPA vacuum process, except for those that (1) were found not to have lead hazards and were properly separated from work areas before the process began, or (2) were never entered during the process. Sidewalks, driveways, and other exterior surfaces should be vacuumed if exterior hazard control work was conducted, or if debris was stored or dropped outside. Vacuuming should begin on the ceilings and end on the floors, sequenced to avoid passing through rooms already cleaned, with the entryway cleaned last.

(7) Emptying the HEPA Vacuum - Used filters and vacuumed debris are potentially hazardous waste and should be treated accordingly. Therefore, operators should use extreme caution when opening the HEPA vacuum for filter replacement or debris removal to avoid accidental release of accumulated dust into the environment. This may occur, for example, if the vacuum's seal has been broken and the vacuum's bag is disturbed. Operators should also wear a full set of

protective clothing and equipment, including appropriate respirators, when performing this maintenance function, which should be done in the containment area or off-site.

b. Wet Detergent Wash - Several types of detergents have been used to remove leaded dust. Those with a high phosphate content (containing at least 5 percent presidium phosphate, also known as TSP) have been found to be effective when used as part of the final cleaning process. TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some states have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control. Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several investigators and may also be safer, since TSP is a skin and eye irritant.* **Manufacturer's Dilution Instructions** - Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change prefilters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

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(1) Proper Wet-Cleaning Procedures - At the conclusion of the active lead hazard control process and after the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and be sequenced to avoid passing through rooms already cleaned.

(2) Changing Cleaning Mixture - Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no more than 1,000 square feet. Used cleaning mixture is potentially hazardous waste; consult with your local water and sewage utility for directions on its proper disposal. Wash water should never be poured onto the ground. The wash water is usually filtered and then poured down toilet (if the local water authority approves).

11. The HEPA/Wet Wash/HEPA Cycle Typical Procedures - The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows: First, the area is HEPA vacuumed. Next, the area is washed down. After drying, the area is again HEPA vacuumed. The rationale for this three-pass system is as follows: The first HEPA vacuum removes as much dust and remaining debris as possible. The wet wash further dislodges dust from surfaces. The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.

12. Single-Pass Wet Wash/HEPA Vacuum - Some lead hazard control contractors have roundhead spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps

in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.

13. Sealing Floors - Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or epoxy coating. Concrete floors should be sealed with a concrete sealer or other type of epoxy coating. If these floors are already covered by an effective coat of sealant, it may be possible to skip this step. New surfaces should be cleaned with a cleaning solution that is appropriate for that type of surface.

14. Surface Painting or Sealing of Non-floor Surfaces - Surfaces, including walls, ceilings, and wood-work, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision. Coating of walls may not be appropriate if lined with acoustic material to control noise.

15. Exterior Cleaning - Areas potentially affected by exterior lead hazard control should be protected via a containment system. Because weather can adversely affect the efficacy of exterior containment, the surface plastic of the containment system should be removed at the end of each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6-mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming is inappropriate for hard exterior surfaces, not for soil.

16. Worker Protection Measures - Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment and appropriate respirators if required.

17. Maintaining Containment - The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should monitor the sheeting and immediately repair any holes or rips with 6-mil plastic and duct tape.

18. Decontamination of Workers, Supplies, and Equipment - Decontamination is necessary to ensure that worker's families, other workers, and subsequent properties do not become contaminated. Specific procedures for proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas should be implemented. Work clothing, work shoes, and tools should not be placed in a worker's automobile unless they have been laundered or placed in sealed bags. All vacuums and tools that were used should be wiped down using sponges or rags and detergent solutions. Consumable/disposable supplies, such as mop heads, sponges, and rags, should be discarded after each space is completed. Soiled items should be treated as contaminated debris. Durable equipment, such as power and hand tools,

generators, and vehicles should be cleaned prior to their removal from the site. The cleaning should consist of a thorough HEPA vacuuming followed by washing.

19. Preliminary Visual Examination - After the cleaning work is completed, the certified supervisor should visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. While the preliminary examination may be performed by the lead hazard control supervisor, contractor, or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or reclined. Therefore, it is more cost-effective to have the supervisor rather than the clearance examiner perform this initial examination.

20. Final Inspection - The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work is incomplete; 2) to detect the presence of leaded dust; and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the sealant is applied to the floor.

21. Advanced Screening - Advanced screening for clearance may be considered. Immediate on-site analysis of dust wipes may alert the contractor to continue cleaning prior to final clearance sampling.

22. Recleaning After Clearance Failure - If after passing the final visual examination, the space fails the clearance wipe dust tests, the HEPA/wet wash/HEPA cleaning cycle should be carefully and methodically repeated. Failure is an indication that the cleaning has not been successful. Recleaning should be conducted under the direct supervision of a certified supervisor. Care should be exercised during the recleaning of "failed" surfaces or components to avoid recontaminating "cleared" surfaces or components.

23. Cleaning Cost Considerations - An important consideration in determining lead hazard control strategies and methods is the cost and difficulty of required daily and final cleanup operations and the likelihood that one can meet dust-clearance standards. A general rule of thumb is that lead hazard control strategies that generate the most dust will have higher cleanup costs and higher initial clearance test-failure rates.

24. Initial Clearance Test Failure Rates - The likelihood of passing final dust-clearance tests is highly correlated with the chosen intervention strategy, methods, and care exercised by the contractor. Chemical removal and hand-scraping strategies generally experience higher failure rates than replacement and encapsulation/ enclosure strategies. However, clearance failure is not solely related to abatement method. The diligence and effectiveness of an abatement contractor's cleaning process has a major impact on the likelihood of the space to pass the final wipe test clearance.

25. Key Factors In Effective Cleaning - Effective cleaning will be aided by adequate sealing of surfaces with polyethylene sheeting prior to lead hazard control, proper daily cleaning practices,

good worker training, and attention to detail. Where poor worksite preparation is employed, additional cleaning may be required to meet clearance.

26. Special Problems - Surfaces such as porous concrete, old porous hardwood floors, and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve unacceptable level of cleanliness.

27. Alternative Methods - Alternatives to the recommended cleaning tools and practices discussed in this document are available, some with significant potential for increasing effectiveness and lowering costs. Other vacuums may be used if worker exposures do not increase, if compliance with clearance standards is achieved, and if a variance from OSHA regulation is obtained by the contractor or employer (if required). The OSHA lead standard requires the use of HEPA vacuum equipment (see 29 CFR 1926.62 (h)(4), which states, "where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters."). Agitator heads on vacuums have been shown to significantly enhance vacuum effectiveness on carpets in cleaning fine dust without increasing airborne dust levels. Vacuums without agitator heads appear to perform relatively poorly on carpets.

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APPENDIX F

EE&G: Asbestos Survey Report*Department of Military Affairs***ASBESTOS SURVEY REPORT - FORM 1****BUILDING IDENTIFICATION**

County: Polk
 Agency: Dept. of Military Affairs Facility: Armory Facility
 Building Name: Haines City - Armory
 Building No.: A-01132
 Address and/or Geographic Location: 1107 Commerce Ave.
Haines City, FL 33844
 Building Asbestos Contact Person: Mr. Non-Responsive
 Agency Contact: Mr. Non-Responsive Telephone No.: (904) 823-0276

SURVEY IDENTIFICATION

Date of Survey: 9/28/98 Date of Report: 12/9/98
 Contract No.: MA97033 Consultant's Firm: EE&G
 Address: 8049 Arlington Expressway, Suite #9
Jacksonville, Florida 32211
 Telephone No.: (904) 727-3504

BUILDING INFORMATION

Year of Construction: 1976 Renovation Dates: Unknown
 Type of Occupancy: Administrative
 Typical Number of Occupants: 1 - 200
 Building Documents/Drawings Available/Consulted: Generic Floor Plan
 Types (Plans, Specifications, Other): Plans and Specifications were Not Available
 Availability of Asbestos Documents: Asbestos Documents were Not Available
 Location of Asbestos Documents: N/A
 Number of Stories (Floors): 1 Area Each Floor: 13,200 square feet
 Penthouse Area: N/A Attic Area: N/A
 Basement Area: N/A Crawl Space Area: N/A
 Number of Elevators: N/A Number of Spots: N/A

STRUCTURAL DATA

Vertical Support: Concrete Block Horizontal: Concrete
 Roof: Built-Up Roof Floors: Concrete/VFT
 Ceilings: Ceiling Tile/Plaster Exterior Walls: Masonry Brick
 Partition Walls: Concrete Block
 Was an HVAC System Present? (Yes or No): Yes Number: 1
 Was an Air Handler Present? (Yes or No): Yes Number: 1
 Was a Boiler Present? (Yes or No): No Number: N/A
 Was a Chiller Present? (Yes or No): No Number: N/A



Evans Environmental & Geosciences

ASBESTOS OPERATIONS AND MAINTENANCE PLAN

OF

**ARMORY
HAINES CITY ARMORY FACILITY
1107 COMMERCE AVENUE
HAINES CITY, FLORIDA 33844**

Presented to:

**FMO-ENVIRONMENTAL DIVISION
DEPARTMENT OF MILITARY AFFAIRS
FLORIDA ARMY NATIONAL GUARD
2305 SR 207, P.O. BOX 1008
ST. AUGUSTINE, FL 32085-1008**

Prepared by:

**Evans Environmental & Geosciences (EE&G)
8049 Arlington Expressway, Suite 9
Jacksonville, Florida 32211
(904)727-3504**

**December 18, 1998
Project No.: 0601000038**

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APPENDIX A Glossary of Asbestos-Related Terms

APPENDIX B Operations and Maintenance Forms

- Periodic ACM Surveillance form
- Statement by a medical doctor
- Certification of worker acknowledgment
- Non-routine activity cleaning log for buildings with ACM
- Asbestos fiber release report
- Respiratory issuance and fit test
- Summary of employee duties and expected asbestos exposure
- Contractor notification

SECTION 1.0**INTRODUCTION****1.1 INTRODUCTION AND PURPOSE**

This asbestos Operations and Maintenance (O&M) Plan is designed to provide guidelines for conducting maintenance activities where friable and nonfriable asbestos-containing materials (ACM) have been identified or assumed. For the purposes of this O&M plan, ACM refers to materials either identified by laboratory analysis to contain greater than 1 percent asbestos or are assumed asbestos-containing materials. The plan provides for the management of these materials through implementation of worker training, control procedures, periodic surveillance, and air quality testing. In addition to the guidelines outlined in this plan, the building owner or manager should be familiar with all other applicable local, state, and federal regulations. A list of reference materials is provided in section 4.0 of this document.

The goal of this plan is to control fiber release episodes by minimizing disturbance to ACM, and to monitor the condition of these materials over time. It should be emphasized that the primary purpose of the asbestos O&M plan is to prevent employee exposure to airborne asbestos and thereby protect the health of building occupants and staff.

This O&M plan addresses procedures and practices required to safely perform routine maintenance activities including periodic surveillance of ACM, emergency repairs, and asbestos waste disposal. The asbestos O&M plan is designed to:

1. Inform management and maintenance staff of the presence of friable and/or nonfriable ACM in the building and of precautions and procedures to be taken to prevent potential exposure.
2. Provide for training of maintenance workers through a combination of awareness training and maintenance procedures.
3. Establish procedures for routine maintenance of asbestos-containing materials.
4. Provide guidelines for response to fiber release episodes.
7. Establish schedules for periodic surveillance.
8. Provide framework for documentation of asbestos-related activities in accordance with applicable regulations and guidelines.

Refer to Appendix A for a glossary of asbestos-related terms.

1.2 IDENTIFIED OR ASSUMED ACM

The following summary indicates the locations, quantities, and assessment results for the identified asbestos-containing material. This survey included all interior and exterior areas of the building. The results of these assessments are summarized below:

1.2.1 Friable Surfacing Material

None identified.

1.2.2 Friable Thermal System Insulation (TSI)

None identified.

1.2.3 Friable Miscellaneous Material

None identified.

1.2.4 Nonfriable Miscellaneous Material

The following ACM is categorized as nonfriable miscellaneous material.

ACM	Location	Condition
12" x 12" Off-White VFT	Rooms 1-6, 12, 15, 23, and 27	Good
Black Duct Mastic	Rooms 1-7 and 12	Good
Fire Door	Rooms 1-5, 7-9, 11, 13, 15, 17-20, and 22-25	Good
Vault Door	Vault	Good
Built-Up Roof	Roof	Fair

1.3 RESPONSE ACTIONS RECOMMENDATIONS

Specific response actions have been developed using ACM assessment criteria presented in "Asbestos Survey Report Form 2." Response actions are designed to account for the condition, friability, access, asbestos content, and potential for fiber release of the ACM. Implementation of response actions is considered suitable for the management of areas where routine maintenance and building activities would cause disruption of ACM.

The following response action is recommended for the asbestos-containing material at the structure:

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- O&M plan: The ACM listed in section 1.2 may be incorporated into an O&M program to manage the condition of ACM at the facility. These materials should be managed in an O&M plan until renovation or demolition requires removal under the United States Environmental Protection Agency (USEPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP) regulation, or until hazard assessment factors change.

SECTION 2.0**OPERATIONS AND MAINTENANCE PLAN****2.1 ASBESTOS PROGRAM MANAGER**

An Asbestos Program Manager shall be appointed and charged with the following responsibilities:

- Arrange and coordinate training of custodial staff and notification of occupants with annual updates for new personnel.
- Arrange for abatement contractors to perform O&M tasks, when necessary.
- Supervise routine maintenance activities by building employees when these activities may disturb ACM.
- Coordinate and oversee work done by outside contractors when the possibility may exist that ACM will be disturbed.
- Arrange for the periodic surveillance of all ACM in the building.
- Arrange for ambient air quality testing.

2.2 INITIAL CLEANING

All areas shall be cleaned where friable ACM, damaged or significantly damaged TSI, or assumed friable ACM are present. These areas are to be cleaned at least once after completion of inspection and before implementation of any response action, other than O&M activities or repair. The cleaning shall be performed using the following procedures:

- The entry to the work areas will be restricted to all persons, other than those performing cleaning activities.
- All personnel shall wear proper respiratory protection during cleaning activities.
- All floors and horizontal surfaces in the area shall be HEPA vacuumed or wet-wiped.
- All debris, filters, mopheads, cloth rags etc. shall be disposed of in leak-proof, sealed containers, and disposed of properly.

2.3 ADDITIONAL CLEANING

The building owner will provide for additional cleaning of homogeneous areas which have friable surfacing material or thermal system insulation on at least a yearly basis, until the ACM can be removed. All floors and horizontal surfaces will be HEPA vacuumed and/or wet-wiped to clean up any asbestos fibers released during the year.

2.4 METHODS TO PROTECT BUILDING OCCUPANTS

Building occupants shall be protected during all O&M activities through the following procedures:

- All O&M activities which may impact friable ACM or nonfriable ACM with the potential to become friable will be performed by either a licensed asbestos abatement contractor acting under the supervision of a licensed asbestos consultant or with in-house maintenance personnel who have received the 16 hour O&M training course as specified by USEPA and/or Occupational Safety and Health Administration (OSHA) regulations.
- Entry to the work area where O&M activities are being performed will be restricted to all persons other than those performing the O&M activity.
- Warning signs will be posted to prevent entry by unauthorized persons.
- Air-handling systems or other sources of air movement will be shut down or be modified to restrict air movement in the work area.
- Appropriate work practices shall be used to minimize the migration of released fibers. These work practices may include: wet methods, glove bags, protective clothing, and proper containment of contaminated work materials utilizing vacuum or air filtration devices equipped with HEPA filters.
- All fixtures and furniture in the work area will be cleaned using HEPA vacuums and/or wet wiping.
- All asbestos debris and contaminated cleaning materials will be placed in air-tight, sealed containers. These containers will be disposed of according to local, state, and federal regulations.

2.5 MAINTENANCE WORK BEYOND SMALL-SCALE, SHORT DURATION

For any maintenance activity which will disturb the identified ACM, other than small-scale, short duration maintenance work, a response action will be designed by a licensed asbestos consultant and performed by a licensed asbestos abatement contractor. For the purposes of this plan, a small-scale, short duration project is defined as the disturbance of no more than 3 square or linear feet of ACM.

2.6 METHODS TO MINIMIZE FIBER RELEASE**2.6.1 Surfacing ACM**

- There will be no nailing, drilling, tacking, taping or hanging of objects from surfaces which are known to be ACM or assumed to be ACM.
- Maintenance and administrative staff personnel will report any disturbance of known or assumed friable or nonfriable ACM to the Asbestos Program Manager immediately.
- Maintenance personnel will report any evidence of potential or actual water damage to any existing surfacing ACM.
- Any ceiling areas which contain friable surfacing material should be HEPA vacuumed to clean up any asbestos-containing debris which may have dislodged. Ceiling areas which employ a return air plenum should be given priority in the cleanup schedule.
- Access to the ceiling area should be restricted to persons who have received, at minimum, the two hour awareness training course, and who are fitted with appropriate respiratory/personal protective equipment, and who are participating in the medical surveillance program.
- Any work being performed in a ceiling space which employs a return air plenum should be done with the air conditioning equipment shut down.
- Any work being performed in a ceiling space should be done after hours and/or in an isolated/restricted area.

2.6.2 Thermal System Insulation

- All building personnel will refrain from stepping on or storing any equipment against any thermal system insulation until removal can be performed by a licensed asbestos abatement contractor.
- Maintenance personnel will take care not to disturb any thermal system insulation until removal can be performed by an abatement contractor.

2.6.3 Miscellaneous ACM

- No nailing, drilling, sawing, sanding, or similar disturbance of vinyl asbestos floor tile, asbestos-containing ceiling tile, or any other friable or nonfriable miscellaneous ACM will occur without the proper fiber release control methods.

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- Damage to any miscellaneous ACM will be reported to the asbestos program manager immediately.
- Maintenance personnel shall refrain from the use of high speed buffing equipment (>300 RPM) on vinyl asbestos flooring.

2.7 MINOR FIBER RELEASE EPISODES

In the event of a minor fiber release episode (involving the dislodging of less than 3 linear or square feet of ACM), either a licensed asbestos abatement contractor acting under the supervision of a licensed asbestos consultant or appropriately trained in-house maintenance personnel who have received the 16 hour O&M training shall respond by:

- Thoroughly saturating the ACM debris using wet methods.
- Cleaning all fixtures and other components in the immediate area.
- Placement of all ACM debris in proper containers.
- Repairing the area of damaged ACM with appropriate materials.

2.8 MAJOR FIBER RELEASE EPISODE

In the event of a major fiber release episode (involving the dislodging of more than 3 linear or square feet of ACM), the following steps will be taken:

- Entry to affected area will be restricted to authorized personnel.
- Air handling systems will be shut down or modified to prevent the spread of fibers into other sections of the building.

For any major fiber release episode, a licensed asbestos consultant will plan the response action. The response action will be conducted by a licensed asbestos abatement contractor.

2.9 EMERGENCY REPAIRS

In the event that any of the identified ACM becomes damaged, it will be removed in the affected areas. Any material which has become contaminated as a result of emergency repairs may be disposed of as ACM, or decontaminated with a HEPA vacuum (non-porous surfaces only). The repairs will be performed with 6 mil. polyethylene sheeting covering all exposed surfaces. A HEPA-filtered exhaust unit or HEPA vacuum will be used to provide a negative pressure differential in the affected area. A change room will be constructed at the entrance to the enclosure with double flaps on each side for personnel access and also allow for makeup-air inflow. All ACM will be properly bagged and labeled for disposal. All ACM will be disposed of at an approved landfill site. During removal work, all personnel entering the emergency repair work area will wear two layers of protective clothing and half-face air purifying respirators. Personnel exiting the enclosure shall

remove their outer layer of protective clothing inside the enclosure and decontaminate their inner layer of protective clothing with a HEPA-filtered vacuum inside the change room. Air sampling will be performed as outlined in Section 3.0.

2.10 TRAINING

2.10.1 Two Hour Awareness Training

An awareness training program of at least 2 hours will be attended by all members of the building management and building maintenance staff who may work in areas where ACM is present. New maintenance personnel will be trained within 20 days of the start of employment. Elements of the awareness training program will include:

- The uses and forms of asbestos.
- The potential health effects of asbestos exposure.
- The locations of ACM in the buildings.
- How to recognize damage or deterioration of ACM.
- Name and telephone number of the Asbestos Program Manager.
- The location and accessibility of the Asbestos Operations and Maintenance Plan.

2.10.2 O&M Training

Any maintenance personnel, tradesman, contractors, etc. who will be conducting activities which are likely to disturb ACM will receive an additional 14 hours of training. This additional training will include:

- Discussion of the proper methods of handling ACM.
- Instruction in the proper use of respiratory protection equipment, and respiratory protection as contained in the EPA/NIOSH publication *Guide to Respiratory Protection for the Asbestos Abatement Industry*.
- Training in the use of respiratory equipment, personal protective clothing, and proper work and safety practices.

2.10.3 Refresher Training

Maintenance personnel who received the 16 hour O&M training course shall be given a 4 hour refresher training course on an annual basis as per OSHA requirements.

2.11 RECORD KEEPING

1. All records concerning the periodic surveillance, response actions, and operations and maintenance program will be kept on file in the Asbestos Program Manager's office.
2. For each area where ACM has been removed, records of the abatement activity will be retained until the property is sold. Abatement records will be transferred with the property upon sale
3. For any response action or preventative measure taken to abate or minimize fiber release, the Asbestos Program Manager will provide:
 - A written description of the measure or action which will include:
 - Methods used to control fibers.
 - Location of action or measure.
 - Reasons for selecting such measures or actions.
 - Start and completion dates.
 - Names and addresses of all contractors involved in the activity.
 - State of accreditation and accreditation number.
 - The name and location of the disposal site.
 - Copies of air monitoring reports which will include:
 - The name and signature of person(s) collecting air samples.
 - The locations where samples were collected.
 - Date of collection.
 - Name and address of laboratory analyzing air samples.
 - Date(s) of analysis.
 - The method of analysis.
 - The name and signature of the person(s) performing the analysis.
 - A statement that the laboratory meets all applicable requirements.

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4. Training records for each person involved in the work will include:
 - The person's name and job title.
 - Date of completion of training.
 - Location of the training.
 - Number of hours of training.
5. When periodic surveillance is performed, the name of the person performing the surveillance, date, and changes in condition of ACM will be recorded and kept on file.
6. When cleaning is performed, the name(s), date, locations, methods of cleaning will be recorded and kept on file.
7. When O&M activities are performed, names, dates, locations, and a description of the activities will be recorded and kept on file.
8. When ACM is removed as part of an O&M activity, the name and location of the disposal site will be recorded along with all other information required in 2.11.7.
9. When a major abatement activity is performed, the following information will be recorded and kept on file:

The name, signature, state of accreditation, and accreditation number of each person performing the activity.

- The start and completion dates of the activity.
 - The locations where activity occurred.
 - description of the activity.
 - The name and location of the disposal site, if ACM is removed.
10. When a fiber release episode occurs, a record of the following will be kept:
 - The date and location of the episode.
 - The method of repair.
 - Description of preventive measures or response action taken.
 - The names of person(s) performing the work.
 - The name and location of the disposal site, if ACM is removed.

2.12 WARNING LABELS

Where feasible, the building owner will attach warning labels adjacent to any installed ACM or assumed ACM located including but not limited to routine maintenance areas. Routine maintenance areas are those areas where normal maintenance activities may disturb ACM (e.g. mechanical rooms).

All labels will be displayed in visible locations and will remain until the ACM is removed.

The warning label will be printed in large bold letters on a contrasting background and will read as follows:

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD**

2.13 MEDICAL SURVEILLANCE AND EMPLOYEE PROTECTION PROGRAM

All employees involved in the O&M plan will participate in a medical surveillance program designed to detect symptoms of asbestos-related diseases, and evaluate their ability to wear a negative pressure respirator. The medical surveillance program will consist of an initial and a periodic (annual) examination which will include:

- Completion of a mandatory OSHA questionnaire.
- A physical examination which emphasizes cardiovascular and gastro-intestinal functions.
- A pulmonary function test, which includes the forced vital capacity, and forced expiratory volume (one second).
- For initial examinations, a chest X-ray read by a B-reader is preferable, but not necessary if a recent X-ray is available.
- All medical records will be maintained for at least 30 years after the termination of employment.

2.14 NOTIFICATIONS

A written notification policy should be implemented to inform maintenance and service personnel of the existence of asbestos throughout the facility. Building maintenance should be aware of the potential for damage to all ACM, and refrain from disturbing them, unless properly trained to handle ACM. Outside service contractors must be informed about the location of asbestos-containing materials as plumbers, air conditioning maintenance personnel, electricians and general contractors etc. may disturb ACM unwittingly. Any planned disturbance to the ACM during operations and maintenance work will require notification to the State of Florida Asbestos Coordinator.

Notifications to maintenance, service personnel, and the State of Florida should be the responsibility the Asbestos Program Manager.

2.15 PERIODIC SURVEILLANCE

The condition of the ACM can be expected to change over time due to wear and erosion. In addition, the quantity and location(s) of ACM may change over time as a result of abatement conducted as part of renovations or repairs, etc. In order to document and keep track of these changes, periodic surveillance is performed on a bi-annual basis. Every six months, all areas of the building that were found to have asbestos-containing material present will be visually reinspected by qualified personnel. The personnel performing the surveillance will record the date of surveillance, their names, and any changes in the condition of the ACM that are apparent from the previous inspection. This information will be submitted to the "Asbestos Program Manager" for inclusion in the building records. If any significant damage has occurred to any of the asbestos-containing material since prior inspections, the designated person shall contact the appropriate licensed person(s) to repair or perform acceptable response actions. A copy of a sample periodic surveillance form is provided in Appendix B.

SECTION 3.0

AIR QUALITY TESTING

The following is a brief overview of the different types of asbestos air sampling procedures commonly used during: O&M work, asbestos abatement work, and routinely for documentation purposes. This overview is provided for general informational purposes only and is not intended to be an all inclusive reference document.

3.1 SAMPLING DURING O&M ACTIVITIES

O&M activities are generally small scale, short duration projects where small amounts of ACM may be intentionally or unintentionally disturbed. The minimum type of sampling that should be performed during O&M work includes:

- Worker exposure monitoring - Worker exposure monitoring must be performed by a licensed asbestos consulting firm under the direction of a licensed asbestos consultant. Other types of air monitoring can also be performed during O&M activities at the owner's discretion. These other types of monitoring include area monitoring in and around the work area, and final clearance monitoring. This additional air monitoring is usually not warranted during small scale/short duration projects, and must be performed by personnel who have been trained in the NIOSH 582 course *Sampling and Evaluation of Airborne Asbestos Dust*.

3.1.1 Sample Collection Methods

Air samples are collected on 25 mm diameter mixed cellulose ester (MCE) filters with 0.8 micron diameter pores. The filters are mounted in 25mm diameter plastic cassettes with 50mm anti-static extension cowls. The cassettes should be attached to the worker's collar to allow monitoring of the worker's breathing zone.

Low volume battery-operated air pumps are used to draw air through the filter apparatus. The pump flow rates should be set between 0.5 to 2.5 liters per minute. Lower flow rates are preferable if there is expected to be a high amount of airborne dust present during the sampling, and if the sampling will occur over several hours. Higher flow rates are preferable if the work is expected to require less than a couple of hours to complete the asbestos-related task.

In general, the higher the volume of air sampled, the more sensitive the analytical results are. The minimum volume of air that should be collected for worker exposure purposes is 50 liters; this volume will permit a detection limit of 0.099 fibers per cubic centimeter (fibers/cc) of air, which is below the current OSHA Permissible Exposure Limit (PEL) of 0.1 fibers/cc of air. A volume of 1,227 liters will yield the lowest possible detection limit of 0.004 fibers per cc of air. Samples with volumes greater than 1,227 liters are acceptable, although caution must be taken to not overload the filter cassette if dusty conditions exist. Each individual pump's flow rate should be checked prior to each sampling period. At the end of each sampling period, the flow rate of each pump should be rechecked to obtain an average flow rate during the entire sampling period.

3.1.2 Sample Analysis Methods

Worker exposure samples are generally analyzed using Phase Contrast Microscopy (PCM) techniques samples as described in the NIOSH method 7400, NIOSH Manual of Analytical Methods, 3rd edition, 2nd supplement, August 1987). Copies of the sample results should be made available to the worker for his review.

3.1.3 Sampling Strategy

Worker exposure sampling should be conducted during each phase of the O&M activity (e.g. preparation phase, removal or disturbance phase, and cleanup phase). If the O&M activity is of short duration, these phases of work can be grouped together. The sampling should be performed on the job categories where the highest exposure to asbestos fibers is expected.

3.2 SAMPLING DURING ASBESTOS ABATEMENT PROJECTS**3.2.1 General**

This section reviews the various types of air monitoring typically performed during a large scale asbestos abatement project. Air monitoring during these projects should be performed by a licensed asbestos consulting firm and the removal work should be performed by a licensed asbestos abatement contractor. Air monitoring personnel should be present at all times during the disturbance of ACM including preparation work. The various types of air monitoring performed during asbestos abatement projects typically includes:

- Background Sampling - Prior to the beginning of an abatement operation it is recommended that areas in and around the removal site be sampled for airborne asbestos, and analyzed by the same method as will be used for final air testing.
- Abatement-In-Progress Sampling - During the removal operation, air samples should be taken to monitor the levels of airborne fibers in and around the work area. The purpose of this monitoring is to ensure that the engineering controls being employed by the abatement contractor are sufficient to prevent the release of asbestos fibers outside of the containment. Samples collected during abatement are usually analyzed by the PCM method. Samples are analyzed and results reported to the Owner and contractor within 24 hours. This rapid turnaround generally requires an analyst and microscope at the work site. Samples from outside the work area may be analyzed by Transmission Electron Microscopy (TEM), at the Owner's request or discretion, as a check on results from PCM analysis.
- Worker exposure monitoring - This type of sampling is the same as that discussed in section 3.1 except that it is normally the asbestos abatement contractor's responsibility to perform, unless alternate arrangements have been made.
- Pre-Encapsulation Air Testing - This type of test is often performed prior to dismantling the enclosure system, and prior to the use of any encapsulate. The sampling should

not begin until the work area is dry. Sampling should utilize aggressive techniques (a 1 HP leaf blower and electric fans) to resuspend any dust or material which has settled in the work area. The pre-encapsulation air testing is generally analyzed by PCM (NIOSH 7400) with a concentration of 0.01 f/cc being the standard clearance criteria with a 95% confidence limit.

- **Final Air Testing** - After successful completion of the PCM final air test, the contractor is allowed to encapsulate the entire work area. When encapsulation has been completed and the work area is sufficiently dry, a Final Air Test utilizing the same sampling procedures as the pre-encapsulation test is conducted. The Final Air Test may be analyzed by either PCM or TEM methods. meet the final clearance criteria. The standard final clearance criteria is 0.01 fibers/cc of air when using PCM analysis and an average of 70 structures per square millimeter using TEM analysis. Where the results of the Final Air Test show values of airborne asbestos in excess of the accepted clearance criteria, the contractor should re-clean the work area. The Final Air Testing procedure is generally then repeated at the contractor's expense.

3.3 ROUTINE SAMPLING FOR DOCUMENTATION PURPOSES

Air sampling program should be established to provide an objective assessment of the levels of airborne asbestos that is representative of air quality throughout the structure.

3.3.1 Sample Location, Density, and Frequency

Sampling locations in the building are selected randomly by assigning numbers to equal-sized areas and selecting numbers from a random number system.

The EPA (EPA 560/5-85-024, Guidance For Controlling Asbestos-Containing Materials in Buildings) recommends a sampling density of 1 sample per 5000 sq. ft. of floor space in areas where ACM occurs. Where the area is divided up into small rooms, a higher sampling density is recommended.

The air quality sampling program should be performed on an as need basis, especially when significant damage has been discovered through periodic surveillance in the building. Where ACM is disturbed, a small set of samples may be taken prior to the scheduled sampling time to ensure that airborne fibers are not being distributed through the building. At minimum, air sampling should be performed on an annual basis.

3.3.2 Sample Analysis

The samples may be analyzed by either PCM or TEM methods at the discretion of the Asbestos Program Manager. Analysis by TEM is preferable over PCM especially if PCM analysis reveals elevated fiber counts.

SECTION 4.0

REFERENCES

National Institute of Occupational Safety and Health (NIOSH). *Phase Contrast Microscopy (PCM) Method 7400*. NIOSH Manual of Analytical Methods

United States Environmental Protection Agency (USEPA). *Managing Asbestos in Place - A Building Owner's Guide to an Operations and Maintenance Program for Asbestos-Containing Materials*, July 1990, TS-799 #20T-2003.

USEPA. *National Emissions Standards for Hazardous Air Pollutants (NESHAP)*, 40 CFR Part 61, Subpart M, 1990.

USEPA. *Asbestos-containing Materials in Schools; Final Rule and Notice*. 40 CFR 763, 1987.

OSHA. *Occupational Exposure to Asbestos; Final Rule*, 29 CFR 1910 et al.

State of Florida: *Licensure of Asbestos Consultants and Contractors*. Florida Statutes F.S. 455.301 - 455.308.

EE&G: Asbestos Survey Report*Department of Military Affairs***ASBESTOS SURVEY REPORT FORM 2**

Facility: Haines City
 Building Name: Armory
 Date of Survey: 9/28/98
 Contract No.: MA97033
 Consultant: EE&G
 Agency: State of Florida, FDMA

Sample #	Material	Homogeneous Area	Functional Space	Salient Area	Total Quantity	Friable (Y-N)	Type & % Asbestos	Condition	Damage Potential	Hazard Assessment	Response Priority	Air Monitor Results	Comments
001	12" x 12" Off-White VFT w/ Black Mastic	01	Office	N/A	2,500 square feet (s.f.)	N	VFT 3% Chrysotile & Mastic 10% Chrysotile	Good	Low	1	7	N/A	
002	12" x 12" Off-White VFT w/ Black Mastic	01	Office	N/A	See Sample 001	N	Not Analyzed	Good	Low	1	7	N/A	
003	12" x 12" Off-White VFT w/ Black Mastic	01	Office	N/A	See Sample 001	N	Not Analyzed	Good	Low	1	7	N/A	
004	12" x 12" Brown VFT	02	Shop	N/A	500 s.f.	N	ND	Good	Low	N/A	N/A	N/A	
005	12" x 12" Brown VFT	02	Shop	N/A	See Sample 004	N	ND	Good	Low	N/A	N/A	N/A	
006	12" x 12" Brown VFT	02	Shop	N/A	See Sample 004	N	ND	Good	Low	N/A	N/A	N/A	
007	Baseboard Mastic	03	Office	N/A	260 s.f.	N	ND	Good	Low	N/A	N/A	N/A	QA/QC Verified
008	Baseboard Mastic	03	Office	N/A	See Sample 004	N	ND	Good	Low	N/A	N/A	N/A	

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Department of Military Affairs

Sample #	Material	Homogeneous Area	Functional Space	Salient Area	Total Quantity	Friable (Y-N)	Type & % Asbestos	Condition	Damage Potential	Hazard Assessment	Response Priority	Air Monitor Results	Comments
009	Baseboard Mastic	03	Office	N/A	See Sample 007	N	ND	Good	Low	N/A	N/A	N/A	
010	Plaster Ceiling System	04	Kitchen/Latrine	N/A	750 s.f.	N	ND	Good	Low	N/A	N/A	N/A	
011	Plaster Ceiling System	04	Kitchen/Latrine	N/A	See Sample 010	N	ND	Good	Low	N/A	N/A	N/A	
012	Plaster Ceiling System	04	Kitchen/Latrine	N/A	See Sample 010	N	ND	Good	Low	N/A	N/A	N/A	
013	2' x 4' White Ceiling Tile (CT)	05	Throughout	N/A	8,050 s.f.	Y	ND	Good	Low	N/A	N/A	N/A	
014	2' x 4' White CT	05	Throughout	N/A	See Sample 013	Y	ND	Good	Low	N/A	N/A	N/A	
015	2' x 4' White CT	05	Throughout	N/A	See Sample 013	Y	ND	Good	Low	N/A	N/A	N/A	
016	2' x 4' White CT	05	Throughout	N/A	See Sample 013	Y	ND	Good	Low	N/A	N/A	N/A	
017	2' x 4' White CT (Worm Pattern)	06	Shop	N/A	500 s.f.	Y	ND	Good	Low	N/A	N/A	N/A	QA/QC Verified
018	2' x 4' White CT (Worm Pattern)	06	Shop	N/A	See Sample 013	Y	ND	Good	Low	N/A	N/A	N/A	
019	2' x 4' White CT (Worm Pattern)	06	Shop	N/A	See Sample 013	Y	ND	Good	Low	N/A	N/A	N/A	
020	2' x 4' White CT (Tight Dot Pattern)	07	Shop	Y	175 s.f.	Y	ND	Good	Low	N/A	N/A	N/A	

EE&G: Asbestos Survey Report**Department of Military Affairs**

Sample #	Material	Homogeneous Area	Functional Space	Salient Area	Total Quantity	Friable (Y-N)	Type & % Asbestos	Condition	Damage Potential	Hazard Assessment	Response Priority	Air Monitor Results	Comments
021	2' x 4' White CT (Tight Dot Pattern)	07	Shop	Y	See Sample 020	Y	ND	Good	Low	N/A	N/A	N/A	
022	2' x 4' White CT (Tight Dot Pattern)	07	Shop	Y	See Sample 020	Y	ND	Good	Low	N/A	N/A	N/A	
023	Black Duct Mastic	08	Office/Mechanical Room	N/A	200 s.f.	N	10% Chrysotile	Good	Low	1	7	N/A	
024	Black Duct Mastic	08	Office/Mechanical Room	N/A	See Sample 023	N	Not Analyzed	Good	Low	1	7	N/A	
025	Black Duct Mastic	08	Office/Mechanical Room	N/A	See Sample 023	N	Not Analyzed	Good	Low	1	7	N/A	
026	Door Caulk	09	Door System	N/A	9 s.f.	N	ND	Good	Low	N/A	N/A	N/A	
027	Door Caulk	09	Door System	N/A	See Sample 026	N	ND	Good	Low	N/A	N/A	N/A	
028	Door Caulk	09	Door System	N/A	See Sample 026	N	ND	Good	Low	N/A	N/A	N/A	
N/A	Fire Door	10	Throughout	N/A	33	N	Assumed	Good	Low	1	7	N/A	
N/A	Vault Door	11	Vault	N/A	1	N	Assumed	Good	Low	1	7	N/A	
N/A	Built-Up Roof	12	Roof	N/A	13,200 s.f.	N	Assumed	Fair	Moderate	5	3	N/A	

EE&G: Asbestos Survey Report

Department of Military Affairs

ASBESTOS COST ESTIMATE

Facility: Haines City
 Building Name: Armory
 Date of Survey: 9/28/98

MATERIAL TYPE	RESPONSE ACTION	TOTAL QUANTITY	ESTIMATED REMOVAL COST PER UNIT	TOTAL
12" x 12" Off-White VFT	O & M	2,500 s.f.	\$2 - \$4/s.f.	\$5,000 - \$10,000
Black Duct Mastic	O & M	200 s.f.	\$2 - \$4/s.f.	\$400 - \$800
Fire Door	O & M	33	\$100 - \$150/door	\$3,300 - \$4,950
Vault Door	O & M	1	\$300 - \$400/door	\$300 - \$400
Built-Up Roof	O & M	13,200 s.f.	\$2 - \$4/s.f.	\$26,400 - \$52,800



Photo 1: Haines City Armory Front Entrance



Photo 2: East side of Armory



Photo 3: Armory west and rear side



Photo 4: Outside the converted IFR



Photo 5: West end of the converted IFR showing the air handling unit and storage cages.



Photo 6: East end of the converted IFR (Firing line area).



Photo 7: Air handling unit on the west end of the converted IFR.



Photo 8: Drill hall facing the converted IFR.



Photo 9: Drill hall facing the office area.



Photo 10: Communication repair area.



Photo 11: Ceiling tiles.



Photo 12: Air handling units to the office areas.



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111 SOUTH GEORGE MASON DRIVE
ARLINGTON VA 22204-1382

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ARNG-CSG-P

25 April 2011

MEMORANDUM TO SFC Non-
Demographic, Company A 1st BN 124th Infantry, Florida
Army National Guard, 910 North Dixie Highway, Hollywood, FL 33020-3423.

SUBJECT: Executive Summary (EXSUM) for the Industrial Hygiene (IH) Survey of the
Hollywood Armory conducted 31 March 2011.

1. Purpose.

a. At the request of the Florida Safety and Occupational and Health Office and the
Southeast Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was
put together to conduct a baseline IH survey at the Hollywood Armory.

b. This IH survey was conducted to 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. **There were no major findings found and noted during this IH survey.**

3. Recommendations.

a. The shipping containers and other reclaimable items in the weapons firing pit should
be removed and decontaminated. **(RAC 2)**

b. The shipping containers and other items with a nonporous hard surface should be
carried outside and wiped cleaned (rags sponge etc.) with a wet solution of spic and
span® and water. After wet wiping all surfaces, permit all areas to dry. Any items that
are heavily laden with dust should be High Efficiency Particulate Air (HEPA) filtered
vacuum prior to wet wiping. Do not remove or attempt to clean any porous items from
the weapons firing pit carpet, etc. **(RAC 2)**

c. During removal and cleaning, personnel should wear protective disposable coveralls
or full body Tyvek ® disposable suits and disposable rubber gloves. **(RAC 2)**

d. After items are removed and cleaned, the weapons firing pit should be posted with an
off limits/no entry sign. **(RAC 2)**

- e. Items that have been cleaned should be stored in a different location.
- f. Submit a work order to decontaminate, rehabilitate, or convert the weapons firing pit to storage or other uses. (RAC 2)
- g. No attempt to decontaminate or clean the weapons firing pit should be made by army personnel. (RAC 3)
- h. Ensure that armory personnel receive lead evaluations during their annual physicals.
- i. Ensure that the State of Florida does not have lead reduction levels and procedures lower than recommended in Pamphlet 420-15. (RAC 2)
- j. Post Inventory lists on the flammable and non-flammable storage cabinets. (RAC 3)
- k. Repair and replace lights in the drill hall and five offices, to increase illumination levels to 70 foot-candles. (RAC 3)
- l. Follow the remaining recommendations listed by the contractor.

4. The technical point of contact is **Non-Responsive** of the Region Southeast Industrial Hygiene Office, at commercial 404-559-4174, or **Non-Responsive** us.army.mil. For State follow up, contact MAJ **Non-Responsive** Occupational Health Manager at commercial 904-823-0470 or the Safety and Occupational Health Office.

Non-Responsive

SE Regional Industrial Hygienist

CF: **Non-Responsive** Chief, Industrial Hygiene, 301 IH Old Bay Lane, Havre de Grace, MD 21078. (EXSUM only)

Office of the Adjutant General, ATTN: MAJ **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

LTC **Non-Responsive** Deputy State Surgeon, Florida Army National Guard, 2305 State Road, St. Augustine, Florida 32086. (EXSUM only)

MAJ **Non-** SSMO, Route 1, Box 478, Camp Blanding, Starke Florida 32091-9708 (EXSUM only)

MAJ **Non-Responsive** Chief, NGB Occupational Health, Office of the Chief Surgeon, ARNG ARNG-CSG, 111 South George Mason Drive Arlington, VA 22204-1382 (EXSUM only)

LTC **Non-Responsive** CFMO, 2305 SR 207, St. Augustine, FL 32086 ((EXSUM only)

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC

1108 East Dolphin Drive
Oak Island, NC 28465
Phone: 443-807-0848, Fax: 910-278-5186
nickenviron@att.net

March 31, 2011

Mr. **Non-Responsive**
Region South Industrial Hygiene Office
510 Plaza Drive, Suite 1530
College Park, GA 30349

RE: Contract between Region South Industrial Hygiene Office
and Nichols Environmental Associates, Inc.
Industrial Hygiene Survey

Dear Mr. **Non-Responsive**

In accordance with the requirements of the above reference, Nichols Environmental Associates, Inc. (NEA) is pleased to submit this report.

This submittal incorporates the requirements of the Industrial Hygiene Contract and interview information collected. The survey and sampling were performed diligently and in accordance with industry regulations, guidelines, and good management standards. The information is complete and accurate to the best of our knowledge.

If you have any questions or comments regarding the report, please contact me.

Non-Responsive

Certified Hazard Control Manager (CHCM)
President

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<u>APPENDIX A:</u>	Building Diagram & Summary of Illumination Measurements
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<u>APPENDIX B:</u>	Sample Placement Diagram, Chain of Custody Forms, Lab Sample Results & Sample Photographs
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<u>APPENDIX C:</u>	Occupant Health and Comfort Questionnaire, Facility Information Form, Health Hazard Information Module, Photographs & References
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1.0 EXECUTIVE SUMMARY

The shipping containers and other reclaimable items in the weapons firing pit should be removed and decontaminated.

During removal and cleaning, personnel should wear protective disposable coveralls or full body Tyvek ® disposable suits and disposable rubber gloves.

After items are removed and cleaned, the weapons firing pit should be posted with an off limits/no entry sign.

Items that have been cleaned should be stored in a different location.

Submit a work order to decontaminate, rehabilitate, or convert the weapons firing pit to storage or other uses.

No attempt to decontaminate or clean the weapons firing pit should be made by army personnel.

Ensure that armory personnel receive lead evaluations during their annual physicals.

Post Inventory lists on the flammable and non-flammable storage cabinets.

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2.0 BACKGROUND

Nichols Environmental Associates, Inc. (NEA) was contracted by the National Guard Region South Industrial Hygiene Office to conduct an Industrial Hygiene Initial Baseline Survey of the Army National Guard Armory, Alpha Company, 1st Battalion, 124th Infantry, Hollywood, Florida. The survey was conducted on March 24nd, 2011 by Paul Nichols, Certified Hazard Control (CHCM).

Hollywood Army National Guard Armory is responsible for administration, readiness and personnel support. The armory is used for drills on weekends. On weekends, personnel perform within their Military Occupational Specialty. Alpha Company, 1st Battalion, 124th Infantry headquarters is in Miami, Florida.

The Hollywood Army National Guard Armory does not have an indoor firing range.

Reportedly, the inactive weapons firing pit that was built at the end of the drill hall, when the building was constructed in 1954, has not been used for more than thirty years or more. The weapons firing pit has been used over the years for storage.

The baseline survey included conducting illumination studies, lead wipe samples, a suspected lead and asbestos bulk samples, Health Hazard Information Modules (HHIMs), Petroleum Oil & Lubricant (POL) procedures, Facility Information Form (FIF) and Occupant Health and Comfort Questionnaires (OHCQ).

3.0 SITE DESCRIPTION

The Hollywood Army National Guard Armory, Alpha Company, 1st Battalion, 124th Infantry, is located in an approximately 16,000 square foot one story cinder block building, in a commercial area at 910 North Dixie Highway, Hollywood, Florida 33020-3423. The armory was built in 1954. The armory contains an inactive indoor weapons firing pit that is located in the drill hall and is used for storage. The building is old with floor and wall damages in several areas. The armory contains the usual and customary offices, classrooms, drill hall, kitchen, storage, supply, and men/women latrines, etc. There are currently three (3) full-time employees assigned.

4.0 SCOPE of WORK

The industrial hygiene (IH) survey conducted at the Hollywood Army National Guard Armory included an illumination survey of the entire facility, lead wipe samples of the drill hall/vault, a bulk lead sand analysis of the inactive firing pit and an asbestos bulk sample analysis of office wall board material. An inspection of the flammable/non-flammable storage cabinets was also completed.

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A review of the Facility Information Form (FIF) and Occupant Health and Comfort Questionnaire (OHCQ) which addresses questions or concerns of the employees were also completed.

5.0 IH SURVEY PERSONNEL AND POINTS OF CONTACTS

Non-Responsive MS, Certified Hazard Control Manager (CHCM), Nichols Environmental Associates, Incorporated, was responsible for this survey. Hollywood points of contacts (POCs) and coordinators were SFC **Non-Responsive** (shop foreman) and MAJ **Non-Responsive** Occupational Health Specialist.

6.0 SURVEY METHODOLOGY

A walk-thru survey was conducted of the armory. Employees were interviewed, and the OHCQs/FIF were reviewed. Sampling and evaluation strategies were developed from information obtained from the POCs, OHCQs, FIF, and a walk-thru. Procedures and strategies were designed for the purpose of collecting lead wipe samples, lead/asbestos bulk samples, and conducting a lighting survey. The POC was charged with providing NEA detailed information about the process and the flow of operations for each area. All tests and procedures were conducted in accordance with usual and customary, generally accepted, IH protocol.

7.0 FINDINGS

7.1 Illumination Survey

Illumination readings were obtained with an Extech Model 407026 Heavy Duty Light Meter, Serial # Z118558, with a National Institute of Standards and Technology (NIST) traceable calibration. Illumination readings were recorded in foot-candles (FCS) and the Extech light meter was programmed for the type of illumination present. Illumination readings were taken in offices, class rooms, drill hall, vault, kitchen, storage, supply, recreation room, and men/women latrines.

Illumination Parameters FCS

Office/ Admin = 70	Physical Fitness = 5	Vehicle Work/Bays = 50
Supply = 20	Vault = 20	Drill Hall = 50
Latrines = 20	Library = 70	Kitchen = 50

The average reading taken in the drill hall was 22 FCS (10 lights were out). The Five offices had lighting levels that were well below 70 FCS. Other areas met or exceeded the guidelines.

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A building diagram and summary of illumination measurements and Army National Guard DG 415 Design Guide Lighting Standards are included in Appendix A.

7.2 Lead Wipe, Lead Bulk and Asbestos Bulk Sampling

Twelve lead dust surface samples were collected from representative areas in the drill hall and vault using Environmental Express Ghost Wipes™ and 12 inch by 12 inch plastic template. The entire area was wiped using an "S" configured motion. The Ghost™ Wipe was then folded in half, and the area was again wiped in a direction 90° to the first using an "S" motion. The wipe was folded again and the perimeter of the area was wiped. The wipe was then placed into a plastic bag and sealed. In addition, a clean wipe was placed in a resealable plastic bag and submitted as a blank sample for analysis. The template was decontaminated after each sample with alcohol wipes. The samples were sent to Analytical Environmental Services, Inc., an American Industrial Hygiene Certified Laboratory, for chemical analysis. The samples were submitted using the Chain of Custody Procedure where they were individually processed and given a unique number.

A firing pit which was a part of the original building plans (1954) is located on the rear wall of the drill hall (Diagram). The former firing pit is currently a storage room. A wipe sample (HWP-11) was collected from one of the slats used for trunk storage, and a bulk sample of the sand from the firing pit was collected (Diagram & Photographs).

Laboratory lead wipe sample results indicated lead concentrations were below the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft² or lower for post cleaning indoor firing ranges/weapons firing pits. However, bulk sample results of the sand that remains throughout the pit indicates the presence of lead. Prior to conversion for storage, the weapons firing pit should have been decontaminated, cleaned and remodeled to eliminate the potential for on-going lead contamination.

A drill hall and vault sample placement diagram, Chain of Custody Forms, laboratory sample results, and photographs are included in Appendix B.

A table denoting sample locations, field numbers, and lead results is outlined below.

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Lead Wipe Sample Locations, Field Numbers & Results

Sample Number	Sample Location	Results (µg/ft²)
HW-01	Drill Hall Floor	BRL
HW-02	Drill Hall Floor	BRL
HW-03	Drill Hall Floor	40
HW-04	Drill Hall Floor	BRL
HW-05	Drill Hall Floor	BRL
HW-Blank	Drill Hall	BRL
HWV-06	Vault Floor	71
HWV-07	Vault Floor	48
HWV-08	Vault Floor	54
HWV-09	Vault Floor	63
HWV-Blank	Vault	BRL
HWP-10	Drill Hall Floor	BRL
HWP-11	Storage/Weapons Pit/Slat	70

BRL=Below Reportable Limits

Bulk Lead & Asbestos Samples

HWP-12	Sand/ Bullet Trap Weapons Pit	11.3
HW-13, layer 1	Wall Bulk Asbestos	None Detected
HW-13, layer 2	Wall Bulk Asbestos	None Detected

A bulk sample (HW-13, layers 1&2) of suspected asbestos material was collected from damaged wallboard in the office next to the class room (Diagram and Photographs). Sample results indicated no asbestos was detected in the wall board material.

7.3 Flammable & Non Flammable Storage, Chemical Inventory, & General Observations

An inspection of the flammable and non-flammable storage cabinets in the drill hall was made. The flammable storage cabinet is of the approved type and in good repair. All chemicals present in the flammable storage cabinet were relatively typical. The storage cabinet contained primarily aerosol spray paint cans. Spray painting with the aerosol spray paint cans is done for "touch-up" purposes or spraying ID numbers on the bumpers of vehicles. This is done infrequently, with duration of no more than 5 -10 minutes. The most common "potentially hazardous" chemicals found in the substances were acetone, and toluene.

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The Short Term Exposure Limit (STEL) and Permissible Exposure Limit (PEL) set forth for these chemicals was not a concern. This is due to the amount of time, quantity and use of the chemicals, combined with their low percentage by volume.

Chemical Inventory lists were not posted on the flammable storage cabinets.

8.0 OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE (OHCQ) & FACILITY INFORMATION FORM (FIF)

Three armory personnel responded to the OHCQ. Two mentioned the overall poor condition of the building. The OHCQs and FIF forms are included in Appendix C.

9.0 HEALTH HAZARD INFORMATION MODULE (HHIM)

The HHIM Field Survey Forms were completed for operations surveyed. Controls/protective measures, and potential health hazards for specific operations were identified. The HHIM Field Survey Forms are included in Appendix C.

10.0 PHOTOGRAPHS

Site photographs are included in Appendix C.

11.0 REFERENCES

A list of references used during the course of this survey is included in Appendix C.

12.0 LIMITATIONS

Variation of the work environment is an inherent part of sampling and evaluations. This report reflects conditions, operations, and practices observed and reported at the time of the survey. Changes in operating conditions, materials used, and work practices can alter the environment and the outcome of this type of survey.

13.0 RECOMMENDATIONS

Provided under separate cover.

Building Diagram & Summary of Illumination Measurements (Foot-Candles-FCS)

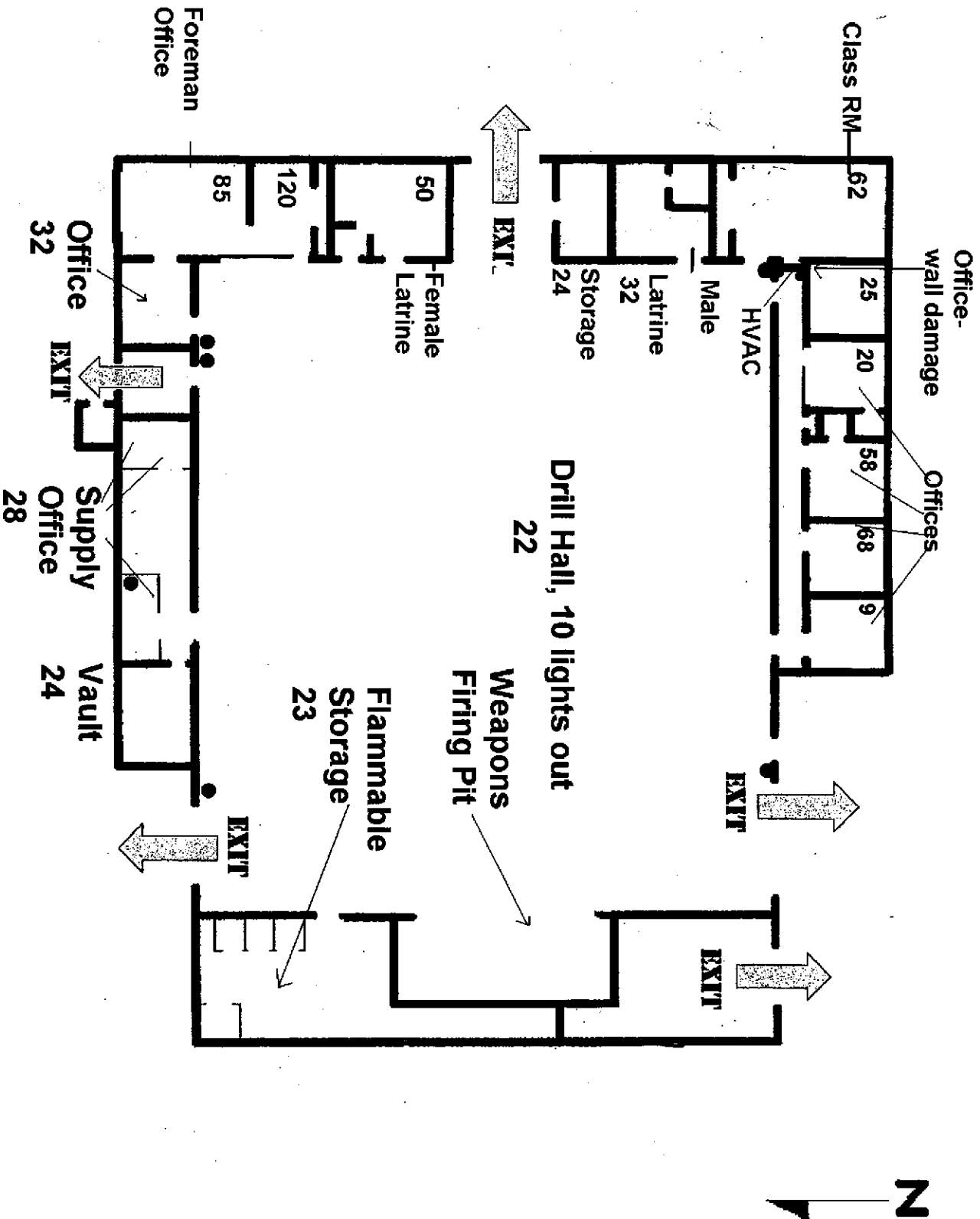


Table 8
DC-1500000 Standards

DC 415-2
01 MARCH 2005

Table 8. Electrical Requirements

	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
Office Areas				
1	General Supervisor	70 FC, FL	1 duplex per wall	1
2	Supervisor	70 FC, FL	1 duplex per wall	1
3	Production Controller	70 FC, FL	1 duplex per wall	1
4	Inspection and Library	70 FC, FL	1 duplex per 10 LF of wall	1
5	Automation Clerk	70 FC, FL	1 duplex per 10 LF of wall	1
6	Common IT Space	70 FC, FL	1 duplex per 10 LF of wall	2
7	IT Support Activities	70 FC, FL	1 duplex per 10 LF of wall	2
8	Classroom	70 FC, FL	1 duplex per 10 LF of wall	
Personnel Areas				
1	Toilet/Shower	40 FC, FL	1 duplex GFCI per 2 sinks	
2	Locker Room	40 FC, FL	1 duplex GFCI	
3	Break Area	30 FC, FL	1 duplex per 10 LF of wall	
4	Physical Fitness Area	50 FC, FL	1 duplex per 12 LF of wall	2
Work Areas				
1	Tool Room	50 FC, FL	1 duplex per 20 LF of wall	
2	Supply Room	30 FC, FL	1 duplex per 20 LF of wall	
3	Battery Room	30 FC, FL	explosion proof	4
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
5	Instrument Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
6	Small Arms Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
7	Small Arms Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
8	Vault (Small Arms)	20 FC, FL	1 duplex	
9	Vault (CBT Vehicle Arms)	20 FC, FL	1 duplex	
10	Injector Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
11	Fuel and Ignition Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
12	Oil Storage/Issue	20 FC, FL	1 duplex per 20 LF of wall	
13	Machine Shop	50 FC, FL	1 duplex per 10 LF of wall	2
14	Carpenter Shop	50 FC, FL	1 duplex per 10 LF of wall	2
15	Lumber Storage Shed	10 FC, FL	none	

Table 8
CONSTRUCTION STANDARDS

DC 415-2
01 MARCH 2005

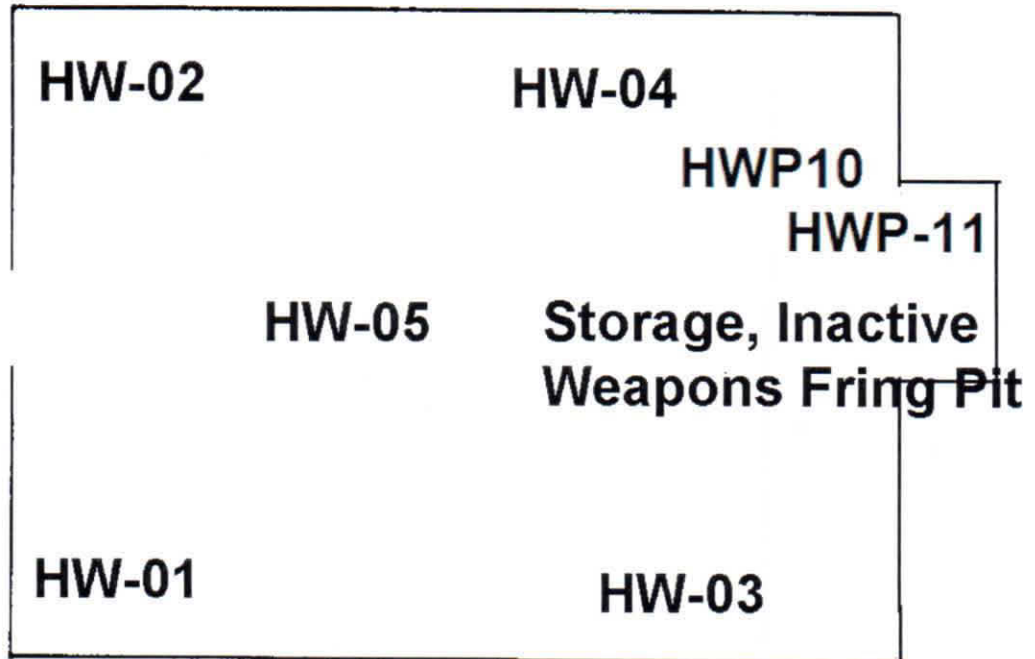
Table 8. Electrical Requirements (Continued)

	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
16	Canvas Shop	50 FC, FL	1 duplex per 10 LF of wall	2
17	Missile Repair Shop	70 FC, FL	1 duplex per 10 LF of wall	2
18	Vault (Missile)	20 FC, FL	1 duplex	
19	Calibration Room	70 FC, FL	1 duplex per 2 LF of workbench	
20	Calibration Storage	20 FC, FL	1 duplex per 20 LF of wall	
21	Glass Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
22	Radiator Test & Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
23	COMSEC Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
24	Radiation Calibration Room	70 FC, FL	1 duplex per 2 LF of workbench	
25	Bulk POL Storage for Lubricating Systems	20 FC, FL	1 duplex	
26	Bulk POL Storage	20 FC, FL	1 duplex per 20 LF of wall	
27	Controlled Waste Handling	20 FC, FL	1 duplex per 20 LF of wall	
28	Bulky Equipment Storage	20 FC, FL	1 duplex per 20 LF of wall	
29	Flammable Materials Storage	20 FC, FL	1 duplex explosion proof	
30	Enclosed Unfinished Storage	20 FC, FL	1 duplex per 20 LF of wall	
Workbenches				
1	General Purpose Workbench	50 FC, FL	1 duplex per 10 LF of wall	2
2	Wash-Up Bay	50 FC, FL	1 duplex per 10 LF of wall	2
3	Welding Shop	50 FC, FL	1 duplex per 10 LF of wall	2
4	Wash Bay	50 FC, FL	N/A	2
5	Paint Stripping Bay	50 FC, FL	1 duplex per 10 LF of wall	2
6	Paint Preparation Bay	50 FC, FL	1 duplex per 10 LF of wall	2
7	Paint Booth	50 FC, FL	1 duplex per 10 LF of wall	2
8	Lubrication Bay	50 FC, FL	1 duplex per 10 LF of wall	2
9	Engine/Transmission Test Cell	50 FC, FL	1 duplex per 10 LF of wall	2
10	Electronics Bay	50 FC, FL	1 duplex per 10 LF of wall	2
11	Body Shop	50 FC, FL	1 duplex per 10 LF of wall	2

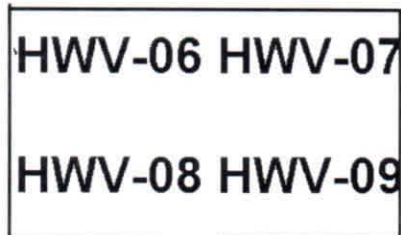
Lead Samples Location

(All Samples Collected on Floor)

Drill Hall



Vault





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

April 01, 2011

Non-

Nichols Environmental Associates, Inc.
1108 East Dolphin Dr
Oak Island NC 28465

TEL: (443) 807-0848

FAX: (910) 278-5183

RE: Hollywood, Fl Armory

Dear

Non-

Order No: 1103057

Analytical Environmental Services, Inc. received 14 samples on 3/28/2011 10:00:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager

1103057

CHAIN OF CUSTODY

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

3785 Presidential Parkway, Atlanta GA 30340-3704
 A/E/S TEL (770)457-8177 / TOLL-FREE (800)972-4889 / FAX (770)457-8188

Work Order

Day 3/24/11 Page 1 of 2

COMPANY Nichols Environmental Associates 1108 East Dolphin Drive Oak Island, NC 28465 PHONE 443-807-0848 FAX 910-278-5186 SIGNATURE _____ DATE 3/24/11		ADDRESS 1108 East Dolphin Drive Oak Island, NC 28465 FAX 910-278-5186 SIGNATURE _____ DATE 3/24/11		ANALYSIS REQUESTED LEAD PRESERVATION (See notes) REMARKS		Visit our website www.aesatlanta.com to check on the status of your results, place orders, orders, etc.		No. of Containers	
SAMPLE ID HW-01 - Drill Hail 3/24/11 8:30 AM HW-02 - Drill Hail " " HW-03 - Drill Hail " " HW-04 - Drill Hail " " HW-05 - Drill Hail " " HW-06 - Blank Drill Hail " " HW-07 - voutt 3/24/11 10:30 PM HW-08 HW-09 HW-10 HW-11		DATE/TIME SUBMITTED 3/28/11 10:00 Non-Responsive Non-Responsive		PROJECT NAME Kellywood, FL Armory PROJECT 910 North Dixie Highway SEND REPORT TO Paul Fuchs 302-8 INVOICE TO IF DIFFERENT FROM ABOVE: Bill To 510 Plaza Dr., Suite 1530, College Park, GA 30349		RECEIPT Total # of Containers Turnaround Time Requested Standard Business Days 2 Business Day Rush Next Business Day Rush Same Day Rush (with req.) Other		STATE PROGRAM (if any) DATA RANGE I B III IV	
SPECIAL INSTRUCTIONS/REMARKS Please Fax or Email Results ASAP SAMPLES RECEIVED AFTER 4PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY. IF NO FAT IS MARKED ON CONTAINERS WILL PROVIDED AS STANDARD FAT. SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE. SHIPPING METHOD INSIDE () UPS MAIL COURIER OUTSIDE () OTHER									

White Copy - Original, Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
 3785 Presidential Parkway, Atlanta GA 30340-3704
 A/E/S TEL: (770) 457-8177 / TOLL-FREE: (800) 972-4839 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order

Date: 3/24/11 Page 2 of 2

COMPANY Nichols Environmental Associates 1108 East Dolphin Drive Oak Island, NC 28465 PHONE: 443-807-0848 FAX: 910-278-5186 SIGNATURE: _____		ADDRESS 1108 East Dolphin Drive Oak Island, NC 28465 FAX: 910-278-5186 SIGNATURE: _____		ANALYSIS REQUESTED LEAD PRESERVATION (See order)		REMARKS Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.		No. of Containers	
SAMPLE ID 1. ALU-P-12 Bullet Top & Head 2. Lead Analysis 3. ALU-13-Wall 4. Bulk Asbestos 5. BLANK		SAMPLED DATE: 3/24/11 TIME: 11:30		STATUS (See codes)		RECEIPT Tools & Containers Tons/containers Line Request Standard 5 Business Days 2 Business Day Rush Next Business Day Rush Same Day Rush (auth req.) Other		STATE PROGRAM (if any) E-mail: Y/N Fax: Y/N DATA PACKAGE: I II III IV	
DATE/TIME 3/24/11 3:00 PM		DATE/TIME 3/28/11 10:00		PROJECT INFORMATION PROJECT NAME: HOLLYWOOD FL ARMY PROJECT #: SEND REPORT TO: 910 North Dixie Highway 33020		INVOICE TO (IF DIFFERENT FROM ABOVE) Bill To: 510 Plaza Dr., Suite 1530, College Park, GA 30349 QUOTE #		SHIPMENT METHOD OUT: _____ VIA: _____ IN: _____ VIA: _____ CARRIER: UPS MAIL COURIER KEYWORD: OTHER	
SPECIAL INSTRUMENTS/REMARKS Please Fax or Email Results ASAP		SHIPMENT METHOD OUT: _____ VIA: _____ IN: _____ VIA: _____ CARRIER: UPS MAIL COURIER KEYWORD: OTHER		SHIPMENT METHOD OUT: _____ VIA: _____ IN: _____ VIA: _____ CARRIER: UPS MAIL COURIER KEYWORD: OTHER		SHIPMENT METHOD OUT: _____ VIA: _____ IN: _____ VIA: _____ CARRIER: UPS MAIL COURIER KEYWORD: OTHER		SHIPMENT METHOD OUT: _____ VIA: _____ IN: _____ VIA: _____ CARRIER: UPS MAIL COURIER KEYWORD: OTHER	

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY. IF NO TAT IS MARKED ON THE A/E/S WILL PROCESS AS STANDARD TAT.
 SAMPLES ARE DISPOSED OF 90 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.
 MATRIX CODES: A - Air; CW - Groundwater; SE - Sediment; SW - Soil; SW - Surface Water; W - Water (Blank); DW - Drinking Water (Blank); (3 - Other Specimen); WWA - Waste Water
 PRESERVATIVE CODES: 10-1 Hydrochloric acid; 10-2 Hydrochloric acid; 10-3 Hydrochloric acid; 10-4 Sodium Borate/Ascorbic acid; 10-5 Sodium Borate/Ascorbic acid; 10-6 Sodium Borate/Ascorbic acid; 10-7 Sodium Borate/Ascorbic acid; 10-8 Sodium Borate/Ascorbic acid; 10-9 Sodium Borate/Ascorbic acid; 10-10 Sodium Borate/Ascorbic acid

Analytical Environmental Services, Inc

Date: 1-Apr-11

Client: Nichols Environmental Associates, Inc.
Project: Hollywood, FL Armory
Lab ID: 1103057

Case Narrative

3/24/2011 was used as the collection date for all samples with collection dates not listed on the Chain of Custody per Non-
Non- via phone 3/29/2011.

Sample HW-13-Wall was logged in for asbestos analysis under a separate work order.

Analytical Environmental Services, Inc

Date: 1-Apr-11

Lab Order: 1103057

Client: Nichols Environmental Associates, Inc.

Project: Hollywood, Fl Armory

Matrix: Wipe

Date Received: 3/28/2011 10:00:00 AM

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1103057-001A	HW-01-DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-002A	HW-02-DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-003A	HW-03-DRILL HALL	40	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-004A	HW-04-DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-005A	HW-05-DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-006A	HW-BLANK DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-007A	HWV-06 VAULT	71	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-008A	HWV-07	48	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-009A	HWV-08	54	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-010A	HWV-09	63	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-011A	HWV-BLANK	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-012A	HWP-10	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103057-013A	HWP-11	70	ug, Total	20	1		03/24/2011	03/31/2011	MP

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable

Analytical Environmental Services, Inc

Date: 1-Apr-11

Client:	Nichols Environmental Associates, Inc.	Client Sample ID:	HW-12 BULLET TRAP
Project Name:	Hollywood, FL Armory	Collection Date:	3/24/2011 11:00:00 AM
Lab ID:	1103057-014	Matrix:	Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C					(SW3050B)			
Lead	11.3	4.97		mg/Kg-dry	144216	1	03/30/2011 17:12	TA
PERCENT MOISTURE D2216								
Percent Moisture	0.160	0		w1%	R193923	1	04/01/2011 10:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 1-Apr-11

Client: Nichols Environmental Associates, Inc.
Project: Hollywood, FL Armory
Lab Order: 1103057

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1103057-001A	HW-01-DRILL HALL	3/24/2011 8:30:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-002A	HW-02-DRILL HALL	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-003A	HW-03-DRILL HALL	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-004A	HW-04-DRILL HALL	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-005A	HW-05-DRILL HALL	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-006A	HW-BLANK DRILL HALL	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-007A	HWV-06 VAULT	3/24/2011 10:30:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-008A	HWV-07	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-009A	HWV-08	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-010A	HWV-09	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-011A	HWV-BLANK	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-012A	HWV-10	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-013A	HWV-11	3/24/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		03/30/2011	03/31/2011
1103057-014A	HWV-12 BULLET TRAP	3/24/2011 11:00:00AM	Solid	TOTAL METALS BY ICP		03/30/2011	03/30/2011
1103057-014A	HWV-12 BULLET TRAP	3/24/2011 11:00:00AM	Solid	PERCENT MOISTURE			04/01/2011

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Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Nichols Env. Work Order Number 1103057

Checklist completed by Non-Responsive Date 3/28/17

Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? pi 3/28/17 Yes ☐ No ☐ Not Present ☒

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ☒ No ☐

Cooler #1 all Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☒ Cooler #5 ☐ Cooler #6 ☐

Chain of custody present? Yes ☐ No ☒

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Was TAT marked on the COC? Yes ☒ No ☐

Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒

Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒

Adjusted? ☐ Checked by ☐

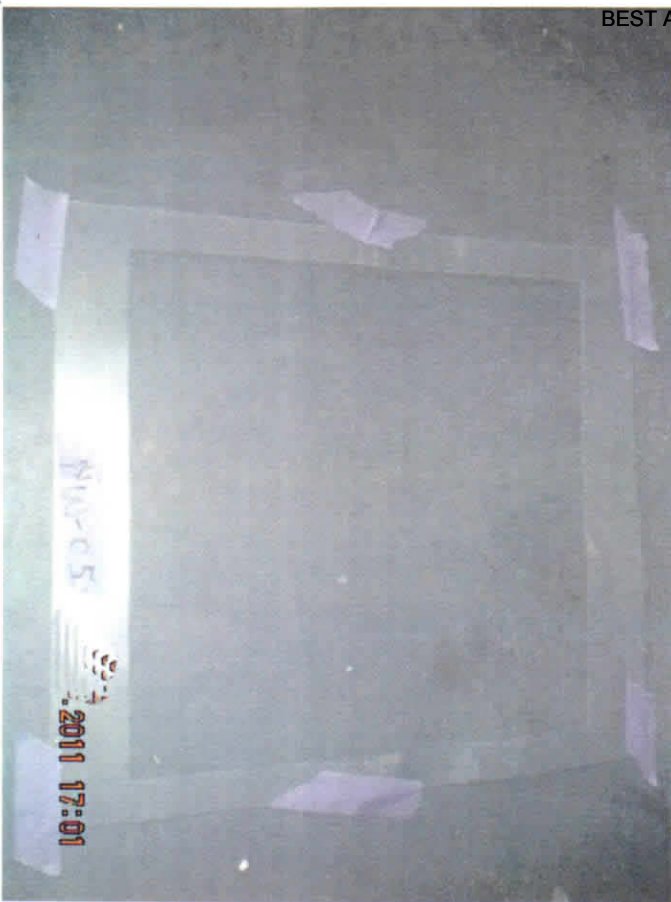
Sample Condition: Good ☒ Other(Explain) ☐

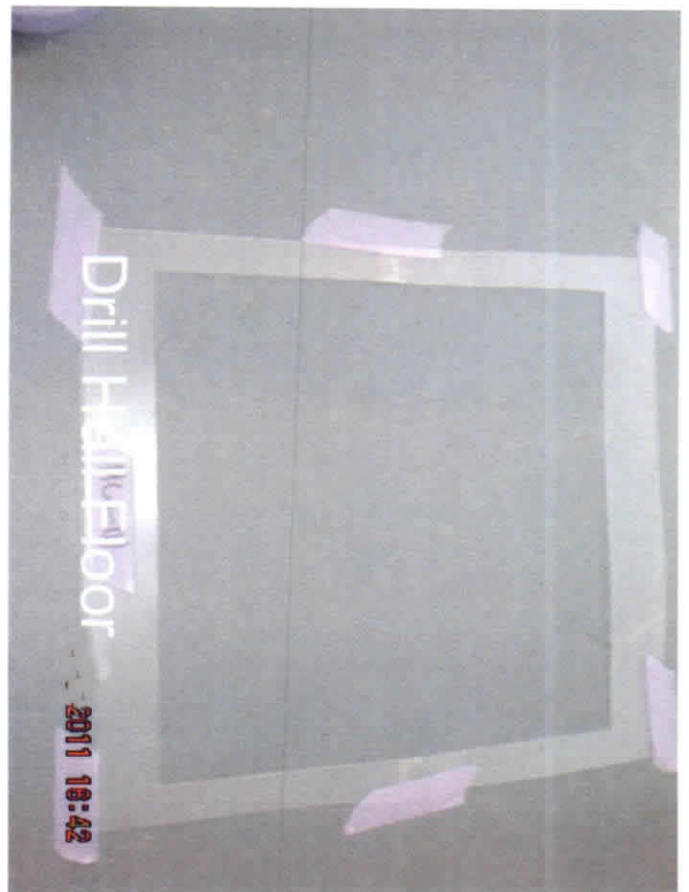
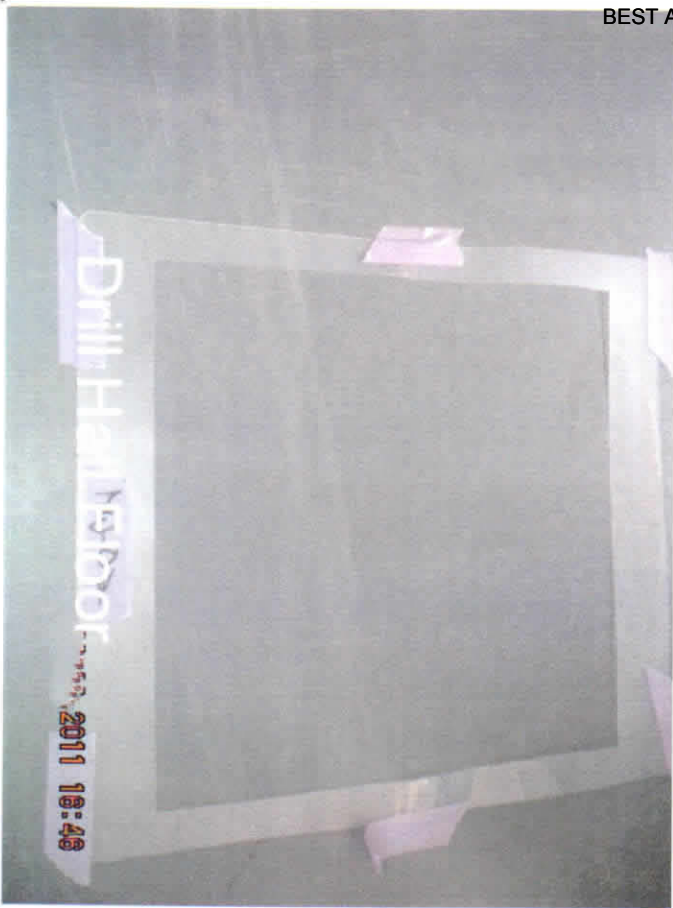
(For diffusive samples or AIIA lead) Is a known blank included? Yes ☐ No ☒

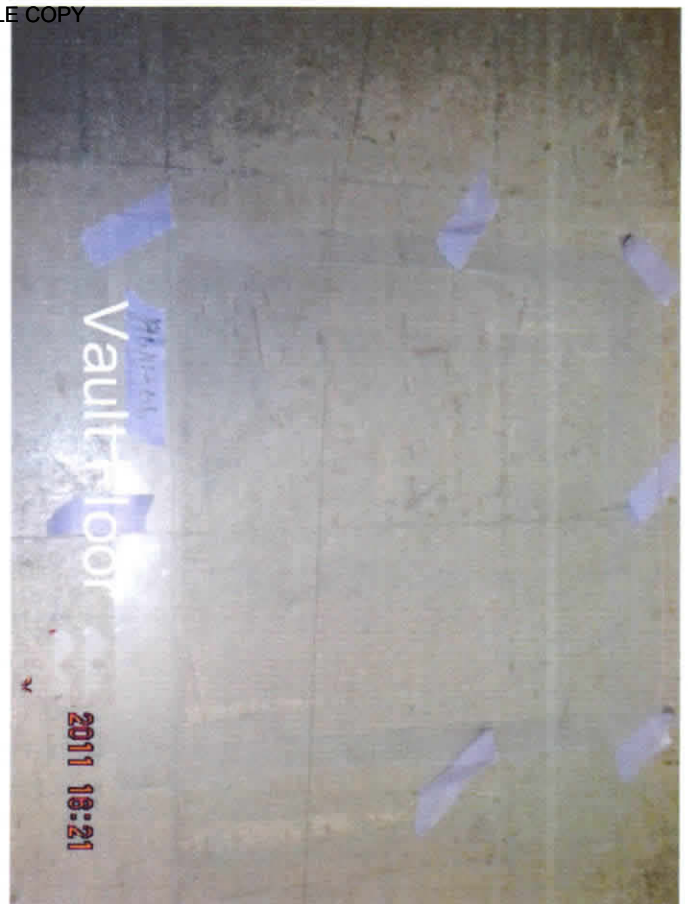
See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist





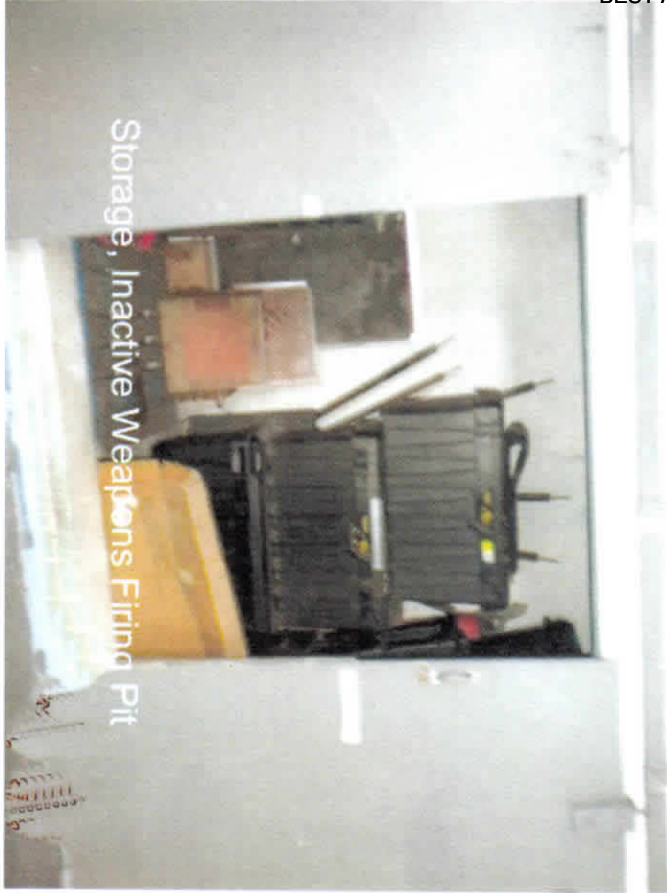




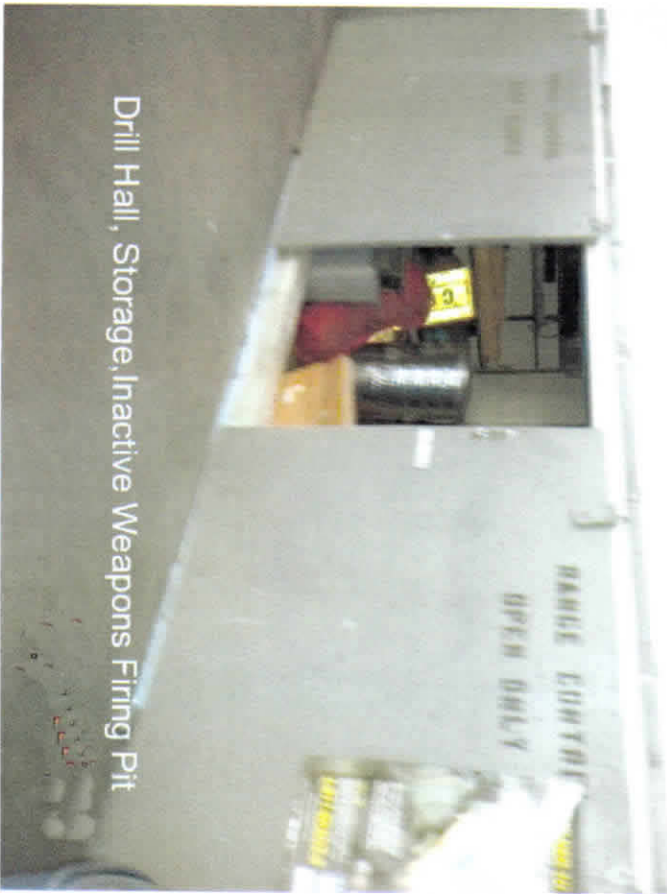
Storage (Slat) in Weapons Firing Pit, HWP-11



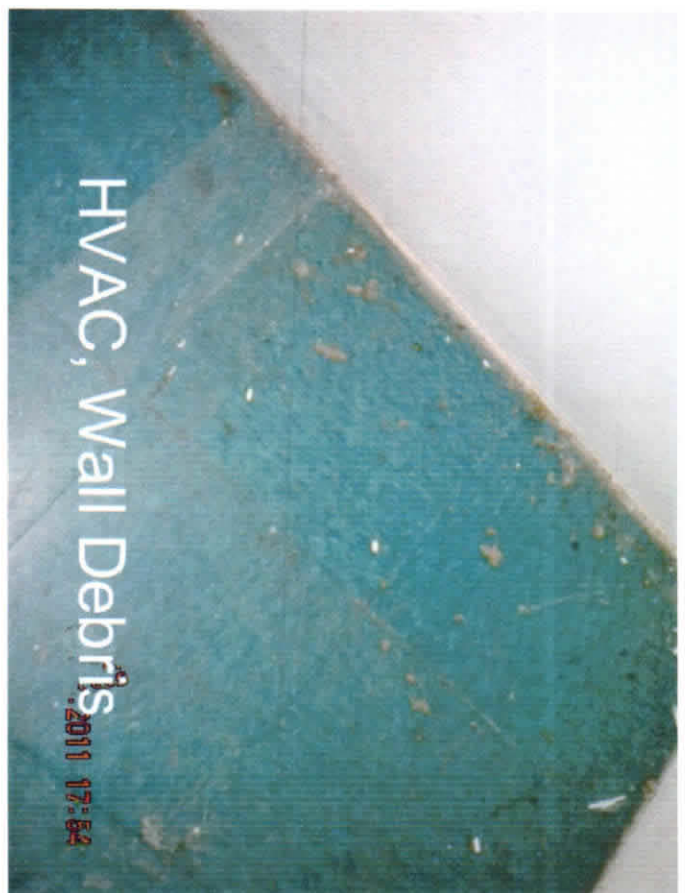
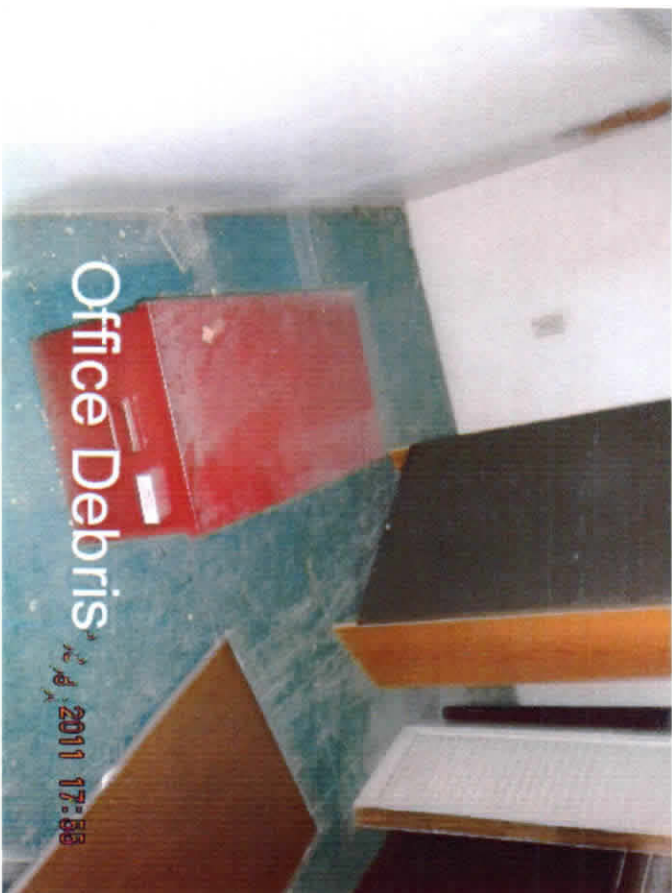
Sand Trap, Storage, Weapons Firing Pit, HWP-12



Storage, Inactive Weapons Firing Pit



Drill Hall, Storage, Inactive Weapons Firing Pit



Facility Information Form

State: FLORIDADate Prepared: 11 MARCH 2011Facility: HOLLYWOOD Armory

Supervisor: _____

Facility Address: 910 NORTH DIXIE HIGHWAY, HOLLYWOOD, FL 33020-3423Phone#: (954) 967-1350Fax #: (954) 967-1470Work Schedule (Days of the Week, Time of Open and Close) 0700 - 1630 DAILY MON - FRI

General Information	
Number of Maintenance Bays:	NONE
Number of Exhaust Extensions:	3 (EXHAUST FANS WEST EXTERIOR WALL)
Total Number of Personnel:	3 FULL TIME / 130 ON DRILL WEEKENDS
Number of Maintenance Personnel:	0
Number of Administrative Personnel:	3
Approximate area of facility (ft ²)	16,000 SQUARE FEET
Approximate Date of Construction	1954

Operations		
	Yes (if Yes, How Many Hours per Day on Average)	No
Firing Range (active inactive?)		X
Aerosol Can Painting	YES: STORES IN HAZMAT LOCKER	
Air Compressors (How many?)		X
Battery Charging Room or Battery Storage Room		X
Brake/Clutch Repair and/or Replacement		X
Calibration of Equipment		X
Grinding, buffing, polishing, sanding		X
Hazardous Materials/POL Handling	HAZMAT / PAINT LOCKER	
Electronics Repair		X
Pneumatic Tool Operation		X
Respirators (what kind?)		X
Refueling Vehicles		X
Solvent Tank Use (How Many)		X
Spray Paint Booth		X
Weapons Repair		X
Weapons Storage	YES (VAULT)	
Soldering		X
Supply/Warehouse	YES (SUPPLY ROOM / CORNERS)	
Testing and Tuning of Engines		X
Welding (List Types)		X
Other Noise sources		X

Please write below any special concerns that you would like to have addressed during the survey:

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date: 11 Mar 11

1. Location of Facility Hollywood, FL

2. Area or room where you spend the most time in the building: Training Office

3. Gender: Female
Age: 25-34 Under 25 35-44 45-54 55 and over

4. Do you:
Smoke? Yes No
Have hay fever/pollen allergies? Yes No
Have skin allergies/dermatitis? Yes No
Have a cold/flu? Yes No
Have sinus problems? Yes No
Have other allergies? Yes No
Wear contact lenses? Yes No
Operate video display terminals? Yes No
Take medication for asthma, allergies, sinus, lung or immune problems? Yes No

5. Do any of your work activities produce dust or odor?

Yes No

Describe:

6. Office characteristics:

Number of persons sharing same room/work area 1 Number of windows in room/work area 1

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor Average Excellent
1 2 3 4 5

Please rate room temperature:

Poor Average Excellent
1 2 3 4 5

7. How many years or months have you worked:

In this room/area? 2 In this building? 2

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

Have you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?
When do symptoms disappear?

9. In your opinion, what is the cause of perceived indoor air quality problems?

Age, wear, and just overall poor condition Building support,

Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date: 11 MAR 11

1. Location of Facility HOLLYWOOD, FL

2. Area or room where you spend the most time in the building: READING OFFICE

3. Gender: Male Female
Age: Under 25 25-34 35-44 45-54 55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No

No

No

No

No

No

No

No

No

5. Do any of your work activities produce dust or odor?

Yes

No

Describe:

6. Office characteristics:

Number of persons sharing same room/work area 1 Number of windows in room/work area 2

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor Average Excellent
1 2 3 4 5

Please rate room temperature:

Poor Average Excellent
1 2 3 4 5

7. How many years or months have you worked:

In this room/area? 2 In this building? 2 (MONTHS)

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

SINUS ISSUES

Have you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear? NO / NOT SURE YET IF RELATED TO WORK PLACE

9. In your opinion, what is the cause of perceived indoor air quality problems?

AGE AND CONDITION OF THE FACILITY.

Thank you very much for your cooperation.

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OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date: 11 MAR 11

1. Location of Facility

Hollywood, FL

2. Area or room where you spend the most time in the building:

Supply Room

3. Gender: Male Female

Age: Under 25

25-34

35-44

45-54

55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

5. Do any of your work activities produce dust or odor?

Yes

No

Describe:

6. Office characteristics:

Number of persons sharing same room/work area 1 Number of windows in room/work area 2

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor

Average

Excellent

1

2

3

4

5

Please rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

7. How many years or months have you worked:

In this room/area? 6m In this building? 6m

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

None

Have you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear?

9. In your opinion, what is the cause of perceived indoor air quality problems?

Thank you very much for your cooperation.

Alpha Company, 1st Battalion, 124th, Infantry, 910 Dixie Highway,
Hollywood, FL 33020

BLDG/ RMNO.

LOCATION/CODE Armory

OPERATION/CODE	Indoor Firing Range/IFR
1	1
2	2
3	3
4	4
5	5
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95	95
96	96
97	97
98	98
99	99
100	100

SURVEY DATE: March
24, 2011.

Evaluator:

Non-

CHCM

WACOM/CODE
National Guard Bureau/NG

SUBMACOM/CODE
ARNG

SUPERVISOR	Non-
SFC	

Non-

TELEPHONE
(954)967-1350

UNIT/ORGANIZATION

RAC

FREQUENCY (hrs/day)
HRS/DAY
As needed

NO. CIV(S)
0

NO. MIL	
3	

NO. CONTRACTORS	0
-----------------	---

NO. LOC(S)0

NO. OTHER	
0	

SECTION 2 : FACILITY DATA

LAB HOODS
0

VAPOR DEGREASERS
0

SPRAY BOOTHS
0

MAINTENANCE BAYS
Drill Hall

OPEN SURFACE TANKS
0

VENTILATION UNITS

SECTION 3: SURVEY DATA

CONTROLS PRESENT

EVALUATION

UNIT CODE

CONTROLS REQUIRED

STATUS

Former Weapons firing pit at the end of drill hall.

Lead contamination.
Sand remains in the
pit.

Lead abatement procedures during renovation of building..

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	1	HEAD/FIT
HEMICAL SPLASH		(CANAL CAPS		JAPRONS			(COLD WEATHER BOOTS/HATS

R/U

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FULL FACE SHIELD	X/X	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MUFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNESS	/		/

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SECTION 4: HAZARD INVENTORY DATA

CAS CODE	HAZARD DESCRIPTION	PAC	EPC
		3	A
7664-93-9	Sulfuric Acid	3	A
1309-60-0	Lead oxide	3	A
PONoiseCO	Noise Continuous	2	A
POLIFTING	Heavy Lifting	2	A
POEYEHAZARD	Eye Hazard	3	A
POFOOTHAZARD	Foot Hazard	2	A
7440-31-3	Tin	3	A
1439-92-1	Lead	3	A

1

SECTIONS: PERSONNEL DATA

LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		

SECTIONS: COMMENTS

1. Weapons firing pit (inactive).

ARLOC 22000		INSTALLATION Alpha Company, 1 st Battalion, 124th, Infantry, 910 Dixie Highway, Hollywood, FL 33020		BLDG/ RMNO.	
LOCATION/CODE Armory			OPERATION/CODE Administration/ADO		
SURVEY DATE: March 24, 2011. Evaluator: Non- CHCM					
WACOM/CODE National Guard Bureau/NG		SUBMACOM/CODE ARNG		SUPERVISOR SFC Non-	
TELEPHONE (954)967-1350		UNIT/ORGANIZATION RAC 3		FREQUENCY (hrs/day) HRS/DAY 10	
NO. CIV(S) 0	NO. MIL 3	NO. CONTRACTORS 0	NO. LOC(S) 0	NO. OTHER 0	
SECTION 2: FACILITY DATA					
LAB HOODS 0		VAPOR DEGREASERS 0		SPRAY BOOTHS 0	
MAINTENANCE BAYS Drill Hall		OPEN SURFACE TANKS 0		VENTILATION UNITS	
SECTION 3: SURVEY DATA					
CONTROLS PRESENT		EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
Central Heating & Ventilation & Air Conditioning (HVAC) System.		Central HVAC in part of building.			
Fluorescent Lights Drill Hall & Offices.		Lighting inadequate in many areas.		75 Foot-candles	Work request should be initiated
Video Display Terminal		Admin & Techs use computers			
PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)					
GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/
EYES/FACE	R/U	HEARING	R/U	BODY	R/U
HEMICAL SPLASH	/	CANAL CAPS	/	JAPRONS	/
				(COLD WEATHER BOOTS/HATS)	

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FULL FACE SHEILD	/	EARPLUGS	X/x	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	X/x
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	dUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MFF/EARPLUG W/TIME LIMIT	X/x	SAFETY BELT/HARNESS	/		/

1

SECTION 4: HAZARD INVENTORY DATA

CAS CODE	HAZARD DESCRIPTION	PAC	EPC
POVDT	Video Display Terminal	2	F
PODTRESS	Physical Stress	2	F

SECTIONS: PERSONNEL DATA

LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		

SECTIONS: COMMENTS

1. Computers are used in the shop and admin office. Lighting is inadequate.

ARLOC 22000		INSTALLATION Alpha Company, 1 st Battalion, 124th, Infantry, 910 Dixie Highway, Hollywood, FL 33020		BLDG/	RMNO. POL Storage
LOCATION/CODE Armory			OPERATION/CODE /STO		
SURVEY DATE: March 24, 2011. Evaluator: Non- [REDACTED] CHCM					
WACOM/CODE National Guard Bureau/NG		SUBMACOM/CODE ARNG		SUPERVISOR SFC Non- [REDACTED]	
TELEPHONE (954)967-1350		UNIT/ORGANIZATION RAC 3		FREQUENCY (hrs/day) HRS/DAY As needed	
NO. CIV(S) 0	NO. MIL 3	NO. CONTRACTORS 0	NO. LOC(S)0	NO. OTHER 0	
SECTION 2 : FACILITY DATA					

LAB HOODS 0	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS Drill Hall	OPEN SURFACE TANKS 0	VENTILATION UNITS

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
None	Flammable storage cabinets.		Yes	

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
N8C AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT
HEMICAL SPLASH	/	(CANAL CAPS	/	JAPRONS	/	(COLD WEATHER BOOTS/HATS

R/U

BEST AVAILABLE COPY

FULL FACE SHEILD	/	EARPLUGS	X/x	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	X/x
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NGN-CONDUCTIVE SHOES	/
		MFF/EARPLUG W/TIME LIMIT	X/x	SAFETY BELT/HARNESS	/		/

1

SECTION 4: HAZARD INVENTORY DATA

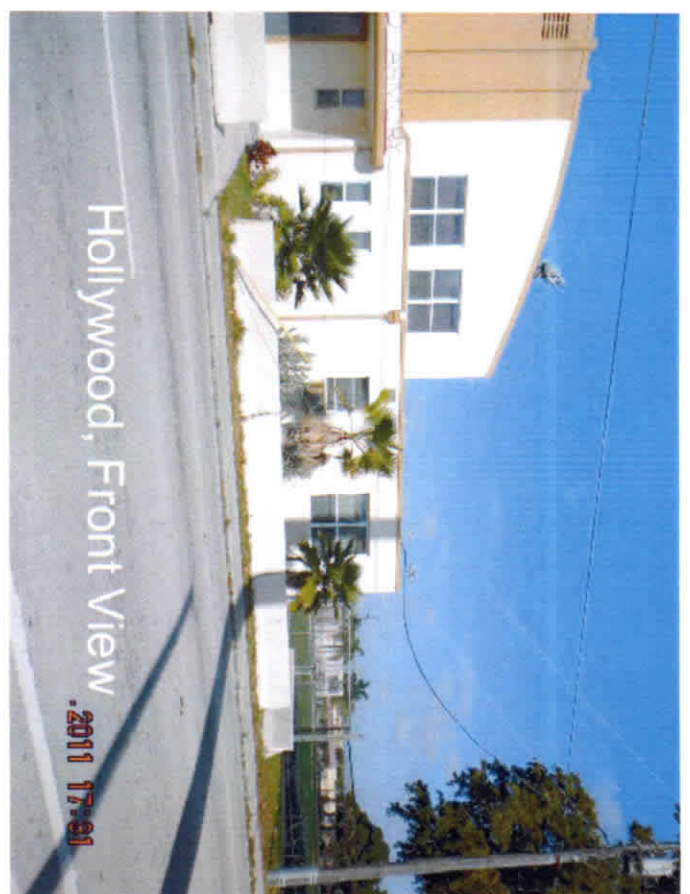
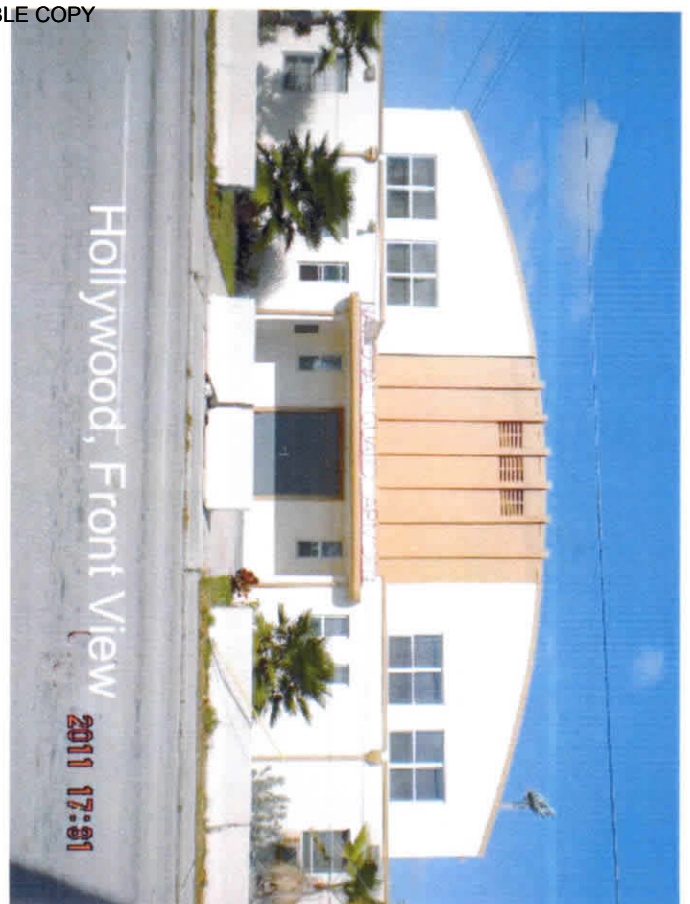
PCSTRESSX	Physical Stress	3	A
POLIFTING	Heavy Lifting	3	A
POEYEHAZARD	Eye Hazard	3	A
POFOOTHAZARD	Foot Hazard	2	0
108-88-3	Toluene	3	A
67-64-1	Acetone	3	A
1330-20-7	Xylene	3	A
			A
COGASENEX	Gasoline EXh Products	0	A

SECTIONS: PERSONNEL DATA

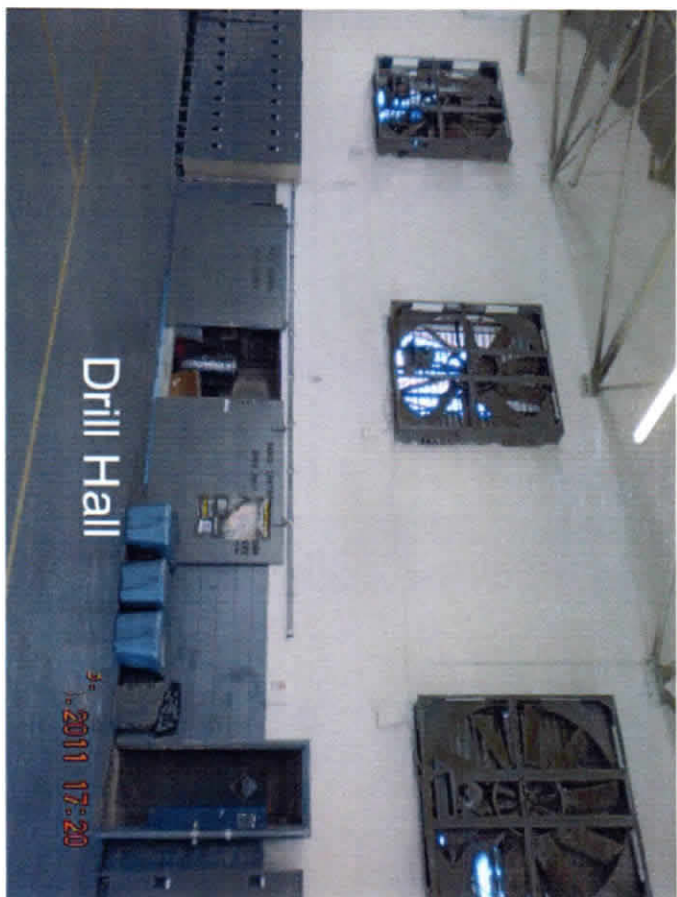
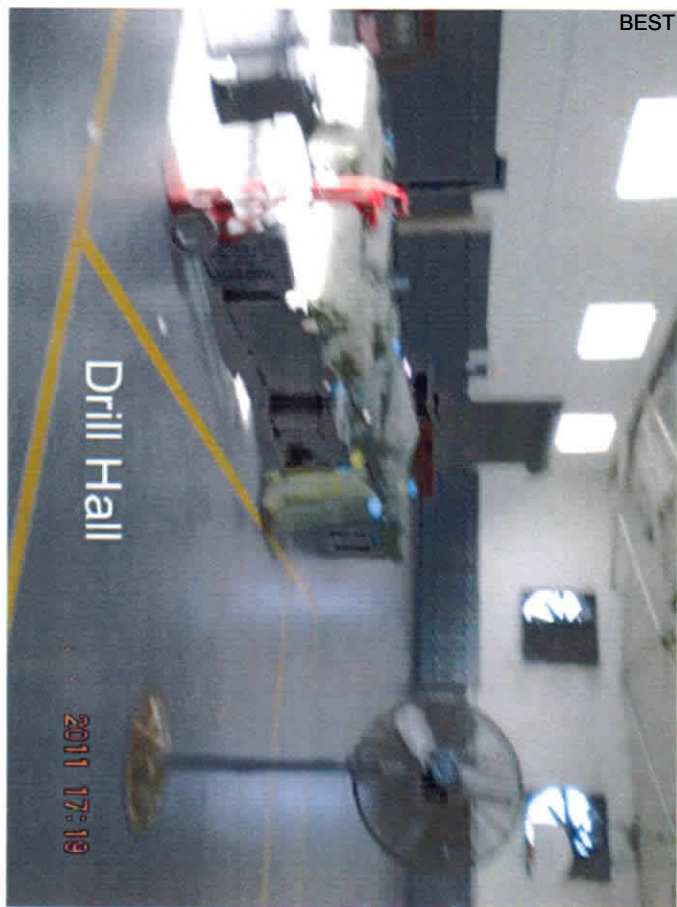
LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		

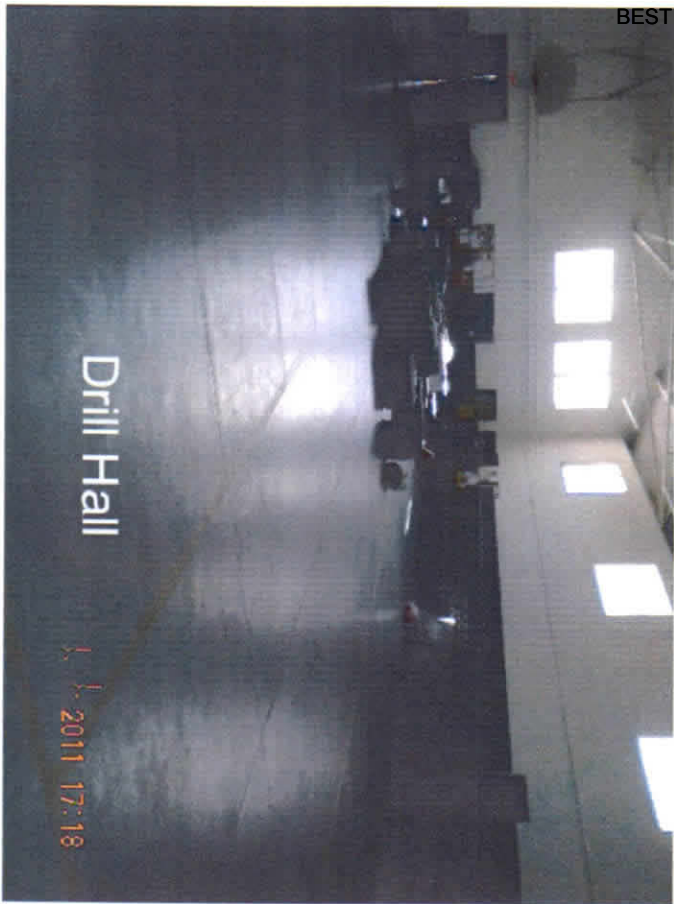
SECTIONS: COMMENTS

1. Storage/handling and flammable storage cabinets.







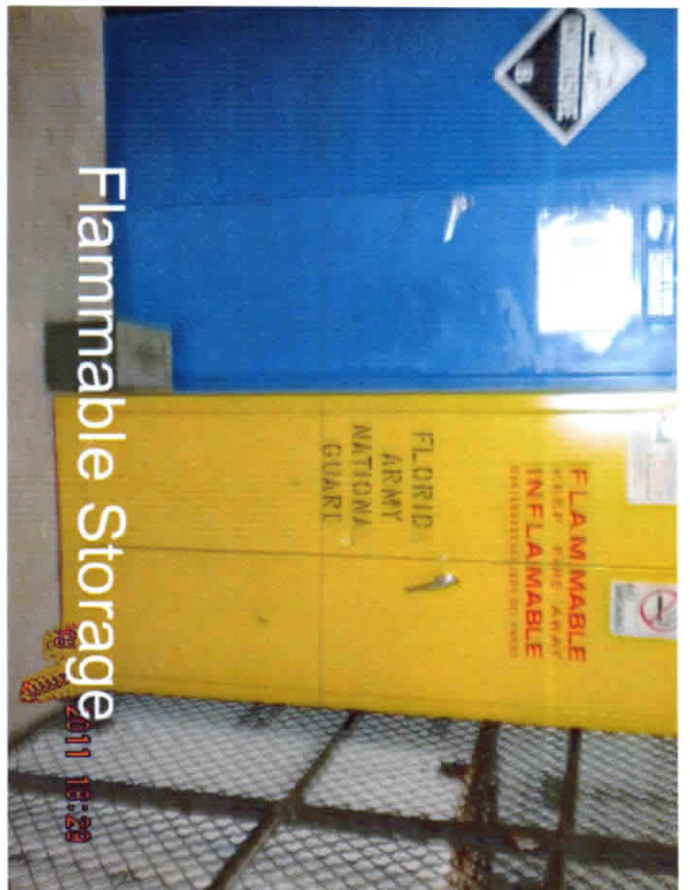




Office, Missing Floor Tile



Flammable Storage



Flammable Storage



Corrosive Storage

REFERENCES

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 22 July 2005.
- c. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, October 1988.
- d. AR 385-10, The Army Safety Program, 29 February 2000.
- e. National Guard Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges, 3 November 2006.
- f. NGR 385-15, Policy and Responsibilities, Evaluation and Operation of Army National Guard Indoor Firing Ranges, 3 November 2006.
- g. DA PAM 40-503, The Army Industrial Hygiene Program, 30 October 2000.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. Title 29, Code of Federal Regulations (CFR), 2001 rev., part 1910, Occupational Safety and Health Standards.



**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-ARS-SEIH

9 July 2010

MEMORANDUM THRU: LTC [Non-Responsive] Deputy State Surgeon, Florida Army National Guard, 2305 State Road, St. Augustine, Florida 32086.

TO: The Florida Army National Guard, ATTN: SSG [Non-Responsive] Armory Supervisor, Robert B. Harkness National Guard Armory, 490 N.W Lake Jeffery Road, Lake City, Florida 32055.

SUBJECT: Industrial Hygiene survey of the Lake City Armory.

1. References.

- a. Report dated 3 June 2010, Industrial Hygiene Survey [Non-Responsive] LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, 25 May 2007.
- d. AR 385-10, 23 August 2007, Army Safety Program.
- e. DA PAM 40- 503, Industrial Hygiene Program, 30 October 2000
- f. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- g. Industrial Ventilation, 25th ed, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume, 8th edition, 1995, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida Safety and Occupational and Health Office and the Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was put together to conduct a baseline IH survey at the Lake City Armory
- b. Ms. [Non-Responsive] of LAE conducted the survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Understand that all findings found in the enclosed report have been reviewed by the Regional Industrial Hygienist and the following recommendations are the ones to be followed.

b. Follow all recommendations made in reference 1. a. requesting Facility Engineering's Environmental Sections help and Industrial Hygiene (IH) and Occupational Health (OH) services where needed to complete the recommendations.

c. Use the report to help in correcting all deficiencies noted by the contractor. Put a plan in place to correct the deficiencies and let the Occupational Safety and Health Office know in 30 days how you are going to correct all recommendations.

d. Ensure that the environmental Office receive a copy of this report.

e. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse, Industrial Hygiene Technician and the Occupational Safety and Health Office for technical guidance if needed.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: CW3 **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

LAE CONSULTING

1218 Scattered Pines Court, Severn, MD, 21144
Tel: (410) 551-2717

30 June 2010

MEMORANDUM FOR: Robert B. Harkness National Guard Armory, ATTN: SSG
490 N.W. Lake Jeffrey Road, Lake City, Florida 32055

Non-
Responsive

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- g. NG Pamphlet 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges (IFRs), 3 November 2006.

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Lake City Florida NG Armory. The facility was visually examined and the employees were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of [Non-Responsive] of the National Guard Bureau Region south Industrial Hygiene Office, Ms. [Non-Responsive] of LAE Consulting performed an Industrial Hygiene survey of Lake City Florida Armory on 3 June 2010.

4. Facility Description. The Armory is a one story building built in the 1960s. The facility's office areas were being renovated during the survey. The facilities bathrooms are scheduled to be renovated in the next few months. The facility has offices, supply room, kitchen, and classroom. Three full-time soldiers work at the Armory

5. Instrumentation and Laboratory Analysis. The Contractor obtained all instrumentation from the Florida state Occupational Safety and Health office and from EON Products Inc. All equipment was operated per manufacture's instructions. Lead wipe samples were analyzed by Analytical Environmental Services, Inc.

6. Findings.

a. A deactivated indoor firing range is located in the drill hall. The range pit is located behind two doors within the hall's rear wall. The backstop has been removed but at least 4-5 inches of sand remains. The pit is currently being used as a storage space. Plastic bags of plush toys and boxes of small toys are stored in the pit. Sleeping cots, boxes of office files, and excess office equipment is also stored in the pit. The pit doors are pad locked and the Readiness NCO maintains the key. Lead levels in the blood causes adverse health effects on the central nervous system, kidney and blood cells. The effects on children can cause physical and mental development issue. Four bulk sand samples were obtained from the pit area. Photos of sample locations are within the enclosure of the report. Sand samples were collected using plastic cups and pouring sand into snack size zip top plastic bags. Two samples were found above the EPA level of 400 parts per million (ppm) for lead in soil.

Table 3

Sample #	Sample results
LB-001-LC	35.4 mg/Kg-dry or ppm
LB-002-LC	115 mg/Kg-dry or ppm
LB-003-LC	897 mg/Kg-dry or ppm
LB-004-LC	3710 mg/Kg-dry or ppm

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

b. Ten Lead wipe samples with two blank samples were obtained from areas within the pit. Two samples were found greater than clearance limit of 200 ug/ft². Four samples were found above the EPA limit of 40 ug/ft². Table 1 below indicates sample locations and results. A copy of the laboratory results are located with in the enclosure of this report.

Table 2		
Sample #	Sample location	Sample results
LW-Blank-00	BLANK	BRL
LW-01	Rear wall of backstop center	63 ug/ft ²
LW-02	Front of Scotties Box containing toys, Box at Floor Right side near rear wall	BRL
LW-03	Front of Box Cuddly Cousins (top) storing puzzles	BRL
LW-04	Top of computer monitor stand (black /silver) right side	21 ug/ft ²
LW-05	Black folded screen, near rear wall of backstop pit	BRL
LW-06	Trunk lid located on left side inside pit	494 ug/ft ²
LW-07	Ceiling of backstop pit center	65 ug/ft ²
LW-08	Metal ledge of pit behind sliding door	2160 ug/ft ²
LW-09	Plastic bag storing plush toys	BRL
LW-10	Skillcraft brand toy in green and blue canvas bag	22 ug/ft ²
LW-Blank-02	BLANK	BRL

c. The gutter system of the building is not effectively moving the water though downspouts. A heavy rain storm occurred during the survey. Water was observed running down the brick and through gutters during a heavy rain storm. Extensive moisture absorption is evident on portions of the exterior brick. Mold and dirt stains are on the fascia board.

d. The light fixture in the kitchen is not shatter-proof. A new kitchen was installed during a self-help project.

e. Illumination was surveyed throughout the facility. The rooms listed below are found to be below the standards required in reference f. The findings are as followed in Foot-candles (FC):

Table 1		
AREA/LOCATION	MEASURED FC	REQUIRED FC
Sensitive item area of Supply	5.3	20-30
CIF	11.4	20-30
desk area	20.9	50
Classroom	31.8-36.1	50
Recruiters office	24.6-30.7	50

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

7. Technical Assistance. For technical assistance, regarding information found in this report, please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, (404) 559-4174

Non-Responsive

2 Encl

LAE Consulting

1. Building schematics
2. Photos
3. Lead sampling results

CF:

Florida State Safety and Occupational Health Office, PO Box 1008, St Augustine Florida 32085-1008

Florida State Environmental Office, St Augustine Florida 32085-1008

Florida State CFMO, St Augustine Florida 32085

LAE Consulting

Page 4

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

8. Recommendations.

a. Recommend the state Environmental office remove the sand in the pit according to EPA and RCRA and decontaminate the range IAW reference g. Do not allow entrance to the range pit. All items must remain in the pit until they have been professionally decontaminated and clearance tested. Ensure toys are never distributed to children. **(RAC 1)**

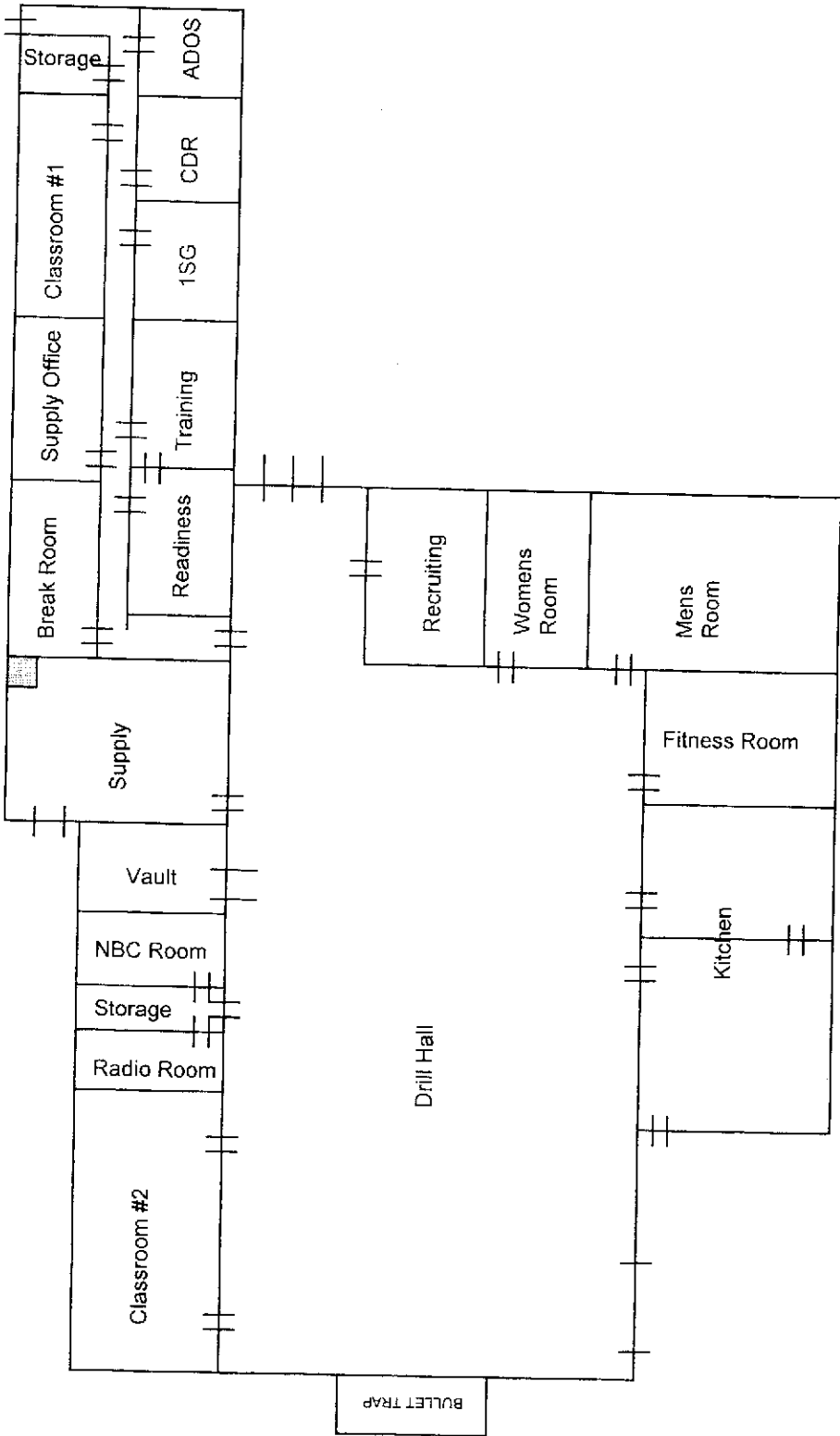
b. Recommend the state Environmental office remove the sand in the pit according to EPA and RCRA and decontaminate the range IAW reference g. Do not allow entrance to the range pit. All items must remain in the pit until they have been professionally decontaminated and clearance tested. Ensure toys are never distributed to children. **(RAC 1)**

c. Install an effective gutter system. Consider sealing brick to reduce water intrusion.

d. Install shatter-proof bulbs and/or light fixture in the kitchen. **(RAC 3)**

e. The lighting should be upgraded to at least 50 foot candles in office areas. Consider purchasing supplemental lighting such as a desk lamp for office areas. **(RAC 3)**

POST OF LAKE CITY



A CO 53rd BSTB - LAKE CITY, FL

SFC
SSG
SGT





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 14, 2010

Non-
Responsive

LAE Consulting
1218 Scattered Pines Ct
Severn MD 21144

TEL: (410) 551-2717
FAX: (410) 551-7215

RE: LakeCity Armory

Dear Non-
Responsive

Order No: 1006688

Analytical Environmental Services, Inc. received 12 samples on 6/8/2010 11:15:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

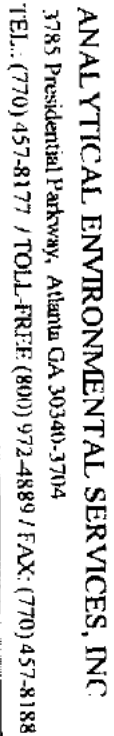
- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/09-06/30/10.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager



Work Order: 1006638

Date: 4 June 10 Page 1 of 1

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 612 of 1021

Analytical Environmental Services, Inc.

Date: 17-Jun-10

CLIENT: LAE Consulting
Project: LakeCity Armory
Lab Order: 1006688

CASE NARRATIVE

Sample Receiving Nonconformance:

Sample label for LW-BLANK-00 did not match sample container. Sample container was labeled LW-BLANK-01. It was logged in according to the Chain of Custody.

Analytical Environmental Services, Inc

Date: 14-Jun-10

Lab Order: 1006688
Client: LAF Consulting
Project: LakeCity Armory
Matrix: Wipe
Date Received: 6/8/2010 11:15:00 AM

LEAD ON WIPES (N9100/7082)**N7082**

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1006688-001A	LW-BLANK-00	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-002A	LW-01	63	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-003A	LW-02	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-004A	LW-03	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-005A	LW-04	21	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-006A	LW-05	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-007A	LW-06	494	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-008A	LW-07	65	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-009A	LW-08	2160	µg/ft ²	71	3.54		06/03/2010	06/09/2010	MW
1006688-010A	LW-09	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-011A	LW-10	22	µg/ft ²	20	1		06/03/2010	06/09/2010	MW
1006688-012A	LW-BLANK-02	BRL	µg/ft ²	20	1		06/03/2010	06/09/2010	MW

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client LAE Consulting Work Order Number W06688Checklist completed by Non-Responsive Date 6/8/10Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C±2)* Yes ☒ No ☐Cooler #1 AUREUM Cooler #2 CM Cooler #3 6/8/10 Cooler #4 6/8/10 Cooler #5 6/8/10 Cooler #6 6/8/10Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☐ No ☒Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☐

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\\Checklists Procedures Sign-Off Templates\\Checklists\\Sample Receipt Checklists\\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 14-Jun-10

ANALYTICAL QC SUMMARY REPORT

BatchID: 130597

Client: LAE Consulting
Project Name: LakeCity Armory
Workorder: 1006688

Sample ID: MB-130597	Client ID:	Units: ug, Total	Prep Date: 06/09/2010	Run No: 173594				
Sample Type: MBLK	TestCode: LEAD ON WIPES (N9100/N7082)	BatchID: 130597	Analysis Date: 06/09/2010	Seq No: 3608876				
Analyte	Result	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	BRL	20	0	0	0	0	0	0

Sample ID: LCS-130597	Client ID:	Units: ug, Total	Prep Date: 06/09/2010	Run No: 173594							
Sample Type: LCS	TestCode: LEAD ON WIPES (N9100/N7082)	BatchID: 130597	Analysis Date: 06/09/2010	Seq No: 3608878							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
	908.1	20	957	0	94.9	80	120	0	0	0	

Sample ID: LCSD-130597	Client ID:	Units: ug, Total	Prep Date: 06/09/2010	Run No: 173594				
Sample Type: LCSD	Test Code: LEAD ON WIPES (N9100/N7082)	BatchID: 130597	Analysis Date: 06/09/2010	Seq No: 3608879				
Analyte	Result	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
	901.2	20	93.1	80	120	908.1	1.88	25

BEST AVAILABLE COPY

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantization range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 17, 2010

Non-

Responsive

LAE Consulting
1218 Scattered Pines Ct
Severn MD 21144

TEL: (410) 551-2717

FAX: (410) 551-7215

RE: Lake City Armory

Dear

Non-
Responsive

Order No: 1006687

Analytical Environmental Services, Inc. received 4 samples on June 7, 2010 11:15 am for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/09-06/30/10.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
 3785 Presidential Parkway, Atlanta GA 30340-3704
 TEL: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1006687

COMPANY

LAZ CONSULTING

ADDRESS

1218 Scattered Pines CT
 SEVEN, MD 21144

Date:

Page 1 of 1

PHONE 410.551.2717

ANALYST

Non-Responsible

STATION

Non-Responsible

@aol.com

SAMPLE ID

1 LB-001 LC
 2 LB-002 LC
 3 LB-003 LC
 4 LB-004 LC

DATE

TIME

Grav

Composite

Matrix (See codes)

PRESERVATION (See codes)

REMARKS

No # of Containers

Visit our website
www.aesatlanta.com
 to check on the status of
 your results, place bottle
 orders, etc.

UNOBTAINED BY

DATE/TIME

RECEIVED BY

DATE/TIME

Non-Responsible

4/10/00

Made 6/7/00 11:15

PROJECT INFORMATION

PROJECT NAME

Lake City Army

PROJECT #

SITE ADDRESS

Lake City Army

SEND REPORT TO: INVOICE + LAB CONSULTING

INVOICE TO: ALB-1140 PACE

510 PLAZA DRIVE, SUITE 1530

COLLEGE PARK, GA 30849

RECEIPT

Total # of Containers

4

Turnaround Time Request

- Standard 5 Business Days
- 2 Business Day Rush
- Next Business Day Rush
- Same Day Rush (with req)
- Other

STATE PROGRAM (if any)

DATA PACKAGE I II III IV

TRUCK CODES A = Air CAV = Groundwater SE = Sediment SO = Soil SIV = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (Specify)
 PRESERVATIVE CODES H+1 = Hydrochloric acid + ice I = Ice only N = Nitric acid S+1 = Sulfuric acid + ice S+1+1 = Sodium Bisulfate/Acid + ice O = Other (Specify) NA = None

Analytical Environmental Services, Inc

Date: 17-Jun-10

Client: LAE Consulting
 Project: Lake City Armory
 Lab ID: 1006687-001

Client Sample ID: LB-001 LC
 Collection Date: 6/3/2010
 Matrix: Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C								
					(SW3050B)			
Lead	35.4	4.96		mg/Kg-dry	130593	1	06/09/2010 19:58	TA
PERCENT MOISTURE D2216								
Percent Moisture	0.310	0		wt%	R173710	1	06/10/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc

Date: 17-Jun-10

Client: LAE Consulting
 Project: Lake City Armory
 Lab ID: 1006687-002

Client Sample ID: LB-002 LC
 Collection Date: 6/3/2010
 Matrix: Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C								
					(SW3050B)			
Lead	115	4.87		mg/Kg-dry	130593	1	06/09/2010 20:25	TA
PERCENT MOISTURE D2216								
Percent Moisture	0.329	0		wt%	R173710	1	06/10/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc

Date: 17-Jun-10

Client: LAE Consulting	Client Sample ID: LB-003 LC
Project: Lake City Armory	Collection Date: 6/3/2010
Lab ID: 1006687-003	Matrix: Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C								
					(SW3050B)			
Lead	897	4.87		mg/Kg-dry	130593	1	06/09/2010 20:30	TA
PERCENT MOISTURE D2216								
Percent Moisture	0.294	0		wt%	R173710	1	06/10/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc

Date: 17-Jun-10

Client: LAE Consulting
 Project: Lake City Armory
 Lab ID: 1006687-004

Client Sample ID: LB-004 LC
 Collection Date: 6/3/2010
 Matrix: Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C								
					(SW3050B)			
Lead	3710	48.9		mg/Kg-dry	130593	10	06/10/2010 12:44	TA
PERCENT MOISTURE D2216								
Percent Moisture	0.318	0		wt%	R173710	1	06/10/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client LAE Consulting Work Order Number 1006687

Non-Responsive

Checklist completed by [Redacted] Date 6/8/10Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C-5°C) Yes ☒ No ☐Cooler #1 RUDENT Cooler #2 6/8/10 Cooler #3 6/8/10 Cooler #4 6/8/10 Cooler #5 6/8/10 Cooler #6 6/8/10Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☒ 6/8/10Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by Sample Condition: Good ☒ Other(Explain) (For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☐

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\\Checklists Procedures Sign-Off Templates\\Checklists\\Sample Receipt Checklists\\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 17-Jun-10

Client: LAE Consulting
Project Name: Lake City Armory
Workorder: 1006687

ANALYTICAL QC SUMMARY REPORT

BatchID: 130593

Sample ID: MB-130593	Client ID:	Units: mg/Kg	Prep Date: 06/09/2010	Run No: 173592							
SampleType: MBLK	TestCode: METALS, TOTAL	BatchID: 130593	Analysis Date: 06/09/2010	Seq No: 3609063							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	BRL	0.998	0	0	0	0	0	0	0	0	0

Sample ID: LCS-130593	Client ID:	Units: mg/Kg	Prep Date: 06/09/2010	Run No: 173592							
SampleType: LCS	TestCode: METALS, TOTAL	BatchID: 130593	Analysis Date: 06/09/2010	Seq No: 3609060							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	49.62	5.00	50	0	99.2	80	120	0	0	0	

BEST AVAILABLE											
Sample ID: 1006687-001AMS	Client ID: LB-001 LC	Units: mg/Kg-dry	Prep Date: 06/09/2010	Run No: 173592							
SampleType: MS	TestCode: METALS, TOTAL	BatchID: 130593	Analysis Date: 06/09/2010	Seq No: 3609069							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD RefVal	%RPD	RPD Limit	Qual
Lead	93.13	4.95	49.54	35.44	116	75	125	0	0	0	0

E COPY											
Sample ID: 1006687-001AMSD		Client ID: LB-001 LC		Units: mg/Kg-dry		Prep Date: 06/09/2010		Run No: 173592			
SampleType: MSD		TestCode: METALS, TOTAL		BatchID: 130593		Analysis Date: 06/09/2010		Seq No: 3609071			
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	Low Limit	High Limit	RPD RefVal	%RPD	RPD Limit	Qual
Lead	93.94	4.94	49.39	35.44	118	75	125	93.13	0.868	20	

Qualifiers: > Greater than Result value
BRL Below reporting limit
J Estimated value detected below Reporting Limit
Rpt Lim Reporting Limit

< Less than Result value
E Estimated (value above quantitation range)
N Analyte not NELAC certified
S Spike Recovery outside limits due to matrix

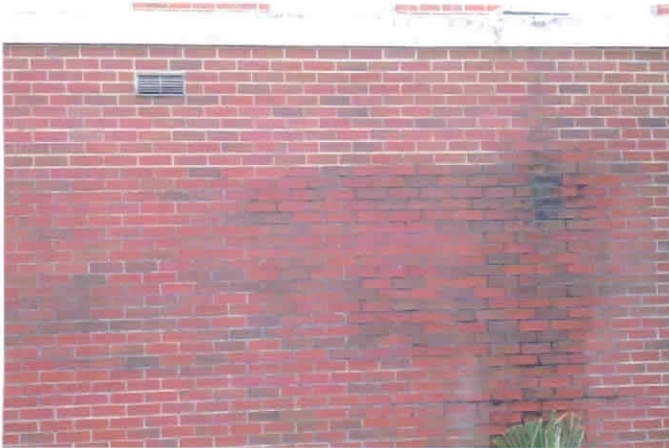
B Analyte detected in the associated method blank
H Holding times for preparation or analysis exceeded
R RPD outside limits due to matrix



View of Lake City Florida Armory



Excessive moisture on bricks of the building



View of moisture absorption on bricks of the building



View of dirt and mold growth along fascia of the building



View of dirt and mold growth along fascia of the building



View of dirt and mold growth window



View of water staining and mold growth on brick of the building



View of dirt and mold growth along fascia porch overhang. The need for an effective gutter.



BEST AVAILABLE COPY

View of water coming from porch overhang during heavy rain shower.
Brick absorption indicates need of effective gutter system.



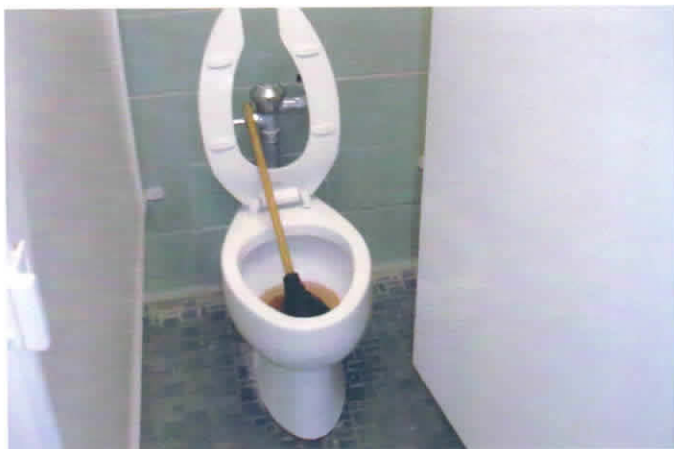
View of Armory kitchen/Mess



View of kitchen lighting with bulbs that are not shatter proof



View of urinal system in male latrine



View of plumbing issue



View of male shower



View of shower floor



View of entrance from the drill hall



View of Drill hall towards indoor firing range



Classroom located behind IFR



View of tables and chairs used to clean weapons.



View of deactivated Indoor firing range



View of deactivated Indoor firing range



View of Toys stored in the deactivated IFR



View of Toys stored in a box located in the deactivated IFR



View of sample 1.4 and 5 located in the deactivated IFR



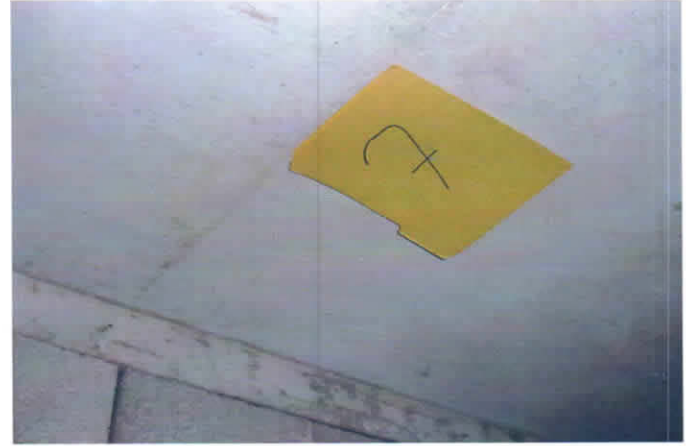
View of Lead wipe sample 2 and 4, located on the outside of box storing toys and on the top of a computer monitor stand



View of Lead wipe sample 3, 9, and 10 located, on the front of the box (Cuddley) storing toys, On the plastic bag storing plush toys and on the green and blue canvas bag storing a game.



View of Lead wipe sample 6, located on top of a trunk lid



View of lead wipe sample 7 located on the ceiling of the deactivated IFR



View of sample 5 and , located on the black folded screen located at the rear of the range and the on the ledge of the pit



View of lead wipe sample 9, located on the plastic bag of plush toys



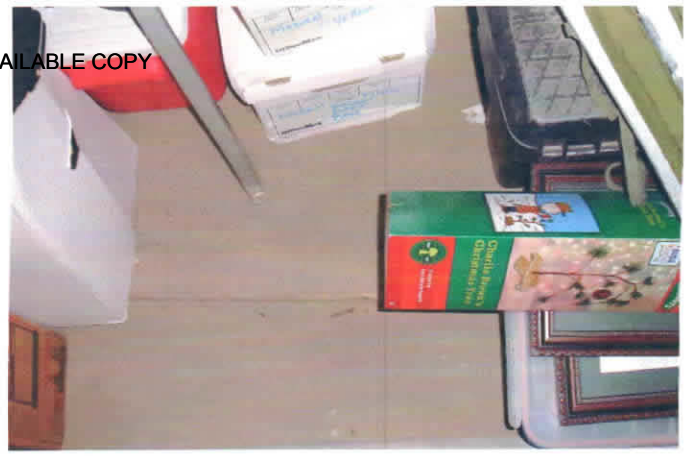
View of sample 5 and , located on the black folded screen located at the rear of the range



View of Lead wipe sample 3, 9, and 10 located, on the front of the box (Cuddley) storing toys, On the plastic bag storing plush toys and on the green and blue canvas bag storing a game.



View of Bulk Lead sample location LB-001-LC



View of Bulk Lead sample location LB-002-LC



View of Bulk Lead sample location LB-003-LC



View of Bulk Lead sample location LB-004-LC



View of sealed plastic cups used to collect sand from the pit for Lead analysis



View of former backstop area behind sliding doors



View of left wall inside space that held former backstop. The white color on blocks indicate where the backstop was mounted to the wall



View of plush toys stored in the former backstop area



View of storage items, boxes, and cots stored in backstop area



View of concrete ceiling. The wood pattern may be from the wood that was removed when associated range items were removed.



View rear wall located in space (would have been behind backstop)



View of more than 5 inches of sand located in the pit area



View of the Armory

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

18 July 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: LTC [Redacted]
[Redacted] Safety Manager, Safety and Occupational Health Office, St. Francis Barracks, 82
Marine Street, St. Augustine, FL 32085-1008

SUBJECT: Industrial Hygiene Survey of the Florida Army National Guard, Charlie Jack
Anderson Armory, 435 South Airport Road, Lake Wales, Florida 33853-8170.

1. References.

- a. Report submitted 11 July 2003, Industrial Hygiene Survey, Tammer Sciences, Inc.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office a Service Contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. [Redacted] of Tammer Sciences, Inc. conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Ensure the Armory Commander get a copy of this report.

c. Discuss the high lead samples taken in the Armory with the Safety and Occupational Health Office, the Facility Management Office and the Environmental Office. Request help in eliminating possible employee lead exposures. Be prepared to educate personnel on proper lead clean-up procedures.

d. Use the report to help in correcting all deficiencies noted by the contractor.

e. Consider additional Industrial Hygiene services to conduct a follow up or monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

Industrial Hygiene Baseline Survey Report
For
Florida Army National Guard
(FLARNG)

At
Charlie Jack Anderson National Guard Armory
Lake Wales Armory
435 South Airport Rd
Lake Wales, FL 33853-8170

Prepared for:

Department of the Army and the Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-
Responsive [REDACTED] CIH PE
Tammer Sciences, Inc.

June 30, 2003

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Executive Summary

An initial baseline industrial hygiene survey was conducted at the Lake Wales Armory on 22 April 2003 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality, and a review of several industrial hygiene programs such as hazard communication, ergonomics, personal protection equipment, and posting of forms and bulletins.

The following table summarizes the survey findings and recommendations for each topic surveyed.

Topic	Summary of Findings	Recommendations
Lead Wipe Samples	10 to 6100 microgram per square foot	Clean contaminated surface in the IFR Area
Asbestos Bulk Samples	No asbestos.	No action
Noise Survey	No sources identified. Noise levels are estimated to well below the 85 dBA limit	No action
Illumination Survey	<10 to 110 footcandles	Consider increasing the lighting levels in the converted IFR.
HVAC/IAQ	Evidence of water leak stains on ceiling tiles.	All water leaks should be repaired and water damaged building material replaced immediately
Hazcom	No findings.	No action
Ergonomics	No issues	Consider offering ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
PPE	No issues	No action
Posters & Bulletins	No findings	No action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Charlie Jack Anderson National Guard Armory in Lake Wales, Florida on 22 April 2003

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Lake Wales Armory in Lake Wales, Florida. Sgt. [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 22 April 2003. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards present at the armory.

Site Description. The facility houses the 325th Maintenance Company and has 4 full time employees. The armory building is a one-story structure configured like a typical armory with administrative office areas, kitchen, mess hall, a classroom, a drill hall, a supply room, and a converted indoor firing range area used for storage. The construction date of the armory is unknown. Refer to Building layout drawing and photos in Appendix D.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, and an evaluation of the ventilation system as it pertains to indoor air quality. A list of occupational health programs and procedures were verbally covered with the Armory designated safety officer. The list included programs such as Hazard Communication, Ergonomics, and Personal protection Equipment. Procedures included posting of applicable posters and bulletins, training, and posting of warning signs and labels.

Methodology Lead wipe samples were collected from surfaces that showed signs of lead contamination in Armories that have a renovated, inactive, or closed indoor firing range (IFR). The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. A photograph of the sampled material and area were also taken. Illumination readings were collected using a Davis light meter Model L595339. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Roosa Kay (863) 678-4161/4165.

Lead Wipe Samples: Eight wipe samples were collected from the converted indoor firing range area and other administrative areas as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
LW001	Top of window ledge in the converted IFR observation room.	280
LW002	Top of a filing cabinet stored in the converted IFR by the trap area.	44000
LW003	Top of exhaust fan opening ledge in the converted IFR by the trap area.	97
LW004	Top of a locker stored in the converted IFR and used by weekend personnel.	10
LW005	Top of the ice maker in the kitchen.	<10
LW006	Top of bulletin board in the drill hall.	<10
LW007	Supply air diffuser in the office administrative area	<10
LW008	Supply air diffuser in Sgt. Roosa's office.	<10
LW009	Field blank	<10

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

The indoor firing range should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18. Appendix E contains recommended guidelines for cleaning and decontaminating indoor firing range.

Asbestos Suspect Building Material Three types of building materials were identified as potentially containing asbestos, which included 12 by 12 floor tiles, 2x4 ceiling tiles, and baseboard. A total of three bulk samples were collected randomly from the identified materials. Suspect materials for the surveyed areas are listed in the table below:

Area	Floor	Walls	Ceiling	Other
Office Area	Carpet	Wallboard and Baseboard	2x2 Ceiling Tiles	
Drill Hall	Cement	Cement Block	2x4 Ceiling Tiles.	
Lounge	12x12" Floor Tiles	Cement Blocks and Wallboard with baseboard	2x4 Ceiling Tiles	
Training Rooms	12x12" Floor Tiles	Cement Block	2x4 Ceiling Tiles	

Suspect building materials were collected from floor tiles, ceiling tiles and the black tar found on the air supply duct. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
LW01A	12x12 inch floor tile from lounge	None
LW02A	Baseboard Base Material	None
LW02A	Baseboard Adhesive	None
LW03A	2x4 feet ceiling tile from Lounge	None

The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey Due to the lack of noise sources, area noise level readings were not measured. Based on experience noise levels in the armory could range from 60 decibels on the A scale (dBA) to 75 dBA depending on the activity or background noise source.

Illumination Survey Lighting levels throughout the Armory ranged between 9 foot-candles to 110 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Converted Firing Range	<10 to 30
Drill hall	70 to 110
Office Areas	50 to 65
Training Rooms	50 to 60
Lounge	9 to 20
Vault Storage	10 to 15

Except for the converted IFR, which is being used as a storage area, all readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the

surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Armory is heated with two forced air furnaces. The air handler serving the office areas has outside air capability. The other air handler serving the training rooms does not have outside air capability. The cooling unit was not in working order at the time of the survey. No complaints of indoor air quality issues were documented or communicated to the POC. Water leak stains were observed in the storage area ceiling tiles. All water leaks should be repaired immediately and water damaged building material should be replaced to eliminate any potential for sources of microbiological growth, which could contribute to poor quality indoor air.

Hazard Communication Standard All full time employees have received their annual hazard communication training. Material Safety Data Sheets (MSDSs) for the cleaning supplies are kept in a binder, which is located in the cleaning supplies storage room. No other chemicals are used or stored at the Armory.

Ergonomics No ergonomic related injuries or concerns were expressed by the full time employees that work at the Armory. Consideration should be given to provide all full time employees that spend the majority of their working time working at a computer terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

Personal Protection Equipment (PPE) Normal duties of the full time employees at the Armory do not require the use of PPE. However, all full time employees are issued safety glasses and personal earplugs as part of their field duties.

Posters and Bulletin Posting The Department of Defense Safety and Occupational Health Protection Program, DD Form 2272, were posted. Employee Report of Alleged Unsafe or Unhealthful Working Conditions, DA Form 4755 was not posted. Safety related bulletins and information issued by State Headquarters were also posted.

Recommendations:

1. Clean the contaminated surfaces in the converted IFR by wet wiping and vacuuming using a High Efficiency Particulate Air (HEPA) filter.
2. Consider increasing the lighting levels in the IFR.
3. Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.

4. Repair all water leaks and replace all damaged ceiling tiles as soon as feasible.

Technical Assistance: For technical assistance regarding information found in this report or the performed survey please contact Mr. Non-Responsive Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

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

Army Regulation (AR) 11-34, The Army Respiratory Protection Program, 1990

Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990.

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

National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustibles Liquid Code, 1996.

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

NGR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

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

Title 29, Code Of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.

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

APPENDIX B

EMSL Analytical, Inc.

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107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-4960 Email: ssiegel@EMSL.com**EMSL**Attn: **Non-**Tanner Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project:

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:32 AM

EMSL Order: 040306877

EMSL Project ID:

Analysis Date: 5/7/03

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Treatment	<u>Non-Asbestos</u>		<u>Asbestos</u>
				% Fibrous	% Non-Fibrous	% Type
LW01A 040306877-0001		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LW02A CoveBase 040306877-0002		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LW02A Adhesive 040306877-0004		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LW03A 040306877-0003		White/Brown Fibrous Heterogeneous	Dissolved Teased	45% Cellulose 35% Min. Wool	20% Non-fibrous (other)	None Detected

Analyst(s)

Delores Beard (4)

Non-Responsive

or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

PLM-1

THIS IS THE LAST PAGE OF THE REPORT.

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FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

Page 644 of 1021

Attn:

Non-Tammer Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:10 AM

Fax: (630) 369-7957

Phone: 630-369-7956

EMSL Order: 200304248

Project: Lake Wales

EMSL Project ID:

Lead in Wipes by Flame AAS (SW 846, 7420)

Client Sample Description		Lab ID	Analyzed	Area Sampled	Lead Concentration
LW001	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/9/03	144 in ²	300.0 µg/ft ²
LW002		0002	5/9/03	144 in ²	280.0 µg/ft ²
LW003		0003	5/9/03	144 in ²	44000.0 µg/ft ²
LW004		0004	5/9/03	144 in ²	97.0 µg/ft ²
LW005		0005	5/9/03	144 in ²	10.0 µg/ft ²
LW006		0006	5/9/03	144 in ²	<10.0 µg/ft ²
LW007		0007	5/9/03	144 in ²	<10.0 µg/ft ²
LW008		0008	5/9/03	144 in ²	<10.0 µg/ft ²
LW009		0009	5/9/03	144 in ²	<10.0 µg/ft ²

Non-ResponsiveLaboratory Director
NJ-NELAP: 04653
AIHA: 100194
or other approved signatory

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA, unless specifically indicated otherwise in the comment section.

ACCREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Date Printed: 5/9/03 3:28:33 PM

THIS IS THE LAST PAGE OF THE REPORT.

Page 1 of 1

APPENDIX C

EMSL ANALYTICAL

Revised 7/1/99

BEST AVAILABLE COPY
CHAIN OF CUSTODY

2030424Y

LEAD

EMSL Rep:

Your Company

Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project

Name/Number:

DATE:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase

Order #:

Third party billing requires written authorization
from third party

Same

Zip:

Tanner Sciences, Inc.

Non-Responsive

3744 Lawrence Dr

Naperville

Zip: IL

Non-Responsive

630 369 7956

Non-Responsive

630-369-7957

MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chips*	SW846-7420 or AOAC 5.009 (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
	or NIOSH 7300	ICP	3.0 ug/filter	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	10 ug/wipe	6-10 days
	or SW846-6010	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
Lead Soil +			0.3 mg/kg (ppm) soil	
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - 3 hours, 6 hours, Please call ahead to schedule.

12 hours (must arrive by 11:00 a.m),

24 hours (1day), 48 hours (2 days), 72 hours, 96 hours (3 days), 120 hours(4 days), 144 + hours (6-10 days)

* ** *** **** +, ++ Please Refer to Price Quote

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW001		144 in ²	
BTW002			
BTW003			
BTW004			
Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date: 4/26/03		Date: 4/26/03 11:10 a.m.	

Note: Please duplicate this form and use additional sheets if necessary.

Page 1 of 3

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW005		144 in ²	
BTW006			
BTW007			
BTW008			
BTW009			04248-1
LW001			-2
LW002			-3
LW003			-4
LW004			-5
LW005			-6
LW006			-7
LW007			-8
LW008			-9
LW009			
HC001			
HC002			
HC003			
HC004			
HC005			
HC006			
HC007			
HC008			
HC009			
HC010			
LH001			
LH002			
LH003			
LH004			
LH005			
LH006			
LH007			
LH008			
LH009			
LH010			

Relinquished By: (Person)

Non-Responsive

Received at EMSL By:

Non-

Responsive

Date

4/26/03

Date

4/29/03 11:00 AM

Note: Please duplicate this form and use additional sheets if necessary.

* Separate Report

Page 2 of 3



EMSL Analytical, Inc.
Revised 07/07/99

BEST AVAILABLE COPY

CHAIN OF CUSTODY

Asbestos

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tammel Sciences, Inc.
Street: 3744 Lawrence Dr.

EMSL-Bill to:
Street: Same

Box #:
City/State: Naperville, IL Zip: 60564

Box #:
City/State: Zip:

Phone Results to: Non-Responsive
Name:
Telephone #: 630-369-7956
Project Name/Number:

Fax Results to: Non-Responsive
Name:
Fax #: 630-369-7957
Purchase Order #:

MATRIX	TURNAROUND
--------	------------

<input type="checkbox"/> Air	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Soil	<input type="checkbox"/> 3 hrs	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours 1 day
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Dust	<input type="checkbox"/> 48 Hours 2 days	<input type="checkbox"/> 72 Hours 3 days	<input type="checkbox"/> 96 Hours 4 days	<input type="checkbox"/> 120 Hours 5 Days
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Micro-Vac	<input checked="" type="checkbox"/> 144+ hours 6-10 Days			

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.). Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 quantitative method
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative		XRD <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica
		OTHER <input type="checkbox"/>

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s)

Total Samples #:

Relinquished:

Non-Responsive

Date:

4/26/03

Time:

PM

Received:

Date:

4-28-03

Time:

11:32am

Page 1 of 2



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Asbestos

[illegible]

~~A~~ Separate report

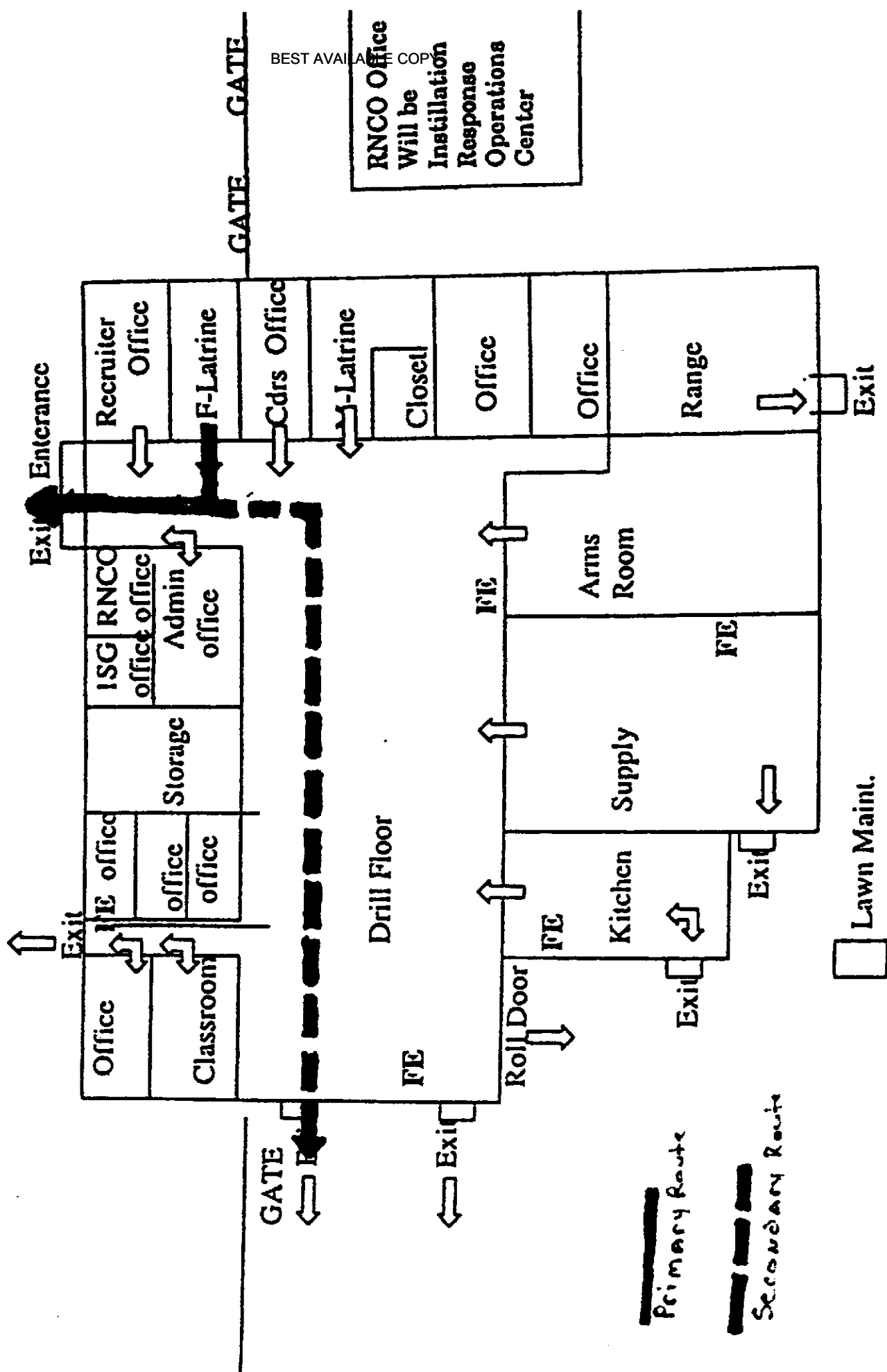
Page 2 of 2

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APPENDIX D

** Diagram will depict facility layout to include rooms, location of all fire extinguishers and exit routes in case of extreme emergencies. Include location of "Installation Response Operations Center".

NOTE: Color code diagram to differentiate information provided. DIAGRAM:



APPENDIX E

Indoor Firing Range Cleaning Guidance

1. Introduction - This document describes procedures to be employed in cleaning a range for non-lead use. All lead hazard control activities can produce dangerous quantities of lead dust. Unless this dust is properly removed, a facility will be more hazardous after the work is completed than it was originally. Once deposited, lead dust is difficult to remove effectively. Whenever possible, ongoing and daily cleaning of lead dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures. Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead hazards in a space will not make the space safe unless excessive levels of lead dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.

2. Difficulties in Cleaning - While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail. Several common reasons for this failure include worker inexperience, high dust-producing methods, and deadlines.

3. Performance Standard - Although the cleaning methods described in this document are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both occupants and workers.

4. Clearance Standard - 200 $\mu\text{g}/\text{ft}^2$ on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 $\mu\text{g}/\text{ft}^2$ for exterior concrete (a HUD interim recommendation and serves as a useful guideline). These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied as a non-lead work area after the completion of a lead hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.

5. Worker Inexperience - To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.

6. Equipment Needed for Cleaning - The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice tools), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).

7. Waste Disposal - Regulations governing hazardous and non-hazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.

8. Containment - Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containments or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area.

9. Pre-cleaning Procedures - Pre cleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in facilities that are heavily contaminated with debris/paint chips, etc. Pre cleaning involves removing large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant furniture or carpeting (rugs or carpets or any porous item in the firing range is not recommended due to the difficulty in cleaning these items effectively), depending on the worksite preparation. Carpeting (if present) should always be misted before its removal to control the generation of hazardous dust. However, if necessary, owners or project management should be prepared to remove furniture before lead hazard control work begins.

10. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques - Because leaded dust adheres tenaciously, especially to rough or porous materials like weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time. The typical cleaning method uses a special vacuum cleaner equipped with a HEPA filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum. Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the Alternatives Methods section in this document, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.

a. HEPA Vacuuming - HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small particles. These filters can remove particles of 0.3 microns or greater from air with 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is capable of filtering out particles of 0.13 microns or greater at 99.9995 percent efficiency. However, ULPA filters are slightly more expensive and may be less available than HEPA filters. Vacuuming with conventional vacuum machines is unlikely to be effective because much of the fine dust will be exhausted back into the environment where it can settle on surfaces. Considerations for the proper use of a HEPA vacuum are listed below.

(1) Operating Instructions - There are a several manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, carefully follow the manufacturer's operating instructions and, if possible, arrange training sessions with the manufacturer's representative. Although HEPA vacuums have the same suction capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.

(2) Special Attachments - Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces such as brushes of various sizes, crevice tools, and angular tools.

(3) Selecting Appropriate Size(s) - HEPA vacuums are available in several sizes, ranging from a small lunch bucket-sized unit to track-mounted systems. Two criteria for size selection are the size of the job and the type of electrical power available. Manufacturer recommendations should be followed.

(4) Wet-Dry HEPA Vacuums - Some hazard control contractors have found the wet-dry HEPA vacuums to be particularly effective in meeting clearance standards. These vacuums are equipped with a special shut-off float switch to protect the electrical motor from water contact.

(5) Prefilters - HEPA filters are usually used in conjunction with a pre filter or series of pre filters that trap the bulk of the dust in the exhaust air stream, particularly the larger particles. The HEPA filter traps most of the remaining small particles that have passed through the pre filter(s). All filters must be maintained and replaced or cleaned as specified in the manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

(6) HEPA Vacuuming Procedures - Surfaces to be vacuumed include ceilings, walls, floors, doors, heating, ventilation, and air conditioning (HVAC) equipment (heating diffusers, radiators, pipes, and vents), fixtures of any kind (light), built-in cabinets, and appliances. All rooms and surfaces should be included in the HEPA vacuum process, except for those that (1) were found not to have lead hazards and were properly separated from work areas before the process began, or (2) were never entered during the process. Sidewalks, driveways, and other exterior surfaces should be vacuumed if exterior hazard control work was conducted, or if debris was stored or dropped outside. Vacuuming should begin on the ceilings and end on the floors, sequenced to avoid passing through rooms already cleaned, with the entryway cleaned last.

(7) Emptying the HEPA Vacuum - Used filters and vacuumed debris are potentially hazardous waste and should be treated accordingly. Therefore, operators should use extreme caution when opening the HEPA vacuum for filter replacement or debris removal to avoid accidental release of accumulated dust into the environment. This may occur, for example, if the vacuum's seal has been broken and the vacuum's bag is disturbed. Operators should also wear a full set of

protective clothing and equipment, including appropriate respirators, when performing this maintenance function, which should be done in the containment area or off-site.

b. Wet Detergent Wash - Several types of detergents have been used to remove leaded dust. Those with a high phosphate content (containing at least 5 percent presidium phosphate, also known as TSP) have been found to be effective when used as part of the final cleaning process. TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some states have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control. Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several investigators and may also be safer, since TSP is a skin and eye irritant.* **Manufacturer's Dilution Instructions** - Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change prefilters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

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(1) Proper Wet-Cleaning Procedures - At the conclusion of the active lead hazard control process and after the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and be sequenced to avoid passing through rooms already cleaned.

(2) Changing Cleaning Mixture - Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no more than 1,000 square feet. Used cleaning mixture is potentially hazardous waste; consult with your local water and sewage utility for directions on its proper disposal. Wash water should never be poured onto the ground. The wash water is usually filtered and then poured down toilet (if the local water authority approves).

11. The HEPA/Wet Wash/HEPA Cycle Typical Procedures - The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows: First, the area is HEPA vacuumed. Next, the area is washed down. After drying, the area is again HEPA vacuumed. The rationale for this three-pass system is as follows: The first HEPA vacuum removes as much dust and remaining debris as possible. The wet wash further dislodges dust from surfaces. The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.

12. Single-Pass Wet Wash/HEPA Vacuum - Some lead hazard control contractors have roundhead spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps

in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.

13. Sealing Floors - Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or epoxy coating. Concrete floors should be sealed with a concrete sealer or other type of epoxy coating. If these floors are already covered by an effective coat of sealant, it may be possible to skip this step. New surfaces should be cleaned with a cleaning solution that is appropriate for that type of surface.

14. Surface Painting or Sealing of Non-floor Surfaces - Surfaces, including walls, ceilings, and wood-work, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision. Coating of walls may not be appropriate if lined with acoustic material to control noise.

15. Exterior Cleaning - Areas potentially affected by exterior lead hazard control should be protected via a containment system. Because weather can adversely affect the efficacy of exterior containment, the surface plastic of the containment system should be removed at the end of each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6-mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming is inappropriate for hard exterior surfaces, not for soil.

16. Worker Protection Measures - Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment and appropriate respirators if required.

17. Maintaining Containment - The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should monitor the sheeting and immediately repair any holes or rips with 6-mil plastic and duct tape.

18. Decontamination of Workers, Supplies, and Equipment - Decontamination is necessary to ensure that worker's families, other workers, and subsequent properties do not become contaminated. Specific procedures for proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas should be implemented. Work clothing, work shoes, and tools should not be placed in a worker's automobile unless they have been laundered or placed in sealed bags. All vacuums and tools that were used should be wiped down using sponges or rags and detergent solutions. Consumable/disposable supplies, such as mop heads, sponges, and rags, should be discarded after each space is completed. Soiled items should be treated as contaminated debris. Durable equipment, such as power and hand tools,

generators, and vehicles should be cleaned prior to their removal from the site. The cleaning should consist of a thorough HEPA vacuuming followed by washing.

19. Preliminary Visual Examination - After the cleaning work is completed, the certified supervisor should visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. While the preliminary examination may be performed by the lead hazard control supervisor, contractor, or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or reclined. Therefore, it is more cost-effective to have the supervisor rather than the clearance examiner perform this initial examination.

20. Final Inspection - The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work is incomplete; 2) to detect the presence of lead dust; and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the sealant is applied to the floor.

21. Advanced Screening - Advanced screening for clearance may be considered. Immediate on-site analysis of dust wipes may alert the contractor to continue cleaning prior to final clearance sampling.

22. Recleaning After Clearance Failure - If after passing the final visual examination, the space fails the clearance wipe dust tests, the HEPA/wet wash/HEPA cleaning cycle should be carefully and methodically repeated. Failure is an indication that the cleaning has not been successful. Recleaning should be conducted under the direct supervision of a certified supervisor. Care should be exercised during the recleaning of "failed" surfaces or components to avoid recontaminating "cleared" surfaces or components.

23. Cleaning Cost Considerations - An important consideration in determining lead hazard control strategies and methods is the cost and difficulty of required daily and final cleanup operations and the likelihood that one can meet dust-clearance standards. A general rule of thumb is that lead hazard control strategies that generate the most dust will have higher cleanup costs and higher initial clearance test-failure rates.

24. Initial Clearance Test Failure Rates - The likelihood of passing final dust-clearance tests is highly correlated with the chosen intervention strategy, methods, and care exercised by the contractor. Chemical removal and hand-scraping strategies generally experience higher failure rates than replacement and encapsulation/ enclosure strategies. However, clearance failure is not solely related to abatement method. The diligence and effectiveness of an abatement contractor's cleaning process has a major impact on the likelihood of the space to pass the final wipe test clearance.

25. Key Factors In Effective Cleaning - Effective cleaning will be aided by adequate sealing of surfaces with polyethylene sheeting prior to lead hazard control, proper daily cleaning practices,

good worker training, and attention to detail. Where poor worksite preparation is employed, additional cleaning may be required to meet clearance.

26. Special Problems - Surfaces such as porous concrete, old porous hardwood floors, and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve unacceptable level of cleanliness.

27. Alternative Methods - Alternatives to the recommended cleaning tools and practices discussed in this document are available, some with significant potential for increasing effectiveness and lowering costs. Other vacuums may be used if worker exposures do not increase, if compliance with clearance standards is achieved, and if a variance from OSHA regulation is obtained by the contractor or employer (if required). The OSHA lead standard requires the use of HEPA vacuum equipment (see 29 CFR 1926.62 (h)(4), which states, "where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters."). Agitator heads on vacuums have been shown to significantly enhance vacuum effectiveness on carpets in cleaning fine dust without increasing airborne dust levels. Vacuums without agitator heads appear to perform relatively poorly on carpets.



Photo 1: Lake Wales Armory Front Entrance



Photo 2: East side of Armory



Photo 3: Armory west side.



Photo 4: Outside rear of the armory.



Photo 5: Converted indoor firing range (Bullet trap area) showing the storage lockers.



Photo 6: East end of the converted IFR showing observation area.



Photo 7: Window sill in converted IFR where a wipe sample was collected.



Photo 8: Armory drill hall.



Photo 9: Drill hall roll top door.



Photo 10: Floor tiles found in lounge area.



Photo 11: Lounge area floor tile and baseboard.



Photo 12: Ceiling tile in lounge area.



Photo 13: Stained ceiling tile in storage area

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

18 July 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: LTC. [Non-Responsive]
[Non-Responsive] Safety Manager, Safety and Occupational Health Office, St. Francis Barracks, 82
Marine Street, St. Augustine, FL 32085-1008

SUBJECT: Industrial Hygiene Survey of the Florida Army National Guard, Lakeland
Armory, 1440 Drane Field Road, Lakeland, Florida 33811-1269.

1. References.

- a. Report submitted 11 July 2003, Industrial Hygiene Survey, Tammer Sciences, Inc.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida State Safety and Occupational Health Office a Service Contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.
- b. Mr. [Non-Responsive] of Tammer Sciences, Inc. conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Ensure the Armory Commander get a copy of this report.

c. Use the report to help in correcting all deficiencies noted by the contractor.

d. Consider additional Industrial Hygiene services to conduct a follow up or monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174. **Non**

Non-Responsive

Regional Industrial Hygienist

Industrial Hygiene Baseline Survey Report
For
Florida Army National Guard
(FLARNG)

At
Lakeland Armory
4140 Drane Field Rd
Lakeland, FL 33811-1269

Prepared for:

Department of the Army and the Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By
Non-Responsive CIH PE
Tammer Sciences, Inc.

June 30, 2003

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- A. References.
- B. Laboratory Analytical Results.
- C. Lab Chain of Custody.
- D. Floor Layout and Photographs.
- E. Indoor Firing Range Cleaning Guidance.

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Lakeland Armory on 23 April 2003 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality, and a review of several industrial hygiene programs such as hazard communication, ergonomics, personal protection equipment, and posting of forms and bulletins.

The following table summarizes the survey findings and recommendations for each topic surveyed.

Topic	Summary of Findings	Recommendations
Lead Wipe Samples	<10 to 270 microgram per square foot	Clean contaminated surface in the IFR Area
Asbestos Bulk Samples	No asbestos containing materials found	No action.
Noise Survey	No sources identified. Noise levels are estimated to well below the 85 dBA limit	No action
Illumination Survey	9 to 125 footcandles	Consider increasing the lighting levels in the drill hall.
HVAC/IAQ	No issues observed or documented.	No action
Hazcom	MSDS found loose on a shelf.	Consider binding the MSDSs for easy access.
Ergonomics	No issues	Consider offering ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
PPE	No issues	No action
Posters & Bulletins	No issues	No action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Lakeland Armory in Lakeland, Florida on 23 April 2003

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Lakeland Armory in Lakeland, Florida. Sgt. [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 23 April 2003. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards present at the armory.

Site Description. The facility houses HHS (-) 2nd Bn 116th Field Artillery (FA) and has 4 full time employees. The armory building is a one-story structure similar to the Bartow and Haines City Armories. The Armory layout is typical and consists of a drill hall, administrative office areas, kitchen, mess hall, a classroom, a drill hall, a supply room, a break room/lounge, and a converted indoor firing range area used for storage. Refer to Building layout drawing and photos in Appendix D.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, and an evaluation of the ventilation system as it pertains to indoor air quality. A list of occupational health programs and procedures were verbally covered with the Armory designated safety officer. The list included programs such as Hazard Communication, Ergonomics, and Personal protection Equipment. Procedures included posting of applicable posters and bulletins, training, and posting of warning signs and labels.

Methodology Lead wipe samples were collected from surfaces that showed signs of lead contamination in Armories that have a renovated, inactive, or closed indoor firing range (IFR). The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. A photograph of the sampled material and area were also taken. Illumination readings were collected using a Davis light meter Model L595339. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Non- (863) 648- 3230/3231.

Lead Wipe Samples: Nine wipe samples were collected from the converted indoor firing range area and other administrative areas as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
LL001	Top of support beam in the converted IFR above the trap area.	23
LL002	Top of air handler located on top of the trap area in the converted IFR.	200
LL003	Top of food containers "mermites" stored in the converted IFR.	<10
LL004	Top of filing cabinet in the converted IFR by the firing line.	270
LL005	Top of the control panel in the kitchen.	43
LL006	Top of fire protection panel in the drill hall.	31
LL007	Supply air diffuser in S1 Section Office area	<10
LL008	Supply air diffuser in operations NCO office.	24
LL009	Supply air diffuser in readiness NCO office.	13
LL010	Field blank	<10

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

The indoor firing range should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18. Appendix E contains recommended guidelines for cleaning and decontaminating indoor firing range.

Asbestos Suspect Building Material Three types of building materials were identified as potentially containing asbestos and included 12 by 12 inch floor tiles, 2x4 ceiling tiles, and baseboard. A total of three bulk samples were collected randomly from the identified materials. Suspect materials for the surveyed areas are listed in the table below:

Area	Floor	Walls	Ceiling	Other
Office Area	Carpet	Cement with Baseboard	2x4 Ceiling Tiles	
Office Area Hallways	12x12" Tiles	Cement Block	2x4 Ceiling Tiles	
Drill Hall	Cement	Cement Block	2x4 Ceiling Tiles.	
Lounge	Carpet and 12by 12" Floor Tiles	Cement with Baseboard	2x4 Ceiling Tiles.	
Kitchen	Cement	Cement with Baseboard	Concrete	
Supply Room	Cement	Cement Block	Corrugated Steel	

Suspect building materials were collected from floor tiles, ceiling tiles and the baseboard. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
LL01A	12x12 inch floor tile from kitchen	None.
LL02A	Baseboard from kitchen, base material.	None.
LL02A	Baseboard from kitchen, adhesive material.	None.
LL03A	2x4 feet ceiling tile typical throughout armory.	None.

The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey Due to the lack of noise sources, area noise level readings were not measured. Based on experience noise levels in the armory could range from 60 decibels on the A scale (dBA) to 75 dBA depending on the activity or background noise source.

Illumination Survey Lighting levels throughout the Armory ranged between 9 foot-candles to 125 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Converted Firing Range	55 to 75
Drill hall	9 to 15
Administrative Office Areas	50 to 125
Kitchen	20 to 55
Utility Storage	40 to 45
Lounge	60 to 65
Copy Room	60 to 70
Readiness NCO Office	65 to 75

Except for the drill hall, all readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Armory is heated with two forced air furnaces. Both air handler serving the office areas has outside air capability. No complaints of indoor air quality issues were documented or communicated to the POC. Water leak stains were observed on ceiling tiles. All water leaks should be repaired immediately and water damaged building material should be replaced to eliminate any potential for microbiological growth, which could contribute to poor quality indoor air.

Hazard Communication Standard All full time employees have received their annual hazard communication training. Material Safety Data Sheets (MSDSs) for the cleaning supplies are kept on the shelf in the cleaning supplies storage room. No other chemicals are used or stored at the Armory. MSDSs should be kept in a binder for easy access and to minimize loss potential.

Ergonomics No ergonomic related injuries or concerns were expressed by the full time employees that work at the Armory. Consideration should be given to provide all full time employees that spend the majority of their working time working at a computer terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

Personal Protection Equipment (PPE) Normal duties of the full time employees at the Armory do not require the use of PPE. However, all full time employees are issued safety glasses and personal earplugs as part of their field duties.

Posters and Bulletin Posting The Department of Defense Safety and Occupational Health Protection Program, DD Form 2272, were posted. Employee Report of Alleged Unsafe or Unhealthful Working Conditions, DA Form 4755 was not posted. Safety related bulletins and information issued by State Headquarters were also posted.

Recommendations:

1. Clean the contaminated surfaces in the converted IFR by wet wiping and vacuuming using a High Efficiency Particulate Air (HEPA) filter.
2. Consider increasing the lighting levels in the drill hall.
3. Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.
4. Repair all water leaks and replace all damaged ceiling tiles as soon as feasible.
5. Consider putting all MSDSs in a binder for easy access.

Technical Assistance: For technical assistance regarding information found in this report or the performed survey please contact Mr. Non-
[REDACTED] Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

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

Army Regulation (AR) 11-34, The Army Respiratory Protection Program, 1990

Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990.

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

National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustibles Liquid Code, 1996.

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

NGR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

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

Title 29, Code Of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.

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

APPENDIX B

Attn: **Non-**Tammer Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project: **Lakeland**

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:10 AM

EMSL Order: 200304250

EMSL Project ID:

Lead in Wipes by Flame AAS (SW 846, 7420)

Client Sample Description		Lab ID	Analyzed	Area Sampled	Lead Concentration
LL001	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/9/03	144 in ²	23.0 µg/ft ²
LL002		0002	5/9/03	144 in ²	200.0 µg/ft ²
LL003		0003	5/9/03	144 in ²	<10.0 µg/ft ²
LL004		0004	5/9/03	144 in ²	270.0 µg/ft ²
LL005		0005	5/9/03	144 in ²	43.0 µg/ft ²
LL006		0006	5/9/03	144 in ²	31.0 µg/ft ²
LL007		0007	5/9/03	144 in ²	<10.0 µg/ft ²
LL008		0008	5/9/03	144 in ²	24.0 µg/ft ²
LL009		0009	5/9/03	144 in ²	13.0 µg/ft ²
LL010		0010	5/9/03	144 in ²	<10.0 µg/ft ²

Non-ResponsiveLaboratory Director
NJ-NELAP: 04633
AIHA: 100194
or other approved signatory

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA, unless specifically indicated otherwise in the comment section.

ACCREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Date Printed: 5/9/03 3:33:08 PM

THIS IS THE LAST PAGE OF THE REPORT.

Page 1 of 1

EMSL Analytical, Inc.

BEST AVAILABLE COPY

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (356) 858-4960 Email: ssieget@EMSL.com**EMSL**Attn: **Non-**Tanner Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project:

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:32 AM

EMSL Order: 040306876

EMSL Project ID:

Analysis Date: 5/7/03

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
LL01A 040306876-0001		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LL02A CoveBase 040306876-0002		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LL02A Adhesive 040306876-0004		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
LL03A 040306876-0003		White/Brown Fibrous Heterogeneous	Dissolved Teased	45% Cellulose 35% Min. Wool	20% Non-fibrous (other)	None Detected

Analyst(s)

Non-
Responsive 4)**Non-Responsive**

or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

PLM-1

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BEST AVAILABLE COPYFOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 683 of 1021

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APPENDIX C

EMSL ANALYTICAL

Revised 7/1/99

BEST AVAILABLE COPY CHAIN OF CUSTODY

261304250 LEAD

EMSL Rep:

Your Company

Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project

Name/Number:

DATE:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase

Order #:

Third party billing requires written authorization from third party

Same

Zip:

Tanner Sciences, Inc.

Non-Responsive

3744 Lawrence Dr

Naperville

Zip: IL

Non-Responsive

630 369 7456

Non-Responsive

630-369-7457

MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chips*	SW846-7420 or AOAC 5.009 (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
	or NIOSH 7300	ICP	3.0 ug/filter	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	10 ug/wipe	6-10 days
	or SW846-6010	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil +				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - 3 hours, 6 hours, Please call ahead to schedule.

12 hours (must arrive by 11:00 a.m.)

24 hours (1day), 48 hours (2 days), 72 hours, 96 hours (3 days), 120 hours (4 days), 144 + hours (6-10 days)

* ** *** **** +, ++ Please Refer to Price Quote

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW001		144 in ²	
BTW002			
BTW003			
BTW004			
Relinquished By: (Person)	Non-Responsive	Received at EMSL By: Non-Responsive	
Date: 4/26/03		Date: 4/27/03 11:00 a.m.	

Note: Please duplicate this form and use additional sheets if necessary.

Page 1 of 3

EMSL ANALYTICAL

Revised 7/1/99

BEST AVAILABLE COPY
CHAIN OF CUSTODY

200304250

LEAD

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW 005		144 in ²	
BTW 006			
BTW 007			
BTW 008			
BTW 009			
LW 001			
LW 002			
LW 003			
LW 004			
LW 005			
LW 006			
LW 007			
LW 008			
LW 009			
HC 001			
HC 002			
HC 003			
HC 004			
HC 005			
HC 006			
HC 007			
HC 008			
HC 009			
HC 010			04250-1
LH 001			-2
LH 002			-3
LH 003			-7
LH 004			-8
LH 005			-6
LH 006			-1
LH 007			8
LH 008			7
LH 009			10
LH 010			

Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date	4/26/03	Date	4/26/03 11:20

Note: Please duplicate this form and use additional sheets if necessary.

* Separate Report

Page 2 of 3



EMSL Analytical, Inc.
Revised 07/07/99

BEST AVAILABLE COPY

CHAIN OF CUSTODY

Asbestos

040306876

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tammel Sciences, Inc.

EMSL-Bill to:

Street:

Street:

3744 Lawrence Dr.

Same

Box #:

Box #:

City/State:

Naperville, IL Zip: 60564

City/State:

Zip:

Phone Results to:

Non-Responsive

Fax Results to:

Non-Responsive

Name:

Name:

Telephone #:

630-369-7956

Fax #:

630-369-7957

Project

Purchase Order #:

Name/Number:

MATRIX

TURNAROUND

<input type="checkbox"/> Air	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Soil	<input type="checkbox"/> 3 hrs	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours 1 day
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Dust	<input type="checkbox"/> 48 Hours 2 days	<input type="checkbox"/> 72 Hours 3 days	<input type="checkbox"/> 96 Hours 4 days	<input type="checkbox"/> 120 Hours 5 days
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Micro-Vac	<input checked="" type="checkbox"/> 144+ hours 6-10 Days			

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3 hour tat, please call 1-800-120-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m Mon - Fri.), Please Refer to Price Quote

PCM - Air

- ☐ NIOSH 7400
- ☐ OSHA
- ☐ Other:

TEM AIR

- ☐ AHERA
- ☐ NIOSH 7402
- ☐ EPA Level II

TEM WATER

- ☐ Wastewater
- ☐ Drinking Water EPA 100.1
- ☐ Water - NY Wastewater
- ☐ Water-NY Drinking Water

PLM - Bulk

- ☒ EPA 600/R-93/116
- ☐ EPA Point Count
- ☐ NY Stratified Point Count
- ☐ PLM NOB (Gravimetric) NY 198.1
- ☐ Other:

TEM BULK/misc

- ☐ Drop Mount (Qualitative)
- ☐ Chatfield
- ☐ TEM NOB (Gravimetric) NY 198.4

TEM MICROVAC / WIPE

- ☐ ASTM D 5755-95
quantitative method

SEM Air or Bulk

- ☐ Qualitative
- ☐ Quantitative

XRD

- ☐ Asbestos
- ☐ Silica

OTHER

☐

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s)

Total Samples #:

Relinquished:

Non-Responsive

Date:

4/26/03

Time:

4PM

Received:

Date:

4-28-03

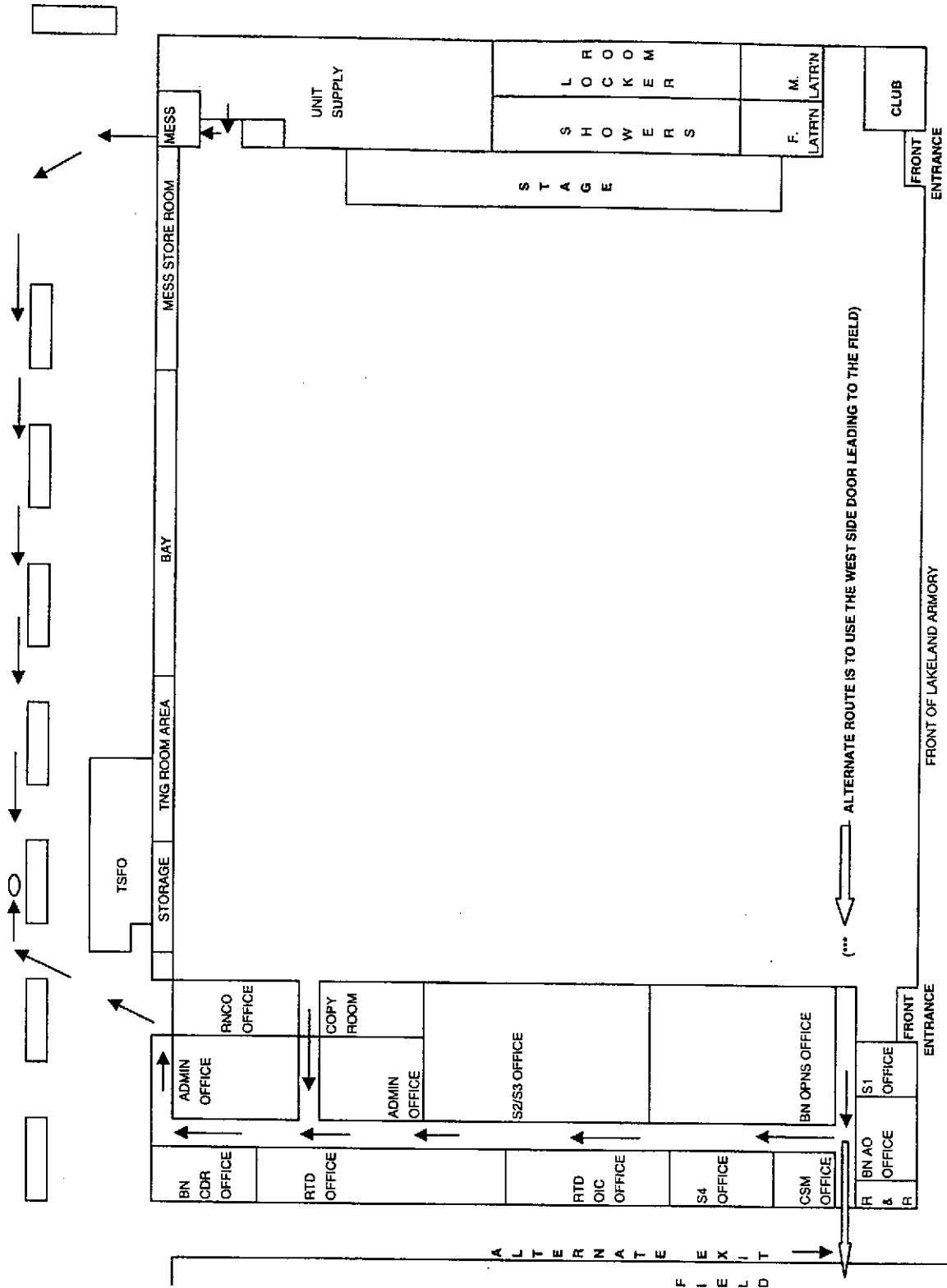
Time:

11:32am

Page 1 of 2

APPENDIX D

ARMORY FIRE / BOMB EXIT DIAGRAM



APPENDIX E

Indoor Firing Range Cleaning Guidance

1. Introduction - This document describes procedures to be employed in cleaning a range for non-lead use. All lead hazard control activities can produce dangerous quantities of leaded dust. Unless this dust is properly removed, a facility will be more hazardous after the work is completed than it was originally. Once deposited, leaded dust is difficult to remove effectively. Whenever possible, ongoing and daily cleaning of leaded dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures. Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead hazards in a space will not make the space safe unless excessive levels of leaded dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.

2. Difficulties in Cleaning - While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail. Several common reasons for this failure include worker inexperience, high dust-producing methods, and deadlines.

3. Performance Standard - Although the cleaning methods described in this document are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both occupants and workers.

4. Clearance Standard - 200 $\mu\text{g}/\text{ft}^2$ on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 $\mu\text{g}/\text{ft}^2$ for exterior concrete (a HUD interim recommendation and serves as a useful guideline). These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied as a non-lead work area after the completion of a lead hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.

5. Worker Inexperience - To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.

6. Equipment Needed for Cleaning - The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice tools), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).

7. Waste Disposal - Regulations governing hazardous and non-hazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.

8. Containment - Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containments or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area.

9. Pre-cleaning Procedures - Pre cleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in facilities that are heavily contaminated with debris/paint chips, etc. Pre cleaning involves removing large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant furniture or carpeting (rugs or carpets or any porous item in the firing range is not recommended due to the difficulty in cleaning these items effectively), depending on the worksite preparation. Carpeting (if present) should always be misted before its removal to control the generation of hazardous dust. However, if necessary, owners or project management should be prepared to remove furniture before lead hazard control work begins.

10. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques - Because leaded dust adheres tenaciously, especially to rough or porous materials like weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time. The typical cleaning method uses a special vacuum cleaner equipped with a HEPA filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum. Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the Alternatives Methods section in this document, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.

a. HEPA Vacuuming - HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small particles. These filters can remove particles of 0.3 microns or greater from air with 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is capable of filtering out particles of 0.13 microns or greater at 99.9995 percent efficiency. However, ULPA filters are slightly more expensive and may be less available than HEPA filters. Vacuuming with conventional vacuum machines is unlikely to be effective because much of the fine dust will be exhausted back into the environment where it can settle on surfaces. Considerations for the proper use of a HEPA vacuum are listed below.

(1) Operating Instructions - There are a several manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, carefully follow the manufacturer's operating instructions and, if possible, arrange training sessions with the manufacturer's representative. Although HEPA vacuums have the same suction capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.

(2) Special Attachments - Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces such as brushes of various sizes, crevice tools, and angular tools.

(3) Selecting Appropriate Size(s) - HEPA vacuums are available in several sizes, ranging from a small lunch bucket-sized unit to track-mounted systems. Two criteria for size selection are the size of the job and the type of electrical power available. Manufacturer recommendations should be followed.

(4) Wet-Dry HEPA Vacuums - Some hazard control contractors have found the wet-dry HEPA vacuums to be particularly effective in meeting clearance standards. These vacuums are equipped with a special shut-off float switch to protect the electrical motor from water contact.

(5) Prefilters - HEPA filters are usually used in conjunction with a pre filter or series of pre filters that trap the bulk of the dust in the exhaust air stream, particularly the larger particles. The HEPA filter traps most of the remaining small particles that have passed through the pre filter(s). All filters must be maintained and replaced or cleaned as specified in the manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

(6) HEPA Vacuuming Procedures - Surfaces to be vacuumed include ceilings, walls, floors, doors, heating, ventilation, and air conditioning (HVAC) equipment (heating diffusers, radiators, pipes, and vents), fixtures of any kind (light), built-in cabinets, and appliances. All rooms and surfaces should be included in the HEPA vacuum process, except for those that (1) were found not to have lead hazards and were properly separated from work areas before the process began, or (2) were never entered during the process. Sidewalks, driveways, and other exterior surfaces should be vacuumed if exterior hazard control work was conducted, or if debris was stored or dropped outside. Vacuuming should begin on the ceilings and end on the floors, sequenced to avoid passing through rooms already cleaned, with the entryway cleaned last.

(7) Emptying the HEPA Vacuum - Used filters and vacuumed debris are potentially hazardous waste and should be treated accordingly. Therefore, operators should use extreme caution when opening the HEPA vacuum for filter replacement or debris removal to avoid accidental release of accumulated dust into the environment. This may occur, for example, if the vacuum's seal has been broken and the vacuum's bag is disturbed. Operators should also wear a full set of

protective clothing and equipment, including appropriate respirators, when performing this maintenance function, which should be done in the containment area or off-site.

b. Wet Detergent Wash - Several types of detergents have been used to remove leaded dust. Those with a high phosphate content (containing at least 5 percent presodium phosphate, also known as TSP) have been found to be effective when used as part of the final cleaning process. TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some states have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control. Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several investigators and may also be safer, since TSP is a skin and eye irritant.* **Manufacturer's Dilution Instructions** - Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change prefilters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the prefilters.

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(1) Proper Wet-Cleaning Procedures - At the conclusion of the active lead hazard control process and after the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and be sequenced to avoid passing through rooms already cleaned.

(2) Changing Cleaning Mixture - Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no more than 1,000 square feet. Used cleaning mixture is potentially hazardous waste; consult with your local water and sewage utility for directions on its proper disposal. Wash water should never be poured onto the ground. The wash water is usually filtered and then poured down toilet (if the local water authority approves).

11. The HEPA/Wet Wash/HEPA Cycle Typical Procedures - The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows: First, the area is HEPA vacuumed. Next, the area is washed down. After drying, the area is again HEPA vacuumed. The rationale for this three-pass system is as follows: The first HEPA vacuum removes as much dust and remaining debris as possible. The wet wash further dislodges dust from surfaces. The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.

12. Single-Pass Wet Wash/HEPA Vacuum - Some lead hazard control contractors have roundhead spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps

in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.

13. Sealing Floors - Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or epoxy coating. Concrete floors should be sealed with a concrete sealer or other type of epoxy coating. If these floors are already covered by an effective coat of sealant, it may be possible to skip this step. New surfaces should be cleaned with a cleaning solution that is appropriate for that type of surface.

14. Surface Painting or Sealing of Non-floor Surfaces - Surfaces, including walls, ceilings, and wood-work, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision. Coating of walls may not be appropriate if lined with acoustic material to control noise.

15. Exterior Cleaning - Areas potentially affected by exterior lead hazard control should be protected via a containment system. Because weather can adversely affect the efficacy of exterior containment, the surface plastic of the containment system should be removed at the end of each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6-mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming inappropriate for hard exterior surfaces, not for soil.

16. Worker Protection Measures - Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment and appropriate respirators if required.

17. Maintaining Containment - The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should monitor the sheeting and immediately repair any holes or rips with 6-mil plastic and duct tape.

18. Decontamination of Workers, Supplies, and Equipment - Decontamination is necessary to ensure that worker's families, other workers, and subsequent properties do not become contaminated. Specific procedures for proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas should be implemented. Work clothing, work shoes, and tools should not be placed in a worker's automobile unless they have been laundered or placed in sealed bags. All vacuums and tools that were used should be wiped down using sponges or rags and detergent solutions. Consumable/disposable supplies, such as mop heads, sponges, and rags, should be discarded after each space is completed. Soiled items should be treated as contaminated debris. Durable equipment, such as power and hand tools,

generators, and vehicles should be cleaned prior to their removal from the site. The cleaning should consist of a thorough HEPA vacuuming followed by washing.

19. Preliminary Visual Examination - After the cleaning work is completed, the certified supervisor should visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. While the preliminary examination may be performed by the lead hazard control supervisor, contractor, or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or reclined. Therefore, it is more cost-effective to have the supervisor rather than the clearance examiner perform this initial examination.

20. Final Inspection - The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work is incomplete; 2) to detect the presence of lead dust; and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the sealant is applied to the floor.

21. Advanced Screening - Advanced screening for clearance may be considered. Immediate on-site analysis of dust wipes may alert the contractor to continue cleaning prior to final clearance sampling.

22. Recleaning After Clearance Failure - If after passing the final visual examination, the space fails the clearance wipe dust tests, the HEPA/wet wash/HEPA cleaning cycle should be carefully and methodically repeated. Failure is an indication that the cleaning has not been successful. Recleaning should be conducted under the direct supervision of a certified supervisor. Care should be exercised during the recleaning of "failed" surfaces or components to avoid recontaminating "cleared" surfaces or components.

23. Cleaning Cost Considerations - An important consideration in determining lead hazard control strategies and methods is the cost and difficulty of required daily and final cleanup operations and the likelihood that one can meet dust-clearance standards. A general rule of thumb is that lead hazard control strategies that generate the most dust will have higher cleanup costs and higher initial clearance test-failure rates.

24. Initial Clearance Test Failure Rates - The likelihood of passing final dust-clearance tests is highly correlated with the chosen intervention strategy, methods, and care exercised by the contractor. Chemical removal and hand-scraping strategies generally experience higher failure rates than replacement and encapsulation/ enclosure strategies. However, clearance failure is not solely related to abatement method. The diligence and effectiveness of an abatement contractor's cleaning process has a major impact on the likelihood of the space to pass the final wipe test clearance.

25. Key Factors In Effective Cleaning - Effective cleaning will be aided by adequate sealing of surfaces with polyethylene sheeting prior to lead hazard control, proper daily cleaning practices,

good worker training, and attention to detail. Where poor worksite preparation is employed, additional cleaning may be required to meet clearance.

26. Special Problems - Surfaces such as porous concrete, old porous hardwood floors, and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve unacceptable level of cleanliness.

27. Alternative Methods - Alternatives to the recommended cleaning tools and practices discussed in this document are available, some with significant potential for increasing effectiveness and lowering costs. Other vacuums may be used if worker exposures do not increase, if compliance with clearance standards is achieved, and if a variance from OSHA regulation is obtained by the contractor or employer (if required). The OSHA lead standard requires the use of HEPA vacuum equipment (see 29 CFR 1926.62 (h)(4), which states, "where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters."). Agitator heads on vacuums have been shown to significantly enhance vacuum effectiveness on carpets in cleaning fine dust without increasing airborne dust levels. Vacuums without agitator heads appear to perform relatively poorly on carpets.



Photo 1: Lakeland Armory Front Entrance



Photo 2: East side of Armory



Photo 3: Armory west side



Photo 4: Rear side of the Armory.



Photo 5: West end of the converted IFR (Bullet trap area) showing the air handling unit and storage.



Photo 6: East end of the converted IFR (Firing line area).



Photo 7: Armory kitchen



Photo 8: Drill hall.



Photo 9: Fire protection panel in drill hall where a wipe sample was collected.



Photo 10: Janitor's Room.



Photo 11: Air handling unit room.



Photo 12: Air supply grill to office area.



Photo 13: Another type of supply air diffuser for the office area.



Photo 14: Office floor tiles photo where sample was collected.

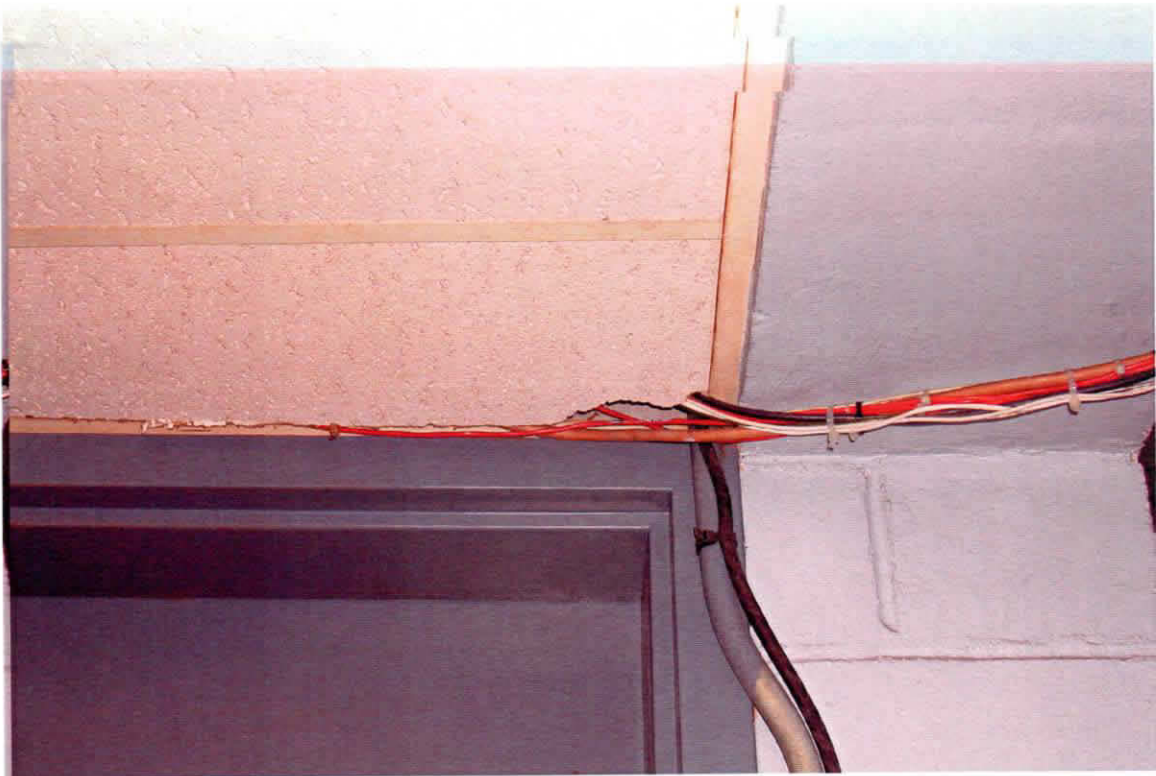


Photo 15: Ceiling tiles in office area.



Photo 16: Floor tiles in drill hall showing evidence of water leaks.

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

13 February 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: CPT [Non-Responsive]
[Non-Responsive] Armory Supervisor, 153rd Finance Battalion, 190 San Marco Ave, St Augustine,
FL 32084-2735.

SUBJECT: Industrial Hygiene Survey of the Lance National Guard Armory, St
Augustine, FL.

1. References.

- a. Report submitted 7 February 2003, Industrial Hygiene Survey, LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a Service Contract was put together to conduct Health Hazard Information module (HHIM) Field surveys and IH surveys at the Florida National Guard Armories.

- b. Ms [Non-Responsive] of LAE Consulting conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Use the report to help in correcting all deficiencies noted by the contractor.

c. **Understand that the lead levels after cleanup in the deactivated Indoor Firing Range and the drill hall area should be as close to zero as possible. Contact your FMO and request follow-up cleaning of this deactivated Indoor Firing Range as soon as possible.**

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR **Non-Res** COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: MAJ. **Non-Responsive** Safety Manager.
Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St.
Augustine, FL 32085-1008

LAE CONSULTING

1218 Scattered Pines Court, Severn, MD, 21144
Tel: (410) 551-2717

7 February 2003

MEMORANDUM FOR: 153rd Finance Battalion, ATTN: CPT **Non-Responsive** 190 San Marco Ave, St Augustine, Florida 32084-2735

SUBJECT: Industrial Hygiene Survey of Lance National Guard Armory, St Augustine, Florida

I. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. National Guard Pamphlet (NG Pam) AR 385-16, Safety, Guidelines for Converting Indoor Firing Ranges to Other Uses.
- g. National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- h. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- i. Occupational Safety and Health Administration (OSHA), 29 CFR, 1926.1101, Asbestos

SUBJECT: Industrial Hygiene Survey of Lance National Guard Armory, St Augustine, Florida

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Lance National Guard Armory. The facility was visually examined and the Building Custodian was interviewed for historical information related to the building and the operations performed. A diagram of the building can be found in Enclosure 1. Laboratory results of Lead wipe samples at Enclosure 2. Photographs of the facility can be found in Enclosure 3. Health Hazard Inventories can be found in Enclosure 4. Excerpt of NG Pam 385-16, guidelines for Converting Indoor Firing Ranges to Other Uses in Enclosure 5.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, Ms. **Non-** of LAE Consulting conducted an industrial hygiene survey at the Lance National Guard Armory on January 14, 2003.

4. Facility Description. This facility houses the 153rd Finance Battalion, 220th Finance Group, 2/153rd Finance Detachment and the 3/153rd Finance Detachment. The Armory has twelve full time personnel. The personnel perform administrative duties Monday through Friday between 0800 and 1630. The Armory is utilized for drills on the weekend. The Armory was built around 1957. The facility houses administrative areas, one kitchen/mess hall, one classroom, a Drill hall, Supply Room, and an Arms Room.

5. Findings.

a. A deactivated Indoor Firing Range was converted into a storage area. The range is located on the drill Hall Floor behind a stage. The Drill Hall was the firing line. Excess cardboard boxes are stored in the pit. The floor of the pit is sand. The backstop has been removed. Seven (7) wipe samples were taken (Table 1). Two samples from the range and four(4) from various other locations throughout the Armory. One bulk sample of sand taken from the floor of the range pit was analyzed. One of the seven samples were above the clearance level of 200-mg/ft² indicated in reference g (enclosure 3 and 6). The bulk sample was less than the reporting liming of 39.73mg/Kg.

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Page 2

SUBJECT: Industrial Hygiene Survey of Lance National Guard Armory, St Augustine, Florida

Table 1.

Sample Number	Sample Location	Results
1	Front wall of Pit	17 ug/ft ²
2	Top of wall of pit	390 ug/ft ²
3	Kitchen, under table	<12 ug/ft ²
4	Air Handler unit front of filter	< 12 ug/ft ²
5	Air handler unit back of filter	16ug/ft ²
6	Drill Hall floor middle	12 ug/ft ²
7	Drill Hall floor near stage	<12 ug/ft ²
8	Bulk sand sample from Pit of Range	< 40 mg/Kg
9	Blank	<12 ug/ft ²

b. The Drill Hall is used primarily for drills.. Visual examination and interview with personnel indicated no apparent vehicle maintenance being performed in this area. A Lead wipe sample was taken in the Drill Hall (Table 1). Results were below the reporting limit.

c. the Armory has two supply rooms belonging to the 220th Finance and the 153rd Finance. The supply rooms house an Arms room and an NBC storage area. The areas were visually surveyed and personnel interviewed. NBC equipment with a radioactive source are stored within the Supply room areas. Signage stating "Warning Radioactive Hazard" was not posted. Personnel stated that accountability and issuing of weapons is performed in the Arms room. Weapons are not repaired in the arms room. Supply personnel were educated about ensuring that they maintain good personnel hygiene after handling weapons and about the risk of performing weapons repair in a non-ventilated area.

d. An air-Handling unit is located in a room that is used to store tables, chair, cleaning equipment, seasonal items and the soda machine. The pleated filter in the air-handling unit was heavily soiled. Access to the filter is quite difficult. Lead wipe samples were taken on the front and back of the filter. Results are indicated in Table 1.

SUBJECT: Industrial Hygiene Survey of Lance National Guard Armory, St Augustine, Florida

e. An illumination survey was performed in Supply room (main) the readiness NCO Office, the 2/153rd Finance office, HQ 220 Finance Office and supply room and the SGM office. The walls in may of these offices are either wood paneled or painted a medium brown color. Several fluorescent light were not working. Dark cherry wood furniture is in the offices. All readings are measured in Foot-candles (FC).

(Table 3)

Location	Average FC
SSSC supply room at computer workstation	9.3 FC
Readiness NCO office	22.5 FC
3/153 rd Finance detachment orderly room	14.6 FC
2/153 rd Finance Office	12.75 FC
HQ 153 rd office	8.43 FC
220 th Finance Det outer office	14.6 FC
220 th Supply room	17.5 FC
SGM workstation	13.5 FC

6. Recommendations.

a. Recommend that the Florida Occupational Safety and Health office review the Lead wipe clearance sample results of this facility to determine if the range was adequately decontaminated. If samples are greater than or equal to 200 ug/ft² (reference g). Consider discontinuing the use of this area as a storage area until further evaluation can be performed.

b. Continue to discourage the use of the Drill Hall as a motor vehicle maintenance bay.

c. Continue to ensure that weapons maintenance is not performed inside the Arms room. Practice good personal hygiene by washing hands thoroughly after handling weapons and ammunition. Post "Radioactive Hazard" warning signage where a known radioactive source is stored

d. Recommend that changing the filter in the Air Handling unit once a month. Removal of the wood obstruction in front of the unit may encourage frequent changing of the filter.

e. . Lighting in the Administrative areas must be upgrades to meet the required 30-50 FC recommended [IES/ANSI RP1-1993]. Consider purchasing supplemental lighting such as desk lamps until funding for lighting upgrades become available. Consider lighting the color of the walls.

7. Technical Assistance. For technical assistance regarding information found in this report please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, 1-800-326-0262.

5 Encl

1. Building Diagram
2. Sample Results
3. Photos of Facility
4. HHIM
5. Excerpts NG Pam 385-16

Non-Responsive

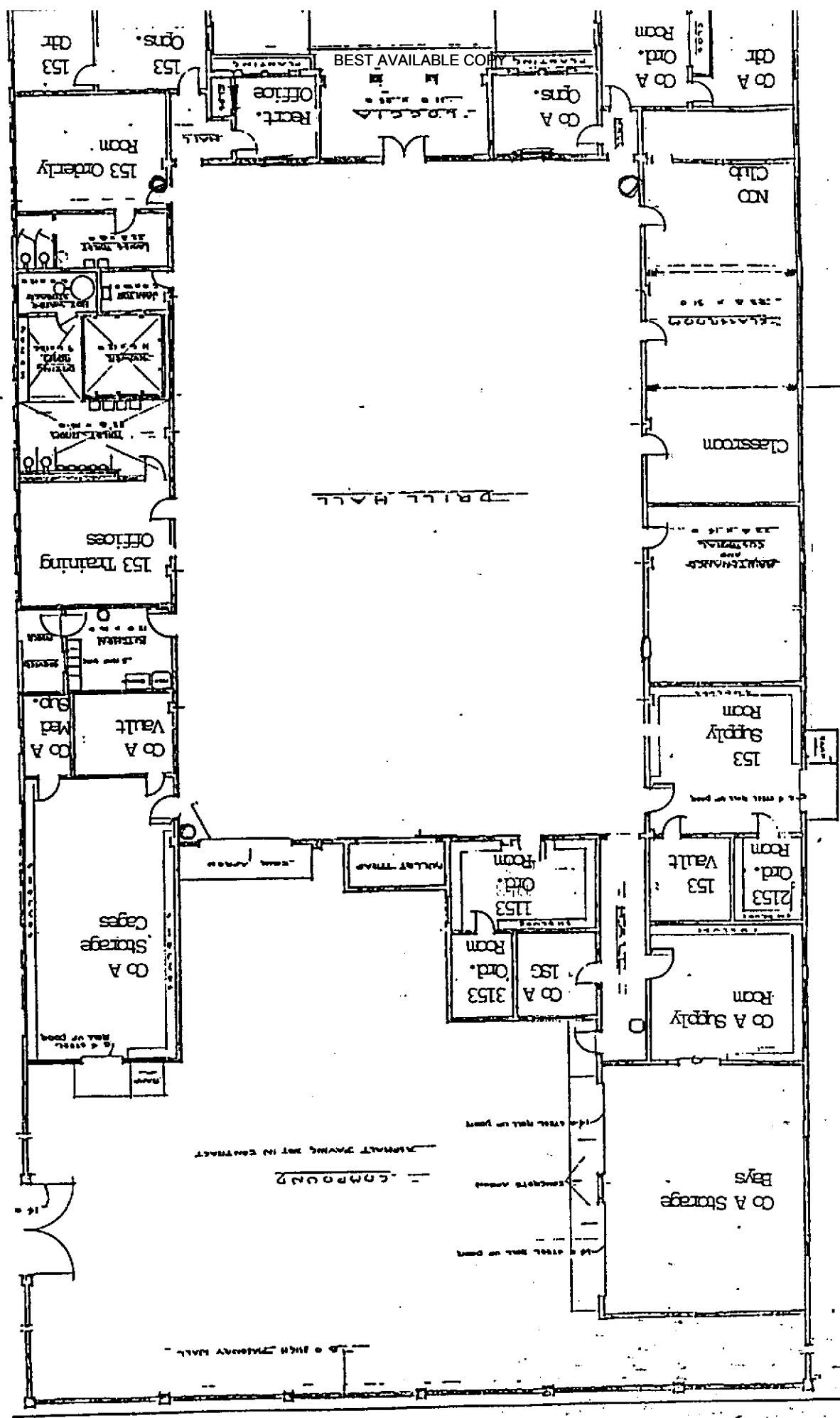
LAE Consulting

CF: Safety Occupational Health Office, Florida NG

LAE Consulting
1218 Scattered Pines Court, Severn, Maryland 21144
Telephone: (410) 551-2717

153rd Fin Bn Army

LOCATION OF FIRE EXTINGUISHERS



CERTIFICATE OF ANALYSIS

NY 6AP
AIHA

NO - U S I U

Client: IAB Consulting
Address: 1218 Southern Pine Court
Sewern, Maryland 21144
Attention:

Job Name:	St. Augustine 153 rd Pk. DM
Job Location:	Not Provided
Job Number:	Not Provided
P.O. Number:	Not Provided

Charita Ofc Custody:	888431
Date Analyzed:	01/21/2003
Person Submitting:	No n-Reso
Report Date:	10-Feb-03

Page 1 of 1

Summary of Atomic Absorption Analysis for Lead

A/M Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (L)	Air Swept (ft ³)	Reported Limit	Excess Result	Comments
0320972	1	Flame	Wipe	4400	1,000	12.00 ug/ft ³	17 ug/ft ³	
0320973	2	Flame	Wipe	4400	1,000	12.00 ug/ft ³	390 ug/ft ³	
0320974	3	Flame	Wipe	4400	1,000	12.00 ug/ft ³	< 12 ug/ft ³	
0320975	4	Flame	Wipe	4400	1,000	12.00 ug/ft ³	< 12 ug/ft ³	
0320976	5	Flame	Wipe	4400	1,000	12.00 ug/ft ³	16 ug/ft ³	
0320977	6	Flame	Wipe	4400	1,000	12.00 ug/ft ³	< 12 ug/ft ³	
0320978	7	Flame	Wipe	4400	1,000	12.00 ug/ft ³	< 12 ug/ft ³	
0320979	8	Flame	Soot/Scrub	4400	N/A	39.73 mg/Kg	< 40 mg/Kg	
0320980	9	Flame	Wipe Blank	4400	N/A	12.00 ug	< 12 ug	

Analysis Method for Parameter: Air, Wqpoa, Paints, and Solvents/Solids: EPA 600/9-9-920200A-7420; Water: SM-311B
Analysis Method for Parameter: Air, Wqpoa, Paints, and Solvents/Solids: EPA 600/9-9-920200A-7421; Water: SM-311B
N/A = Not Applicable mg/Kg = parts per million (ppm) by weight mg/L = parts per million (ppm)
%Pb = percent lead by weight ug = micrograms ug/L = parts per million (ppm)
Note: All results have two significant digits. Any additional digits shown should not be considered when interpreting the result.

Analysis

Non-Responsive

Technical Manager:

Non-Responsive

- do report samples only to the sample, or samples, investigated and to not necessarily indicative of the quality or condition of apparently identical or similar products. As a result, procedures to identify the effects, the public and those Laboratories, C) to report to submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, as whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, brands and collection protocols are listed upon the information provided by the persons submitting them and, unless collected by personnel of those Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of the information. Received sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to published light microscopy of bulk samples and transmission electron microscopy of AEMRA air samples.

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153rd Finance BN National Guard Armory,
St Augustine. FL



Downrange view of Deactivated indoor firing range located behind stage curtains



View of pit floor (sand is in the pit)

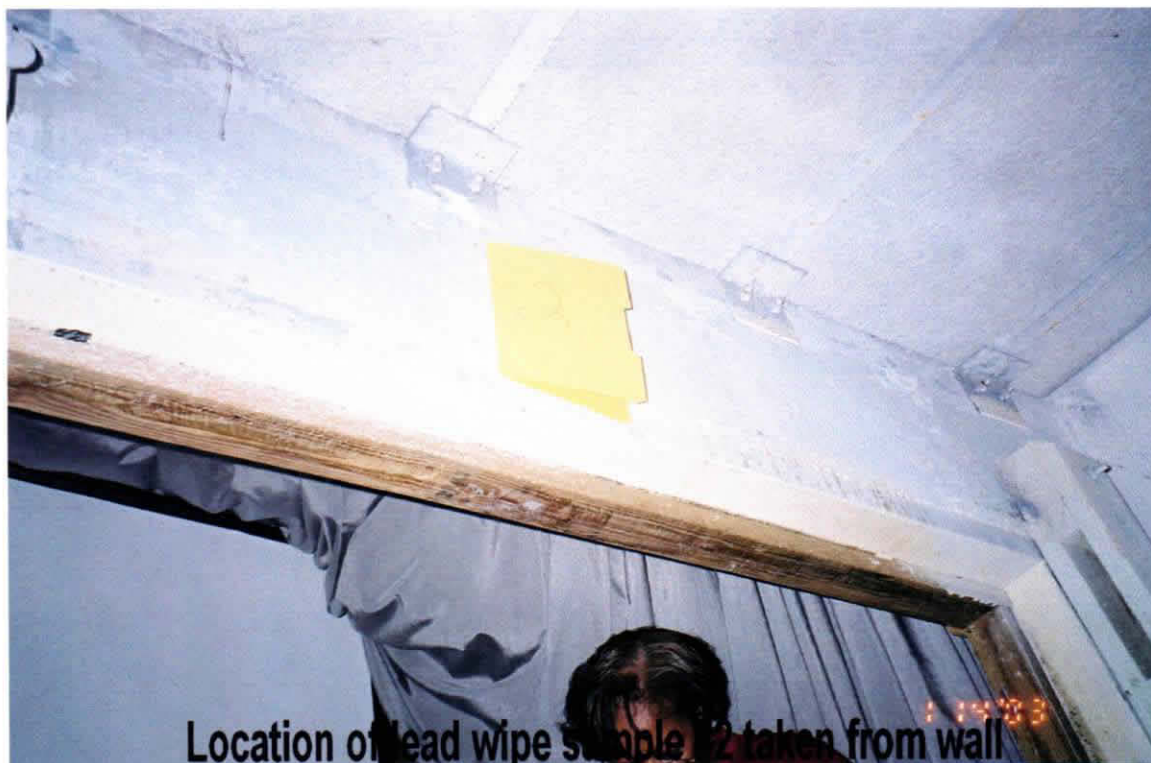


Views of sample locations (yellow cards)
on the drill hall floor





**Location of lead wipe sample #1 taken from wall near
pit floor inside of the deactivated indoor firing range**



**Location of lead wipe sample #2 taken from wall
inside the deactivated indoor firing range**



Air Handler Unit located in a storage closet



Filter From Air handling unit Lead wipe sample taken from supply and exhaust



Lead wipe sample #3 located under table in the kitchen



View of Drill Hall

Full-Time Personnel (220th Finance Group)

Rank	Last Name	First Name	MI	PMOS
CPT	Non-Responsive		J.	44A00
SGM			R.	73Z50
SFC			T.	73C40
SFC			P.	75H40
SFC			E.	92Y40

Full-Time Personnel (153rd Finance Battalion)

Rank	Last Name	First Name	MI	PMOS
MSG	Non-Responsive		F.	73Z50
SSG			M.	73C30
SSG			W.	73C30
SGT			A.	92Y20
SGT			L.	73C20
SPC			B.	92A10
PFC			M.	73C10

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

(For use of this form, see HHIM User's Guide)

ARLOC	INSTALLATION ST Augustine Lance Armory	BLDG/RM NO. 190 San Marco Ave ST AUGUSTINE, FL 32084-2735
LOCATION/CODE AA	OPERATION/CODE ADO	
SURVEY DATE 14 JAN 03	EVALUATOR Non-Responsive	LAE Consulting
MACOM/CODE	SUBMACOM/CODE	SUPERVISOR CPT Non-Responsive
TELEPHONE/DSN NO. (904) 823-4744	UNIT/ORGANIZATION 153rd Finance BN	RAC
NO. CIV(S)	NO. MIL 12	NO. CONTRACTORS
	NO. LOC(S)	NO. OTHER

SECTION 2: FACILITY DATA

LAB HOODS	VAPOR DEGREASERS	SPRAY BOOTHS
MAINTENANCE BAYS	OPEN SURFACE TANKS	VENTILATION UNITS 1

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
Gmv				

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
CHEMICAL SPLASH	/	CANAL CAPS	/	APRONS	/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	/	EARPLUGS	/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MUFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNES	/		/

SECTION 4: HAZARD INVENTORY DATA

CAS CODE	HAZARD DESCRIPTION	PAC	EPC
POLIGHTIN	INADEQUATE LIGHTING		
7439-92-1	LEAD, INORGANIC, DUST + FUMES		

SECTION 5: PERSONNEL DATA

LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY

SECTION 6: COMMENTS

☐ No comments☐ See attached sheet

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
Washington, DC 20310-2500
31 January 1994

NG PAM (AR) 385-16/
ANGPAM 91-101

Safety

GUIDELINES FOR CONVERTING INDOOR FIRING RANGES TO OTHER USES

Summary. This is a new pamphlet. This guidance prescribes policy, responsibilities, and procedures on how to convert lead-contaminated indoor firing ranges to other uses.

Applicability. This guidance applies to all persons responsible for the operation of Army National Guard (ARNG) and Air National Guard (ANG) indoor firing ranges. As no regulation/guidance can foresee all situations that might arise, the following is written in a broad scope and is intended to be interpreted as to the INTENT of the law by health professionals.

Supplementation. Supplementation of this guidance is prohibited without prior approval from Chief, National Guard Bureau (NGB-AVN-SI).

Impact on New Manning System. This guidance does not contain information that affects the New Manning System.

Interim changes. Interim changes are not official unless they are authenticated by the Chief, Administrative Services. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

Suggested Improvements. The proponent of this publication is the National Guard Bureau. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Chief, National Guard Bureau, Attn: NGB-AVN-SI, 111 South George Mason Drive, Arlington, VA 22204-1382.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12-09-E.

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- B. Interpretation of Sample Results (Prior to Cleaning)
- C. Interpretation of Sample Results (After Cleaning)
- D. OSHA Instruction CPL 2-2.208
- E. Where to Purchase Sample Media and Containers
- F. AEHA Form 8-R (Bulk Sample Data)
- G. Instructions to Complete AEHA Form 8-R
- H. Examples of Computation of Lead Level from Wipe Sample Results
- I. Supporting Laboratories and Areas Served

Glossary

1. Purpose

This pamphlet establishes policy and procedures for converting indoor firing ranges to other uses.

2. References

Related publications are listed below.

a. **DODI 6055.1** (Department of Defense Occupational Safety and Health (OSH) Program).

b. **AR 11-34** (The Army Respiratory Protection Program).

c. **AR 40-5** (Preventive Medicine).

d. **NGR (AR) 385-15** (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARNG Indoor Firing Ranges).

e. **TB MED 502** (Occupational and Environmental Health Respiratory Protection Program).

f. **USA-EHA TG 141** (Industrial Hygiene Air Sampling and Bulk Sampling Instructions).

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

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**APPENDIX B
INTERPRETATION OF SAMPLE RESULTS
(PRIOR TO CLEANING)****B-1 200 micrograms/sq ft or LESS**

If all sample results are 200 micrograms/sq ft or less, the range can be converted and/or used for any purpose.

B-2 BETWEEN 201 and 200,000 micrograms/sq ft.

Range must be decontaminated. Continue with cleaning instructions listed in paragraph 15. Sample results will be used to establish a baseline. The baseline sample results will be used to ensure the 75 percent reduction is achieved.

B-3 OVER 200,000 micrograms/sq ft.

Your sample media may not be capable of collecting additional lead dust and results that are above 200,000 micrograms/sq ft should be considered suspect. Larger concentrations of lead dust may exist on surfaces tested other than results indicate. If the initial sampling results are above 200,000 micrograms/sq ft, the range should be cleaned by either HEPA vacuuming and/or wet wiping to establish a baseline. After the cleaning procedure is completed, resampling should occur until sample results are under the 200,000 micrograms/sq ft limit.

B-4 High sample results may exist due to personnel walking or moving equipment/vehicles over the range surfaces causing the lead dust to be "ground" into the substratum. For example, a maintenance activity may have oversprayed paint or spilled solvents onto the surface which would bond with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

**APPENDIX C
INTERPRETATION OF SAMPLE RESULTS
(AFTER CLEANING)****C-1 200 micrograms/sq ft or LESS**

If all sample results are less than 200 micrograms/sq ft, the range can be converted and/or used for any purpose after a coat of lead-free latex paint is applied. The paint color must contrast the color of the present substratum.

C-2 ABOVE 200 micrograms/sq ft

As a minimum, a 75 percent reduction should occur from your initial sample results or the samples should be under the 200 microgram/sq ft level. If all sample results meet this criteria, a contrasting color of lead-free latex paint must be applied before the area is utilized for other purposes. The room can only be used as a storage area. Storage of kitchen equipment and food is prohibited. The room cannot be used for a child care or nursery area. If sample results are not

below the 75 percent reduction, a more thorough cleaning of the range is required along with resampling until criteria are met.

* **PLEASE NOTE**, that if your original wipe sample results were, i.e., 175,000 ug/sq ft then you would have to reduce the lead level below 13,125 ug/sq ft. This would meet the 75 percent reduction criteria; however, this is an enormous amount of lead dust and care should be taken to ensure a heavy coat of paint seals the lead dust. It is unknown at this time whether or not the remaining amount of lead dust will allow the latex paint to adhere to the substratum. If the paint peels, falls to the floor and is crushed over a period of time, it will create another respirable lead hazard. If this happens, contact your Regional Industrial Hygiene Office for guidance. Periodically monitor the converted range for signs of peeling paint. Paint chips can be analyzed for lead content. **DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRING RANGE.**



**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-ARS-SEIH

9 July 2010

MEMORANDUM THRU: LTC [Non-Responsive] Deputy State Surgeon, Florida Army National Guard, 2305 State Road, St. Augustine, Florida 32086.

TO: The Florida Army National Guard, ATTN: SFC [Non-Responsive] Armory Supervisor, Louie C. Wadsworth National Guard Armory, 1416 S.W. 11th Street, Live Oak, FL 32064.

SUBJECT: Industrial Hygiene survey of the Live Oak Armory.

1. References.

- a. Report dated 2 June 2010, Industrial Hygiene Survey [Non-Responsive] LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, 25 May 2007.
- d. AR 385-10, 23 August 2007, Army Safety Program.
- e. DA PAM 40- 503, Industrial Hygiene Program, 30 October 2000
- f. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- g. Industrial Ventilation, 25th ed, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume, 8th edition, 1995, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida Safety and Occupational and Health Office and the Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was put together to conduct a baseline IH survey at the Live Oak Armory
- b. Ms. [Non-Responsive] of LAE conducted the survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

4. Recommendations.

a. Understand that all findings found in the enclosed report have been reviewed by the Regional Industrial Hygienist and the following recommendations are the ones to be followed.

b. Follow all recommendations made in reference 1. a. requesting Facility Engineering's Environmental Sections help and Industrial Hygiene (IH) and Occupational Health (OH) services where needed to complete the recommendations.

c. Use the report to help in correcting all deficiencies noted by the contractor. Put a plan in place to correct the deficiencies and let the Occupational Safety and Health Office know in 30 days how you are going to correct all recommendations.

d. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse, Industrial Hygiene Technician and the Occupational Safety and Health Office for technical guidance if needed.

5. If additional information is needed about the contractors report, please contact Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174. No

Non-Responsive

Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: CW3 Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT Non-Responsive Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

LAE CONSULTING
1218 Scattered Pines Court, Severn, MD, 21144
Tel: (410) 551-2717

30 June 2010

MEMORANDUM FOR: Louie C. Wadsworth National Guard Armory, ATTN: SFC [Non-Respon] [Redacted]
[Redacted] 416 S.W. 11th Street, Live Oak, Florida 32064

SUBJECT: Industrial Hygiene Survey of Live Oak Florida National Guard Armory

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- g. NG Pamphlet 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges (IFRs), 3 November 2006.

SUBJECT: Industrial Hygiene Survey of Live Oak Florida National Guard Armory

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Live Oak Florida NG Armory. The facility was visually examined and the employees were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region south Industrial Hygiene Office, Ms. **Non-** of LAE Consulting performed an Industrial Hygiene survey of Live Oak Florida Armory on 2 June 2010.

4. Facility Description. The Armory is a one story building built in 1958. The facility was renovated in 2006. The indoor firing range was removed. Classrooms, bathrooms, and a new roof were installed. A unit maintenance shop is located at the rear of the Armory in the motor pool. The facility has a kitchen, two classrooms, five offices, bathrooms, and a small gym.

5. Instrumentation. The Contractor obtained all instrumentation from the Florida state Occupational Safety and Health office and from EON Products Inc. All equipment was operated per manufacture's instructions.

6. Findings.

a. A three bay maintenance shop is located within the motor pool of the Armory. The shop is utilized for unit maintenance. The FMS shop in Lake City Florida provides support to the unit and uses the shop. Batteries were found stored on a cart in the maintenance bay. Eyewash is located outside the maintenance shop. The covers to the eyewash were missing. POLs are stored in a flammable container. Material Safety Data Sheets (MSDSs) were provided of the materials stored for the maintenance shop. Copies of the MSDSs are within the enclosure of the report. A fuel powered forklift was stored in the maintenance facility.

b. Rodent droppings were observed in the kitchen. A pest control contractor placed rodent bait stations in the kitchen. The Armory does not have a unit mess section.

c. Illumination was surveyed throughout the facility. The rooms listed below are found to be below the standards required in reference f. The findings are as followed in Foot-candles (FC):

Table 1

AREA/LOCATION	MEASURED FC	REQUIRED FC
Rm A121	38	50
Rm A122	22.7-43.4	50
Rm A109,	5-25.1	50
Rm A104	22.3	50
Rm A105	30.1-58.2	50
Rm A 103	29.6-30.2	50
Rm A106 Non-	35.6	50
Rm A106 Respon	36.6	50
Rm A106 PBO	40.4	50

LAE Consulting
1218 Scattered Pines Court, Severn, Maryland 21144
Telephone: (410) 551-2717

Page 2

SUBJECT: Industrial Hygiene Survey of Live Oak Florida National Guard Armory

d. An Indoor firing range was removed during renovations that occurred in 2006. The range was located behind a rear wall of the Drill Hall. The removal made room for a classroom and bathroom facilities. Floor plans before and after the renovations are located within the enclosure of the report.

7. Technical Assistance. For technical assistance, regarding information found in this report, please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, (404) 559-4174

Non-Responsive

2 Encl

LAE Consulting

1. Building schematics
2. Floor plans
3. Material Safety Data Sheets

LAE Consulting

Page 3

SUBJECT: Industrial Hygiene Survey of Live Oak Florida National Guard Armory

8. Recommendations.

a. Recommend the Region south Industrial Hygiene office perform an industrial hygiene survey of the Maintenance shop. **(RAC 2)**

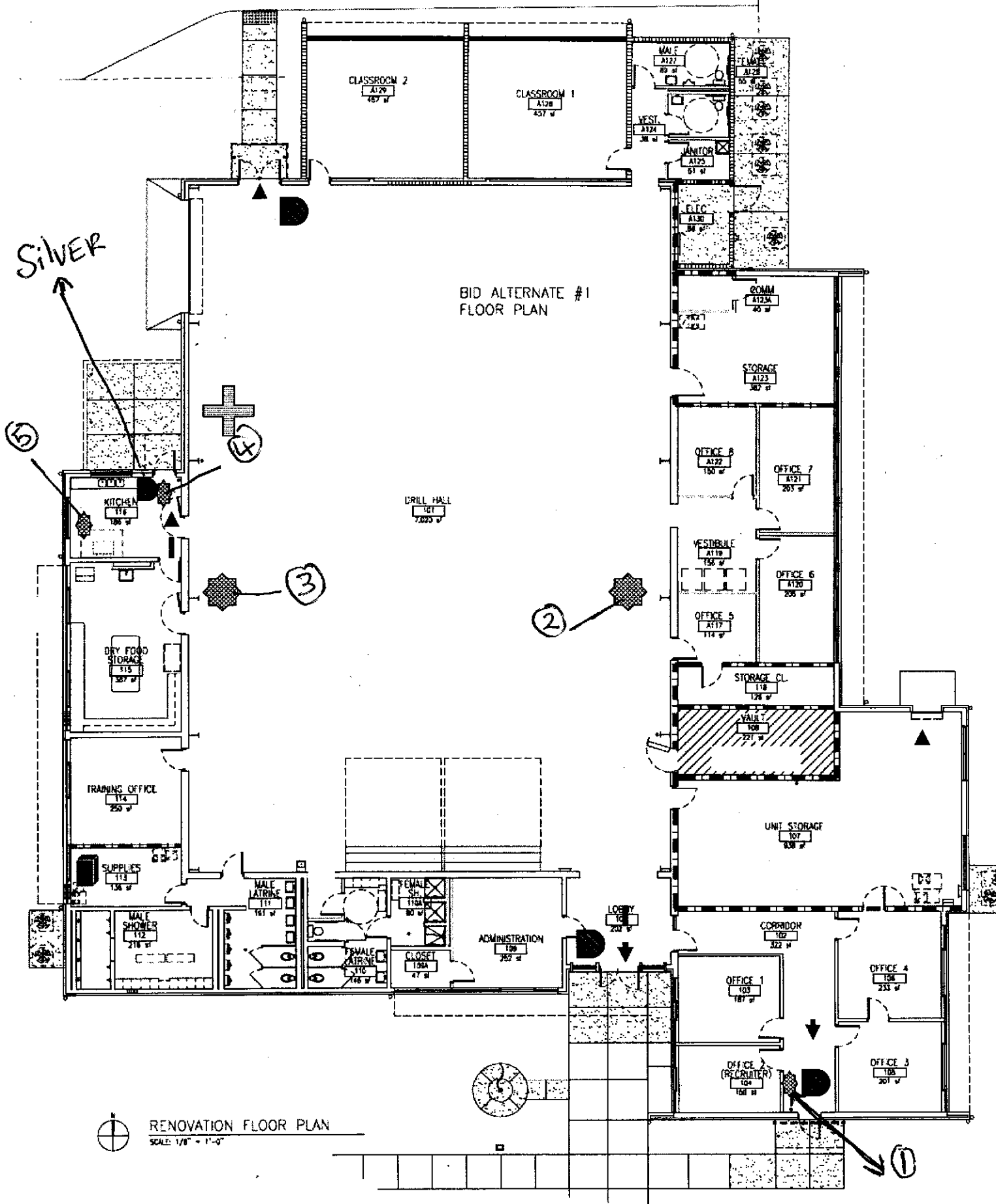
b. Recommend monitoring the pest control contractor. Note dates and areas that rodent baits are placed. Ensure that the contractor is checking the bait stations weekly for rodent activity and bait effectiveness. **(RAC 3)**

c. The lighting should be upgraded to at least 50 foot candles in office areas. Consider purchasing supplemental lighting such as a desk lamp for office areas. **(RAC 3)**

d. No recommendations

LAE Consulting

Page 4



LIVE OAK
2006

AFTER REMOVAL OF BULLET HOLE

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SEPARATE #1
PLAN

CLASSROOM 2
A129
457 sf

CLASSROOM 1
A128
457 sf

VEST.
A124
38 sf

FEMALE
A126
55 sf

MALE
A127
89 sf

JANITOR
A125
51 sf

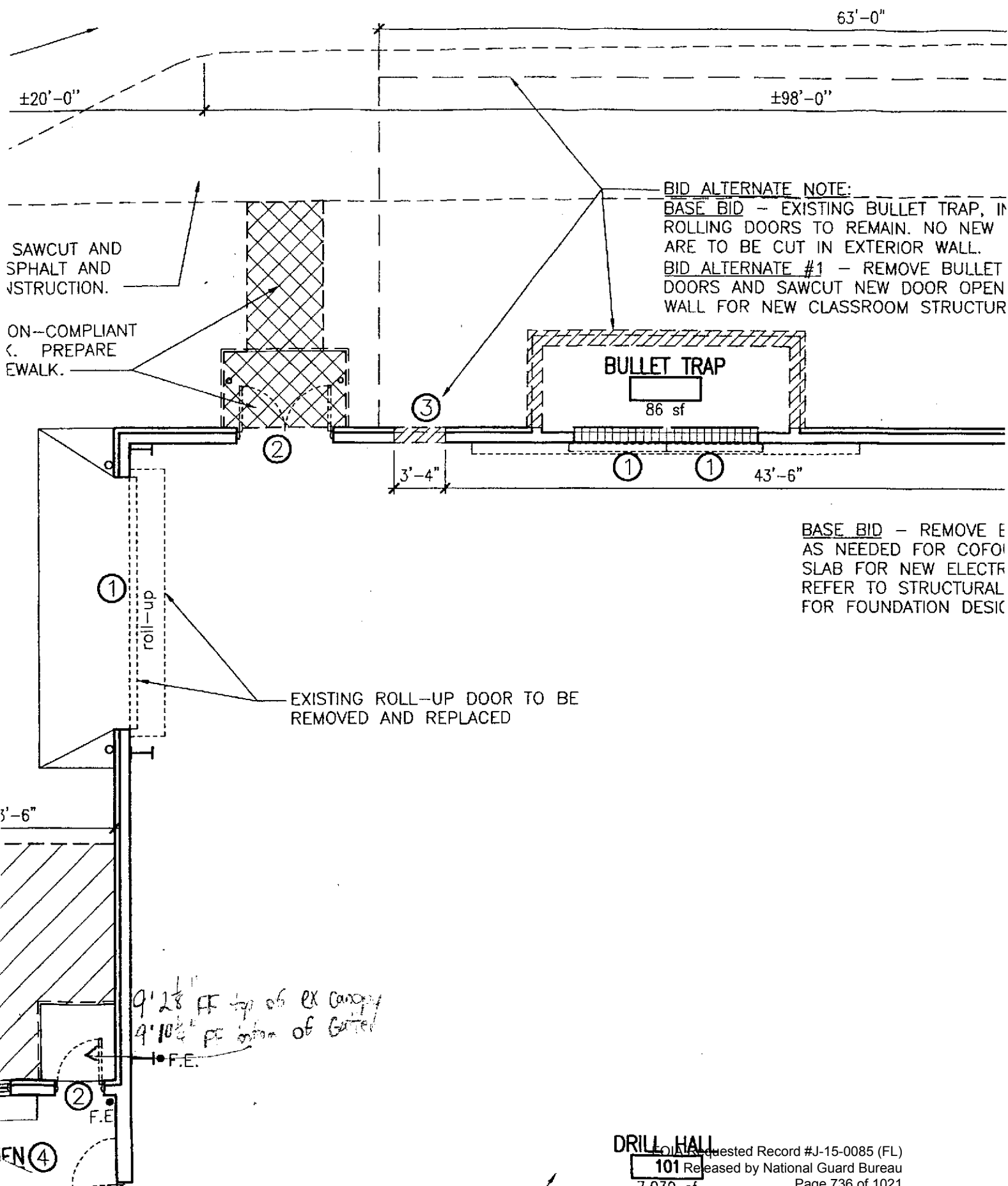
ELEC
A130
88 sf

TO A/C

Live Oak-2000

REMOVAL OF BULLET TRAP PLANS

BEST AVAILABLE COPY



ACTIVITY NAME: 868th EN BN, LIVE OAK, FL
STORAGE LOCATION: MAINTENANCE BAY FLO1
INVENTORY PERFORMED BY: N C E S P C O SIV
DATE: 14-Oct-09

1/20/2015
3/26/2015
3/23/2015
4/01/2015
5/15/2015
11/6/2015

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
DATE 01-20-2015 BY 60322 UCBAW

2015 RELEASE UNDER E.O. 13526

FOIA Requested
Released by

ACTIVITY NAME: 868th EN BN, LIVE OAK, FL
STORAGE LOCATION: STORAGE ROOM 113 CL-01
INVENTORY PERFORMED BY: 2 LEADS DIV
DATE: 14-Oct-09

[illegible]

Jan 1/2010
2/26/10
3/03/10
4/10/10
11/5/10
2/6/10

ACTIVITY NAME: 868th EN BN, LIVE OAK, FL
STORAGE LOCATION: STORAGE ROOM 113 CHEMICAL STORAGE SHELF (CSS-01)
INVENTORY PERFORMED BY: [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
DATE: 14-Oct-09

Jan 2010
1/20/10
Feb 2010
2/20/10
3/17/10
4/8/10
5/2/10
6/2/10



View of Live Oak, Alabama Armory



Rear view of Live Oak, Alabama Armory



Rear view of Live Oak, Alabama Armory



View of the unit's maintenance shop



View of eyewash located outside the maintenance shop. The eyewash has no eye covers



Interior view of the unit's maintenance shop



View of batteries stored in the shop



View of batteries stored in the shop



Interior view of POL storage container located near the maintenance shop



View of Hazardous Waste storage container



View of Fuel powered forklift stored in maintenance bay area of shop



View of Mess or kitchen of the Armory



View of rodent bait station in the kitchen



View of mouse droppings in the kitchen



View of the weight room of the Armory



View of the Drill Hall within the Armory



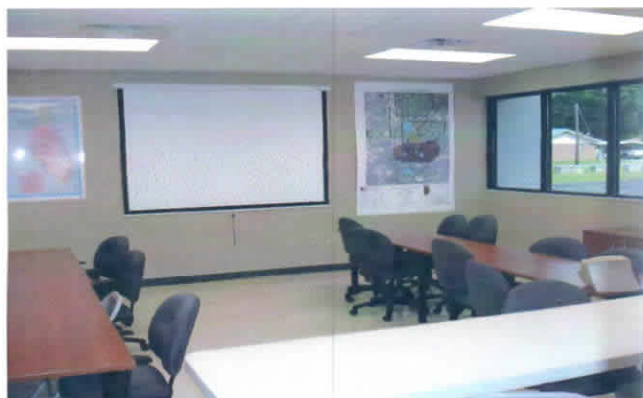
View of rear wall of the drill hall where the former IFR was located



View of rear wall of the drill hall where the former IFR was located



View of front entrance from the Drill Hall



View of new class room located behind the former IFR

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 23, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
Readiness NCO, 900 SW 20th Street, Ocala, Florida 34474.

SUBJECT: Industrial Hygiene Survey of the Ocala National Guard Armory, Ocala, Florida.

1. References.

a. Report submitted 16 April 2004, Industrial Hygiene Survey, Ocala Armory, George Hinchliffe.

b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.

c. AR 40-5, Preventive Medicine, October 1990.

d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.

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

f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.

g. TB MED 530, The Army Industrial Hygiene Program.

h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.

i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

a. Discontinue use of Indoor Firing Range (IFR) until the IFR has been properly cleaned of Lead and retested by the Florida State Safety and Occupational Health Office.

b. Clean converted Indoor Firing Range (Supply/Storage room) of lead following NG PAM's 385-15 and 385-16. Keep in mind that EPA and your state may have lead reduction levels lower than the levels recommended in the 385-15 and 385-16.

c. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

FLORIDA ARMY NATIONAL GUARD



**OCALA ARMORY
900 SW 20th STREET
OCALA, FLORIDA 34474**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Ocala Armory
900 SW 20th Street
Ocala, FL 34474

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Methodology

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C. Laboratory Analytical Results
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E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Ocala Armory on 22 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 2210 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	5 to 92 footcandles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Ocala Armory in Ocala, Florida on 22 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Ocala Armory in Ocala, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 22 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses Company A 3/20th Special Forces and Troop E, 153rd CAV. Between the two units there are eleven (11) full time employees. Total M-Day soldiers drilling at the facility is 190. The armory was built in 1998 and contains 22,911 square feet. The armory is a typical building of this era with an indoor firing range that was converted to a supply room (see #23 in photograph section). Refer to building layout in Appendix F.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Non-Responsive

Lead Wipe Samples: Twenty-two wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-000A	FIELD BLANK	UNDETECTED
04-010A	SOUTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-020A	EAST SIDE OF DRILL FLOOR	UNDETECTED
04-030A	NORTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-040A	CENTER OF DRILL FLOOR	UNDETECTED
04-050A	SOUTH CENTER OF DRILL FLOOR	UNDETECTED
04-060A	NORTH CENTER OF DRILL FLOOR	UNDETECTED
04-070A	WEST SIDE OF DRILL FLOOR	UNDETECTED
04-080A	NORTHWEST CORNER OF DRILL FLOOR	UNDETECTED
04-090A	KITCHEN, TOP OF COOLER	29.4
04-100A	KITCHEN, TOP OF ICE MAKER	UNDETECTED
04-110A	IRF WEST SIDE BEHIND FIRING LINE	306
04-120A	IFR EAST SIDE BEHIND FIRING LINE	6.35
04-130A	IFR NORTH END MIDDLE OF FLOOR	467
04-140A	IFR SOUTH END MIDDLE OF FLOOR	928
04-150A	IFR WEST SIDE	2210
04-160A	IFR EAST SIDE	1140
04-170A	IFR EAST SIDE IN FRONT OF BULLET TRAP	2170
04-180A	IFR WEST SIDE IN FRONT OF BULLET TRAP	108
04-190A	IFR SOUTH WALL BY TRAP	31.7
04-200A	ARMS VAULT, MIDDLE OF FLOOR	UNDETECTED
04-210A	ARMS VAULT, OUTSIDE OF DOOR	28.5
04-220A	ARMS VAULT, INSIDE DOOR	21.5

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range (supply room) should be properly cleaned and decontaminated in accordance with NG PAM 385-18. Wipe samples should be taken after the cleaning and decontamination process to ensure levels are well below the standard of 200 micrograms per square foot.

Asbestos Suspect Building Material There were no signs of asbestos in the Ocala Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Ocala armory ranged from 5 foot-candles to 92 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	10 to 33
Indoor Firing Range (Supply)	6 to 25
Office Areas	7 to 81
Classrooms	19 to 92
Mechanical Rooms	5 to 28
Kitchen	13 to 61

There are several areas within the Ocala Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination.

Noise Survey The Ocala Armory is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBA. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Ocala Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise ritual to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Properly clean the contaminated surfaces of the converted indoor firing range by wet wiping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Obtain wipe samples after cleaning to ensure lead level standards have been met.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels where recommended and as depicted on the illumination survey diagram.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. Non-Responsive Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

LABORATORY
CHAIN OF CUSTODY

Client	HINCHCO			Client Project	Florida Army National Guard		
Address	2202 KATY HAWK CT.			Project Location	ARMORY 3		
City/State/Zip Code	SPRINGFIELD, IL 62707			Sample(s) / Phone No.	1 219-787-2077		
Phone / Facsimile No.	219 787 2077			Turnaround Time	Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Date Required:		
Contact Person	Sams as above			P.O. # of Invoice To	HINCHCO		
Sample Description (10 Characters Only)	Sampling Date	Time	Container Size	Type / No.	Analysis and / or Method Requested	Laboratory Comments	
04-00/0A	32 March	0836		1	Lead (Blank)		
04-01/0A	32 March	0840		1	Lead		
04-02/0A		0841		1			
04-03/0A		0843		1			
04-04/0A		0845		1			
04-05/0A		0847		1			
04-06/0A		0848		1			
04-07/0A		0850		1			
04-08/0A		0852		1			
04-09/0A		0854		1			
04-10/0A		0856		1			
04-11/0A		0859		1			
¹ Size of Container	40 mL		125 mL		250 mL	500 mL	1000 mL
² Type of Container	G - Glass (Clear)		AG - Glass (Ambar)		P - HDPE	VC - Volatile Core	SC - Soil Core
³ M = Matrix Code	A - Aqueous		BW - Drinking Water		NA - Non-aqueous liquid	SE - Saline Water	S - Solids
⁴ P = Preservative Code	A - None		B - HNO ₃		C - H ₂ SO ₄	D - NaOH	E - FQ
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment	
Special Instructions:	All samples taken with a 12" x 12" template unless otherwise noted Samples 04-00/0A thru 04-22/0A From OSCALA ARMY						

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Client		HINCAGO		Client Project		Florida Army National Guard	
Address		2702 Kitty Hawk Ct		Project Location		Ocala Army Airfield FL	
City, State, Zip Code		Springfield, IL 62767		Sampler(s) / Phone No.		1217-787-2079	
Phone / Facsimile No.		217-787-2079		Turnaround Time		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Date Required:	
Contact Person		gbc:vc		PO # or Invoice To		HINCAGO	
Sample Description (10 Characters Only)		Sampling		Container		Analysis and/or Method Requested	
		Date	Time	Size	Type / No.	Code	Laboratory Comments
04-12/0A	22 MAR 0905				1	1	Lead
04-13	0908				1	1	
04-14	0910				1	1	
04-15	0911				1	1	
04-16	0914				1	1	
04-17	0915				1	1	
04-18	0916				1	1	
04-19	0920				1	1	
04-20	0940				1	1	
04-21	0942				1	1	
04-22	0943				1	1	
1 Size of Container		40 mL		125 mL		250 mL	500 mL
2 Type of Container		G - Glass (Clean)		AG - Glass (Amber)		P - HDPE	VC - Volatile Core
3 M = Matrix Code		A - Aqueous		DW - Drinking Water		NA - Non-aqueous Liquid	SE - Saline Water
4 P = Preservative Code		A - None		B - HNO ₃		C - H ₂ SO ₄	D - NaOH
Relinquished By		Date	Time	Received By		Date	Time
Special Instructions:		all samples taken with 18" x 12" template					
		Temperature (°C)					

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-001 Collection Date: 3/22/2004 8:36:00 AM
 Client Sample ID: 04-00/0A (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	3/30/2004 2:02:00 AM

Lab ID: 0403154-002 Collection Date: 3/22/2004 8:40:00 AM
 Client Sample ID: 04-01/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	3/30/2004 2:09:00 AM

Lab ID: 0403154-003 Collection Date: 3/22/2004 8:41:00 AM
 Client Sample ID: 04-02/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	3/30/2004 2:17:00 AM

Lab ID: 0403154-004 Collection Date: 3/22/2004 8:43:00 AM
 Client Sample ID: 04-03/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	3/30/2004 2:24:00 AM

Lab ID: 0403154-005 Collection Date: 3/22/2004 8:45:00 AM
 Client Sample ID: 04-04/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	7.50		µg/ft²	10	3/30/2004 2:31:00 AM

Lab ID: 0403154-006 Collection Date: 3/22/2004 8:47:00 AM
 Client Sample ID: 04-05/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	3/30/2004 2:39:00 AM

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-007 Collection Date: 3/22/2004 8:48:00 AM
 Client Sample ID: 04-06/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	U	N7082 5.00	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 2:46:00 AM

Lab ID: 0403154-008 Collection Date: 3/22/2004 8:50:00 AM
 Client Sample ID: 04-07/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	U	N7082 5.00	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 2:54:00 AM

Lab ID: 0403154-009 Collection Date: 3/22/2004 8:52:00 AM
 Client Sample ID: 04-08/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	U	N7082 5.00	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 3:23:00 AM

Lab ID: 0403154-010 Collection Date: 3/22/2004 8:54:00 AM
 Client Sample ID: 04-09/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	29.4	N7082 5.00	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 3:30:00 AM

Lab ID: 0403154-011 Collection Date: 3/22/2004 8:56:00 AM
 Client Sample ID: 04-10/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	U	N7082 7.50	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 3:37:00 AM

Lab ID: 0403154-012 Collection Date: 3/22/2004 8:59:00 AM
 Client Sample ID: 04-11/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	306	N7082 7.50	(N7082)	µg/ft²	10	Analyst: MCL 3/30/2004 3:45:00 AM

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-013 Collection Date: 3/22/2004 9:05:00 AM
 Client Sample ID: 04-12/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	6.35	N7082 5.00		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:52:00 AM

Lab ID: 0403154-014 Collection Date: 3/22/2004 9:08:00 AM
 Client Sample ID: 04-13 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	467	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:59:00 AM

Lab ID: 0403154-015 Collection Date: 3/22/2004 9:10:00 AM
 Client Sample ID: 04-14 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	928	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 4:07:00 AM

Lab ID: 0403154-016 Collection Date: 3/22/2004 9:11:00 AM
 Client Sample ID: 04-15 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	2210	N7082 75.0		(N7082) µg/ft²	100	Analyst: MCL 3/30/2004 7:13:00 AM

Lab ID: 0403154-017 Collection Date: 3/22/2004 9:14:00 AM
 Client Sample ID: 04-16 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	1140	N7082 7.50		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 4:22:00 AM

Lab ID: 0403154-018 Collection Date: 3/22/2004 9:15:00 AM
 Client Sample ID: 04-17 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS						
Lead	2170	N7082 75.0		(N7082) µg/ft²	100	Analyst: MCL 3/30/2004 7:20:00 AM

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-019

Collection Date: 3/22/2004 9:16:00 AM

Client Sample ID: 04-18

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

N7082

(N7082)

Analyst: MCL

Lead

108

5.00

µg/ft²

10

3/30/2004 6:58:00 AM

Lab ID: 0403154-020

Collection Date: 3/22/2004 9:20:00 AM

Client Sample ID: 04-19

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

N7082

(N7082)

Analyst: MCL

Lead

31.7

7.50

µg/ft²

10

3/30/2004 7:05:00 AM

Lab ID: 0403154-021

Collection Date: 3/22/2004 9:40:00 AM

Client Sample ID: 04-20

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

N7082

(N7082)

Analyst: MCL

Lead

U

5.00

µg/ft²

10

3/30/2004 7:50:00 AM

Lab ID: 0403154-022

Collection Date: 3/22/2004 9:42:00 AM

Client Sample ID: 04-21

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

N7082

(N7082)

Analyst: MCL

Lead

28.5

5.00

µg/ft²

10

3/30/2004 8:19:00 AM

Lab ID: 0403154-023

Collection Date: 3/22/2004 9:43:00 AM

Client Sample ID: 04-22

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

N7082

(N7082)

Analyst: MCL

Lead

21.5

5.00

µg/ft²

10

3/30/2004 8:26:00 AM

Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

APPENDIX D
ILLUMINATION SURVEY DIAGRAM

VACUATION ROUTES

EXTINGUISHERS

PRIMARY RESPONSE OPERATIONS CENTER

ALTERNATE ROS

ocala

TROOP E,
153d Cavalry
Supply Room

Co A, 3/20th SF
Supply Room

25

17

136
24

61 134 135
133 9 23
49 132

10 131 COR #3 32 9

10 127 24 130
126 12 128 25
23 11 129 23

124 27 20 125 14

14 110 112 25 114 115

49 111 113

DRILL FLOOR
33

123

35

74'6"

COR #2 109

49 108 107 106 28 105 104 103 102

5 122
20' 19
120
65 92
20' 75
119 64
73
44 117 118
30

16 14 11
84' 23

OCALA ARMORY
ILLUMINATION SURVEY
Foot-candles
22 MAR 04

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Deale National Guard Armory

2. Area or rooms where you spend the most time in the building:

Office, Drill Hall, Copy Rm, & Classroom

3. Does any of your work activities produce dust or odor?
Describe:

YES

NO

4. Gender: Male Female

Age: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

Y

N

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

Y

N

Have other allergies

Y

N

Wear contact lenses

Y

N

Operate video display terminals (computers)

Y

N

Operate photocopiers 10% of the time

Y

N

Use other office machines

Y

N

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

1 Number of persons sharing same room/work area

2 Number of windows in room/work area

Do windows open?

Y

N/A

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

6 mths In this room/area

8 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Painting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Co A. 3/20TH SFG(A) 900-2 S.W. 20TH ST.
Ocala, FL 34474
2. Area or rooms where you spend the most time in the building:
RM # 112

3. Does any of your work activities produce dust or odor? YES ☒ NO
 Describe: _____

4. Gender: Male Female
 Age: Under 25 25-34 ☒ 35-44 45-54 55 and over

5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | Y | <input checked="" type="radio"/> N |
| Have skin allergies/dermatitis | Y | <input checked="" type="radio"/> N |
| Have a cold/flu | Y | <input checked="" type="radio"/> N |
| Have sinus problems | Y | <input checked="" type="radio"/> N |
| Have other allergies | Y | <input checked="" type="radio"/> N |
| Wear contact lenses | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | N |

Specify: _____

Currently take any medications? Y ☒ N
 Reason: _____

6. Office Characteristics:
- ☒ Number of persons sharing same room/work area
☒ Number of windows in room/work area
 Do windows open? Y N

Rate adequacy of work space per person:

Poor Average Excellent
 1 2 ☒ 3 4 5

Rate room temperature:

Poor Average Excellent
 1 2 ☒ 3 4 5

Are there smokers in your area? Y ☒ N

7. How long have you worked:
 In this room/area SINCE NOV. 04
 In this building SINCE NOV. 04

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):	O	F	N/A	SW	PW

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?
DIDNT REALIZE WE HAD AIR QUALITY PROBLEMS

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Florida Army National Guard Arsenal
900-1 SW 20th STREET Ocala FL 34474-3517
2. Area or rooms where you spend the most time in the building:
#106-107-108-117-118, Supply Room

3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO
 Describe: Dust Coming out of Air Ducts.

4. Gender: ☒ Male ☐ Female
 Age: Under 25 ☒ 25-34 35-44 45-54 55 and over

5. Do you:

Smoke	Y	<input checked="" type="radio"/> N
Have fever/pollen allergies	Y	<input checked="" type="radio"/> N
Have skin allergies/dermatitis	Y	<input checked="" type="radio"/> N
Have a cold/flu	Y	<input checked="" type="radio"/> N
Have sinus problems	Y	<input checked="" type="radio"/> N
Have other allergies	Y	<input checked="" type="radio"/> N
Wear contact lenses	Y	<input checked="" type="radio"/> N
Operate video display terminals (computers)	<input checked="" type="radio"/> Y	N
Operate photocopiers 10% of the time	<input checked="" type="radio"/> Y	N
Use other office machines	<input checked="" type="radio"/> Y	N

Specify:

Currently take any medications? Y ☒ N
 Reason: _____

6. Office Characteristics:

☒ Number of persons sharing same room/work area

☒ Number of windows in room/work area

Do windows open? ☒ Y ☐ N

Rate adequacy of work space per person:

Poor		Average		Excellent
1	2	<input checked="" type="radio"/> 3	4	5

Rate room temperature:

Poor		Average		Excellent
1	2	<input checked="" type="radio"/> 3	4	5

Are there smokers in your area? ☒ Y ☐ N

7. How long have you worked:

241 In this room/area

241 In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

DUST coming out of Air vents, Paint Build up

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F
ARMORY FLOOR PLAN AND PHOTOGRAPHS

VACUATION ROUTES

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EXTINGUISHERS

PRIMARY RESPONSE OPERATIONS CENTER

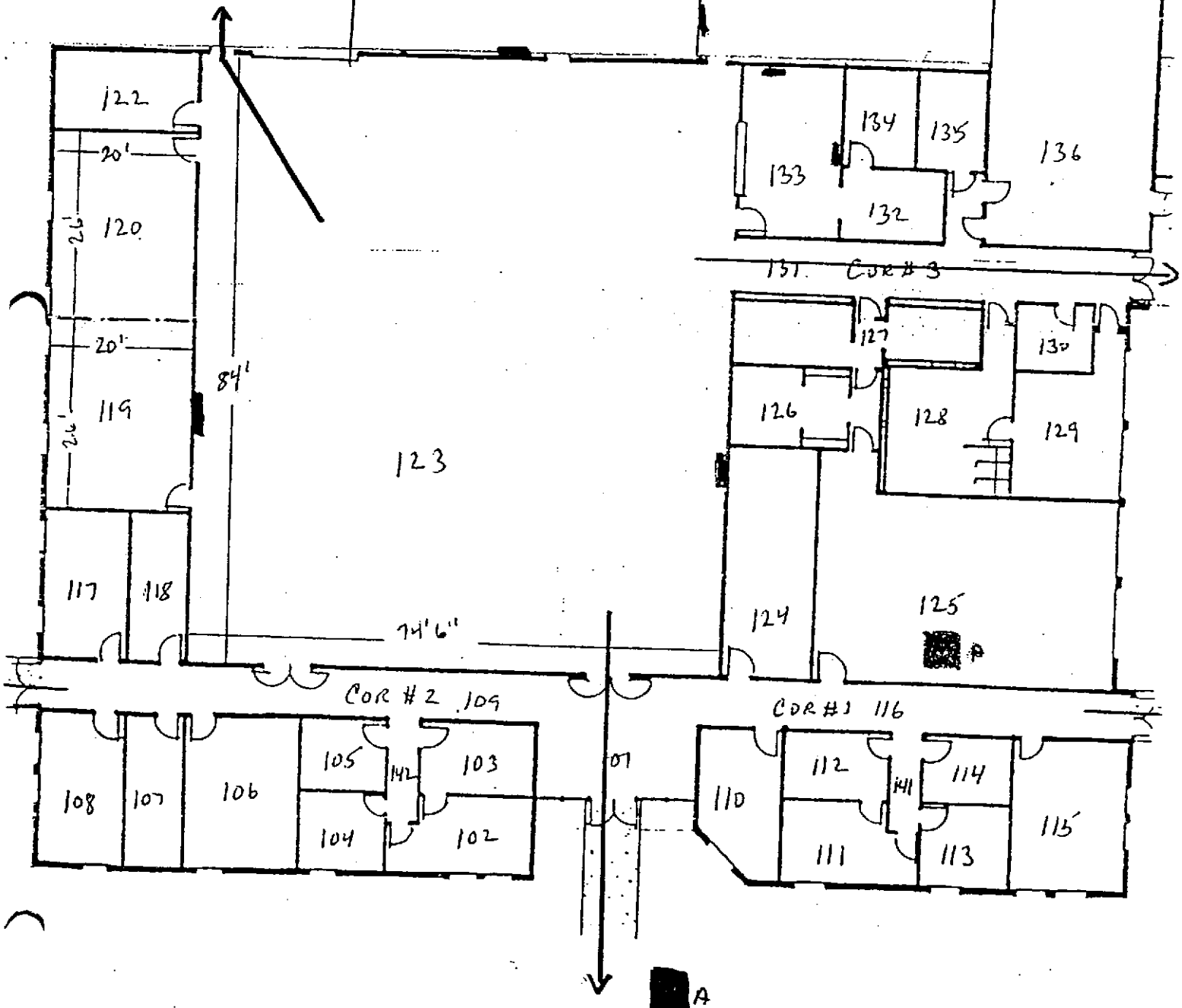
ALTERNATE ROS

Const/ACQ 4/3/85
SF - 22911

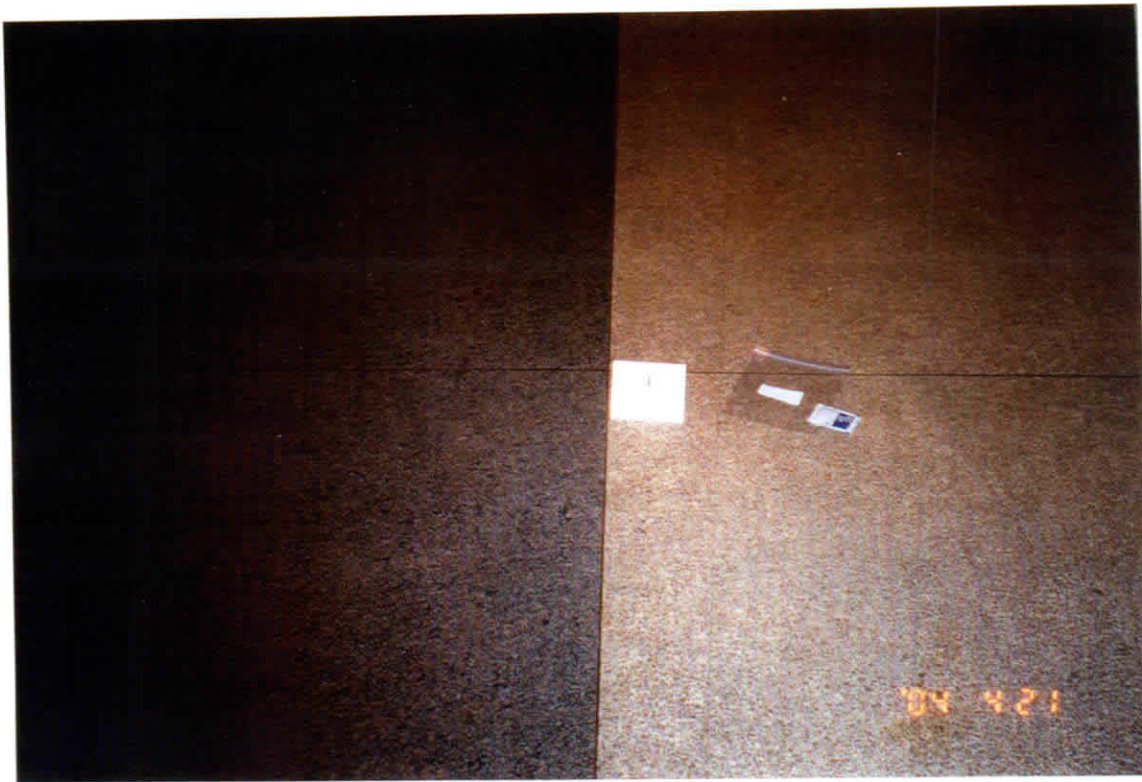
ocala

TROOP E,
153d Cavalry
Supply Room

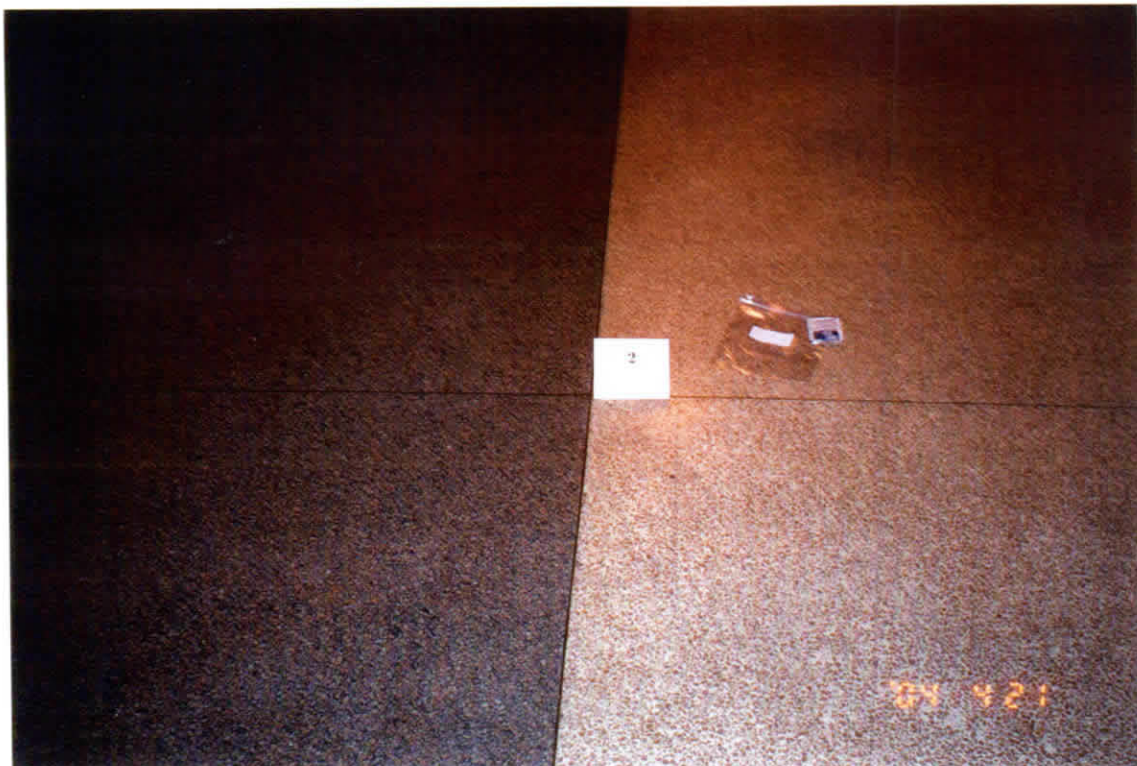
Co A, 3/20th SF
Supply Room



ARMORY PHOTOGRAPHS

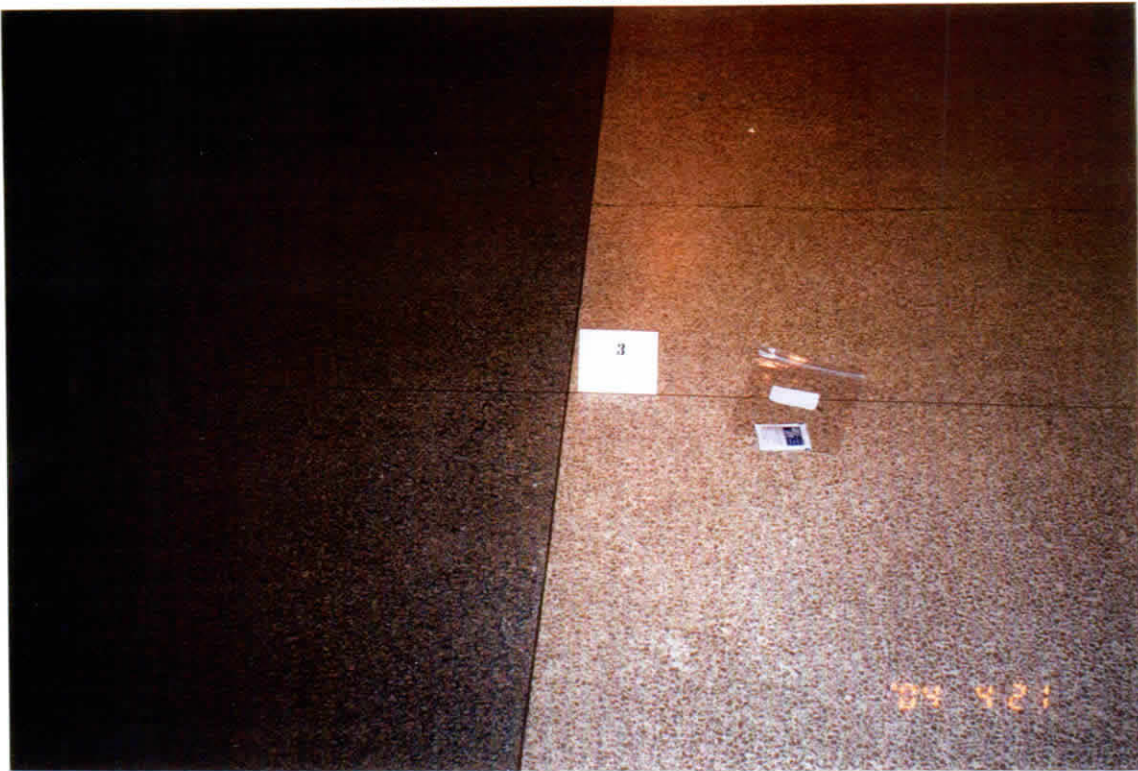


Sample #1 Southeast Corner of Drill Floor



Sample #2 East Side of Drill Floor

ARMORY PHOTOGRAPHS



Sample #3 Northeast Corner of Drill Floor



Sample # 4 Center of Drill Floor

ARMORY PHOTOGRAPHS



Sample #5 South Center of Drill Floor



Sample # 6 North Center of Drill Floor

ARMORY PHOTOGRAPHS



Sample #7 West Side of Drill Floor



Sample # 8 Northwest Corner of Drill Floor

ARMORY PHOTOGRAPHS



Sample #9 Kitchen Top of Cooler



Sample # 10 Kitchen Top of Ice Maker

ARMORY PHOTOGRAPHS



Sample #11 Indoor Firing Range West Side Behind Firing Line



Sample # 12 Indoor Firing Range East Side Behind Firing Line

ARMORY PHOTOGRAPHS



Sample #13 Indoor Firing Range North End Middle Floor Area

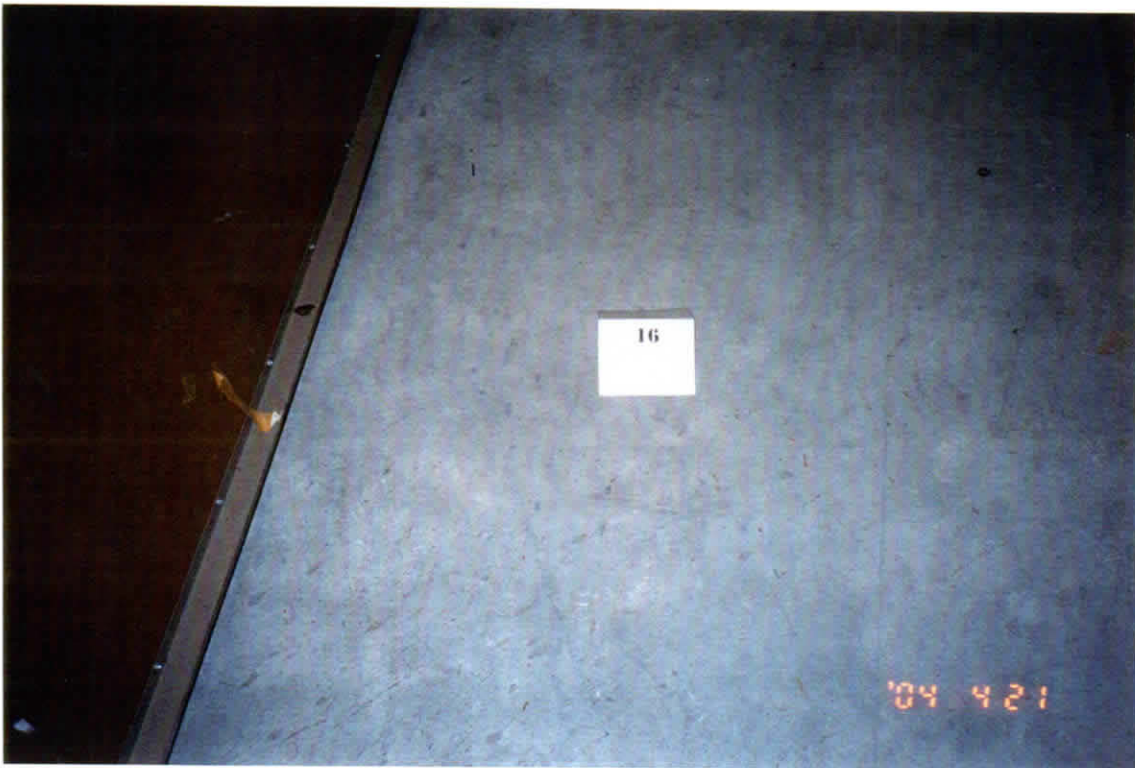


Sample # 14 Indoor Firing Range South End Middle Floor Area

ARMORY PHOTOGRAPHS



Sample #15 Indoor Firing Range West Side



Sample # 16 Indoor Firing Range East Side

ARMORY PHOTOGRAPHS

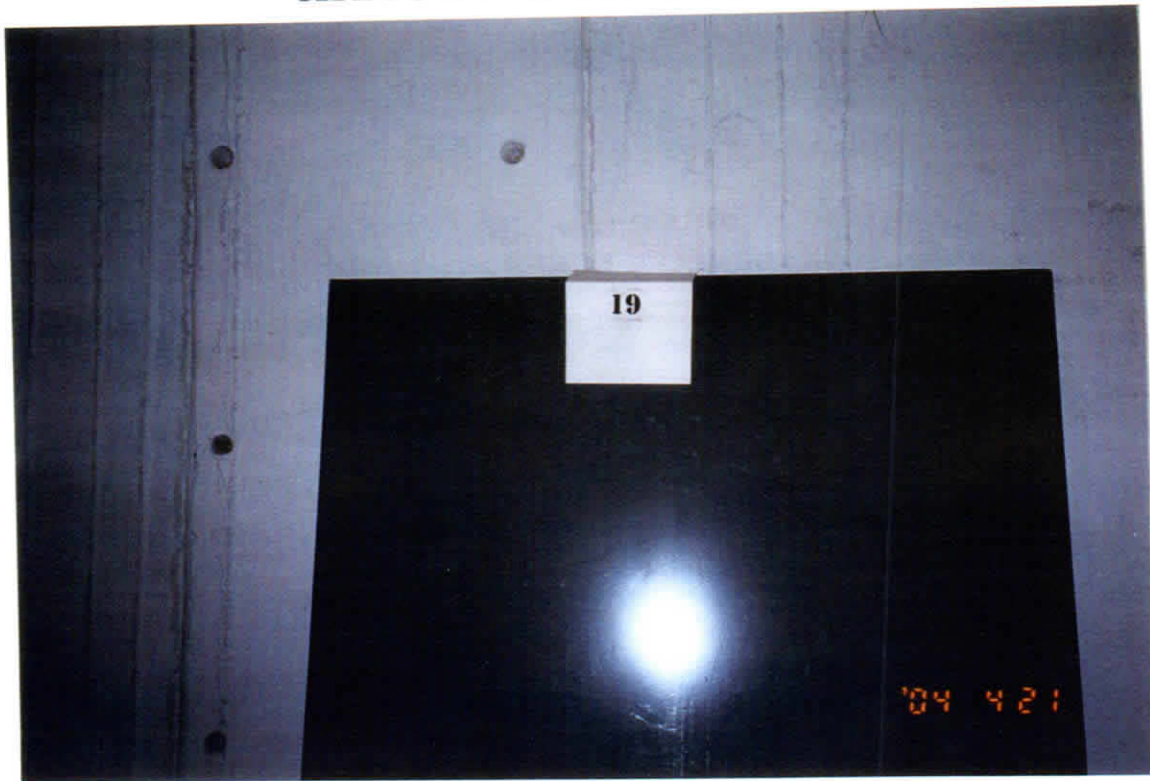


Sample #17 Indoor Firing Range East Side in Front of Bullet Trap



Sample # 18 Indoor Firing Range West Side in Front of Bullet Trap

ARMORY PHOTOGRAPHS



Sample #19 Indoor Firing Range South (Back) Wall Behind Bullet Backstop



Sample # 20 Middle of Floor in Arms Vault

ARMORY PHOTOGRAPHS



Sample #21 Floor Just Outside of Arms Vault



Sample # 22 Floor Inside Arms Vault by Door

ARMORY PHOTOGRAPHS



Sample #23 Indoor Firing Range Converted to Supply Room



Sample # 24 Ocala Units Occupying Armory

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APPENDIX F

ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET****NAME OF ARMORY:** Ocala Armory**LOCATION:** 900 SW 20TH STREET, Ocala, FL 34474**YEAR BUILT:** 1985**SQUARE FOOTAGE:** 22,911**FULL TIME PERS:** 11**M-DAY:** 190**UNIT(S) DRILLING AT THIS ARMORY:**
CO A 3/20TH SPECIAL FORCES & TROOP E 153RD CAV**ARMORY UTILIZED BY CIVILIANS:** YES NO**WHAT FUNCTIONS:** VOTER PRECINCT, TAX SALES, VARIOUS
OTHER - APPROXIMATELY 15 TIMES/YEAR**NOISE HAZARDOUS AREAS IN THE ARMORY?** YES NO**POORLY ILLUMINATED AREAS IN THE ARMORY?** YES NO**STANDING WATER OR LEAKAGE IN THE ARMORY?** YES NO**KNOWN MOLD/MILDEW IN THE ARMORY?** YES NO**INDOOR FIRING RANGE IN ARMORY?** YES NO(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1989, CLEANED AND CONVERTED TO
A SUPPLY ROOM**NUMBER OF VAULTS IN ARMORY:** TWO**AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?**
WEAPONS ARE CLEANED OUTSIDE OF THE ARMORY

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 23, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
Readiness NCO, 900 SW 20th Street, Ocala, Florida 34474.

SUBJECT: Industrial Hygiene Survey of the Ocala National Guard Armory, Ocala, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Ocala Armory, George Hinchliffe.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.
- b. Mr. [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

a. Discontinue use of Indoor Firing Range (IFR) until the IFR has been properly cleaned of Lead and retested by the Florida State Safety and Occupational Health Office.

b. Clean converted Indoor Firing Range (Supply/Storage room) of lead following NG PAM's 385-15 and 385-16. Keep in mind that EPA and your state may have lead reduction levels lower than the levels recommended in the 385-15 and 385-16.

c. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.

d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

e. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

FLORIDA ARMY NATIONAL GUARD



**OCALA ARMORY
900 SW 20th STREET
OCALA, FLORIDA 34474**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Ocala Armory
900 SW 20th Street
Ocala, FL 34474

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Methodology

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Ergonomics.....Page 5
Personal Protection Equipment.....Page 5
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B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Ocala Armory on 22 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 2210 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	5 to 92 footcandles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Ocala Armory in Ocala, Florida on 22 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Ocala Armory in Ocala, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 22 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses Company A 3/20th Special Forces and Troop E, 153rd CAV. Between the two units there are eleven (11) full time employees. Total M-Day soldiers drilling at the facility is 190. The armory was built in 1998 and contains 22,911 square feet. The armory is a typical building of this era with an indoor firing range that was converted to a supply room (see #23 in photograph section). Refer to building layout in Appendix F.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Extech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Mark Moine.

Lead Wipe Samples: Twenty-two wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-000A	FIELD BLANK	UNDETECTED
04-010A	SOUTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-020A	EAST SIDE OF DRILL FLOOR	UNDETECTED
04-030A	NORTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-040A	CENTER OF DRILL FLOOR	UNDETECTED
04-050A	SOUTH CENTER OF DRILL FLOOR	UNDETECTED
04-060A	NORTH CENTER OF DRILL FLOOR	UNDETECTED
04-070A	WEST SIDE OF DRILL FLOOR	UNDETECTED
04-080A	NORTHWEST CORNER OF DRILL FLOOR	UNDETECTED
04-090A	KITCHEN, TOP OF COOLER	29.4
04-100A	KITCHEN, TOP OF ICE MAKER	UNDETECTED
04-110A	IRF WEST SIDE BEHIND FIRING LINE	306
04-120A	IRF EAST SIDE BEHIND FIRING LINE	6.35
04-130A	IRF NORTH END MIDDLE OF FLOOR	467
04-140A	IRF SOUTH END MIDDLE OF FLOOR	928
04-150A	IRF WEST SIDE	2210
04-160A	IRF EAST SIDE	1140
04-170A	IRF EAST SIDE IN FRONT OF BULLET TRAP	2170
04-180A	IRF WEST SIDE IN FRONT OF BULLET TRAP	108
04-190A	IRF SOUTH WALL BY TRAP	31.7
04-200A	ARMS VAULT, MIDDLE OF FLOOR	UNDETECTED
04-210A	ARMS VAULT, OUTSIDE OF DOOR	28.5
04-220A	ARMS VAULT, INSIDE DOOR	21.5

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range (supply room) should be properly cleaned and decontaminated in accordance with NG PAM 385-18. Wipe samples should be taken after the cleaning and decontamination process to ensure levels are well below the standard of 200 micrograms per square foot.

Asbestos Suspect Building Material There were no signs of asbestos in the Ocala Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Ocala armory ranged from 5 foot-candles to 92 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	10 to 33
Indoor Firing Range (Supply)	6 to 25
Office Areas	7 to 81
Classrooms	19 to 92
Mechanical Rooms	5 to 28
Kitchen	13 to 61

There are several areas within the Ocala Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination.

Noise Survey The Ocala Armory is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBA. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Ocala Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise ritual to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Properly clean the contaminated surfaces of the converted indoor firing range by wet wiping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Obtain wipe samples after cleaning to ensure lead level standards have been met.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels where recommended and as depicted on the illumination survey diagram.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

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

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

Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990

Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000

National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996

NGR 385-10, Army National Guard Safety Program, 20 December 1989

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

Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities

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, November 1997

Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

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APPENDIX B

LABORATORY
CHAIN OF CUSTODY

Chai, Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-6490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



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Client	Client Project	Project Location	Sample(s) / Phone No.	Turnaround Time	P.O. # or Invoice To	Analysis and / or Method Requested	Laboratory Comments
Client: Non-Resp Address: Non-Resp City, State Zip Code: Non-Resp Phone / Facsimile No.: Non-Resp Contact Person: Non-Resp	Florida Army National Guard	Alamogordo	1 219-787-2097	Date Required:	HINCHCO		
Sample Description (10 Characters Only)	Container	Size	Type / No.	Code	Analysis and / or Method Requested	Laboratory Comments	
04-00/0A	33 Mar 0836	125 mL	1	1	Lead (Blank)		
04-01/0A	23 Mar 0840	125 mL	1	1	Lead		
04-03/0A	0841	125 mL	1	1			
04-03/0A	0843	125 mL	1	1			
04-04/0A	0845	125 mL	1	1			
04-05/0A	0847	125 mL	1	1			
04-06/0A	0848	125 mL	1	1			
04-07/0A	0850	125 mL	1	1			
04-08/0A	0852	125 mL	1	1			
04-09/0A	0854	125 mL	1	1			
04-10/0A	0856	125 mL	1	1			
04-11/0A	0859	125 mL	1	1			
1 Size of Container	40 mL	125 mL	250 mL	500 mL	1000 mL	O - Other (Specify)	
2 Type of Container	G - Glass (Clear)	AG - Glass (Amber)	P - HDPE	VC - Volatile Core	SC - Soil Core	O - Other (Specify)	
3 M = Matrix Code	A - Aqueous	BW - Drinking Water	NA - Non-aqueous Liquid	SE - Saline Water	S - Solids	O - Other (Specify)	
4 P = Preservative Code	A - None	B - HNO ₃	C - H ₂ SO ₄	D - NaOH	E - HCl	O - Other (Specify)	
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment	
Special Instructions:	all samples taken with a 10" x 10" template unless otherwise noted						
Samples 04-00/0A thru 04-22/0A From 65ALA ARMDRY							

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FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 800 of 1021

Copies: White - Client Yellow - PAS, Inc. Pink - Sampler

Page 1 of 2

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



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Client		Client Project		Analysis and/or Method Requested		Laboratory Comments	
Address		Project Location		Analysis and/or Method Requested		Laboratory Comments	
City, State, Zip Code		Sample(s) / Phone No.		Analysis and/or Method Requested		Laboratory Comments	
Phone / Facsimile No.		Turnaround Time		Analysis and/or Method Requested		Laboratory Comments	
Contact Person		P.O. # or Invoice To		Analysis and/or Method Requested		Laboratory Comments	
Sample Description (10 Characters Only)		Container		Analysis and/or Method Requested		Laboratory Comments	
		Size		Analysis and/or Method Requested		Laboratory Comments	
		Type / No.		Analysis and/or Method Requested		Laboratory Comments	
04-12/OA	22006 Kitty Hawk Ct	125 mL	1	250 mL	Lead	500 mL	
04-13	Springfield IL 62707	125 mL	1	250 mL		500 mL	
04-14	217-787-8490	125 mL	1	250 mL		500 mL	
04-15		125 mL	1	250 mL		500 mL	
04-16		125 mL	1	250 mL		500 mL	
04-17		125 mL	1	250 mL		500 mL	
04-18		125 mL	1	250 mL		500 mL	
04-19		125 mL	1	250 mL		500 mL	
04-20		125 mL	1	250 mL		500 mL	
04-21		125 mL	1	250 mL		500 mL	
04-22		125 mL	1	250 mL		500 mL	
1 Size of Container		40 mL		125 mL		500 mL	
2 Type of Container		G - Glass (Clear)		AG - Glass (Amber)		VC - Volatile Core	
3 M = Matrix Code		A - Aqueous		DW - Drinking Water		SE - Saline Water	
4 P = Preservative Code		A - None		B - HNO ₃		D - NaOH	
Relinquished By		Date	Time	Received By	Date	Time	Method of Shipment
Special Instructions:		all samples taken with 10" x 12" template					
Temperature (°C)							

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-001 Collection Date: 3/22/2004 8:36:00 AM

Client Sample ID: 04-00/0A (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		µg/ft²	10	3/30/2004 2:02:00 AM
------	---	------	--	--------	----	----------------------

Lab ID: 0403154-002 Collection Date: 3/22/2004 8:40:00 AM

Client Sample ID: 04-01/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		µg/ft²	10	3/30/2004 2:09:00 AM
------	---	------	--	--------	----	----------------------

Lab ID: 0403154-003 Collection Date: 3/22/2004 8:41:00 AM

Client Sample ID: 04-02/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		µg/ft²	10	3/30/2004 2:17:00 AM
------	---	------	--	--------	----	----------------------

Lab ID: 0403154-004 Collection Date: 3/22/2004 8:43:00 AM

Client Sample ID: 04-03/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		µg/ft²	10	3/30/2004 2:24:00 AM
------	---	------	--	--------	----	----------------------

Lab ID: 0403154-005 Collection Date: 3/22/2004 8:45:00 AM

Client Sample ID: 04-04/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	7.50		µg/ft²	10	3/30/2004 2:31:00 AM
------	---	------	--	--------	----	----------------------

Lab ID: 0403154-006 Collection Date: 3/22/2004 8:47:00 AM

Client Sample ID: 04-05/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		µg/ft²	10	3/30/2004 2:39:00 AM
------	---	------	--	--------	----	----------------------

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-007

Collection Date: 3/22/2004 8:48:00 AM

Client Sample ID: 04-06/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 2:46:00 AM

Lab ID: 0403154-008

Collection Date: 3/22/2004 8:50:00 AM

Client Sample ID: 04-07/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 2:54:00 AM

Lab ID: 0403154-009

Collection Date: 3/22/2004 8:52:00 AM

Client Sample ID: 04-08/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:23:00 AM

Lab ID: 0403154-010

Collection Date: 3/22/2004 8:54:00 AM

Client Sample ID: 04-09/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

29.4

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:30:00 AM

Lab ID: 0403154-011

Collection Date: 3/22/2004 8:56:00 AM

Client Sample ID: 04-10/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead

U

N7082

7.50

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:37:00 AM

Lab ID: 0403154-012

Collection Date: 3/22/2004 8:59:00 AM

Client Sample ID: 04-11/0A

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

306

N7082

7.50

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:45:00 AM

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Florida Army National Guard
 Lab Order: 0403154

Lab ID: 0403154-013 Collection Date: 3/22/2004 9:05:00 AM

Client Sample ID: 04-12/0A Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

6.35

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:52:00 AM

Lab ID: 0403154-014

Collection Date: 3/22/2004 9:08:00 AM

Client Sample ID: 04-13

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead

467

N7082

7.50

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 3:59:00 AM

Lab ID: 0403154-015

Collection Date: 3/22/2004 9:10:00 AM

Client Sample ID: 04-14

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

928

N7082

7.50

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 4:07:00 AM

Lab ID: 0403154-016

Collection Date: 3/22/2004 9:11:00 AM

Client Sample ID: 04-15

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

2210

N7082

75.0

(N7082)

µg/ft²

100

Analyst: MCL

3/30/2004 7:13:00 AM

Lab ID: 0403154-017

Collection Date: 3/22/2004 9:14:00 AM

Client Sample ID: 04-16

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS

Lead

1140

N7082

7.50

(N7082)

µg/ft²

10

Analyst: MCL

3/30/2004 4:22:00 AM

Lab ID: 0403154-018

Collection Date: 3/22/2004 9:15:00 AM

Client Sample ID: 04-17

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

2170

N7082

75.0

(N7082)

µg/ft²

100

Analyst: MCL

3/30/2004 7:20:00 AM

Prairie Analytical Systems, Inc.

Date: 02-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Florida Army National Guard

Lab Order: 0403154

Lab ID: 0403154-019 Collection Date: 3/22/2004 9:16:00 AM

Client Sample ID: 04-18 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	108	5.00		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 6:58:00 AM
------	-----	------	--	-------------------	----	--------------------------------------

Lab ID: 0403154-020 Collection Date: 3/22/2004 9:20:00 AM

Client Sample ID: 04-19 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	31.7	7.50		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 7:05:00 AM
------	------	------	--	-------------------	----	--------------------------------------

Lab ID: 0403154-021 Collection Date: 3/22/2004 9:40:00 AM

Client Sample ID: 04-20 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	U	5.00		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 7:50:00 AM
------	---	------	--	-------------------	----	--------------------------------------

Lab ID: 0403154-022 Collection Date: 3/22/2004 9:42:00 AM

Client Sample ID: 04-21 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	28.5	5.00		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 8:19:00 AM
------	------	------	--	-------------------	----	--------------------------------------

Lab ID: 0403154-023 Collection Date: 3/22/2004 9:43:00 AM

Client Sample ID: 04-22 Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead	21.5	5.00		(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 8:26:00 AM
------	------	------	--	-------------------	----	--------------------------------------

Prairie Analytical Systems, Inc.

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

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APPENDIX D

ILLUMINATION SURVEY DIAGRAM

VACUATION ROUTES

BEST AVAILABLE COPY

EXTINGUISHERS

PRIMARY RESPONSE OPERATIONS CENTER

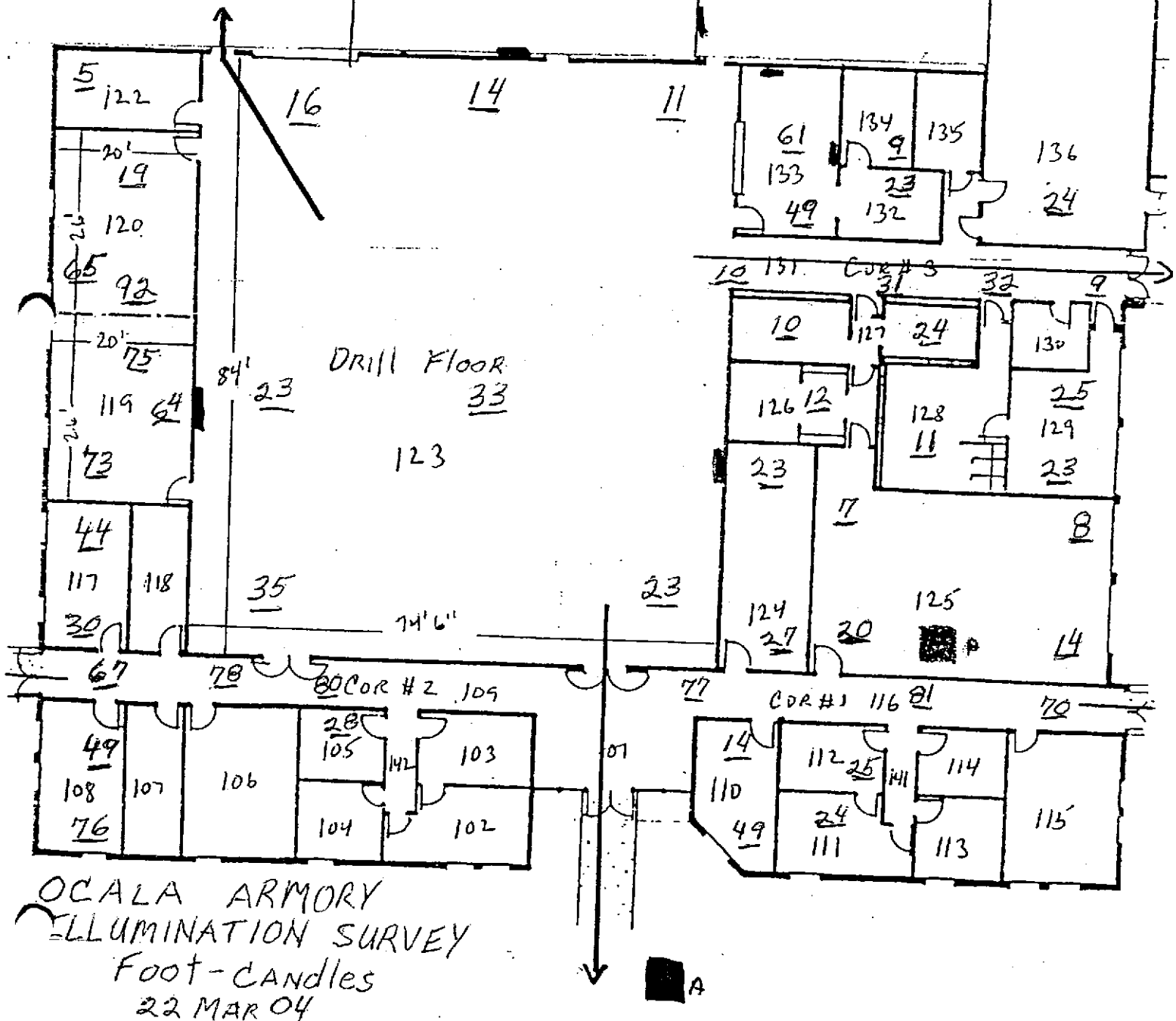
ALTERNATE ROS

ocala

TROOP E,
153d Cavalry
Supply Room

Co A, 3/20th SF
Supply Room

Const/ACQ 4/3/85
SF - 22911



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y

N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Co A. 3/20TH SFG(A) 900-2 S.W. 20TH ST.
OCALA, FL 34474

2. Area or rooms where you spend the most time in the building:
RM # 112

3. Does any of your work activities produce dust or odor? YES NO
 Describe:

4. Gender: Male Female
 Age: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke	Y	<u>N</u>
Have fever/pollen allergies	Y	<u>N</u>
Have skin allergies/dermatitis	Y	<u>N</u>
Have a cold/flu	Y	<u>N</u>
Have sinus problems	Y	<u>N</u>
Have other allergies	Y	<u>N</u>
Wear contact lenses	Y	<u>N</u>
Operate video display terminals (computers)	<u>Y</u>	<u>N</u>
Operate photocopiers 10% of the time	<u>Y</u>	<u>N</u>
Use other office machines	<u>Y</u>	<u>N</u>

Specify:

Currently take any medications? Y N
 Reason:

6. Office Characteristics:

0 Number of persons sharing same room/work area

0 Number of windows in room/work area

Do windows open? Y N

Rate adequacy of work space per person:

Poor	Average		Excellent	
1	2	<u>3</u>	4	5

Rate room temperature:

Poor	Average		Excellent	
1	2	<u>3</u>	4	5

Are there smokers in your area? Y N

7. How long have you worked:

 In this room/area SINCE NOV. 04
 In this building SINCE NOV. 04

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

DIDNT REALIZE WE HAD AIR QUALITY PROBLEMS

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Florida Army National Guard Armory
900-1 SW 20th STREET Ocala FL 34474-3517

2. Area or rooms where you spend the most time in the building:

#106-107-108-117-118, Supply Room

3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO

Describe:

Dust coming out of Air Ducts.

4. Gender: ☒ Male ☐ Female

Age: Under 25 ☒ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over

5. Do you:

Smoke	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have fever/pollen allergies	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have skin allergies/dermatitis	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have a cold/flu	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have sinus problems	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have other allergies	<input type="radio"/> Y	<input checked="" type="radio"/> N
Wear contact lenses	<input type="radio"/> Y	<input checked="" type="radio"/> N
Operate video display terminals (computers)	<input checked="" type="radio"/> Y	<input type="radio"/> N
Operate photocopiers 10% of the time	<input checked="" type="radio"/> Y	<input type="radio"/> N
Use other office machines	<input checked="" type="radio"/> Y	<input type="radio"/> N

Specify:

Currently take any medications?

☐ Y ☒ N

Reason:

6. Office Characteristics:

1 Number of persons sharing same room/work area

1 Number of windows in room/work area

Do windows open?

☒ Y ☐ N

Rate adequacy of work space per person:

Poor 1 2 3 Average 4 5 Excellent

Rate room temperature:

Poor 1 2 3 Average 4 5 Excellent

Are there smokers in your area?

☒ Y ☐ N

7. How long have you worked:

2yr In this room/area

2yr In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Aching joints	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Muscle twitching	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Back pain	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Hearing problems	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Dizziness	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Dry, flaking skin	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Discolored skin	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Skin irritation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Itching	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Heartburn	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Nausea	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Noticeable odors	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Sinus congestion	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Sneezing	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
High stress levels	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Chest tightness	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Eye irritation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Fainting	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Hyperventilation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Problems with contacts	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Headache	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Fatigue/drowsiness	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Temperature too hot	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Temperature too cold	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y

☒ N

N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y

N

When:

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

DUST coming out of air vents, Dust Buildup

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

VACUATION ROUTES

BEST AVAILABLE COPY

EXTINGUISHERS

PRIMARY RESPONSE OPERATIONS CENTER

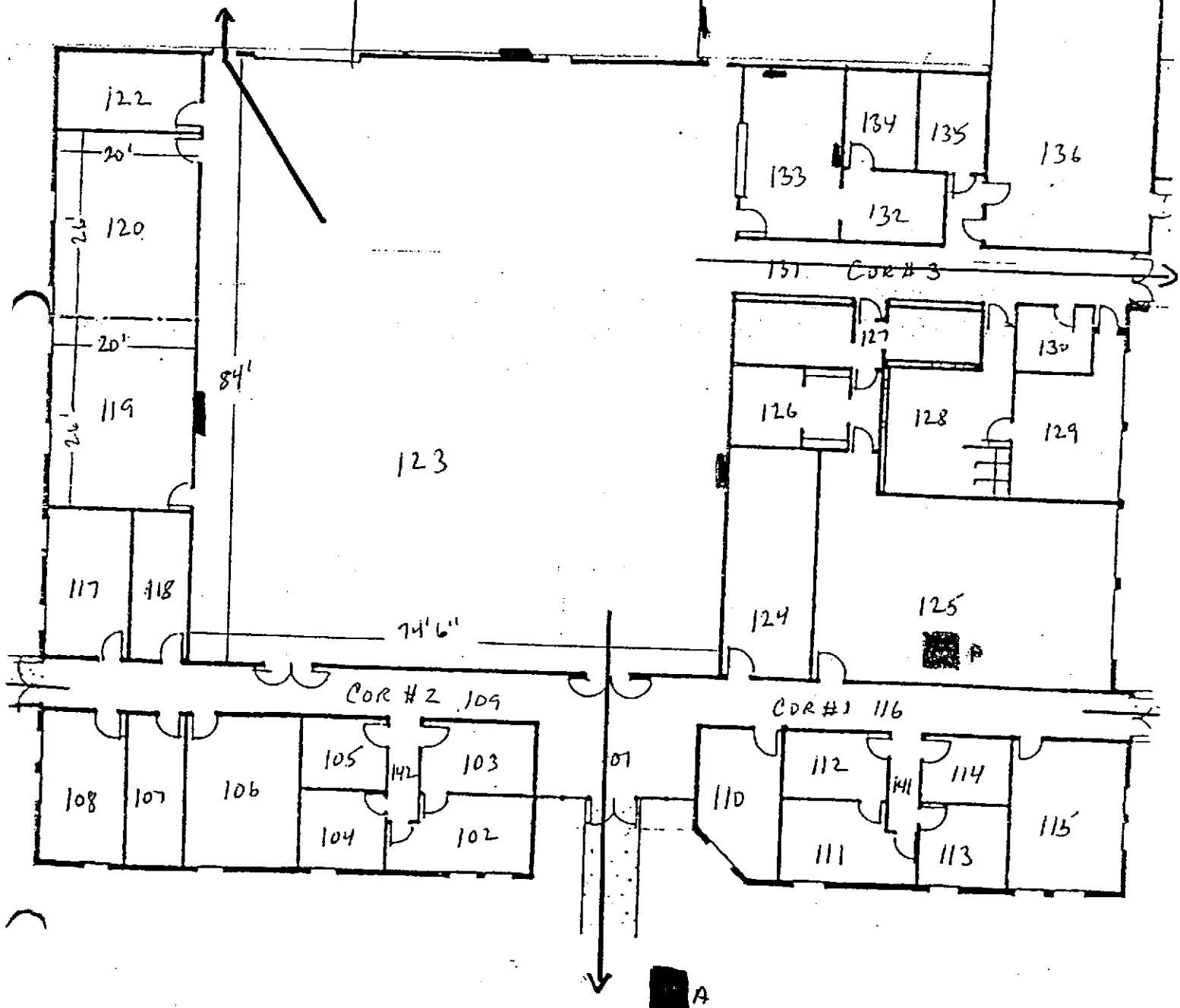
ALTERNATE ROS

Ocala

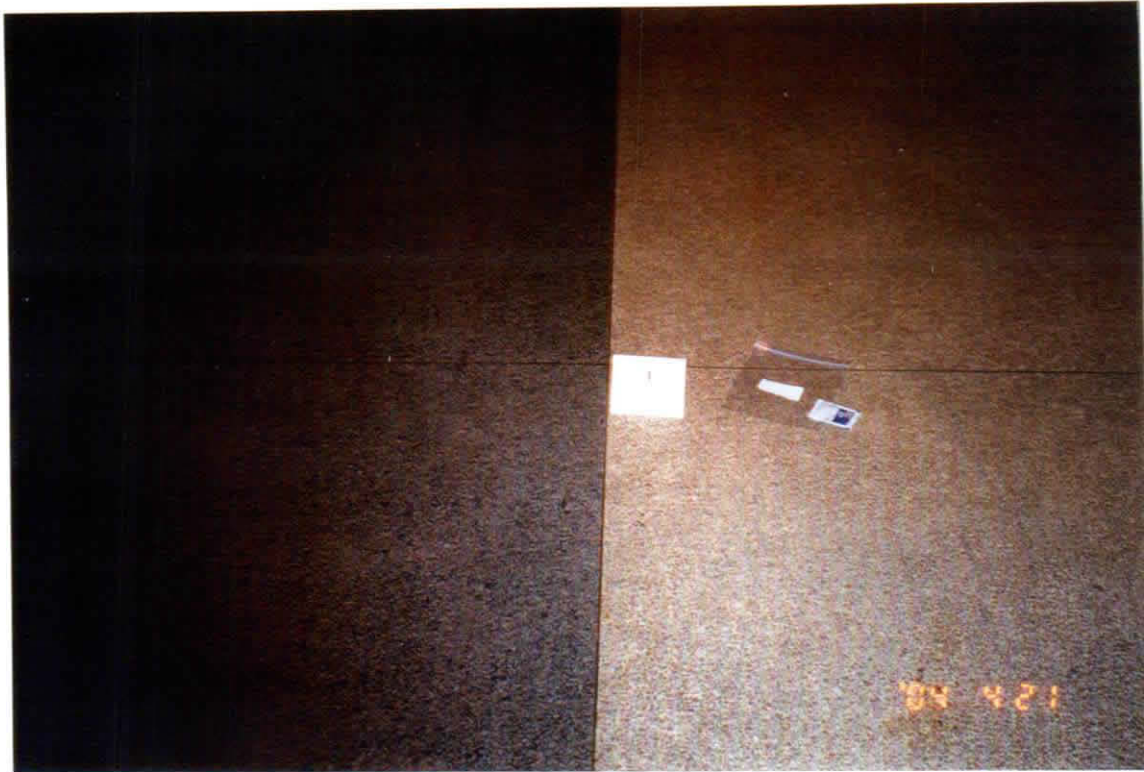
TROOP E,
153d Cavalry
Supply Room

Co A, 3/20th SF
Supply Room

Const/ACQ 4/3/85
SF - 22911



ARMORY PHOTOGRAPHS

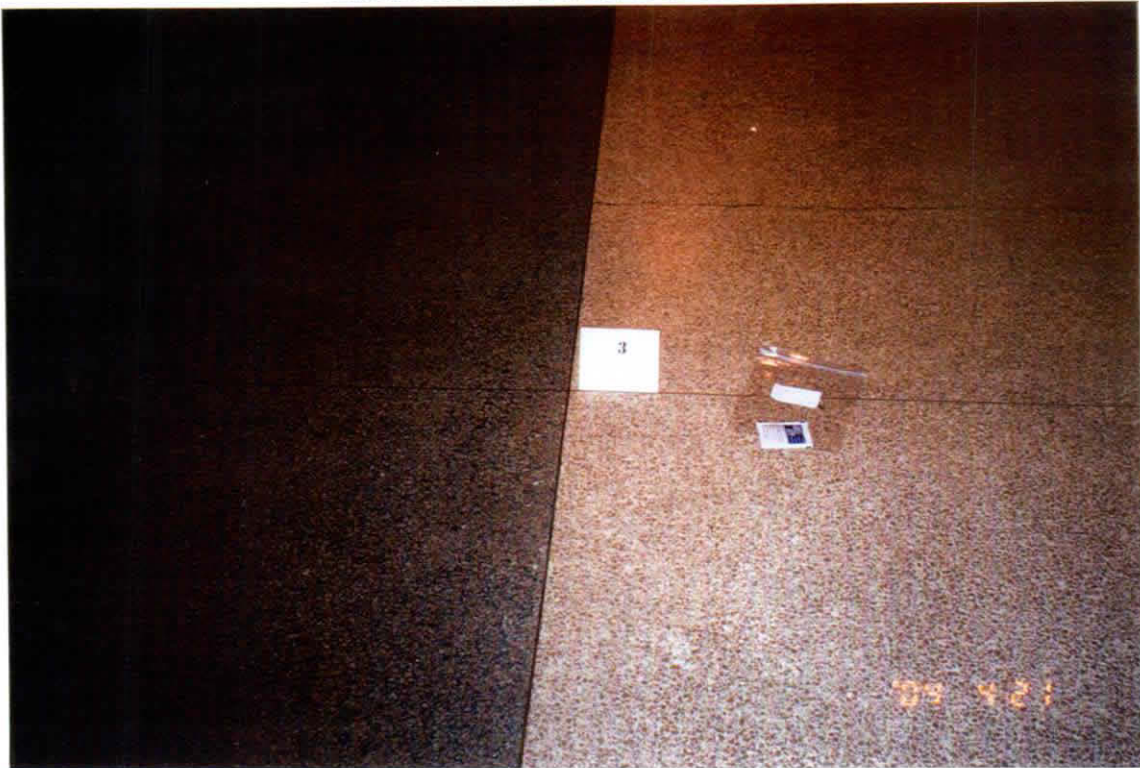


Sample #1 Southeast Corner of Drill Floor



Sample #2 East Side of Drill Floor

ARMORY PHOTOGRAPHS



Sample #3 Northeast Corner of Drill Floor



Sample # 4 Center of Drill Floor

ARMORY PHOTOGRAPHS



Sample #5 South Center of Drill Floor



Sample # 6 North Center of Drill Floor

ARMORY PHOTOGRAPHS



Sample #7 West Side of Drill Floor



Sample # 8 Northwest Corner of Drill Floor

ARMORY PHOTOGRAPHS



Sample #9 Kitchen Top of Cooler



Sample # 10 Kitchen Top of Ice Maker

ARMORY PHOTOGRAPHS

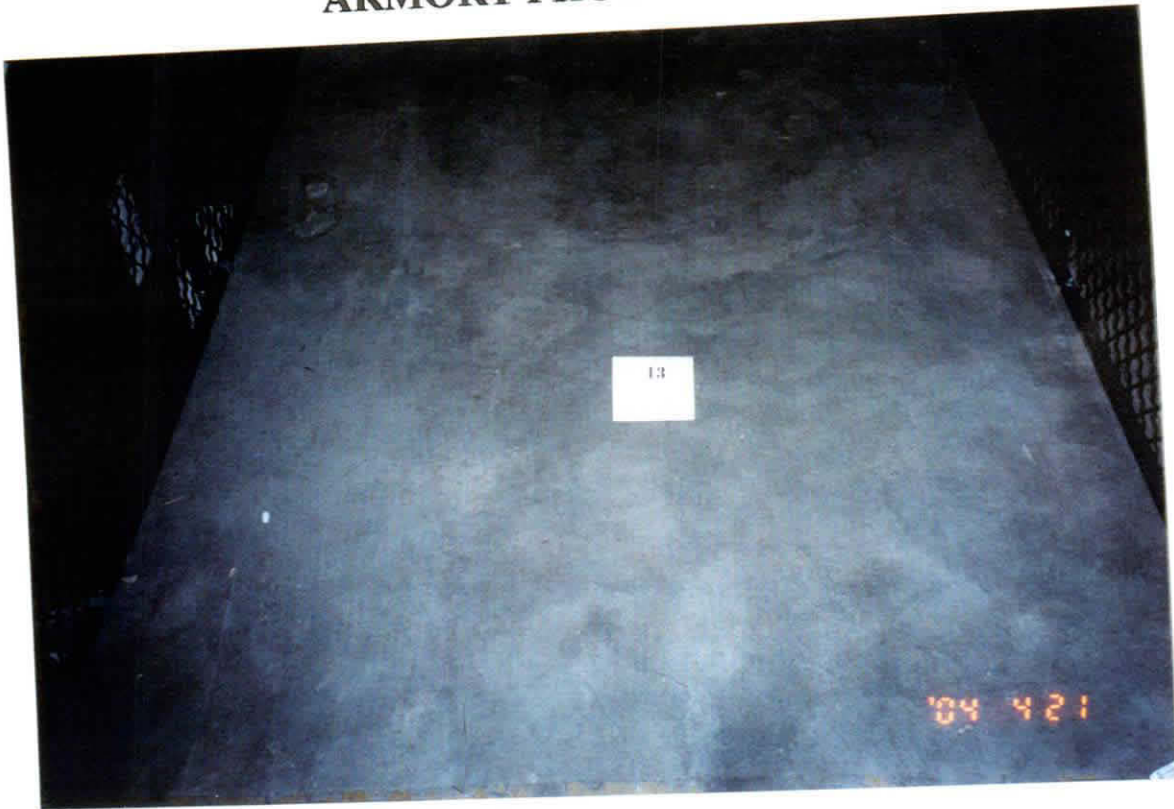


Sample #11 Indoor Firing Range West Side Behind Firing Line



Sample # 12 Indoor Firing Range East Side Behind Firing Line

ARMORY PHOTOGRAPHS

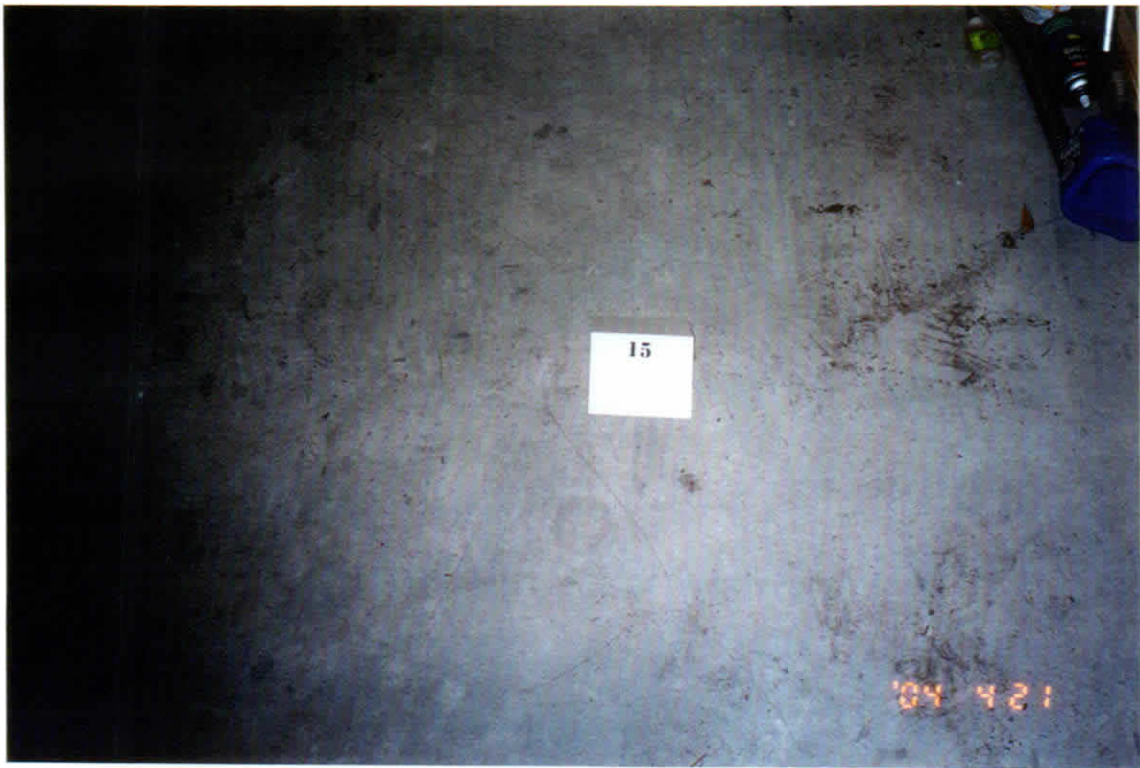


Sample #13 Indoor Firing Range North End Middle Floor Area



Sample # 14 Indoor Firing Range South End Middle Floor Area

ARMORY PHOTOGRAPHS



Sample #15 Indoor Firing Range West Side



Sample # 16 Indoor Firing Range East Side

ARMORY PHOTOGRAPHS

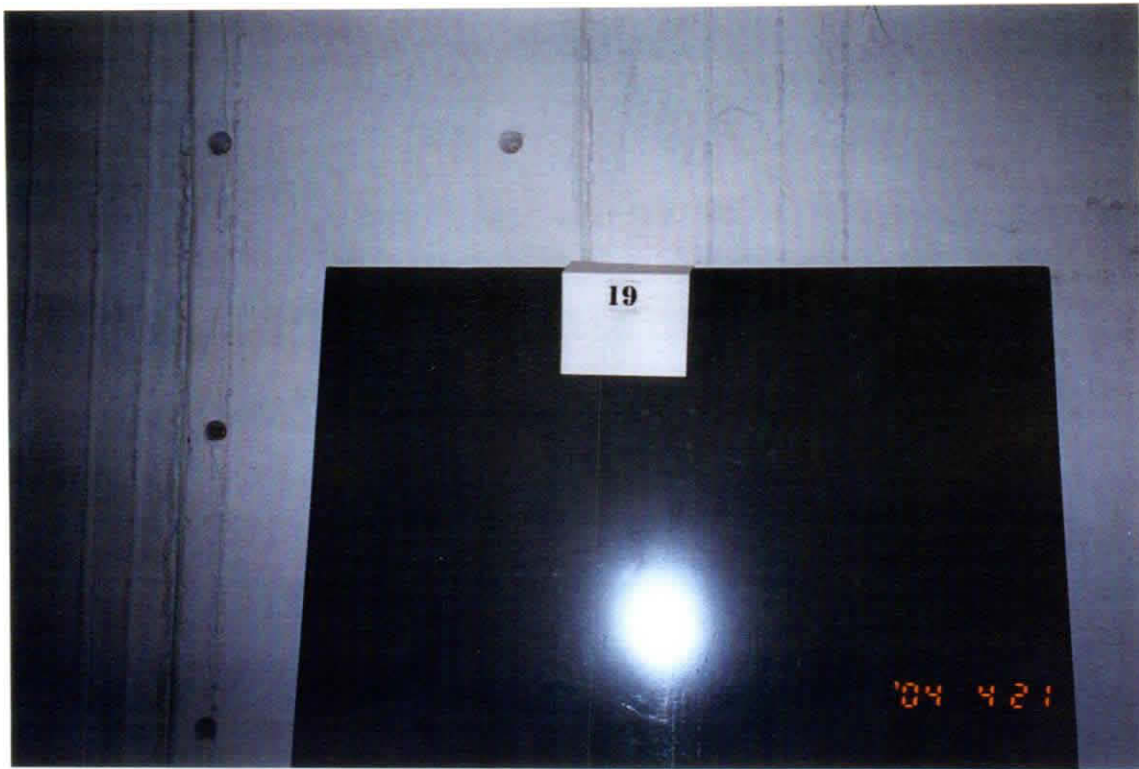


Sample #17 Indoor Firing Range East Side in Front of Bullet Trap



Sample # 18 Indoor Firing Range West Side in Front of Bullet Trap

ARMORY PHOTOGRAPHS



Sample #19 Indoor Firing Range South (Back) Wall Behind Bullet Backstop



Sample # 20 Middle of Floor in Arms Vault

ARMORY PHOTOGRAPHS



Sample #21 Floor Just Outside of Arms Vault



Sample # 22 Floor Inside Arms Vault by Door

ARMORY PHOTOGRAPHS



Sample #23 Indoor Firing Range Converted to Supply Room



Sample # 24 Ocala Units Occupying Armory

BEST AVAILABLE COPY

APPENDIX F
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: Ocala Armory
LOCATION: 900 SW 20TH STREET, Ocala, FL 34474
YEAR BUILT: 1985
SQUARE FOOTAGE: 22,911
FULL TIME PERS: 11
M-DAY: 190

UNIT(S) DRILLING AT THIS ARMORY:
CO A 3/20TH SPECIAL FORCES & TROOP E 153RD CAV

ARMORY UTILIZED BY CIVILIANS: YES NO
WHAT FUNCTIONS: VOTER PRECINCT, TAX SALES, VARIOUS
OTHER - APPROXIMATELY 15 TIMES/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO

POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO

STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO

KNOWN MOLD/MILDEW IN THE ARMORY? YES NO

INDOOR FIRING RANGE IN ARMORY? YES NO

(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1989, CLEANED AND CONVERTED TO
A SUPPLY ROOM

NUMBER OF VAULTS IN ARMORY: TWO

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED OUTSIDE OF THE ARMORY

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 23, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: MAJ **Non-Responsive**
Readiness NCO, 4004 Airport Road, Plant City, Florida 33567.

SUBJECT: Industrial Hygiene Survey of the Plant City National Guard Armory, Plant City, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Plant City Armory, George Hinchliffe.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.
- b. Mr **Non-Responsive** conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.
- c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- d. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**PLANT CITY ARMORY
4004 AIRPORT ROAD
PLANT CITY, FLORIDA 33567**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
LTG Sumter deLeon Lowry Armory
4004 Airport Road
Plant City, FL 33567

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Introduction
Site Description
Scope of Work
Methodology

Findings and Discussion

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Heating Ventilation and Air Conditioning (HVAC).Page 5
Ergonomics.....Page 5
Personal Protection Equipment.....Page 5
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Appendices

A. References
B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Plant City Armory on 24 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 231 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	4 to 84 foot-candles	Consider increasing light levels as discussed in Illumination Survey and depicted on diagram
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Plant City Armory in Plant City, Florida on 24 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Plant City Armory in Plant City, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 24 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The armory houses Battery C 3-116 Field Artillery, HHSB 3-116 Field Artillery and a Medical Clinic (the converted indoor firing range) with full time Title 10 personnel. Between the two units there are eighteen (18) full time employees. The Medical Clinic employs sixteen (16) Title 10 employees. Total M-Day soldiers drilling at the facility is 240. The armory was built in 1982 and contains 23,329 square feet. The armory is a typical building of this era with an indoor firing range that was converted to a Medical Clinic (see photographs 1-6 and next to last photograph in photograph section).

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006.

A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Extech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was MAJ Non-Responsive PH# 813-757-9045.

Lead Wipe Samples: Twenty-one wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00PC	FIELD BLANK	UNDETECTED
04-01PC	IFR, INSIDE DOOR (TO CLINIC)	15.6
04-02PC	IFR LEFT SIDE TRAP WALL	UNDETECTED
04-03PC	IFR RIGHT SIDE TRAP WALL	UNDETECTED
04-04PC	IFR IN FRONT OF TRAP	UNDETECTED
04-05PC	IFR MIDDLE OF RANGE	UNDETECTED
04-06PC	IFR BACK WALL	UNDETECTED
04-07PC	KITCHEN, TOP OF ICE MAKER	UNDETECTED
04-08PC	KITCHEN, TOP OF MIDDLE COOLER	UNDETECTED
04-09PC	DRILL FLOOR SOUTHEAST CORNER	UNDETECTED
04-10PC	DRILL FLOOR NORTHEAST CORNER	UNDETECTED
04-11PC	DRILL FLOOR CENTER	UNDETECTED
04-12PC	DRILL FLOOR NORTHWEST CORNER	UNDETECTED
04-13PC	DRILL FLOOR SOUTHWEST CORNER	UNDETECTED
04-14PC	ROOM 124, SUPPLY, INSIDE DOOR	6.18
04-15PC	ROOM 124, SUPPLY, MIDDLE OF FLOOR	UNDETECTED
04-16PC	ROOM 123, ARMS VAULT, INSIDE DOOR	99.9
04-17PC	ROOM 123, ARMS VAULT, MIDDLE OF FLOOR	231
04-18PC	ROOM 121, SUPPLY, INSIDE DOOR	UNDETECTED
04-19PC	ROOM 121, SUPPLY, MIDDLE OF FLOOR	7.14
04-20PC	ROOM 122, ARMS VAULT, INSIDE DOOR	35.5
04-21PC	ROOM 122, ARMS VAULT, MIDDLE OF FLOOR	21.9

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas.

The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range (Medical Clinic) shows no signs of lead contamination at or near the action level of 200 milligrams per square foot. The Arms Vault, located in room 123, should be properly cleaned and decontaminated in accordance with NG PAM 385-18. Wipe samples should be taken after the cleaning and decontamination process to ensure levels are well below the standard of 200 micrograms per square foot.

Asbestos Suspect Building Material There were no signs of asbestos in the Plant City Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Plant City armory ranged from 4 foot-candles to 84 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	5 to 10
Indoor Firing Range (Medical Clinic)	Well Above Standard
Office Areas	36 to 84
Classrooms	38 to 47
Mechanical Rooms	4 to 11
Kitchen	26 to 39

There are several areas within the Plant City Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination.

Noise Survey The Plant City Armory is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning(HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Plant City Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise program to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Properly clean the contaminated surfaces of the Arms Vault located in room 123 by wet mopping/wiping and vacuuming with a High Efficiency Particulate Air (HEPA) filter. Obtain wipe samples after cleaning to ensure lead level standards have been met.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels where required as per the illumination survey diagram.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Non-Responsive

HINCHCO

Client Project

Elisee Army National Guard

Address

2708 KITH Hawk Ct

Project Location

Plant City, Army

City, State Zip Code

Springfield, IL 62907

Sampler(s) / Phone No.

212782 8099

Phone / Facsimile No.

212782 8099

Turnaround Time

Standard Rush () Date Required:

Contact Person

Non-Responsive

P.O. # or Invoice To:

HINCHCO

Sample Description (10 Characters Only)

04-00 PC

04-01 PC

04-02 PC

04-03 PC

04-04 PC

04-05 PC

04-06 PC

04-07 PC

04-08 PC

04-09 PC

04-10 PC

04-11 PC

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04-13 PC

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04-15 PC

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04-247 PC

04-248 PC

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8430 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Non-Responsive

3702 Kitty Hawk St
Springfield, IL 62907
917-979-8099

Client
Address
City, State, Zip Code
Phone / Facsimile No
Contact Person

Client Project
Project Location
Sampler(s) / Phone No.
Turnaround Time
P.O. # or Invoice To

Flanks Army National Guard
PLAINTIFF ARMY
917-979-8099
Standard X1 Rush () Date Required:
HINCHCO

Laboratory
Comments

Non-Responsive

04-18 PC
04-13 PC
04-14 PC
04-15 PC
04-16 PC
04-17 PC
04-18 PC
04-19 PC
04-20 PC
04-21 PC

Sample Description
(10 Characters Only)

Sampling
Date
Time

Container
Size
Type / No

M / P
Code

Analysis and / or Method Requested

Laboratory
Comments

LEAD

BEST AVAILABLE COPY

BEST AVAILABLE COPY

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 846 of 1021

Special Instructions:

Temperature / or

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403183
 Project: Plant City Armory

Lab ID: 0403183-001 Collection Date: 3/24/2004 8:00:00 AM
 Client Sample ID: 04-00PC (blank) Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 7:39:00 AM

Lab ID: 0403183-002 Collection Date: 3/24/2004 8:05:00 AM
 Client Sample ID: 04-01PC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 15.6 5.00 µg/ft² 10 4/3/2004 7:47:00 AM

Lab ID: 0403183-003 Collection Date: 3/24/2004 8:07:00 AM
 Client Sample ID: 04-02PC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 7:55:00 AM

Lab ID: 0403183-004 Collection Date: 3/24/2004 8:10:00 AM
 Client Sample ID: 04-03PC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 8:02:00 AM

Lab ID: 0403183-005 Collection Date: 3/24/2004 8:15:00 AM
 Client Sample ID: 04-04PC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 8:10:00 AM

Lab ID: 0403183-006 Collection Date: 3/24/2004 8:26:00 AM
 Client Sample ID: 04-05PC Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 8:17:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Plant City Armory

Lab Order: 0403183

Lab ID: 0403183-007 Collection Date: 3/24/2004 8:30:00 AM
 Client Sample ID: 04-06PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS
 Lead U 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 8:24:00 AM

Lab ID: 0403183-008 Collection Date: 3/24/2004 8:40:00 AM
 Client Sample ID: 04-07PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS
 Lead U 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 8:32:00 AM

Lab ID: 0403183-009 Collection Date: 3/24/2004 8:48:00 AM
 Client Sample ID: 04-08PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 82.1 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 8:39:00 AM

Lab ID: 0403183-010 Collection Date: 3/24/2004 9:06:00 AM
 Client Sample ID: 04-09PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 9:09:00 AM

Lab ID: 0403183-011 Collection Date: 3/24/2004 9:04:00 AM
 Client Sample ID: 04-10PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 9:16:00 AM

Lab ID: 0403183-012 Collection Date: 3/24/2004 9:07:00 AM
 Client Sample ID: 04-11PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U 5.00 µg/ft² (N7082) 10 Analyst: MCL
 4/3/2004 9:24:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Plant City Armory

Lab Order: 0403183

Lab ID: 0403183-013

Collection Date: 3/24/2004 9:09:00 AM

Client Sample ID: 04-12PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 9:31:00 AM

Lab ID: 0403183-014

Collection Date: 3/24/2004 9:13:00 AM

Client Sample ID: 04-13PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 9:39:00 AM

Lab ID: 0403183-015

Collection Date: 3/24/2004 9:16:00 AM

Client Sample ID: 04-14PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

6.18

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 9:47:00 AM

Lab ID: 0403183-016

Collection Date: 3/24/2004 9:20:00 AM

Client Sample ID: 04-15PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

U

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 9:54:00 AM

Lab ID: 0403183-017

Collection Date: 3/24/2004 9:30:00 AM

Client Sample ID: 04-16PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

99.9

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 10:02:00 AM

Lab ID: 0403183-018

Collection Date: 3/24/2004 9:40:00 AM

Client Sample ID: 04-17PC

Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS

Lead

231

N7082

5.00

(N7082)

µg/ft²

10

Analyst: MCL

4/3/2004 10:09:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Plant City Armory

Lab Order: 0403183

Lab ID: 0403183-019 Collection Date: 3/24/2004 10:10:00 AM
 Client Sample ID: 04-18PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead U N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 10:39:00 AM

Lab ID: 0403183-020 Collection Date: 3/24/2004 10:12:00 AM
 Client Sample ID: 04-19PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 7.14 N7082 (N7082) Analyst: MCL
 5.00 µg/ft² 10 4/3/2004 10:46:00 AM

Lab ID: 0403183-021 Collection Date: 3/24/2004 10:30:00 AM
 Client Sample ID: 04-20PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 33.5 N7082 (N7082) Analyst: MCL
 7.50 µg/ft² 10 4/2/2004 3:47:00 AM

Lab ID: 0403183-022 Collection Date: 3/24/2004 10:34:00 AM
 Client Sample ID: 04-21PC Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS
 Lead 21.9 N7082 (N7082) Analyst: MCL
 7.50 µg/ft² 10 4/2/2004 3:55:00 AM

Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

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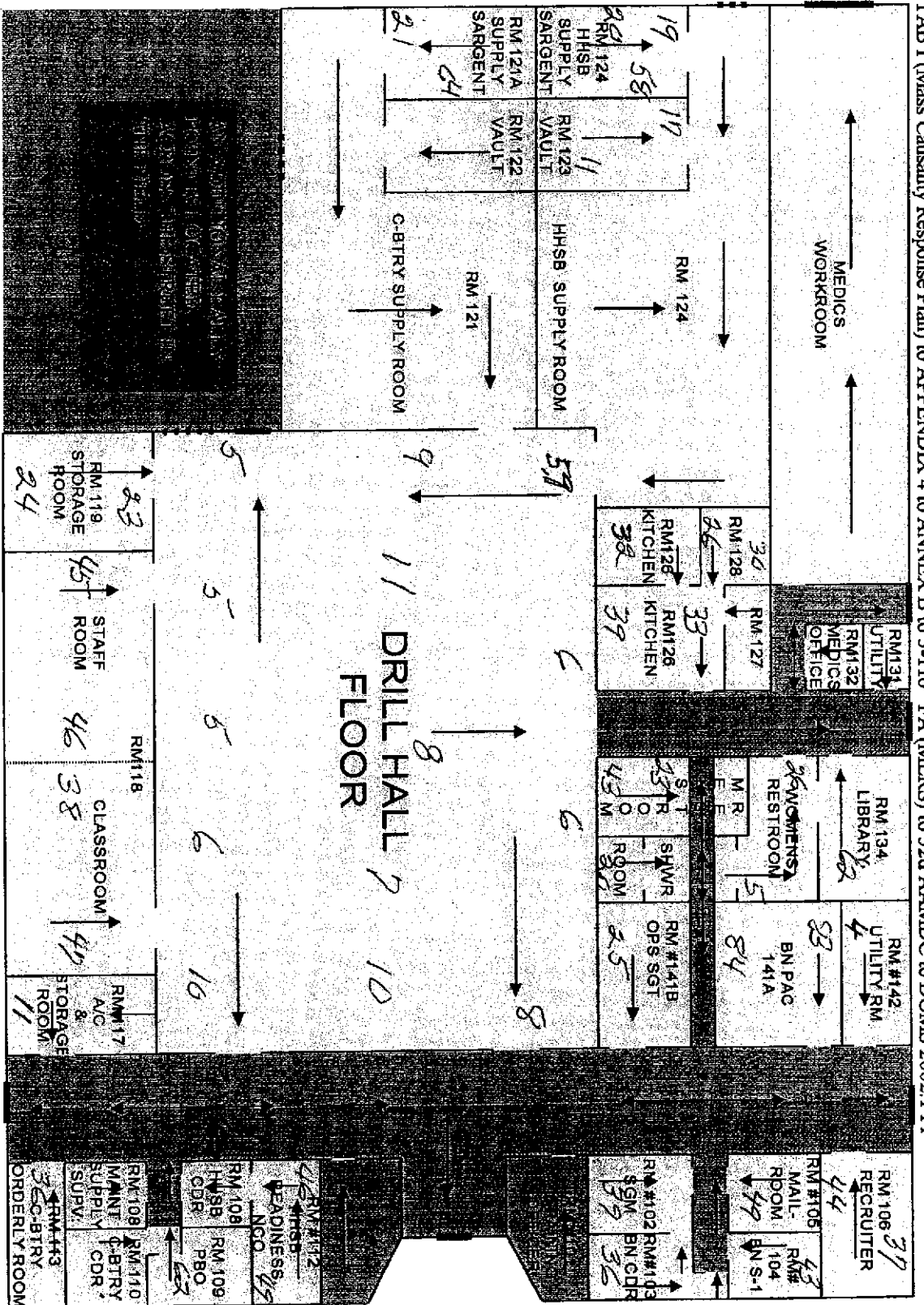
APPENDIX D

ILLUMINATION SURVEY DIAGRAM

SENSITIVE BUT UNCLASSIFIED

RALLY POINT

TAB I (Mass Causality Response Plan) to APPENDIX 4 to ANNEX B to 3-116th FA (MLRS) to 32d AAMDC to DOMS 2002.1 FP



N

3-116th FA (MLRS)
FACILITY LAYOUT

Plant City Illumination Survey
24 Mac 34 Foot-Candles



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility:

2. Area or rooms where you spend the most time in the building:

Room 1123. Does any of your work activities produce dust or odor?
Describe:

YES

☒ NO4. Gender: ☒ Male ☐ FemaleAge: Under 25 25-34 ☒ 35-44 45-54 55 and over

5. Do you:

Smoke

☒ Y☒ N

Have fever/pollen allergies

☒ Y☒ N

Have skin allergies/dermatitis

☒ Y☒ N

Have a cold/flu

☒ Y☒ N

Have sinus problems

☒ Y☒ N

Have other allergies

☒ Y☒ N

Wear contact lenses

☒ Y☒ N

Operate video display terminals (computers)

☒ Y☒ N

Operate photocopiers 10% of the time

☒ Y☒ N

Use other office machines

☒ Y☒ N

Specify:

FAX

Currently take any medications?

Y

☒ N

Reason:

6. Office Characteristics:

2 Number of persons sharing same room/work area1 Number of windows in room/work area

Do windows open?

☒ Y☒ N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

☒ 5

Rate room temperature:

Poor

Average

Excellent

1

2

3

☒ 4

5

Are there smokers in your area?

Y

☒ N

7. How long have you worked:

2 yrs In this room/area2 yrs In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Heartburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms? Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y N

When: Summer/Fall

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Pollen in Air - Hay fever

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

Enjoy the work environment here

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: SUMTER L. LOWRY ARMORY

2. Area or rooms where you spend the most time in the building:

Room # 1133. Does any of your work activities produce dust or odor?
Describe:

YES

NO

4. Gender: Male Female

Age: Under 25 25-34 35-44 45-54 55 and over

5. Do you:

Smoke

Y

N

Have fever/pollen allergies

YN

Have skin allergies/dermatitis

Y

N

Have a cold/flu

Y

N

Have sinus problems

YN

Have other allergies

YN

Wear contact lenses

Y

N

Operate video display terminals (computers)

YN

Operate photocopiers 10% of the time

YN

Use other office machines

YN

Specify:

Currently take any medications?

Y

N

Reason:

6. Office Characteristics:

2 Number of persons sharing same room/work area4 Number of windows in room/work area

Do windows open?

Y

N

Rate adequacy of work space per person:

Poor

Average

Excellent

1

2

3

4

5

Rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

Are there smokers in your area?

Y

N

7. How long have you worked:

3 yr In this room/area7 yr In this building

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	O	F	N/A	SW	PW
Aching joints	O	F	N/A	SW	PW
Muscle twitching	O	F	N/A	SW	PW
Back pain	O	F	N/A	SW	PW
Hearing problems	O	F	N/A	SW	PW
Dizziness	O	F	N/A	SW	PW
Dry, flaking skin	O	F	N/A	SW	PW
Discolored skin	O	F	N/A	SW	PW
Skin irritation	O	F	N/A	SW	PW
Itching	O	F	N/A	SW	PW
Hearburn	O	F	N/A	SW	PW
Nausea	O	F	N/A	SW	PW
Noticeable odors	O	F	N/A	SW	PW
Sinus congestion	O	F	N/A	SW	PW
Sneezing	O	F	N/A	SW	PW
High stress levels	O	F	N/A	SW	PW
Chest tightness	O	F	N/A	SW	PW
Eye irritation	O	F	N/A	SW	PW
Fainting	O	F	N/A	SW	PW
Hyperventilation	O	F	N/A	SW	PW
Problems with contacts	O	F	N/A	SW	PW
Headache	O	F	N/A	SW	PW
Fatigue/drowsiness	O	F	N/A	SW	PW
Temperature too hot	O	F	N/A	SW	PW
Temperature too cold	O	F	N/A	SW	PW
Other (specify):					

Have you seen a doctor for any or all of these symptoms?

Y N N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening

DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear?

Y N

When:

At night

9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

N/A

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

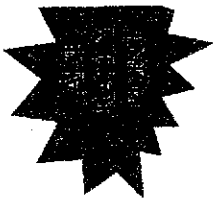
N/A

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

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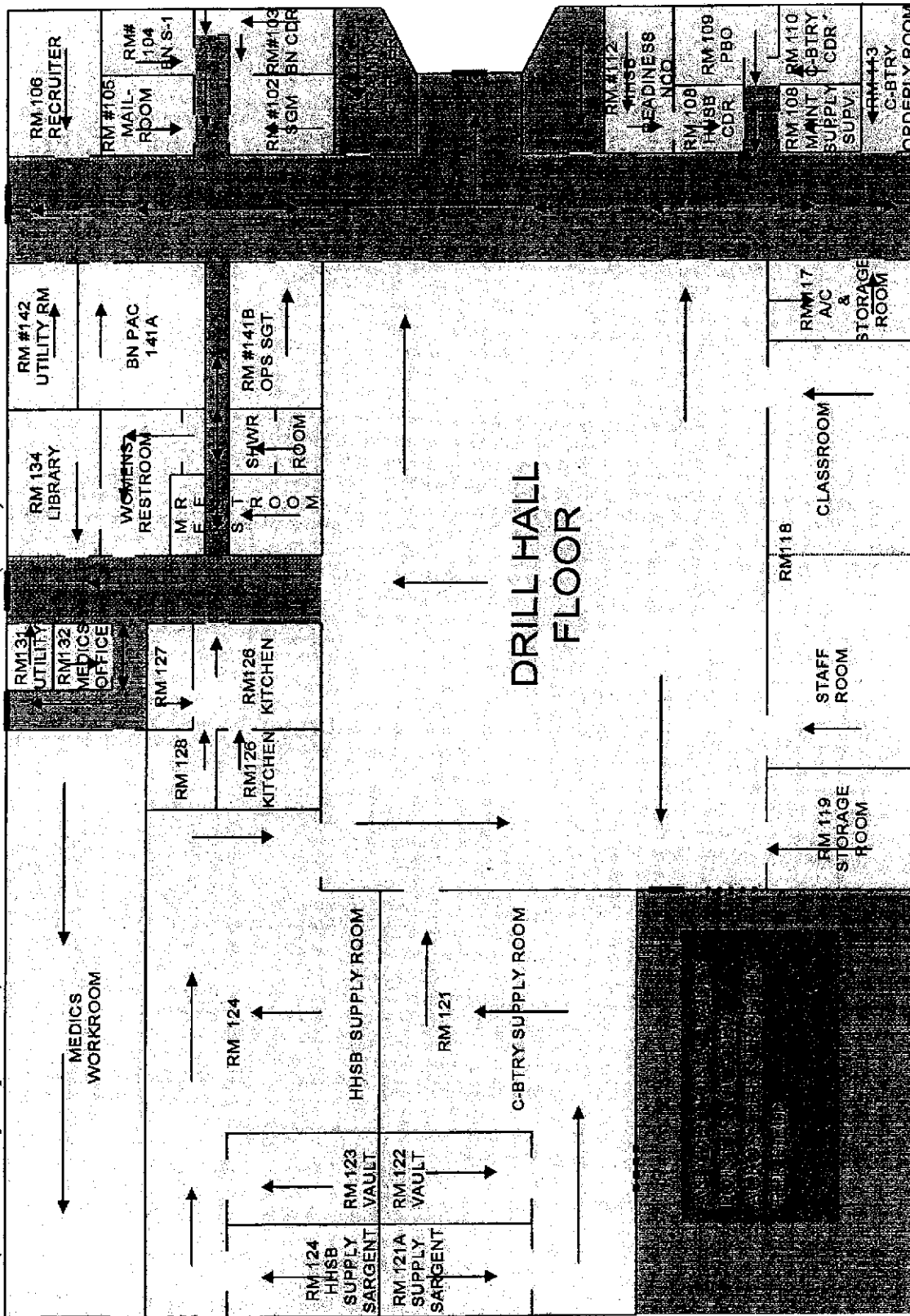
APPENDIX F

ARMORY PHOTOGRAPHS AND FLOOR PLAN



SENSITIVE BUT UNCLASSIFIED

TAB I (Mass Causality Response Plan) to APPENDIX 4 to ANNEX B to 3-116th FA (MLRS) to 32d AAMDC to DOMS 2002.1 FP

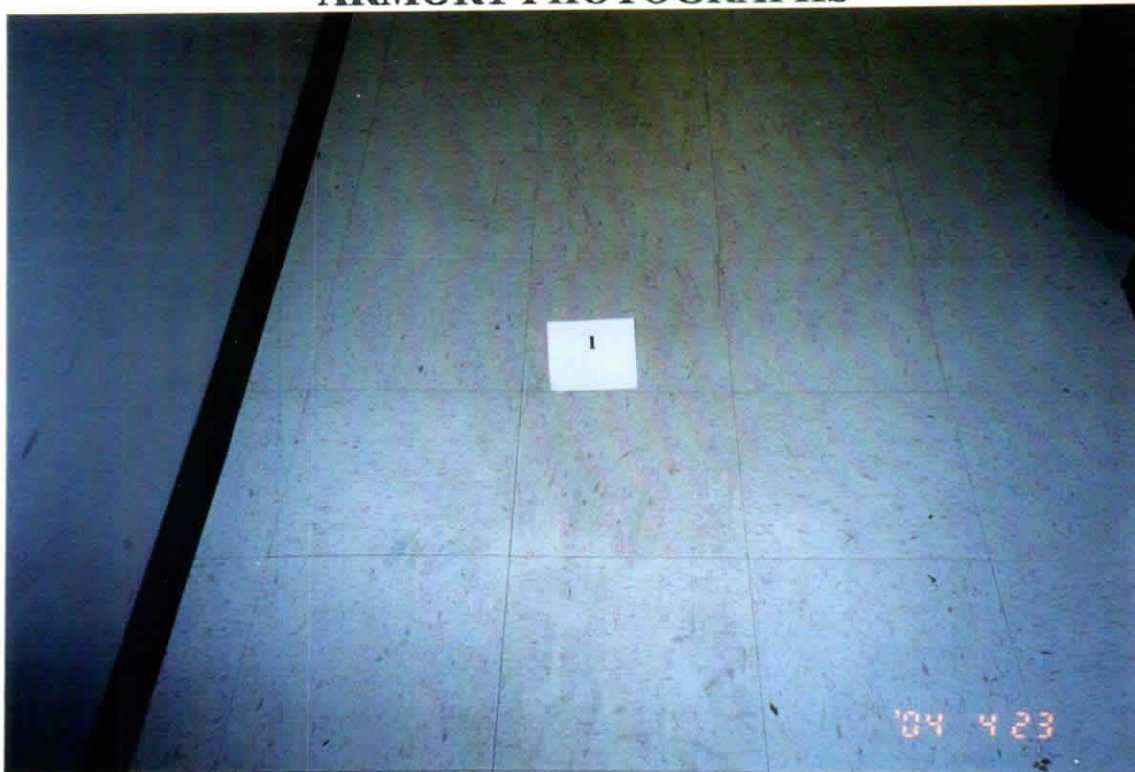


3-116th FA (MLRS)
FACILITY LAYOUT

N

SENSITIVE BUT UNCLASSIFIED
B-4-I-1

ARMORY PHOTOGRAPHS



Sample #1 Entrance to Clinic (Indoor Range Entrance Area)



Sample #2 Left Side Wall by Bullet Trap

ARMORY PHOTOGRAPHS



Sample #3 Right Side, Bullet Trap Wall



Sample #4 In Front of Bullet Trap

ARMORY PHOTOGRAPHS



Sample #5 Middle of Range

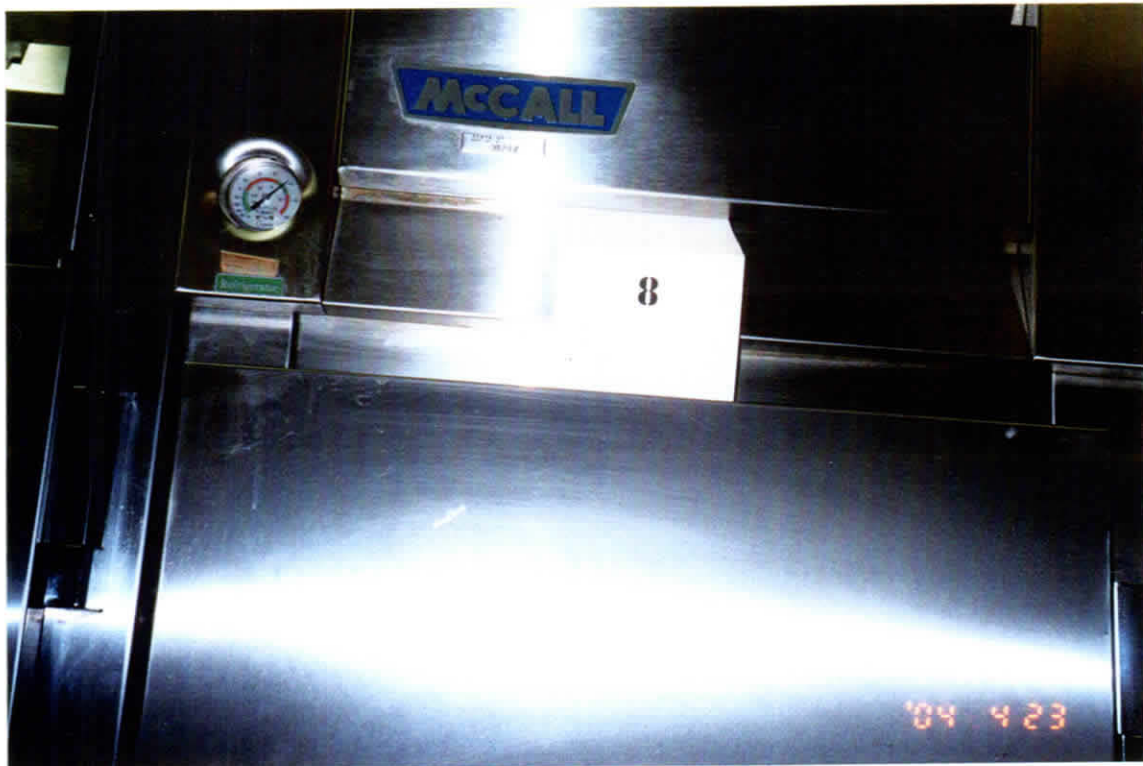


Sample #6 Back Wall (Behind Firing Line}

ARMORY PHOTOGRAPHS



Sample #7 Kitchen, Top of Ice Maker



Sample #8 Kitchen, Top of Middle Cooler

ARMORY PHOTOGRAPHS

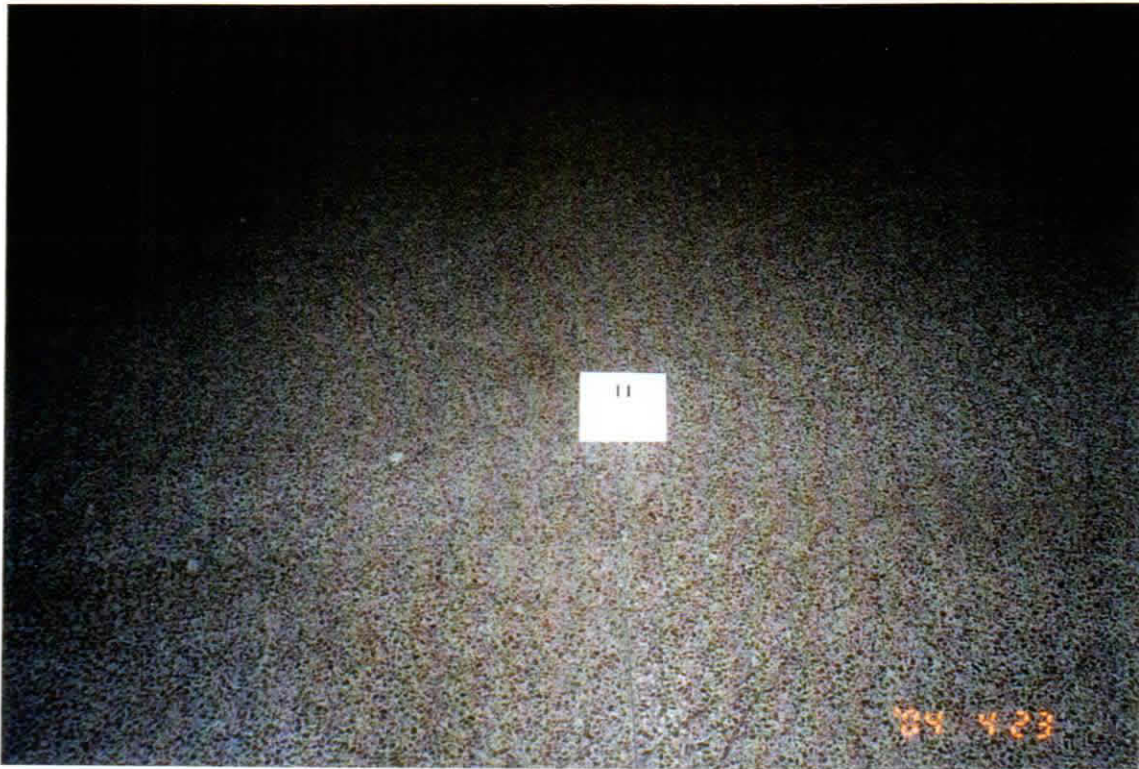


Sample #9 Drill Floor Southeast Corner



Sample #10 Drill Floor Northeast Corner

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Center



Sample #12 Drill Floor Northwest Corner

ARMORY PHOTOGRAPHS



Sample #13 Drill Floor Southwest Corner



Sample #14 Room 124 Supply Inside Door

ARMORY PHOTOGRAPHS



Sample #15 Room 124 Supply Center of Room



Sample #16 Room 124 Inside Arms Room Vault

ARMORY PHOTOGRAPHS



Sample #17 Room 124 Arms Room Vault, Center of Floor



Sample #18 Room 121 Supply Room Inside Door

ARMORY PHOTOGRAPHS



Sample #19 Room 121 Supply Room Center of Room



Sample #20 Room 121 Arms Vault, at Door

ARMORY PHOTOGRAPHS



Photograph of Clinic Viewing from just behind firing line



Plant City Unit Occupying Armory

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APPENDIX G

ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: LTG Sumter deLeon Lowry

LOCATION: 4004 Airport Road, Plant City, FL 33567

YEAR BUILT: 1982

SQUARE FOOTAGE: 23,329

FULL TIME PERS: 18 + (16 Title 10, in Clinic)

M-DAY: 240

UNIT(S) DRILLING AT THIS ARMORY:
Battery C 3-116 FA & HHSB 3-116 FA

ARMORY MANAGER & PH#: MAJ Non-Responsive 813-757-9045

ARMORY UTILIZED BY CIVILIANS: YES NO

WHAT FUNCTIONS: Weddings/Receptions, Community Events, Various Other - APPROXIMATELY 24 TIMES/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY?	<u>YES</u>	<u>NO</u>
POORLY ILLUMINATED AREAS IN THE ARMORY?	<u>YES</u>	<u>NO</u>
STANDING WATER OR LEAKAGE IN THE ARMORY?	<u>YES</u>	<u>NO</u>
KNOWN MOLD/MILDEW IN THE ARMORY?	<u>YES</u>	<u>NO</u>
INDOOR FIRING RANGE IN ARMORY?	<u>YES</u>	<u>NO</u>

(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
RANGE CLOSED IN 1980's, CLEANED AND CONVERTED TO
A MEDICAL CLINIC

NUMBER OF VAULTS IN ARMORY: TWO

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED OUTSIDE OF THE ARMORY

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

18 July 2003

MEMORANDUM FOR The Florida Army National Guard, ATTN: LTC [Non-Responsive]
[Non-Responsive] Safety Manager, Safety and Occupational Health Office, St. Francis Barracks, 82
Marine Street, St. Augustine, FL 32085-1008

SUBJECT: Industrial Hygiene Survey of the Florida Army National Guard, Sumpter L.
Lowry Armory, 4004 Airport Road, Plant City, Florida 33567-1108

1. References.

- a. Report submitted 11 July 2003, Industrial Hygiene Survey, Tammer Sciences, Inc.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

- a. At the request of the Florida State Safety and Occupational Health Office a Service Contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.
- b. Mr. [Non-Responsive] of Tammer Sciences, Inc. conducted the survey.

3. Findings. All HHIM field survey forms and survey findings of the report are enclosed.
(See ENCL. 1)

4. Recommendations.

a Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. **Ensure the Armory Commander get a copy of this report.**

c. Use the report to help in correcting all deficiencies noted by the contractor.

d. Consider additional Industrial Hygiene services to conduct a follow up or monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Non-Responsive

Regional Industrial Hygienist

Industrial Hygiene Baseline Survey Report
For
Florida Army National Guard
(FLARNG)

At
Sumpter L. Lowry National Guard Armory
Plant City Armory
4004 Airport Road
Plant City FL 33567-1108

Prepared for:

Department of the Army and the Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By
Non-Responsive CIH PE
Tammer Sciences, Inc.

June 30, 2003

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Executive Summary

An initial baseline industrial hygiene survey was conducted at the Plant City Armory on 23 April 2003 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality, and a review of several industrial hygiene programs such as hazard communication, ergonomics, personal protection equipment, and posting of forms and bulletins.

The following table summarizes the survey findings and recommendations for each topic surveyed.

Topic	Summary of Findings	Recommendations
Lead Wipe Samples	<10 to 49 microgram per square foot	No action.
Asbestos Bulk Samples	No asbestos.	No action.
Noise Survey	No sources identified. Noise levels are estimated to well below the 85 dBA limit	No action
Illumination Survey	<10 to 65 footcandles	Consider increasing the lighting levels in the drill hall.
HVAC/IAQ	Evidence of water leak stains on ceiling tiles.	All water leaks should be repaired and water damaged building material replaced immediately
Hazcom	No findings.	No action
Ergonomics	No issues	Consider offering ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
PPE	No issues	No action
Posters & Bulletins	No findings	No action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Sumpter L. Lowry National Guard Armory in Plant City, Florida on 23 April 2003

BACKGROUND:

Introduction. At the request of Mr. [Non-] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Plant City Armory in Plant City, Florida. Sgt. [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 23 April 2003. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards present at the armory.

Site Description. The facility is the headquarters for the 3rd Battalion, 116th FA and has 6 full time employees. The armory building is a one-story structure configured like a typical armory with administrative office areas, kitchen, mess hall, a classroom, a drill hall, a supply room, and a converted indoor firing range area used as a medics office. The construction date of the armory is unknown. Refer to Building layout drawing and photos in Appendix D.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, and an evaluation of the ventilation system as it pertains to indoor air quality. A list of occupational health programs and procedures were verbally covered with the Armory designated safety officer. The list included programs such as Hazard Communication, Ergonomics, and Personal protection Equipment. Procedures included posting of applicable posters and bulletins, training, and posting of warning signs and labels.

Methodology Lead wipe samples were collected from surfaces that showed signs of lead contamination in Armories that have a renovated, inactive, or closed indoor firing range (IFR). The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. A photograph of the sampled material and area were also taken. Illumination readings were collected using a Davis light meter Model L595339. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Non-Responsive (863) 678-4161/4165.

Lead Wipe Samples: Five wipe samples were collected from the armory's office areas, drill hall and kitchen. The indoor firing range was completely gutted and converted to a medics office area. No samples were collected from the medics area because it was not accessible at the day of the survey. The table below lists the samples collected and the reported results:

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
PC001	Top of the refrigerator in the kitchen.	14
PC002	Top of a fire extinguisher case in drill hall.	<10
PC003	Top of filing cabinet in library.	38
PC004	Supply air diffuser in the library.	49
PC005	Supply air diffuser in the recruiter office.	21
PC006	Field blank.	<10

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning.

The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

Asbestos Suspect Building Material Three types of building materials were identified as potentially containing asbestos, which included 12 by 12 floor tiles, 2x4 ceiling tiles, and baseboard. A total of three bulk samples were collected randomly from the identified materials. Suspect materials for the surveyed areas are listed in the table below:

Area	Floor	Walls	Ceiling	Other
Office Areas	Carpet	Cement Blocks and Baseboard	2x4 Ceiling Tiles	Fiberglass insulation on ducts
Drill Hall	Terrazo Tiles	Cement Block	2x4 Ceiling Tiles.	
Hallways to offices	12x12" Floor	Cement Blocks	2x4 Ceiling Tiles	

Plant City Armory

Survey Date: 23 APRIL 2003

	Tiles	and Baseboard		
Supply room	Cement	Cement Block	Corrugated Steel Deck	
Training Rooms	Carpet	Cement Block	2x4 Ceiling Tiles	

Suspect building materials were collected from floor tiles, ceiling tiles and the baseboard. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
PC01A	Baseboard Base Material and Adhesive	None
PC02A	12x12 inch floor tile from lounge	None
PC03A	2x4 feet Ceiling Tiles	None

The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey Due to the lack of noise sources, area noise level readings were not measured. Based on experience noise levels in the armory could range from 60 decibels on the A scale (dBA) to 75 dBA depending on the activity or background noise source.

Illumination Survey Lighting levels throughout the Armory ranged between 8 foot-candles to 65 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Drill hall	8 to 11
Office Areas	50 to 65
Training Rooms	45 to 55
Storage areas	20 to 25

Except for the drill, all readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Armory is heated and cooled with two air handling units. Both units have outside air capability. No complaints of indoor air quality issues were documented or communicated to the POC. Water leak

stains were observed in the storage area ceiling tiles. All water leaks should be repaired immediately and water damaged building material should be replaced to eliminate any potential for sources of microbiological growth, which could contribute to poor quality indoor air.

Hazard Communication Standard All full time employees have received their annual hazard communication training. Material Safety Data Sheets (MSDSs) for the cleaning supplies are kept in a binder, which is located in the cleaning supplies storage room. No other chemicals are used or stored at the Armory.

Ergonomics No ergonomic related injuries or concerns were expressed by the full time employees that work at the Armory. Consideration should be given to provide all full time employees that spend the majority of their working time working at a computer terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

Personal Protection Equipment (PPE) Normal duties of the full time employees at the Armory do not require the use of PPE. However, all full time employees are issued safety glasses and personal earplugs as part of their field duties.

Posters and Bulletin Posting The Department of Defense Safety and Occupational Health Protection Program, DD Form 2272, were posted. Employee Report of Alleged Unsafe or Unhealthful Working Conditions, DA Form 4755 was not posted. Safety related bulletins and information issued by State Headquarters were also posted.

Recommendations:

1. Consider increasing the lighting levels in the drill hall.
2. Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.
3. Repair all water leaks and replace all damaged ceiling tiles as soon as feasible.

Technical Assistance: For technical assistance regarding information found in this report or the performed survey please contact Mr. Non- Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

BEST AVAILABLE COPY

APPENDIX A

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

Army Regulation (AR) 11-34, The Army Respiratory Protection Program, 1990

Army Regulation (AR) 40-5, Preventative Medicine, 15 October 1990.

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

National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustibles Liquid Code, 1996.

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

NGR 385-10, Army National Guard Safety and Occupational Health Program, 29 December 1989.

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

Title 29, Code Of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.

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

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APPENDIX B

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-9551 Email: **Non-Responsive**@emsl.com

EMSL

Attn: **Non-Responsive**
Tammer Science Inc
3744 Lawrence Drive
Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project: Plant City

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:10 AM

EMSL Order: 200304251

EMSL Project ID:

Lead in Wipes by Flame AAS (SW 846, 7420)

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
PC001 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/9/03	144 in ²	14.0 µg/ft ²
PC002	0002	5/9/03	144 in ²	<10.0 µg/ft ²
PC003	0003	5/9/03	144 in ²	38.0 µg/ft ²
PC004	0004	5/9/03	144 in ²	49.0 µg/ft ²
PC005	0005	5/9/03	144 in ²	21.0 µg/ft ²
PC006	0006	5/9/03	144 in ²	<10.0 µg/ft ²

Non-ResponsiveLaboratory Director
NJ-NELAP: 04653
AIHA: 100194
or other approved signatory

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA, unless specifically indicated otherwise in the comment section.

ACCREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Date Printed: 5/9/03 3:31:51 PM

THIS IS THE LAST PAGE OF THE REPORT.

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Page 1 of 1

FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 887 of 1021

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 868-4800 Fax: (856) 858-4960 Email: **Non-**EMSL.com

EMSL

Attn: **Non-**
 Tammer Science Inc
 3744 Lawrence Drive
 Naperville, IL 60564

Fax: (630) 369-7957

Phone: 630-369-7956

Project:

Customer ID: TS80

Customer PO:

Received: 04/28/03 11:32 AM

EMSL Order: 040306875

EMSL Project ID:

Analysis Date: 5/7/03

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
PC01A 040306875-0001		Brown Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
PC02A 040306875-0002		White Non-Fibrous Homogeneous	Dissolved		100% Non-fibrous (other)	None Detected
PC03A 040306875-0003		White/Brown Fibrous Heterogeneous	Dissolved Teased	45% Cellulose 35% Min. Wool	20% Non-fibrous (other)	None Detected

Analyst(s)

Delores Beard (3)

Non-Responsive

or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

PLM-1

THIS IS THE LAST PAGE OF THE REPORT.

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FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

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APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

203,4251

LEAD

Revised 7/1/99

EMSL Rep:

Your Company

Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project

Name/Number:

DATE:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase

Order #:

Third party billing requires written authorization from third party

Some

Zip:

Non-Responsive

Non-Responsive

630-369-7957

MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chips*	SW846-7420 or AOAC 5.009 (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
	or NIOSH 7300	ICP	3.0 ug/filter	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	10 ug/wipe	6-10 days
	or SW846-6010	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010	ICP	0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
Lead Soil +			0.3 mg/kg (ppm) soil	
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust:	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - 3 hours, 6 hours, Please call ahead to schedule.

12 hours (must arrive by 11:00 a.m),

24 hours (1day), 48 hours (2 days), 72 hours, 96 hours (3 days), 120 hours(4 days), 144 + hours (6-10 days);

* **, ***, ****, +, ++ Please Refer to Price Quote

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
BTW001		144 in ²	
BTW002			
BTW003			
BTW004			
Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date: 4/26/03		Date: 4/27/03	

Note: Please duplicate this form and use additional sheets if necessary.

Page 1 of 3

[illegible]

Relinquished By: (Person)	Non-Responsive	Received at EMSL By:	Non-Responsive
Date 4/26/03		Date	4/28/03 10:10 AM

Note: Please duplicate this form and use additional sheets if necessary.

* Separate report

Page 3 of 3



EMSL Analytical, Inc.
Revised 07/07/99

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CHAIN OF CUSTODY

Asbestos

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tanner Sciences, Inc.

EMSL-Bill to:

Street:

Street:

3744 Lawrence Dr.

Same

Box #:

Box #:

City/State:

City/State:

Naperville, IL Zip: 60564

Zip:

Phone Results to:

Fax Results to:

Name:

Name:

Telephone #:

Fax #:

Project

Purchase Order #:

Name/Number:

MATRIX

TURNAROUND

<input type="checkbox"/> Air	<input type="checkbox"/> Floor Tile	<input type="checkbox"/> Soil	<input type="checkbox"/> 3 hrs	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours 1 day
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Dust	<input type="checkbox"/> 48 Hours 2 days	<input type="checkbox"/> 72 Hours 3 days	<input type="checkbox"/> 96 Hours 4 days	<input type="checkbox"/> 120 Hours 5 Days
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Micro-Vac	<input checked="" type="checkbox"/> 144+ hours 6-10 Days			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3 hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m Mon - Fri.), Please Refer to Price Quote

PCM - Air

- ☐ NIOSH 7400
- ☐ OSHA
- ☐ Other:

TEM AIR

- ☐ AHERA
- ☐ NIOSH 7402
- ☐ EPA Level II

TEM WATER

- ☐ Wastewater
- ☐ Drinking Water EPA 100.1
- ☐ Water - NY Wastewater
- ☐ Water-NY Drinking Water

PLM - Bulk

- ☒ EPA 600/R-93/116
- ☐ EPA Point Count
- ☐ NY Stratified Point Count
- ☐ PLM NOB (Gravimetric) NY 198.1
- ☐ Other:

TEM BULK/misc

- ☐ Drop Mount (Qualitative)
- ☐ Chatfield
- ☐ TEM NOB (Gravimetric) NY 198.4

TEM MICROVAC / WIPE

- ☐ ASTM D 5755-95
quantitative method

SEM Air or Bulk

- ☐ Qualitative
- ☐ Quantitative

XRD

- ☐ Asbestos
- ☐ Silica

OTHER

☐

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s)

Total Samples #:

Relinquished:

Date:

4/26/03

Time:

PM

Received:

Date:

4-28-03

Time:

11:32am

Page 1 of 2

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FOIA Requested Record #J-15-0005 (FL)
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EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

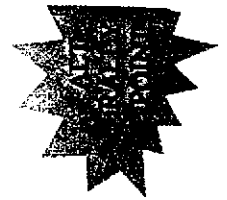
Asbestos

[illegible]

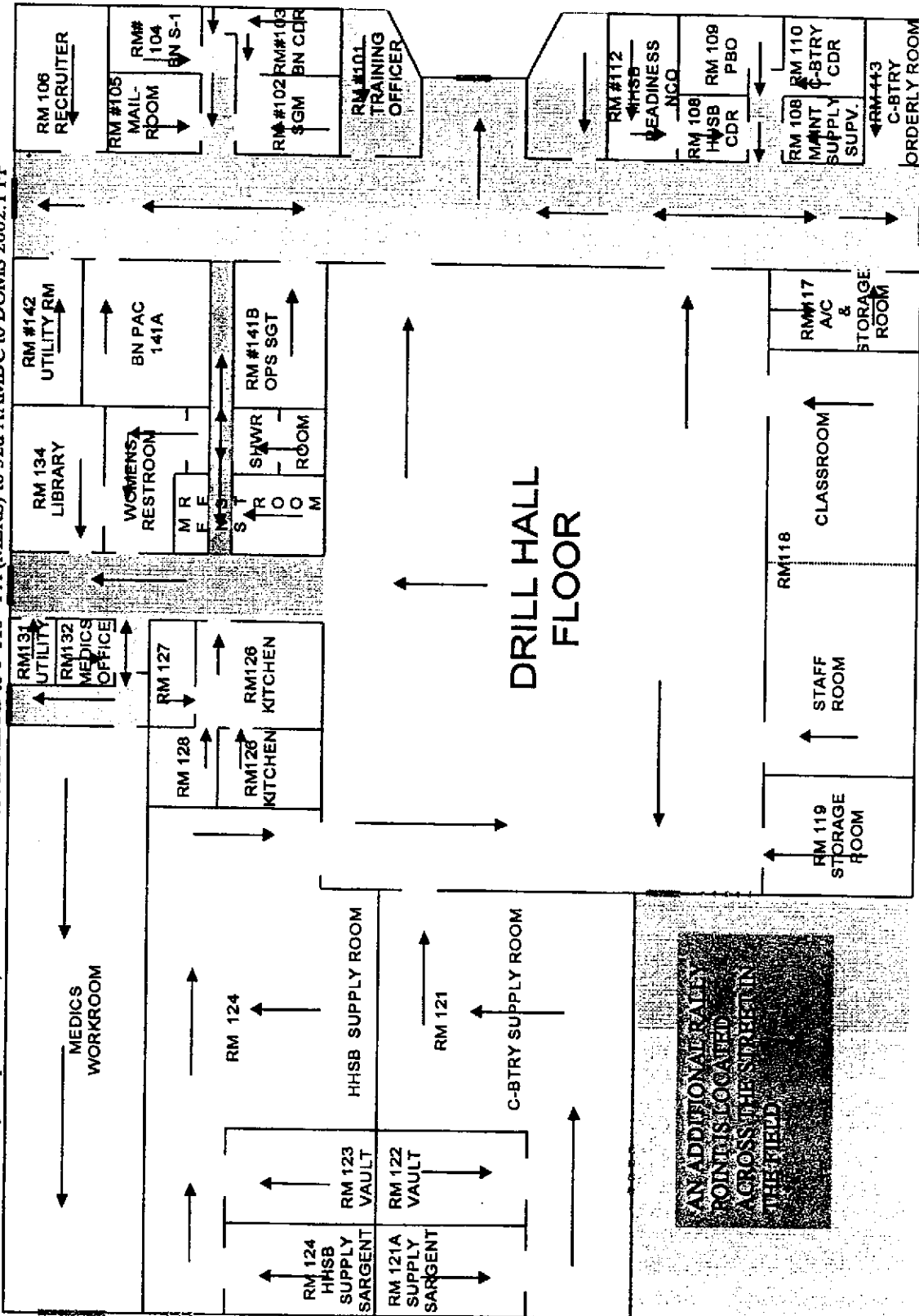
~~A~~ Separate report

Page 2 of 2

APPENDIX D



TAB I (Mass Casualty Response Plan) to APPENDIX 4 to ANNEX B to 3-116th FA (MLRS) to 32d AAMDC to DOMS 2002.1 FP



3-116th FA (MLRS)
FACILITY LAYOUT

SENSITIVE BUT UNCLASSIFIED
B-4-I-1



Photo 1: Plant City Armory Front Entrance



Photo 2: West side of Armory



Photo 3: Armory back side.



Photo 4: Outside rear of the armory.



Photo 5: Training room.



Photo 6: Water damaged ceiling tiles in armory.



Photo 7: Air supply diffuser in administrative office.



Photo 8: Armory drill hall.



Photo 9: Drill hall showing ceiling tiles and lighting.



Photo 10: Floor tiles found in hallway.



Photo 11: Hallway showing ceiling tiles, floor tiles and baseboard.



Photo 12: Air handling units showing the outside air connections.

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 23, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
[Non-Responsive] Readiness NCO, 450 Rodeo Drive, Wauchula, Florida 33873.

SUBJECT: Industrial Hygiene Survey of the Wauchula National Guard Armory, Wauchula, Florida.

1. References.

- a. Report submitted 16 April 2004, Industrial Hygiene Survey, Wauchula Armory, [Non-Responsive]
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.
- c. AR 40-5, Preventive Medicine, October 1990.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 23 May 1988, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. TB MED 530, The Army Industrial Hygiene Program.
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

- a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.
- c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- d. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **No**
Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR
COMMERCIAL (404) 559-4174.

Non-Responsive



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety
and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine,
FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**WACHULA ARMORY
450 RODEO DRIVE
WACHULA, FLORIDA 33873**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Wachula Armory
450 Rodeo Drive
Wachula, FL 33873

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Site Description
Scope of Work
Methodology

Findings and Discussion

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Heating Ventilation and Air Conditioning (HVAC).Page 5
Ergonomics.....Page 5
Personal Protection Equipment.....Page 5
Recommendations.....Page 5

Appendices

A. References
B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Wachula Armory on 25 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 18.9 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	2 to 90 foot-candles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Wachula Armory in Wachula, Florida on 25 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Wachula Armory in Wachula, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 25 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses ORDET 3116 MLRS. There are two (2) full time employees. Total M-Day soldiers drilling at the facility is 20. The armory was built in 1995 and contains 26,408 square feet. The armory is a typical building of this era with an indoor firing range. The indoor firing range has never been fired on. The bullet trap and backstop are still present. A Special forces unit will be moving into the armory in the near future and an additional arms vault is being constructed for them in the indoor firing range.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Non-Responsive PH# 863-773-3555.

Lead Wipe Samples: Sixteen (16) wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00W	FIELD BLANK	UNDETECTED
04-01W	IFR BEHIND PLENUM	15.9
04-02W	IFR PLENUM WALL	9.56
04-03W	IFR MIDDLE OF RANGE FLOOR	14.3
04-04W	IFR IN FRONT OF BULLET TRAP	18.9
04-05W	IFR ON BULLET BACKSTOP	UNDETECTED
04-06W	KITCHEN, TOP OF ICEMAKER	6.11
04-07W	KITCHEN, UPPER SHELF	UNDETECTED
04-08W	DRILL FLOOR, NORTHEAST CORNER	UNDETECTED
04-09W	DRILL FLOOR, NORTHWEST CORNER	UNDETECTED
04-10W	DRILL FLOOR, CENTER	UNDETECTED
04-11W	DRILL FLOOR, SOUTHEAST CORNER	5.75
04-12W	DRILL FLOOR, SOUTHWEST CORNER	UNDETECTED
04-13W	SUPPLY ROOM, AT DOOR	UNDETECTED
04-14W	SUPPLY ROOM, MIDDLE OF FLOOR	9.59
04-15W	ARMS VAULT AT DOOR, ON FLOOR	6.75
04-16W	ARMS VAULT MIDDLE OF FLOOR	12.8

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range (converted to a supply room, with the construction of an additional arms vault in progress), shows traces of lead dust. The of 9.56 to 18.9 milligrams per square foot is well under the not to exceed 200 milligrams per square foot level. The other areas within the armory that show traces of lead dust are also well below the standard. At the present time, recommend no action. However, if weapons are cleaned in the supply room, arms vault, or on the drill floor, recommend protecting the floor against lead dust accumulation.

Asbestos Suspect Building Material There were no signs of asbestos in the Wachula Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Ocala armory ranged from 2 foot-candles to 90 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	20 to 34
Indoor Firing Range (Supply)	2 to 48
Office Areas	34 to 70
Classrooms	35 to 67
Mechanical Rooms	50 to 90
Kitchen	36 to 48

There are several areas within the Wachula Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination.

Noise Survey The Wachula Armory, like practically all other armories visited, is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality. The HVAC equipment appears to be in excellent condition and functions properly.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Wachula Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise program to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Prepare a work order for repair of the roof. There are several areas within the Wachula armory where water is damaging the ceiling tiles and walls. One area, as depicted in the photograph section has caused the electrical fixture to come lose from the ceiling. This should be corrected ASAP. SFC Non-Responsive can point out all of these areas of concern.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels on the drill floor, recruiter's office, and the indoor firing range.

Page 5

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

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APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

Practical Analytical

Primary Control **Systems, Incorporated**

Temperature (°C)

All samples taken with 72" x 12" template

Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Non-Responsive

Non-Responsive

FLINEHCO

Client Project

Florida Army National Guard

Address

2902 Kitty Hawk Dr

Project Location

Wachula Army

City, State Zip Code

Springfield, IL 62789

Sample(s) / Bottle No.

217-989-8099

Phone / Facsimile No.

217-989-8099

Turnaround time

Standard (4 Rush 1) Date Required:

Contact Person

Non-Responsive

P.O. # or Invoice #

FLINEHCO

Sample Description (10 Characters Only)

24Meth 1353

1

1

LEAD

Analysis and / or Method Requested

Laboratory Comments

04-12 W

1358

1

1

1

1

1

04-13 W

1400

1

1

1

1

1

04-14 W

1405

1

1

1

1

1

04-15 W

1409

1

1

1

1

1

04-16 W

1409

1

1

1

1

1

Size of Container

40 ml

125 ml

250 ml

500 ml

1000 ml

O - Other (Specify)

Type of Container

G - Glass (Clear)

AG - Glass (Amber)

P - HDPE

VC - Volatile Core

SC - Soil Core

O - Other (Specify)

M = Matrix Code

A - Aqueous

DW - Drinking Water

NA - Non-aqueous liquid

SE - Solids

O - Other (Specify)

P = Preservative Code

A - None

B - HNO₃

C - H₂SO₄

D - NaOH

E - H₂O

O - Other (Specify)

Relinquished By

Date

Time

Received By

Date

Time

Method of Shipment

Special Instructions:

BEST AVAILABLE COPY

BEST AVAILABLE COPY

FOIA Requested Record #J-15-0085 (FL)

Released by National Guard Bureau

Page 916 of 1021

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Wachula Armory

Lab Order: 0403184

Lab ID: 0403184-001 Collection Date: 3/24/2004 12:44:00 PM

Client Sample ID: 04-00W (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 11:16:00 AM

Lab ID: 0403184-002 Collection Date: 3/24/2004 12:55:00 PM

Client Sample ID: 04-01W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	16.9	5.00		µg/ft²	10	4/3/2004 11:24:00 AM

Lab ID: 0403184-003 Collection Date: 3/24/2004 12:57:00 PM

Client Sample ID: 04-02W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	9.56	5.00		µg/ft²	10	4/3/2004 11:31:00 AM

Lab ID: 0403184-004 Collection Date: 3/24/2004 1:00:00 PM

Client Sample ID: 04-03W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	14.3	5.00		µg/ft²	10	4/3/2004 11:39:00 AM

Lab ID: 0403184-005 Collection Date: 3/24/2004 1:05:00 PM

Client Sample ID: 04-04W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	18.9	5.00		µg/ft²	10	4/3/2004 12:08:00 PM

Lab ID: 0403184-006 Collection Date: 3/24/2004 1:07:00 PM

Client Sample ID: 04-05W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:16:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403184
 Project: Wachula Armory

Lab ID: 0403184-007 Collection Date: 3/24/2004 1:20:00 PM
 Client Sample ID: 04-06W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 6.11 5.00 µg/ft² 10 4/3/2004 12:24:00 PM

Lab ID: 0403184-008 Collection Date: 3/24/2004 1:22:00 PM
 Client Sample ID: 04-07W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 12:31:00 PM

Lab ID: 0403184-009 Collection Date: 3/24/2004 1:45:00 PM
 Client Sample ID: 04-08W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 12:39:00 PM

Lab ID: 0403184-010 Collection Date: 3/24/2004 1:47:00 PM
 Client Sample ID: 04-09W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 12:46:00 PM

Lab ID: 0403184-011 Collection Date: 3/24/2004 1:49:00 PM
 Client Sample ID: 04-10W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 12:54:00 PM

Lab ID: 0403184-012 Collection Date: 3/24/2004 1:51:00 PM
 Client Sample ID: 04-11W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 5.75 5.00 µg/ft² 10 4/3/2004 1:01:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** Hinchco Lab Order: 0403184
 Project: Wachula Armory

Lab ID: 0403184-013 Collection Date: 3/24/2004 1:53:00 PM
 Client Sample ID: 04-12W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 1:09:00 PM

Lab ID: 0403184-014 Collection Date: 3/24/2004 1:58:00 PM
 Client Sample ID: 04-13W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 2:23:00 PM

Lab ID: 0403184-015 Collection Date: 3/24/2004 2:00:00 PM
 Client Sample ID: 04-14W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 9.59 5.00 µg/ft² 10 4/3/2004 2:30:00 PM

Lab ID: 0403184-016 Collection Date: 3/24/2004 2:05:00 PM
 Client Sample ID: 04-15W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 6.75 5.00 µg/ft² 10 4/3/2004 2:38:00 PM

Lab ID: 0403184-017 Collection Date: 3/24/2004 2:07:00 PM
 Client Sample ID: 04-16W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 12.8 5.00 µg/ft² 10 4/3/2004 2:45:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

PRELIMINARY

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APPENDIX D

ILLUMINATION SURVEY DIAGRAM

Illumination Survey

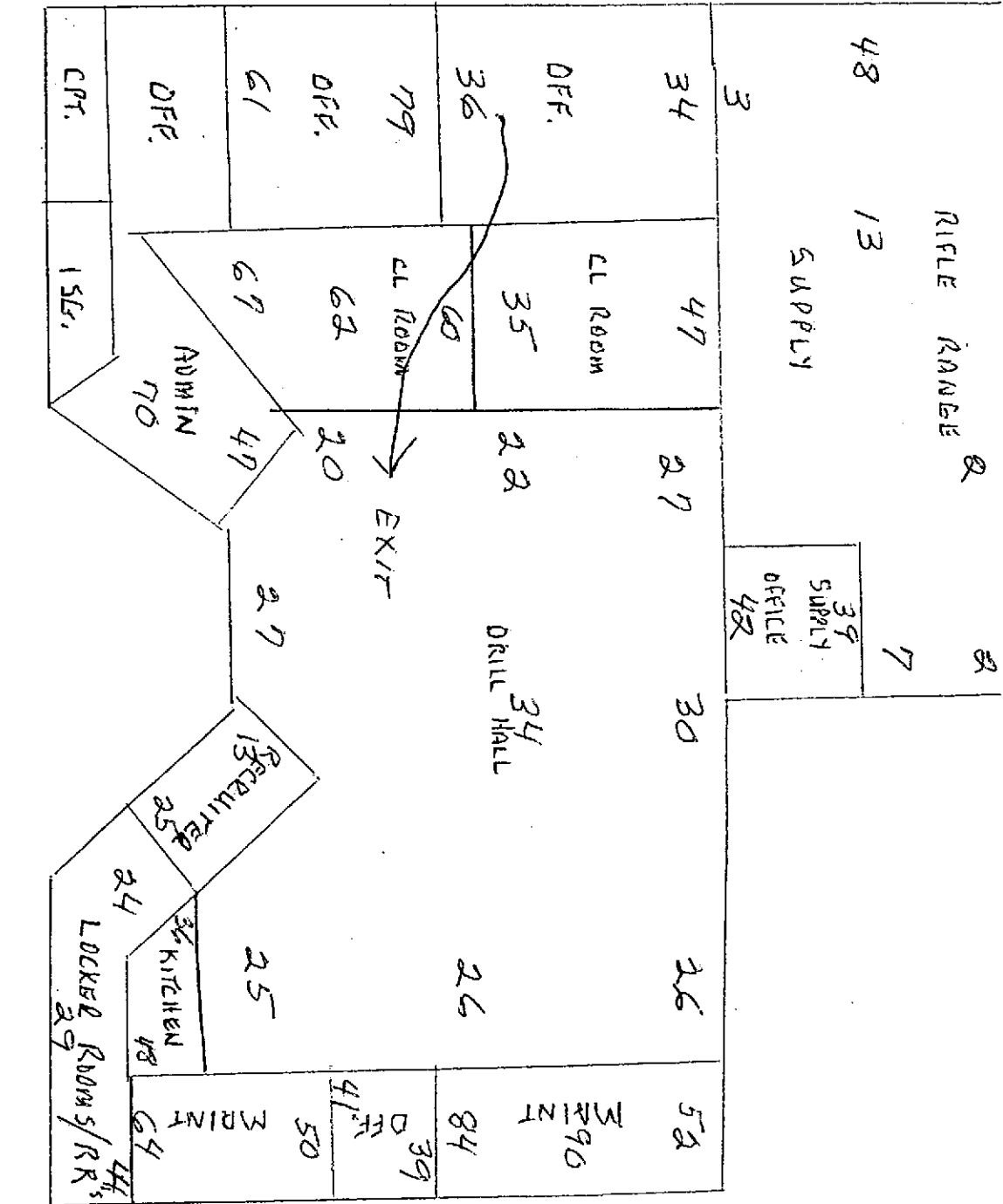
NATIONAL GUARD ARMORY

25 Mar 2004

WALCHULA, FLORIDA

Foot-candles

MOTOR POOL



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APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: CRD Det 3116th (MLAS)
2. Area or rooms where you spend the most time in the building:
OFFICE AREA, MOTOR POOL
3. Does any of your work activities produce dust or odor? ☒ YES ☐ NO
Describe: MOTOR POOL VEH. MAINT. EXHAUST.
4. Gender: Male ☐ Female ☒
Age: Under 25 ☐ 25-34 ☐ 35-44 ☒ 45-54 ☐ 55 and over
5. Do you:
- | | | |
|---|------------------------------------|------------------------------------|
| Smoke | <input type="radio"/> Y | <input checked="" type="radio"/> N |
| Have fever/pollen allergies | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Have skin allergies/dermatitis | <input type="radio"/> Y | <input checked="" type="radio"/> N |
| Have a cold/flu | <input type="radio"/> Y | <input checked="" type="radio"/> N |
| Have sinus problems | <input type="radio"/> Y | <input checked="" type="radio"/> N |
| Have other allergies | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Wear contact lenses | <input type="radio"/> Y | <input checked="" type="radio"/> N |
| Operate video display terminals (computers) | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Operate photocopiers 10% of the time | <input checked="" type="radio"/> Y | <input type="radio"/> N |
| Use other office machines | <input checked="" type="radio"/> Y | <input type="radio"/> N |
- Specify:
- Currently take any medications? ☐ Y ☒ N
Reason: _____
6. Office Characteristics:
- 1 Number of persons sharing same room/work area
2 Number of windows in room/work area
Do windows open? ☒ Y ☐ N
- Rate adequacy of work space per person:
- | Poor | | Average | | Excellent |
|------|---|---------|------------------------------------|-----------|
| 1 | 2 | 3 | <input checked="" type="radio"/> 4 | 5 |
- Rate room temperature:
- | Poor | | Average | | Excellent |
|------|---|---------|------------------------------------|-----------|
| 1 | 2 | 3 | <input checked="" type="radio"/> 4 | 5 |
- Are there smokers in your area? ☐ Y ☒ N
7. How long have you worked:
- 3 mos In this room/area
1.5 yrs In this building

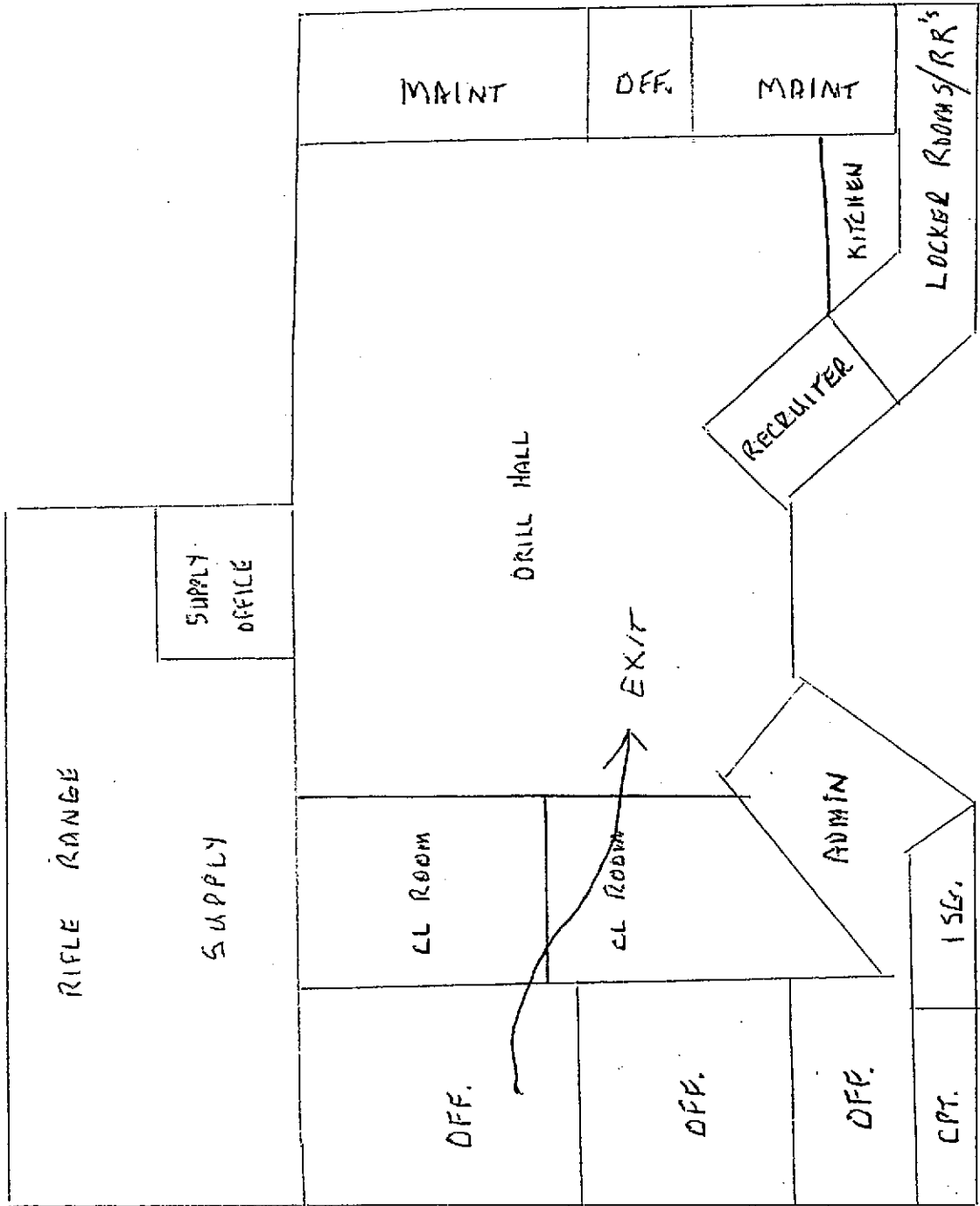
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APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL GUARD ARMORY WAUCHULA, FLORIDA

MOTOR POOL



ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Behind Plenum



Sample #2 Plenum Wall

ARMORY PHOTOGRAPHS



Sample #3 Middle of Range Floor



Sample #4 In Front of Trap

ARMORY PHOTOGRAPHS



Sample #5 On Front of Backstop

Photo Not Available

Sample #6 Kitchen, Top of Ice Maker

ARMORY PHOTOGRAPHS

Photo Not Available

Sample #7 Kitchen Upper Shelf



Sample #8 Drill Floor Northeast Corner

ARMORY PHOTOGRAPHS



Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Center

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Southeast Corner



Sample #12 Drill Floor Southwest Corner

ARMORY PHOTOGRAPHS



Sample #13 Supply Room, at Door



Sample #14 Supply Room, Middle Floor

ARMORY PHOTOGRAPHS



Sample #15 Arms Vault at Door



Sample #16 Arms Vault Middle of Floor

ARMORY PHOTOGRAPHS

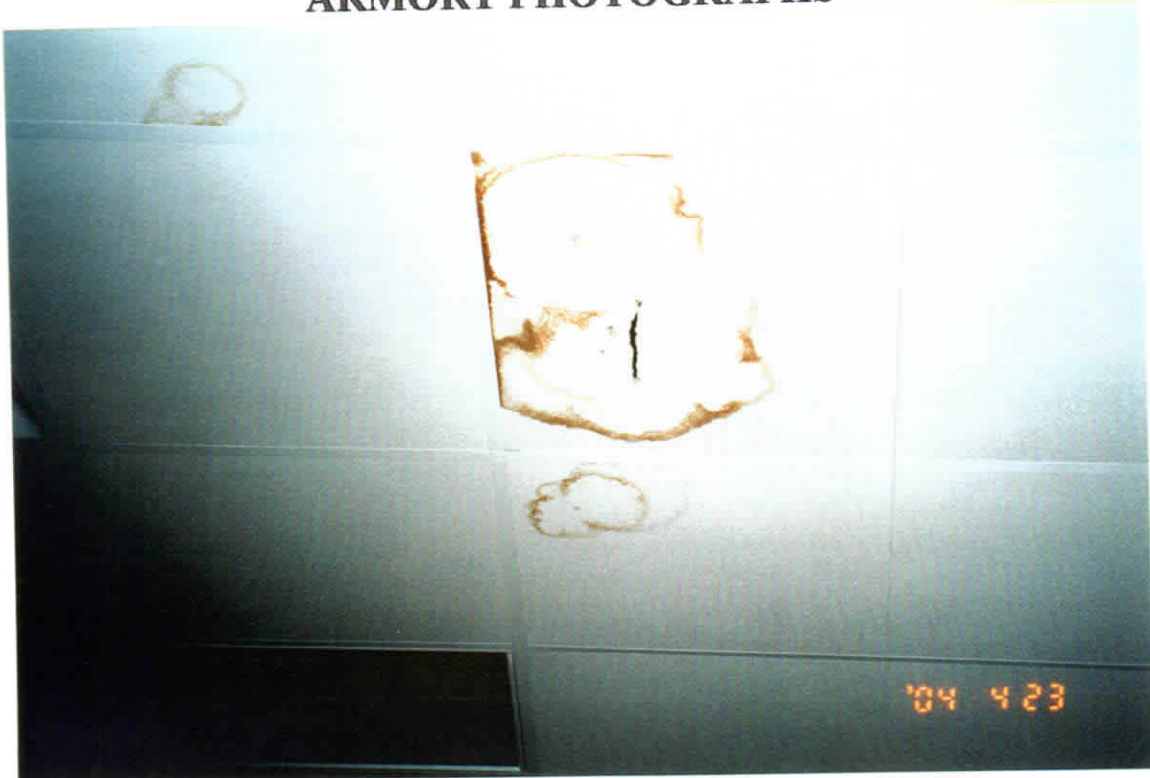


Photograph of Drill Floor



Photograph of Unit at Wachula

ARMORY PHOTOGRAPHS



Photograph of Water Damage



Photograph of Water Damage

ARMORY PHOTOGRAPHS



Photograph of Water Damage

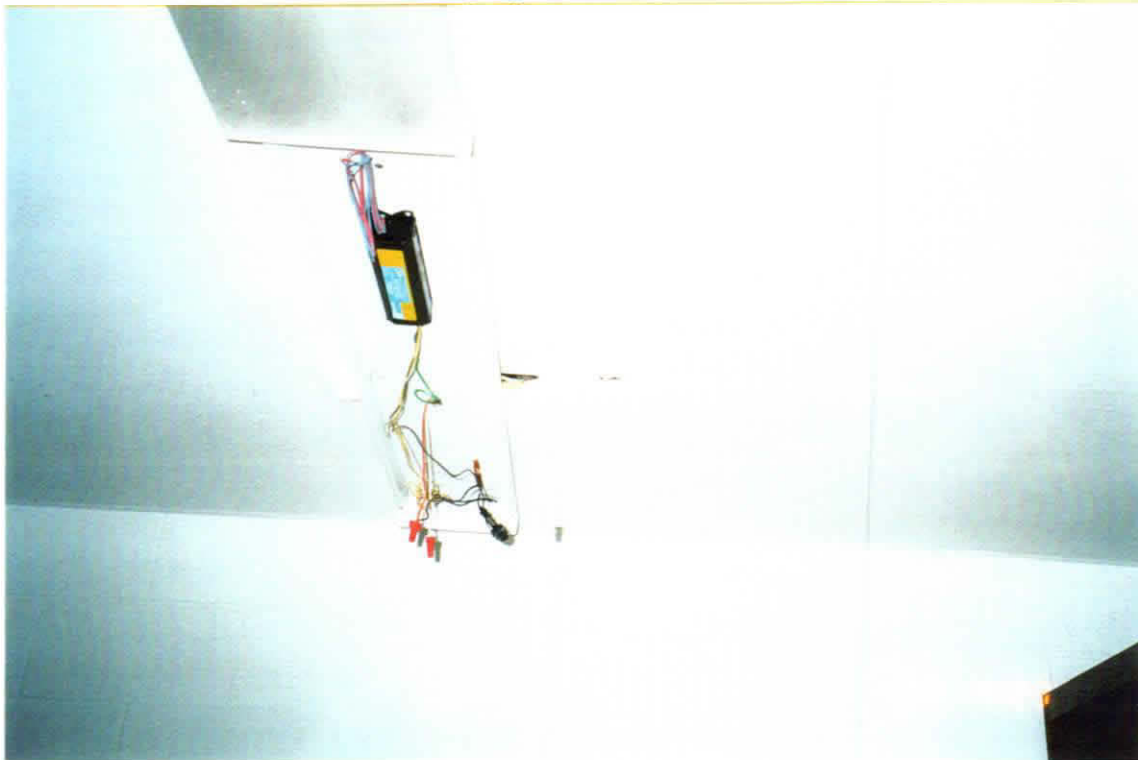


Photograph of Water Damage

ARMORY PHOTOGRAPHS



Photograph of Water Damage



Photograph of Water Damage

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APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: WACHULA ARMORY

LOCATION: 450 Rodeo Dr., Wachula, FL 33873

YEAR BUILT: 1995

SQUARE FOOTAGE: 26,408

FULL TIME PERS: 2

M-DAY: 20

UNIT(S) DRILLING AT THIS ARMORY: ORDET 3116 MLRS

ARMORY UTILIZED BY CIVILIANS: YES NO

WHAT FUNCTIONS: WEDDINGS/RECEPTIONS, FOOTBALL CAMP
APPROXIMATELY 15+ EVENTS/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO

POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO

STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO
(SEE DISCUSSION AND PHOTOGRAPHS OF WATER DAMAGE)

KNOWN MOLD/MILDEW IN THE ARMORY? YES NO

INDOOR FIRING RANGE IN ARMORY? YES NO
(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
Never fired on, supply and arms vault (under construction)

NUMBER OF VAULTS IN ARMORY: ONE* SEE ABOVE

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED IN THE MOTOR POOL AREA



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

ARNG-CSG-P

9 May 2011

MEMORANDUM TO MSG [Non-Redacted] Shop Supervisor, Company C, 3rd Battalion,
20th Special Forces Group, 450 Rodeo Drive, Wauchula, FL 33873.

SUBJECT: Executive Summary (EXSUM) for the Industrial Hygiene (IH) Survey of the
Wauchula Armory conducted 19 April 2011.

1. Purpose.

a. At the request of the Florida Safety and Occupational and Health Office and the Southeast Regional Industrial Hygiene Office an Industrial Hygiene Service Contract was put together to conduct a baseline IH survey at the Wauchula Armory.

b. This IH survey was conducted to 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. **There were no major findings found and noted during this IH survey.**

3. Recommendations.

a. Provide employees' rubber/nit rle gloves, face shield/safety glasses and aprons when cleaning weapons and parts in the solvent cleaning tank. (RAC3)

b. Post MSDS in the vehicle work bay for the solvent cleaning tank solution.

4. The technical point of contact is [Non-Responsive] of the Region Southeast Industrial Hygiene Office, at commercial 404-559-4174, or [Non-Responsive]@us.army.mil. For State follow up, contact MAJ [Non-Responsive] Occupational Health Manager at commercial 904-823-0470 or the Safety and Occupational Health Office.

[Non-Responsive]

SE Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: MAJ **Non-Responsive**, Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

Office of the Adjutant General, ATTN: CPT **Non-Responsive**, Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

LTC **Non-Responsive**, Deputy State Surgeon, Florida Army National Guard, 2305 State Road, St. Augustine, Florida 32086. (EXSUM only)

MAJ **Non-**, SSMO, Route 1, Box 478, Camp Blanding, Starke Florida 32091-9708 (EXSUM only)

LTC **Non-Responsive**, CFMO, 2305 SR 207, St. Augustine, FL 32086 ((EXSUM only)

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC

1108 East Dolphin Drive
Oak Island, NC 28465
Phone: 443-807-0848, Fax: 910-278-5186
nickenviron@att.net

April 29th, 2011

Mr. Non-Responsive
Region South Industrial Hygiene Office
510 Plaza Drive, Suite 1530
College Park, GA 30349

RE: Contract between Region South Industrial Hygiene Office
and Nichols Environmental Associates, Inc.
Industrial Hygiene Survey

Dear Mr. Non-Responsi

In accordance with the requirements of the above reference, Nichols Environmental Associates, Inc. (NEA) is pleased to submit this report.

This submittal incorporates the requirements of the Industrial Hygiene Contract and interview information collected. The survey and sampling were performed diligently and in accordance with industry regulations, guidelines, and good management standards. The information is complete and accurate to the best of our knowledge.

If you have any questions or comments regarding the report, please contact me.

Non-Responsive

Certified Hazard Control Manager (CHCM)
President

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6.0 METHODOLOGY		2
7.0 FINDINGS		3
7.1 Illumination Survey		3
7.2 Industrial Hygiene Lead Wipe Sampling		3
7.3 Vehicle Work Bay/MSDS & General Observations		4
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<u>APPENDIX A:</u>	Building Diagram, Summary of Illumination Measurements
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<u>APPENDIX B:</u>	Sample Placement Diagram, Chain of Custody Forms, Lab Sample Results & Sample Photographs
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<u>APPENDIX C:</u>	Occupant Health and Comfort Questionnaire, Facility Information Form, Health Hazard Information Module, Photographs & References
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NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC.

1.0 EXECUTIVE SUMMARY

Laboratory lead wipe sample results indicated lead concentrations were below the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft² or lower.

Weapons are cleaned using two Graymills Handi-Kleen™ solvent cleaning tanks. Provide employees rubber/nitrile gloves, face shield/safety glasses and aprons to be used when cleaning weapons and parts in the solvent tanks.

Post MSDS in the vehicle work bay for the solvent tank cleaning solution.

The maintenance bay has two vehicle exhaust extensions. The measured exhaust in the two vehicle exhaust extensions ranged from 188-239 cubic feet per minute (cfm). The overall exhaust system did not meet the guidelines of 400-1200 cfm for diesel engines and 1400-2200 cfm for turbocharged vehicles. If the work bay is ever reactivated, the vehicle exhaust ventilation system should be up-graded or replaced.

2.0 BACKGROUND

Nichols Environmental Associates, Inc. (NEA) was contracted by the National Guard Region South Industrial Hygiene Office to conduct an Industrial Hygiene Initial Baseline Survey of the Army National Guard Armory, Company C, 3rd Battalion, 20th Special Forces Group, Wauchula, Florida. The survey was conducted on April 19th, 2011 by Paul Nichols, Certified Hazard Control (CHCM).

Wauchula Army National Guard Armory is responsible for administration, readiness, and personnel support. The armory is used for drills on weekends. On weekends, personnel perform within their Military Occupational Specialty. HHC 3rd Battalion, 20th Special Forces Group headquarters, is in Starke, Florida.

The Wauchula Army National Guard Armory does not have an indoor firing range.

Reportedly, a weapons firing range existed in 1994 when the armory was built. The firing range was converted to a weapons vault and storage area approximately 8-10 years ago.

The baseline survey included conducting illumination studies, lead wipe samples, an evaluation of the vehicle exhaust extensions, Health Hazard Information Modules (HHIMs), Material Safety Data Sheets (MSDS), solvent cleaning tanks procedures, Facility Information Form (FIF) and Occupant Health and Comfort Questionnaires (OHCQ).

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC.

3.0 SITE DESCRIPTION

The Army National Guard Armory, Company C, 3rd Battalion, 20th Special Forces Group, is located in an approximately 16,000 square foot one story brick building, in a commercial area at 450 Rodeo Drive, Wauchula, Florida 33873. The armory was built in 1994. The armory contains the usual and customary offices, classrooms, drill hall, kitchen, storage, supply, and men/women latrines, etc. Additionally, the armory has a vehicle work bay that is currently inactive. There are currently three (3) full-time employees assigned.

4.0 SCOPE of WORK

The industrial hygiene (IH) survey conducted at the Wauchula Army National Guard Armory included conducting an illumination survey of the entire facility, lead wipe samples of the drill hall/vault, an evaluation of the vehicle exhaust extensions, Health Hazard Information Modules (HHIMs), Material Safety Data Sheets (MSDS), and solvent cleaning tanks procedures.

A review of the Facility Information Form (FIF) and Occupant Health and Comfort Questionnaire (OHCQ) which addresses questions or concerns of the employees, were also completed.

5.0 IH SURVEY PERSONNEL AND POINTS OF CONTACTS

Non-Responsive MS, Certified Hazard Control Manager (CHCM), Nichols Environmental Associates, Incorporated, was responsible for this survey. Wauchula points of contacts (POCs) and coordinators were MSG **Non-Responsive** (shop foreman) and MAJ **Non-Responsive** Occupational Health Specialist.

6.0 SURVEY METHODOLOGY

A walk-thru survey was conducted of the armory. Employees were interviewed, and the OHCQs/FIF were reviewed. Sampling and evaluation strategies were developed from information obtained from the POCs, OHCQs, FIF, and a walk-thru. Procedures and strategies were designed for the purpose of collecting lead wipe samples, and conducting a lighting survey. The POC was charged with providing NEA detailed information about the process and the flow of operations for each area. All tests and procedures were conducted in accordance with usual and customary, generally accepted, IH protocol.

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC.

7.0 FINDINGS

7.1 Illumination Survey

Illumination readings were obtained with an Extech Model 407026 Heavy Duty Light Meter, Serial # Z118558, with a National Institute of Standards and Technology (NIST) traceable calibration. Illumination readings were recorded in foot-candles (FCS) and the Extech light meter was programmed for the type of illumination present. Illumination readings were taken in offices, class rooms, drill hall, vault, kitchen, storage, supply, recreation room, vehicle bay and men/women latrines.

Illumination Parameters FCS

Office/ Admin = 70	Physical Fitness = 5	Vehicle Work/Bays = 50
Supply = 20	Vault = 20	Drill Hall = 50
Latrines = 20	Library = 70	Kitchen = 50

Two offices were below the recommended illumination levels (15 and 40 FCS). Other lighting levels through-out the facility met or exceeded the guidelines.

A building diagram and summary of illumination measurements and Army National Guard DG 415 Design Guide Lighting Standards are included in Appendix A.

7.2 Lead Wipe Sampling

Nine lead dust surface samples were collected from representative areas, in the drill hall and vault, using Environmental Express Ghost Wipes™ and 12 inch by 12 inch plastic template. The entire area was wiped using an "S" configured motion. The Ghost™ Wipe was then folded in half, and the area was again wiped in a direction 90° to the first using an "S" motion. The wipe was folded again and the perimeter of the area was wiped. The wipe was then placed into a plastic bag and sealed. In addition, a clean wipe was placed in a resealable plastic bag and submitted as a blank sample for analysis. The template was decontaminated after each sample with alcohol wipes. The samples were sent to Analytical Environmental Services, Inc., an American Industrial Hygiene Certified Laboratory, for chemical analysis. The samples were submitted using the Chain of Custody Procedure where they were individually processed and given a unique number.

A firing range which was a part of the original building plans (1994) is located on the rear wall of the drill hall (Diagram). The former firing range is currently a weapons vault and storage areas. Wipe samples were collected from the vault floor (diagram and photographs).

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC.

Laboratory lead wipe sample results indicated lead concentrations were below the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft² or lower for post cleaning indoor firing ranges.

A drill hall and vault sample placement diagram, Chain of Custody Forms, laboratory sample results, and photographs are included in Appendix B.

A table denoting sample locations, field numbers, and lead results is outlined below.

Lead Wipe Sample Locations, Field Numbers & Results

Sample Number	Sample Location	Results (µg/ft ²)
WAC-01	Drill Hall Floor	BRL
WAC-02	Drill Hall Floor	BRL
WAC-03	Drill Hall Floor	BRL
WAC-04	Drill Hall Floor	BRL
WAC-05	Drill Hall Floor	BRL
WAC-Blank	Drill Hall	BRL
WACV-06	Vault Floor	24
WACV-07	Vault Floor	27
WACV-08	Vault Floor	BRL
WAC-09	Vault Floor	27

BRL=Below Reportable Limits

7.3 Vehicle Work Bay/MSDS & General Observations

The armory's vehicle maintenance bay is inactive, and it is not used to maintain vehicles by armory personnel. Vehicles are maintained by the OMS in Plant City, Florida.

Reportedly, vehicle bay is used for storage and weapons cleaning (approximately three times a year). Weapons are cleaned using two Graymills Handi-Kleen™ solvent cleaning tanks (Photographs). Rubber/nitrile gloves, face shield/safety glasses and aprons should be used when cleaning weapons and parts in the solvent tanks. A MSDS was not available in the vehicle work bay for the solvent tank cleaning solution.

NEA

NICHOLS ENVIRONMENTAL ASSOCIATES, INC.

The maintenance bay has two vehicle exhaust extensions. The measured exhaust in the two vehicle exhaust extensions ranged from 188-239 cubic feet per minute (cfm). The overall exhaust system did not meet the guidelines of 400-1200 cfm for diesel engines and 1400-2200 cfm for turbocharged vehicles. If the work bay is ever reactivated, the vehicle exhaust ventilation system should be up-graded or replaced. Photographs are included in Appendix B.

8.0 OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE (OHCQ) & FACILITY INFORMATION FORM (FIF)

Five armory personnel responded to the OHCQ. Four mentioned problems associated with dust and mold in the building. The OHCQs and FIF forms are included in Appendix C.

9.0 HEALTH HAZARD INFORMATION MODULE (HHIM)

The HHIM Field Survey Forms were completed for operations surveyed. Controls/protective measures and potential health hazards for specific operations were identified. The HHIM Field Survey Forms are included in Appendix C.

10.0 PHOTOGRAPHS

Site photographs are included in Appendix C.

11.0 REFERENCES

A list of references used during the course of this survey is included in Appendix C.

12.0 LIMITATIONS

Variation of the work environment is an inherent part of sampling and evaluations. This report reflects conditions, operations, and practices observed and reported at the time of the survey. Changes in operating conditions, materials used, and work practices can alter the environment and the outcome of this type of survey.

13.0 RECOMMENDATIONS

Provided under separate cover.

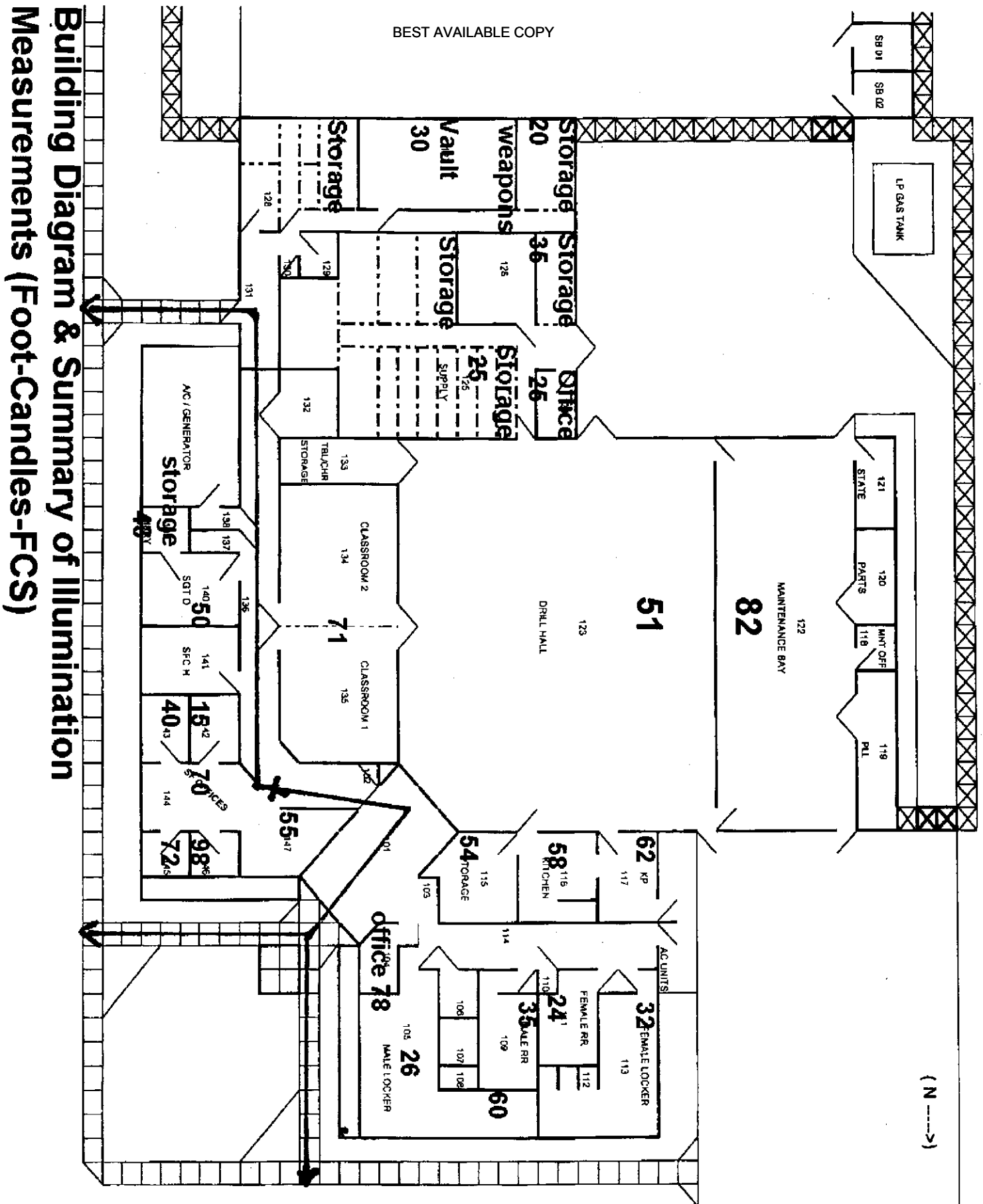


Table 8
DG 415-2 Lighting Standards

DG 415-2
01 MARCH 2005

Table 8. Electrical Requirements

	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
Office Areas				
1	General Supervisor	70 FC, FL	1 duplex per wall	1
2	Supervisor	70 FC, FL	1 duplex per wall	1
3	Production Controller	70 FC, FL	1 duplex per wall	1
4	Inspection and Library	70 FC, FL	1 duplex per 10 LF of wall	1
5	Automation Clerk	70 FC, FL	1 duplex per 10 LF of wall	1
6	Common IT Space	70 FC, FL	1 duplex per 10 LF of wall	2
7	IT Support Activities	70 FC, FL	1 duplex per 10 LF of wall	2
8	Classroom	70 FC, FL	1 duplex per 10 LF of wall	
Personnel Areas				
1	Toilet/Shower	40 FC, FL	1 duplex GFCI per 2 sinks	
2	Locker Room	40 FC, FL	1 duplex GFCI	
3	Break Area	30 FC, FL	1 duplex per 10 LF of wall	
4	Physical Fitness Area	50 FC, FL	1 duplex per 12 LF of wall	2
Work Areas				
1	Tool Room	50 FC, FL	1 duplex per 20 LF of wall	
2	Supply Room	30 FC, FL	1 duplex per 20 LF of wall	
3	Battery Room	30 FC, FL	explosion proof	4
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
5	Instrument Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
6	Small Arms Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
7	Small Arms Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
8	Vault (Small Arms)	20 FC, FL	1 duplex	
9	Vault (CBT Vehicle Arms)	20 FC, FL	1 duplex	
10	Injector Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
11	Fuel and Ignition Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
12	Bill Storage/Issue	20 FC, FL	1 duplex per 20 LF of wall	
13	Machine Shop	50 FC, FL	1 duplex per 10 LF of wall	2
14	Carpenter Shop	50 FC, FL	1 duplex per 10 LF of wall	2
15	Lumber Storage Shed	10 FC, FL	none	

Table 8
DG 415-2 Lighting Standards

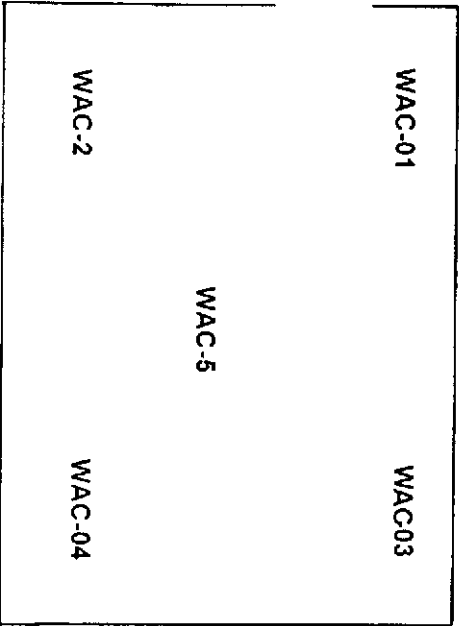
DG 415-2
01 MARCH 2005

Table 8. Electrical Requirements (Continued)

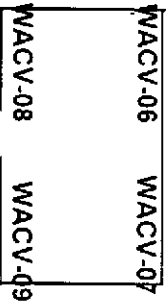
	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
16	Canvas Shop	50 FC, FL	1 duplex per 10 LF of wall	2
17	Missile Repair Shop	70 FC, FL	1 duplex per 10 LF of wall	2
18	Vault (Missile)	20 FC, FL	1 duplex	
19	Calibration Room	70 FC, FL	1 duplex per 2 LF of workbench	
20	Calibration Storage	20 FC, FL	1 duplex per 20 LF of wall	
21	Glass Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
22	Radiator Test & Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
23	COMSEC Repair Room	50 FC, FL	1 duplex per 10 LF of wall	2
24	Radiation Calibration Room	70 FC, FL	1 duplex per 2 LF of workbench	
25	Bulk POL Storage for Lubricating Systems	20 FC, FL	1 duplex	
26	Bulk POL Storage	20 FC, FL	1 duplex per 20 LF of wall	
27	Controlled Waste Handling	30 FC, FL	1 duplex per 20 LF of wall	
28	Bulky Equipment Storage	20 FC, FL	1 duplex per 20 LF of wall	
29	Flammable Materials Storage	20 FC, FL	1 duplex explosion proof	
30	Enclosed Unheated Storage	20 FC, FL	1 duplex per 20 LF of wall	
Workbenches				
1	General Purpose Workbench	50 FC, FL	1 duplex per 10 LF of wall	2
2	Warm-Up Bay	50 FC, FL	1 duplex per 10 LF of wall	2
3	Welding Shop	50 FC, FL	1 duplex per 10 LF of wall	2
4	Wash Bay	50 FC, FL	N/A	2
5	Paint Stripping Bay	50 FC, FL	1 duplex per 10 LF of wall	2
6	Paint Preparation Bay	50 FC, FL	1 duplex per 10 LF of wall	2
7	Paint Booth	50 FC, FL	1 duplex per 10 LF of wall	2
8	Lubrication Bay	50 FC, FL	1 duplex per 10 LF of wall	2
9	Engine/Transmission Test Cell	50 FC, FL	1 duplex per 10 LF of wall	2
10	Electronics Bay	50 FC, FL	1 duplex per 10 LF of wall	2
11	Body Shop	50 FC, FL	1 duplex per 10 LF of wall	2

Lead Sample Locations
(All Samples Collected From Floor)

Drill Hall



Vault





AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

April 28, 2011

Non-

Nichols Environmental Associates, Inc.
1108 East Dolphin Dr
Oak Island NC 28465

TEL: (443) 807-0848
FAX: (910) 278-5183

RE: Wachula Armory

Dear

Non-

Order No: 1104141

Analytical Environmental Services, Inc. received 10 samples on 4/22/2011 9:55:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Non-Responsive

Project Manager

Analytical Environmental Services, Inc

Date: 28-Apr-11

Lab Order: 1104141
 Client: Nichols Environmental Associates, Inc.
 Project: Wachula Armory
 Matrix: Wipe
 Date Received: 4/22/2011 9:55:00 AM

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1104141-001A	WAC-01	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-002A	WAC-02	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-003A	WAC-03	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-004A	WAC-04	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-005A	WAC-05	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-006A	WACV-06	24	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-007A	WACV-07	27	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-008A	WACV-08	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-009A	WACV-09	27	ug. Total	20	1		04/19/2011	04/25/2011	MP
1104141-010A	WAC-BLANK	BRL	ug. Total	20	1		04/19/2011	04/25/2011	MP

Qualifiers BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable

Analytical Environmental Services, Inc

Date: 28-Apr-11

Client: Nichols Environmental Associates, Inc.
Project: Wachula Army
Lab Order: 1104141

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1104141-001A	WAC-01	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-002A	WAC-02	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-003A	WAC-03	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-004A	WAC-04	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-005A	WAC-05	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-006A	WACV-06	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-007A	WACV-07	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-008A	WACV-08	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-009A	WACV-09	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011
1104141-010A	WAC-BLANK	4/19/2011 12:00:00AM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/2011

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ANALYTICAL ENVIRONMENTAL SERVICES INC.
 3785 Presidential Parkway, Atlanta, GA 30341-1704
 TEL: (770) 457-8177 • FAX: (770) 457-8188 • E-MAIL: info@aes.com

CHAIN OF CUSTODY

Date: 4/20/11 Page: 2 of 2

1104111

Nichols Environmental Associates 443-807-0848 Non-Responsive		1108 East Dolphin Drive Oak Island, NC 28465	
ANALYSIS REQUESTED LEAD		VISIT OUR WEBSITE www.aesatlanta.com To check on the status of your results, place bottle orders, etc.	
SAMPLE ID: WAC-01, WAC-02, WAC-03, WAC-04, WAC-05, WACU-06, WACU-07, WACU-08, WACU-09, WAC-BLANK			
DATE/TIME: 4/20/11 4:15 PM		DATE/TIME: 4/22/11 9:55 AM	
PROJECT NAME: Wachula Army		PROJECT ADDRESS: 450 Rodeo Drive, Wachula, FL	
SEND REMITTANCE TO: 610 Plaza Dr., Suite 1530, College Park, GA 30349		BILL TO: 610 Plaza Dr., Suite 1530, College Park, GA 30349	
RECEIPT: []		RECEIPT: []	

Analytical Environmental Services, Inc

Date: 28-Apr-11

Client: Nichols Environmental Associates, Inc.
Project: Wachula Armory
Lab ID: 1104141

Case Narrative

Metals Analysis by Method N7082:

LCSD-145430 recovery for lead was outside control limits biased low. Samples were not reprepared/reanalyzed due to insufficient sample volume.

Analytical Environmental Services, Inc.

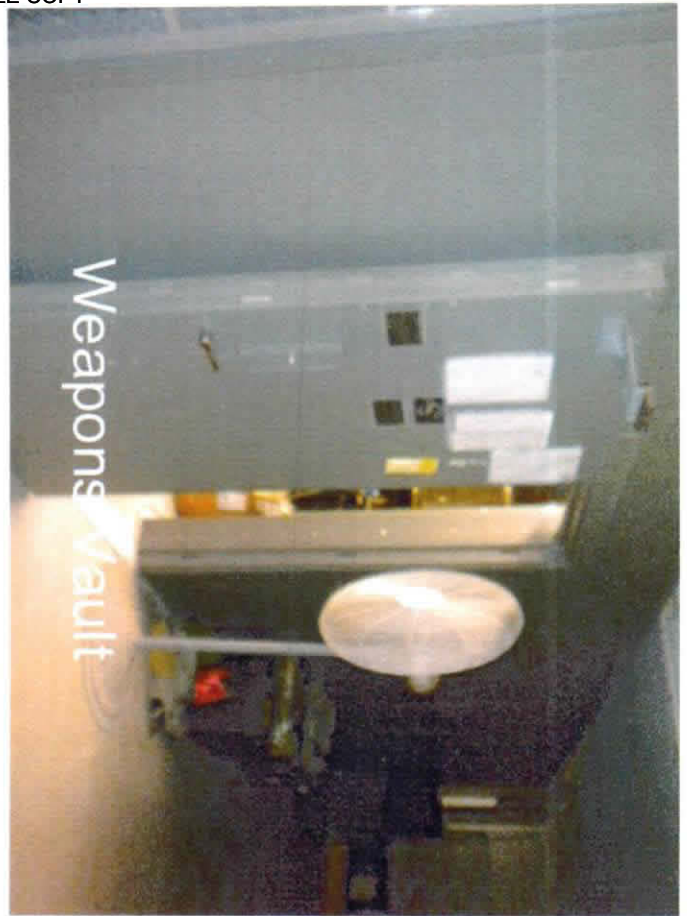
Sample/Cooler Receipt Checklist

Client Nichols Work Order Number 1104141Checklist completed by Non-Responsive Date 4-22-11Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C ± 2) * Yes ☒ No ☐Cooler # Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Sample Condition: Good ☒ Adjusted? ☐ Checked by ☐
Other(Explain) ☐(For diffusive samples or ALPHA lead) Is a known blank included? Yes ☒ No ☐

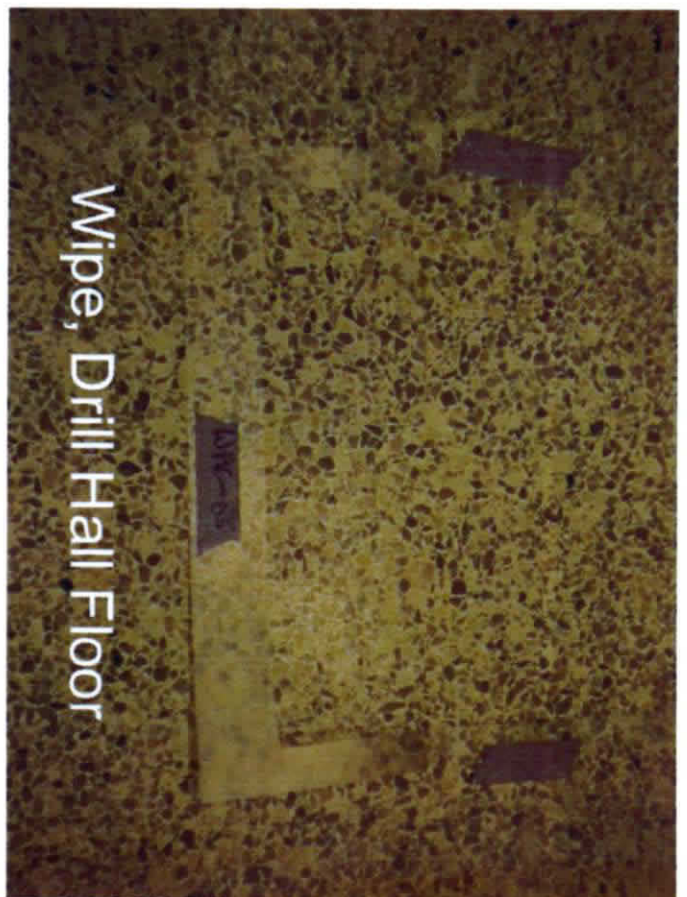
See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist



Weapons Vault



Wipe, Drill Hall Floor



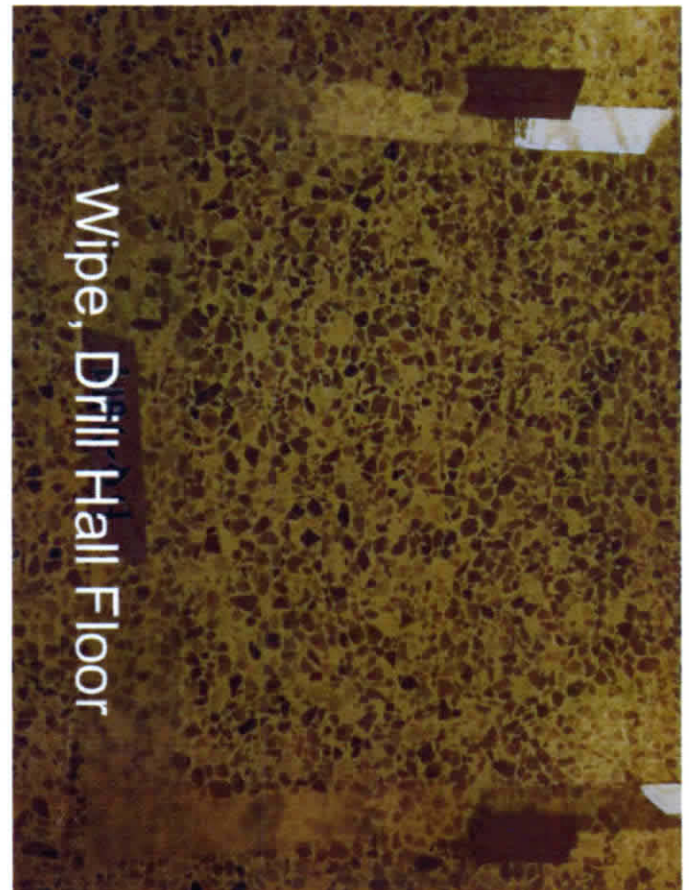
Wipe, Drill Hall Floor



Wipe, Drill Hall Floor



Wipe, Drill Hall Floor



Wipe, Drill Hall Floor



Drill Hall



Drill Hall



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Facility Information Form

State: FLORIDA Date Prepared: 12APR2011
 Facility Company/Battalion: Co.C 3rd Battalion 20th Special Forces Group
 Supervisor: MSG Non-
 Facility Address: 450 Rodeo Drive Wauchula, Florida
33873

Phone#: 863-773-0335 Fax#: 863-773-0256

Work Schedule (Days of the Week, Time of Open and Close) M-F 0730-1700

General Information	
Number of Maintenance Bays:	1
Number of Exhaust Extensions:	2
Total Number of Personnel:	5
Number of Maintenance Personnel:	1
Number of Administrative Personnel:	4
Approximate area of facility (ft ²)	15,345
Approximate Date of Construction	1994

Operations		
	Yes (if Yes, How Many Hours per Day on Average)	No
Firing Range (active inactive?)	inactive	
Aerosol Can Painting	0	No
Air Compressors (How many?)	0	No
Battery Charging Room or Battery Storage Room	0	No
Brake/Clutch Repair and/or Replacement	0	No
Calibration of Equipment	0	No
Grinding, buffing, polishing, sanding	0	No
Hazardous Materials/POL Handling	0	No
Electronics Repair	0	No
Pneumatic Tool Operation	0	No
Respirators (what kind?)	0	No
Refueling Vehicles		
Solvent Tank Use (How Many)	Yes, (2) one hour a day	
Spray Paint Booth	0	No
Weapons Repair	0	No
Weapons Storage	Yes, 24	
Soldering	0	No
Supply/Warehouse	Yes, 24	
Testing and Tuning of Engines	0	No
Welding (List Types)	0	No
Other Noise sources	0	No

Please write below any special concerns that you would like to have addressed during the survey:

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE**Indoor Air Quality Survey (NO NAMES)**

Date: 4/20/11

1. Location of Facility

Wauchope, FL, 33873

2. Area or room where you spend the most time in the building:

Supply

3. Gender:

Male

Female

Age:

Under 25

25-34

35-44

45-54

55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No

No

No

No

No

No

No

No

No

5. Do any of your work activities produce dust or odor?

Yes

No

Describe: Inventory, cleaning and maintenance of Equip

6. Office characteristics:

Number of persons sharing same room/work area 1 Number of windows in room/work area 10

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor

Average

Excellent

1

2

3

4

5

Please rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

7. How many years or months have you worked:

In this room/area? 3 In this building? 38. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation). When do these symptoms occur? NONEHave you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear?

N/A

9. In your opinion, what is the cause of perceived indoor air quality problems?

dust and mold

Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date:

1. Location of Facility

Waukegan, FL

2. Area or room where you spend the most time in the building:

Front Office

3. Gender:

Male

Female

Age:

Under 25

25-34

35-44

45-54

55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No
Yes	X	No

5. Do any of your work activities produce dust or odor?

Describe:

Yes

No

6. Office characteristics:

Number of persons sharing same room/work area *0/2* Number of windows in room/work area _____

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor 1 Average 2 3 *4* Excellent 5

Please rate room temperature:

Poor 1 Average 2 3 *4* Excellent 5

7. How many years or months have you worked:

In this room/area *2 yrs* In this building? *2 yrs*

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

N/A

Have you seen a doctor for any or all of these symptoms? Yes *No*

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear?

N/A

9. In your opinion, what is the cause of perceived indoor air quality problems?

Dust, or mold in the walls or ceiling.

Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date: 4/20/11

1. Location of Facility

Dade County, FL

2. Area or room where you spend the most time in the building:

Office

3. Gender:

Male

Female

Age:

Under 25

25-34

35-44

45-54

55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

5. Do any of your work activities produce dust or odor?

Describe:

Yes

No

6. Office characteristics:

Number of persons sharing same room/work area

Number of windows in room/work area

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor

Average

Excellent

1

2

3

4

5

Please rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

7. How many years or months have you worked:

In this room/area? 5 In this building? 5

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation). When do these symptoms occur?

None

Have you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear?

N/A

9. In your opinion, what is the cause of perceived indoor air quality problems?

dust and HVAC system

Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date: 4/20/11

1. Location of Facility Wanchula, FL

2. Area or room where you spend the most time in the building: Supply, Vault

3. Gender: Male Female
Age: Under 25 28-34 35-44 45-54 55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes

5. Do any of your work activities produce dust or odor?

Yes

No

Describe:

6. Office characteristics:

Number of persons sharing same room/work area 2 Number of windows in room/work area 0

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor 1 2 Average 3 4 Excellent 5

Please rate room temperature:

Poor 1 Average 2 3 4 Excellent 5

7. How many years or months have you worked:

In this room/area? 2 months In this building? 2 months

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

Have you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?
When do symptoms disappear? N/A

9. In your opinion, what is the cause of perceived indoor air quality problems?

Lack of maintenance of A/C, dust and mold.

Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE**Indoor Air Quality Survey (NO NAMES)**

Date: 4/20/11

1. Location of Facility

WAUCHULA, FL. 33873

2. Area or room where you spend the most time in the building:

143

3. Gender:

Male

Female

Age:

Under 25

25-34

35-44

45-54

55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

NoNoNoNoNoNoNoNoNo

5. Do any of your work activities produce dust or odor?

Yes

No

Describe: cleaning, training etc.

6. Office characteristics:

Number of persons sharing same room/work area 2Number of windows in room/work area 1

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor

Average

Excellent

1

2

3

4

5

Please rate room temperature:

Poor

Average

Excellent

1

2

3

4

5

7. How many years or months have you worked:

In this room/area? 2 In this building? 2

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vacation.). When do these symptoms occur?

NONEHave you seen a doctor for any or all of these symptoms? Yes No

If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?

When do symptoms disappear?

NONE

9. In your opinion, what is the cause of perceived indoor air quality problems?

lack of disinfecting or cleaning.

Thank you very much for your cooperation.

FULL FACE SHIELD	X/X	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNESS	/		/

1 SECTION 4 HAZARD INVENTORY DATA

CAS CODE	HAZARD DESCRIPTION	PAC	EPC
		3	A
PONQISECO	Noise Continuous	2	A
POLIFTING	Heavy Lifting	2	A
POEYEHAZARD	Eve Hazard	3	A
POFOOTHAZARD	Foot Hazard	2	A
7440-31-3	Tin	3	A
1439-92-1	Lead	3	A

1 SECTIONS: PERSONNEL DATA

LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		
			M		
			M		

SECTIONS: COMMENTS

1. Firing range converted to weapons vault & Storage..

ARLOC 22000

INSTALLATION: National Guard Amory, Company C, 3rd Battalion,
20th Special Forces Group, 450 Rodeo Drive, Wauchula,
Florida 33873

LOCATION/CODE		OPERATION/Administration/ADO	
SURVEY DATE: 19/04/11 Evaluator: Non- CHCM			
WACOM/CODE National Guard Bureau/NG		SUBMACOM/CODE FL ARNG	
TELEPHONE (863)773-0335		SUPERVISOR MSG Non-	
UNIT/ORGANIZATION		RAC	
		4	
FREQUENCY (hrs/day)		HRS/DAY	
8 hours/per day			
NO. CIV(S)	NO. MIL	NO. CONTRACTORS	NO. LOC(S)
0	5	0	0
NO. OTHER			
0			

SECTION 2 FACILITY DATA

GENERAL OFFICE AREA	VAPOR DEGREASERS	SPRAY BOOTHS
	0	0
MAINTENANCE BAYS	OPEN SURFACE TANKS	VENTILATION UNITS
Inactive	0	HVAC

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
Central Heating & Ventilation & Air Conditioning (HVAC) System.			New filters & maintenance.	
Fluorescent Lights in Office.	15-82 FCS	FCS	50-75 FCS	Meet Requirement except 2 Offices.
Video Display Terminal	Admin & Staff Use Computers		Adequate Light	

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
HEMICAL SPLASH	/	CANAL CAPS	/	JAPRONS	/	(COLD WEATHER BOOTS/HATS	

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FULL FACE SHIELD	/	EARPLUGS	/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNESS	/		/

1 SECTION 4: HAZARD INVENTORY DATA			
CAS CODE	HAZARD DESCRIPTION	PAC	EPC
POVDTXXXX	Video Display Terminal	2	F
POEYHAZARD	Eye Hazard	3	
POSTRESSx	Physical Stress	2	F

1 SECTIONS: PERSONNEL DATA					
LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		
			M		
			M		

1. The lighting is very good in offices and shop.

ARLOC 22000

INSTALLATION: National Guard Armory, Company C, 3rd Battalion,
20th Special Forces Group, 450 Rodeo Drive, Wauchula,
Florida 33873

LOCATION/CODE	OPERATION/Auto Maintenance/SPC
---------------	--------------------------------

SURVEY DATE: 19/04/11	Evaluator: Non- [REDACTED] CHCM
-----------------------	---------------------------------

WACOM/CODE National Guard Bureau/NG	SUBMACOM/CODE FL ARNG	SUPERVISOR MSG Non- [REDACTED]
--	--------------------------	-----------------------------------

TELEPHONE (863)773-0335	UNIT/ORGANIZATION 3	RAC	FREQUENCY (hrs/day) HRS/DAY 3-4 times per year
----------------------------	------------------------	-----	--

NO. CIV(S) 0	NO. MIL 5	NO. CONTRACTORS 0	NO. LOC(S) 0	NO. OTHER 0
-----------------	--------------	----------------------	-----------------	----------------

SECTION 2 : FACILITY DATA				
---------------------------	--	--	--	--

GENERAL OFFICE AREA	VAPOR DEGREASERS 2 Solvent Cleaning Tanks	SPRAY BOOTHS 0
---------------------	--	-------------------

MAINTENANCE BAYS One/inactive	OPEN SURFACE TANKS 0	VENTILATION UNITS 2 exh extensions
----------------------------------	-------------------------	---------------------------------------

SECTION 3: SURVEY DATA				
------------------------	--	--	--	--

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
General Ventilation	No gloves, apron, Safety glasses		Gloves, apron, Safety glasses	

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
HEMICAL SPLASH	/	CANAL CAPS	/	JAPRONS	/	COLD WEATHER BOOTS/HATS	/

FULL FACE SHIELD	0	EarPLUGS	/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
		MFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNES	/		/

SECTION 4. HAZARD INVENTORY DATA			
CAS CODE	HAZARD DESCRIPTION	PAC	EPC
8052-41-3	Handi-Kleen™ solvent cleaning tank	0	A
COGASENEX	Gasoline EXh Products	0	Q
CODIESELE	Diesel Fuel	3	A
PONOISECO	Noise Continuous	2	D
POLIFTING	Heavy Lifting	2	A
POEYEHAZARD	Eye Hazard	3	A
POEOOTHAZARD	Foot Hazard	2	0

SECTIONS: PERSONNEL DATA

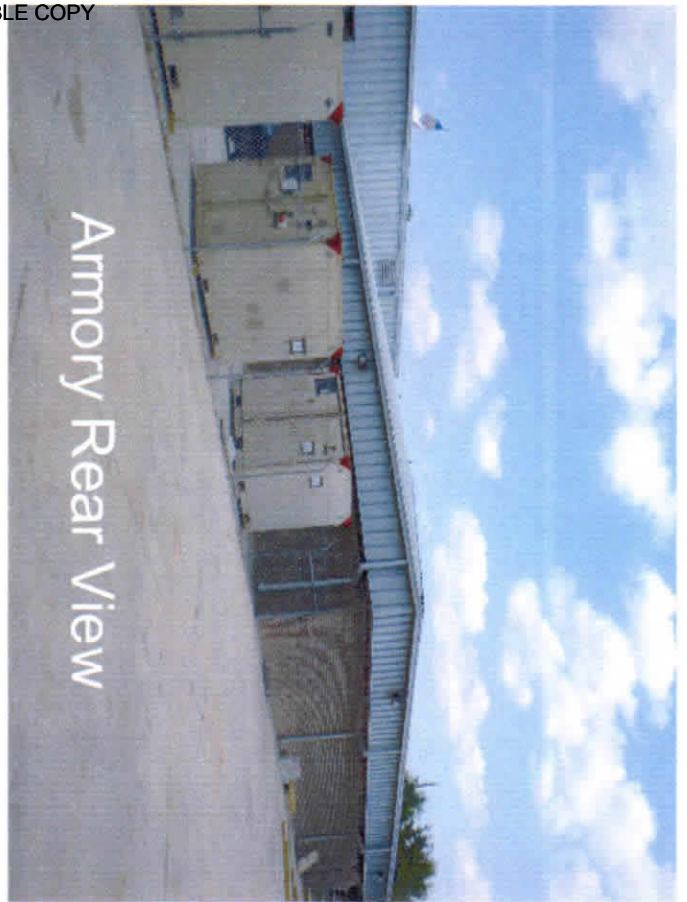
LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Non-Responsive	Non-Responsive		M	Non-Responsive	
			M		
			M		
			M		
			M		

SECTIONS: COMMENTS

No gloves, safety glasses or apron were available.



Wachula Armory



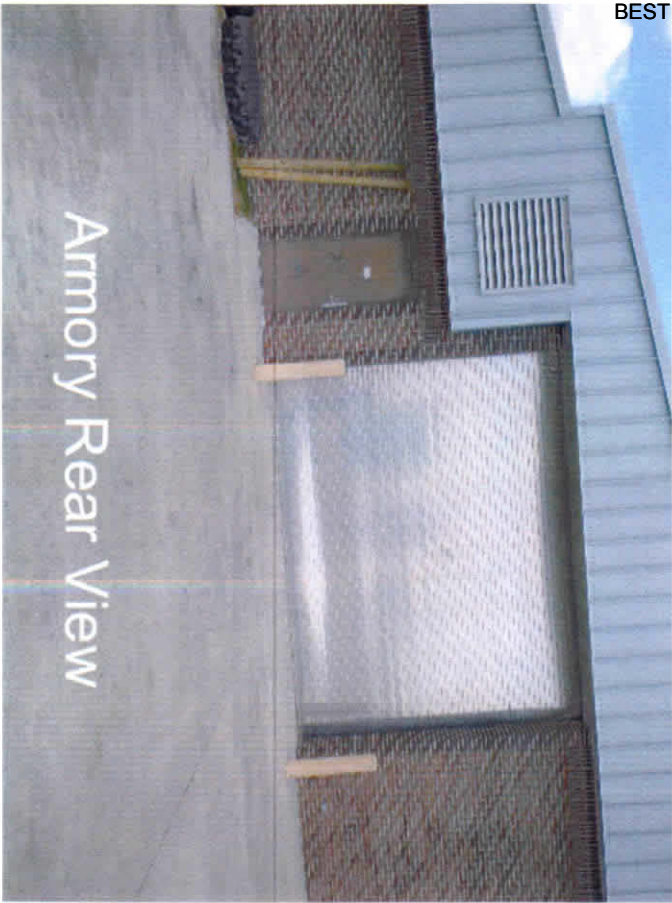
Armory Rear View



Wachula Armory



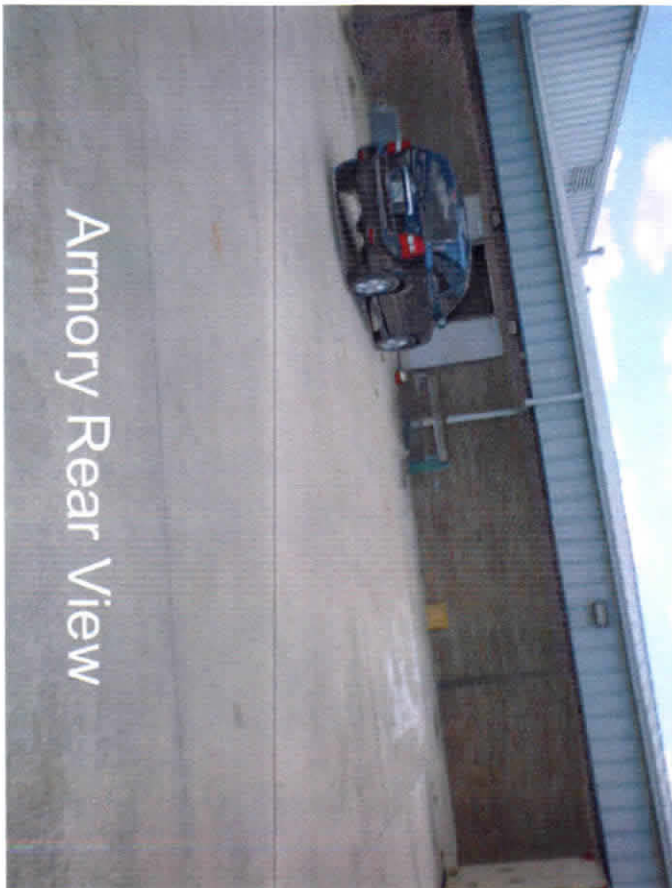
Wachula Armory



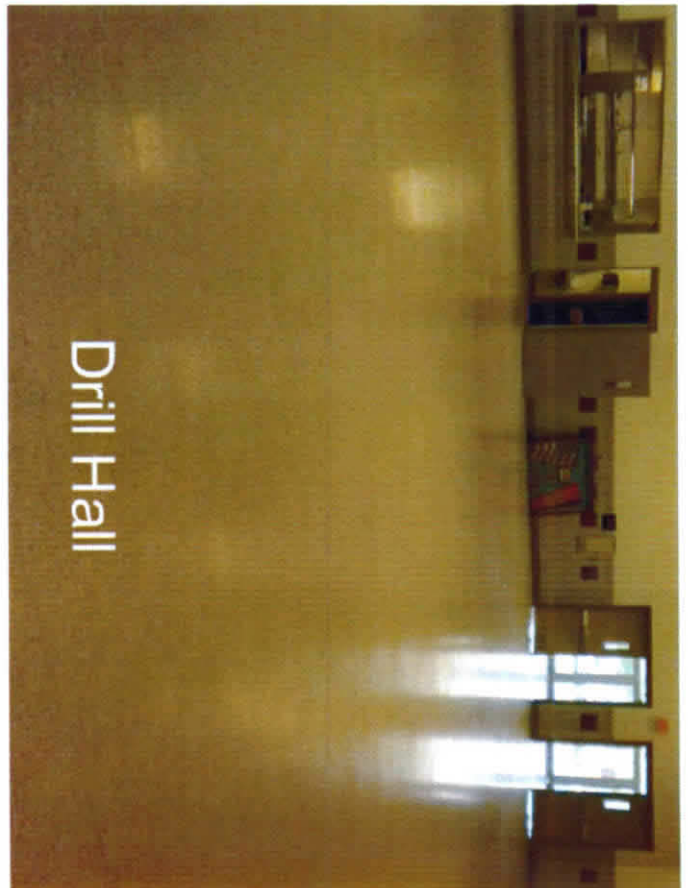
Armory Rear View



Drill Hall



Armory Rear View



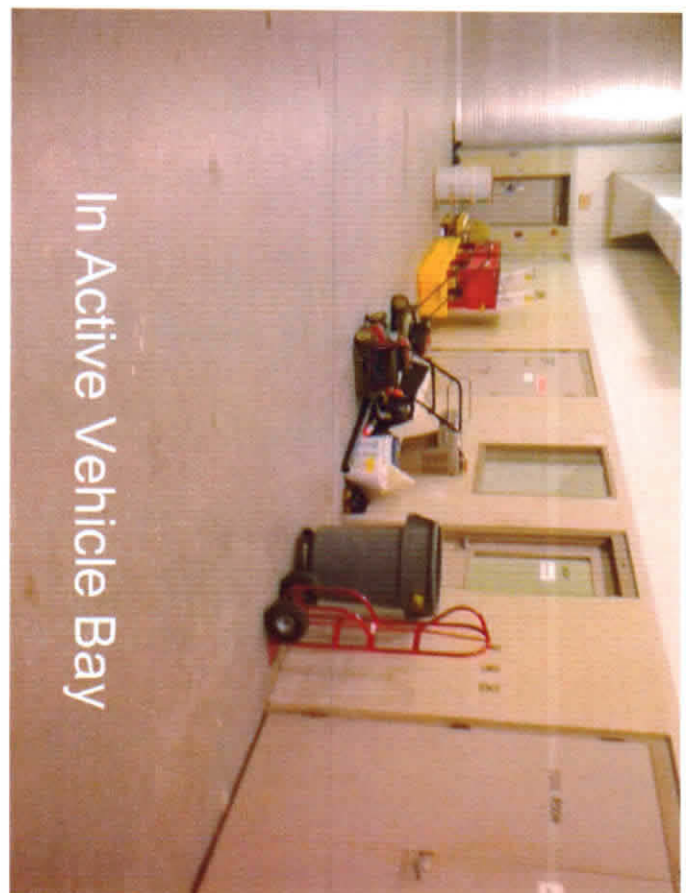
Drill Hall



Former Vehicle Bay/Storage



Solvent Tanks/Weapons Cleaning



In Active Vehicle Bay



Inactive Work Bay Exhaust

REFERENCES

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- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 22 July 2005.
- c. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, October 1988.
- d. AR 385-10, The Army Safety Program, 29 February 2000.
- e. National Guard Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges, 3 November 2006.
- f. NGR 385-15, Policy and Responsibilities, Evaluation and Operation of Army National Guard Indoor Firing Ranges, 3 November 2006.
- g. DA PAM 40-503, The Army Industrial Hygiene Program, 30 October 2000.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. Title 29, Code of Federal Regulations (CFR), 2001 rev., part 1910, Occupational Safety and Health Standards.

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

NGB-AVN-SI

April 23, 2004

MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC [Non-Responsive]
[Non-Responsive] Readiness NCO, 450 Rodeo Drive, Wauchula, Florida 33875.

SUBJECT: Industrial Hygiene Survey of the Wauchula National Guard Armory, Wauchula, Florida.

1. References.

[Non-Responsive] Report submitted 16 April 2004, Industrial Hygiene Survey, Wauchula Armory,

b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1988.

c. AR 40-5, Preventive Medicine, October 1990.

d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.

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

f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.

g. TB MED 530, The Army Industrial Hygiene Program.

h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.

i. Industrial Ventilation, 21st ed, 1992, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of the Florida State Safety and Occupational Health Office and the Region South Industrial Hygiene Office a service contract was put together to conduct Industrial Hygiene surveys at the Florida National Guard Armories.

b. Mr. [Non-Responsive] conducted this survey.

3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)

**NATIONAL GUARD REGION SOUTH
INDUSTRIAL HYGIENE OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349**

4. Recommendations.

a. Follow all recommendations made in reference 1. a., requesting industrial hygiene (IH) services where needed to complete the recommendations.

b. Insure that the Commander of the Armory surveyed and anyone else who has a need to see this report get a copy.

c. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the contract visit, especially if this will help eliminate health hazards and reduce medical surveillance cost.

d. To ensure that the Armory Commander execute their responsibilities in correcting all deficiencies and meeting all standards, have them coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174/ **No**

Non-Responsive

Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC **Non-Responsive** Florida State Safety and Occupational Health Office, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

**FLORIDA ARMY
NATIONAL GUARD**



**WACHULA ARMORY
450 RODEO DRIVE
WACHULA, FLORIDA 33873**

Industrial Hygiene Baseline Report
For
Florida Army National Guard
(FLARNG)

At
Wachula Armory
450 Rodeo Drive
Wachula, FL 33873

Prepared for:
Department of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
Airport Plaza Suite 1530
510 Plaza Drive
College Park, GA 30349

By

Non-Responsive

dba HINCHCO

9 April 2004

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Methodology

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Ergonomics.....Page 5
Personal Protection Equipment.....Page 5
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Appendices

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B. Laboratory Chain of Custody
C. Laboratory Analytical Results
D. Illumination Diagram
E. Occupant Health and Comfort Questionnaire(s)
F. Armory Floor Plan and Photographs
G. Armory Worksheet

Executive Summary

An initial baseline Industrial Hygiene survey was conducted at the Wachula Armory on 25 March 2004 as part of the Florida Army National Guard Occupational Health Program to identify potential health hazards within the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples(if any), an illumination survey, evaluation of the HVAC system as it relates to indoor air quality, ergonomics, personal protection equipment, and completion of the Occupant Health and Comfort Questionnaire.

The following table summarizes the survey findings and recommendations for each topic surveyed:

TOPIC	Summary of Findings	Recommendations
Lead Wipe Samples	Undetected to 18.9 micrograms per square foot	See discussion under Lead Wipe Samples
Asbestos Bulk Samples	None Detected	No Action
Noise Survey	No Sources identified. Noise Levels well below 85 dBa limit	No Action
Illumination Survey	2 to 90 foot-candles	Consider increasing light levels as discussed in Illumination Survey
HVAC/IAQ	No issues observed	No Action
Ergonomics	No issues	Consider class on exercise/posture for individuals spending a great deal of time on computers
PPE	No issues	No Action
Questionnaire	No issues	No Action

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Wachula Armory in Wachula, Florida on 25 March 2004

BACKGROUND:

Introduction. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was conducted at the Wachula Armory in Wachula, Florida. SSG [Non-Responsive] Industrial Hygiene Technician for the Florida Army National Guard and [Non-Responsive] dba HINCHCO, conducted the survey on 25 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to evaluate potential health hazards within the armory.

Site Description. The facility houses ORDET 3116 MLRS. There are two (2) full time employees. Total M-Day soldiers drilling at the facility is 20. The armory was built in 1995 and contains 26,408 square feet. The armory is a typical building of this era with an indoor firing range. The indoor firing range has never been fired on. The bullet trap and backstop are still present. A Special forces unit will be moving into the armory in the near future and an additional arms vault is being constructed for them in the indoor firing range.

Scope of Work. The work included collecting wipe samples for lead, illumination levels, evaluating the HVAC system in regard to IAQ characteristics, and reviewing the Occupant Health and Comfort Questionnaire. Personal Protective Equipment, Ergonomics, and noise levels were also addressed. There were no areas within the armory that had signs of asbestos in solid state or friable. Therefore, no bulk samples were taken.

Methodology. Lead wipe samples were collected from surfaces that showed possible signs of lead contamination in armories that have a renovated, inactive, or closed indoor firing range. The samples were collected in accordance with instructions published by Region South National Guard Bureau. Wipe samples were taken with a 15cm x 15cm "Ghost Wipe" (meets ASTM E 1792), with an expiration date on Lot# of November 2006. A 12" x 12" template was utilized for all sample extractions.

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination readings were taken with an Exttech Model 407026 Heavy Duty Light Meter, Serial #L631426, Calibration Date 23 December 2003. Illumination readings were taken on work surfaces and approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Karen Hemingway PH# 863-773-3555.

Lead Wipe Samples: Sixteen (16) wipe samples were taken from the indoor firing range and throughout the armory as depicted below:

SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
04-00W	FIELD BLANK	UNDETECTED
04-01W	IFR BEHIND PLENUM	16.9
04-02W	IFR PLENUM WALL	9.56
04-03W	IFR MIDDLE OF RANGE FLOOR	14.3
04-04W	IFR IN FRONT OF BULLET TRAP	18.9
04-05W	IFR ON BULLET BACKSTOP	UNDETECTED
04-06W	KITCHEN, TOP OF ICEMAKER	6.11
04-07W	KITCHEN, UPPER SHELF	UNDETECTED
04-08W	DRILL FLOOR, NORTHEAST CORNER	UNDETECTED
04-09W	DRILL FLOOR, NORTHWEST CORNER	UNDETECTED
04-10W	DRILL FLOOR, CENTER	UNDETECTED
04-11W	DRILL FLOOR, SOUTHEAST CORNER	5.75
04-12W	DRILL FLOOR, SOUTHWEST CORNER	UNDETECTED
04-13W	SUPPLY ROOM, AT DOOR	UNDETECTED
04-14W	SUPPLY ROOM, MIDDLE OF FLOOR	9.59
04-15W	ARMS VAULT AT DOOR, ON FLOOR	6.75
04-16W	ARMS VAULT MIDDLE OF FLOOR	12.8

The US Environmental Protection Agency (EPA), under the new standard issued in 2000, considers lead dust a hazard if levels are greater than 40 micrograms of lead dust per square foot on floors, 250 micrograms of lead dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The chain of custody and laboratory report forms are located in Appendices B and C.

The indoor firing range(converted to a supply room, with the construction of an additional arms vault in progress), shows traces of lead dust. The of 9.56 to 18.9 milligrams per square foot is well under the not to exceed 200 milligrams per square foot level. The other areas within the armory that show traces of lead dust are also well below the standard. At the present time, recommend no action. However, if weapons are cleaned in the supply room, arms vault, or on the drill floor, recommend protecting the floor against lead dust accumulation.

Asbestos Suspect Building Material There were no signs of asbestos in the Wachula Armory. All materials utilized for insulation were properly covered, ceiling tiles were the newer non-asbestos material, and no signs of any friability was encountered.

Illumination Survey Lighting levels throughout the Ocala armory ranged from 2 foot-candles to 90 foot-candles. Specific readings were as follows:

<u>AREA</u>	<u>READING IN FOOT-CANDLES</u>
Drill Floor	20 to 34
Indoor Firing Range (Supply)	2 to 48
Office Areas	34 to 70
Classrooms	35 to 67
Mechanical Rooms	50 to 90
Kitchen	36 to 48

There are several areas within the Wachula Armory that does not meet the standard illumination requirements as per Design Guide 415-2, Table 3.1.1. There is an illumination requirement of 50 foot-candles for office areas and 20 foot-candles for supply/storage areas. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work and 20 to 50 foot-candles for general lighting. Replacing light fixtures/bulbs with higher wattage output will aid and assist with higher illumination. Replacing burned out lights and cleaning light fixtures will also increase illumination.

Noise Survey The Wachula Armory, like practically all other armories visited, is very quiet. There were no areas or equipment within the armory that would produce noise levels above 70 to 75 dBa. Therefore, a DD Form 2214 will not be accompanying this report.

Heating, Ventilation, and Air Conditioning (HVAC) The armory is heated with forced air heating and cooling air handling units. As per interviews and the Occupant Health Comfort Questionnaire, there were no noticeable problems with the indoor air quality. The HVAC equipment appears to be in excellent condition and functions properly.

Ergonomics There were no ergonomic related injuries or concerns expressed by the full time employees at the Wachula Armory. However, employees that spend the majority of their work day at a computer work station, should be presented with an "at station" exercise program to relieve muscle, joint, and eye strain. The State Occupational Health Nurse can provide this training.

Personal Protection Equipment The duties assigned within the armory environment does not require the wearing of personal protective equipment. However, when performing in drill status, head, ear, and eye protection is required. These items of personal protective equipment are issued to the soldiers and readily available.

Recommendations

1. Prepare a work order for repair of the roof. There are several areas within the Wachula armory where water is damaging the ceiling tiles and walls. One area, as depicted in the photograph section has caused the electrical fixture to come lose from the ceiling. This should be corrected ASAP. SFC Hemingway can point out all of these areas of concern.
2. Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
3. Consider increasing the illumination levels on the drill floor, recruiter's office, and the indoor firing range.

Technical Assistance: For technical assistance regarding information contained in the report or the survey results contact Mr. **Non-Responsive** Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 23rd Edition, 1998
- American National Standards Institute (ANSI), Illuminating Engineering Society (IES), Industrial Lighting, 1991
- Army Regulation (AR) 40-5, Preventive Medicine, 15 October, 1990
- Army Regulation (AR) 385-10, The Army Safety Program, 29 February 2000
- National Safety Council, Fundamentals of Industrial Hygiene, 4th Edition, 1996
- NGR 385-10, Army National Guard Safety Program, 20 December 1989
- DA PAM 40-501, Hearing Conservation, 27 August 1991
- Design Guide 414-2 (DG 414-2), Table 3.1.1, Interior Finishes and Lighting Criteria-Surface Maintenance Facilities
- 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, November 1997
- Title 29, Code of Federal Regulations (CFR), 1999 Revision, part 1910, Occupational Safety and Health Standards

APPENDIX B

**LABORATORY
CHAIN OF CUSTODY**

1210 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com



Special Instructions:

All samples taken with 12" x 12" template

12110 Capital Airport Drive • Springfield, IL 62707-8490 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairieanalytical.com

[illegible]

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Wachula Armory

Lab Order: 0403184

Lab ID: 0403184-001 Collection Date: 3/24/2004 12:44:00 PM

Client Sample ID: 04-00W (blank) Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 11:16:00 AM

Lab ID: 0403184-002 Collection Date: 3/24/2004 12:55:00 PM

Client Sample ID: 04-01W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	16.9	5.00		µg/ft²	10	4/3/2004 11:24:00 AM

Lab ID: 0403184-003 Collection Date: 3/24/2004 12:57:00 PM

Client Sample ID: 04-02W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	9.56	5.00		µg/ft²	10	4/3/2004 11:31:00 AM

Lab ID: 0403184-004 Collection Date: 3/24/2004 1:00:00 PM

Client Sample ID: 04-03W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	14.3	5.00		µg/ft²	10	4/3/2004 11:39:00 AM

Lab ID: 0403184-005 Collection Date: 3/24/2004 1:05:00 PM

Client Sample ID: 04-04W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	18.9	5.00		µg/ft²	10	4/3/2004 12:08:00 PM

Lab ID: 0403184-006 Collection Date: 3/24/2004 1:07:00 PM

Client Sample ID: 04-05W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082	(N7082)			Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:16:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** / Hinchco
 Project: Wachula Armory

Lab Order: 0403184

Lab ID: 0403184-007 Collection Date: 3/24/2004 1:20:00 PM

Client Sample ID: 04-06W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	6.11	5.00		µg/ft²	10	4/3/2004 12:24:00 PM

Lab ID: 0403184-008 Collection Date: 3/24/2004 1:22:00 PM

Client Sample ID: 04-07W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:31:00 PM

Lab ID: 0403184-009 Collection Date: 3/24/2004 1:45:00 PM

Client Sample ID: 04-08W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:39:00 PM

Lab ID: 0403184-010 Collection Date: 3/24/2004 1:47:00 PM

Client Sample ID: 04-09W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:46:00 PM

Lab ID: 0403184-011 Collection Date: 3/24/2004 1:49:00 PM

Client Sample ID: 04-10W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	U	5.00		µg/ft²	10	4/3/2004 12:54:00 PM

Lab ID: 0403184-012 Collection Date: 3/24/2004 1:51:00 PM

Client Sample ID: 04-11W Matrix: WIPE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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METALS ANALYSIS		N7082		(N7082)		Analyst: MCL
Lead	5.75	5.00		µg/ft²	10	4/3/2004 1:01:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: **Non-Responsive** Hinchco
 Project: Wachula Armory

Lab Order: 0403184

Lab ID: 0403184-013 Collection Date: 3/24/2004 1:53:00 PM
 Client Sample ID: 04-12W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 1:09:00 PM

Lab ID: 0403184-014 Collection Date: 3/24/2004 1:58:00 PM
 Client Sample ID: 04-13W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead U 5.00 µg/ft² 10 4/3/2004 2:23:00 PM

Lab ID: 0403184-015 Collection Date: 3/24/2004 2:00:00 PM
 Client Sample ID: 04-14W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 9.59 5.00 µg/ft² 10 4/3/2004 2:30:00 PM

Lab ID: 0403184-016 Collection Date: 3/24/2004 2:05:00 PM
 Client Sample ID: 04-15W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 6.75 5.00 µg/ft² 10 4/3/2004 2:38:00 PM

Lab ID: 0403184-017 Collection Date: 3/24/2004 2:07:00 PM
 Client Sample ID: 04-16W Matrix: WIPE
 Analyses Result Limit Qual Units DF Date Analyzed
 METALS ANALYSIS N7082 (N7082) Analyst: MCL
 Lead 12.8 5.00 µg/ft² 10 4/3/2004 2:45:00 PM

PRELIMINARY

Prairie Analytical Systems, Inc.

Qualifiers:

- B - Analyte detected in the associated method blank.
- E - Value above quantitation range.
- H - Analysis performed past holding time.
- HT - Sample received past holding time.
- J - Analyte detected between RL and MDL.
- R - RPD outside acceptance limits.
- S - Spike recovery outside acceptance limits.
- U - Analyte not detected (i.e. less than RL or MDL).

PRELIMINARY

APPENDIX D

ILLUMINATION SURVEY DIAGRAM



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: CRD Det 311644 (MILRS)

2. Area or rooms where you spend the most time in the building:

OFFICE Area, Motor Pool3. Does any of your work activities produce dust or odor?
Describe:☒ YES ☐ NOMotor Pool Veh. maint. Exhaust.4. Gender: Male ☐ Female ☒Age: Under 25 25-34 ☒ 35-44 45-54 55 and over

5. Do you:

Smoke	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have fever/pollen allergies	<input checked="" type="radio"/> Y	<input type="radio"/> N
Have skin allergies/dermatitis	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have a cold/flu	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have sinus problems	<input type="radio"/> Y	<input checked="" type="radio"/> N
Have other allergies	<input checked="" type="radio"/> Y	<input type="radio"/> N
Wear contact lenses	<input type="radio"/> Y	<input checked="" type="radio"/> N
Operate video display terminals (computers)	<input checked="" type="radio"/> Y	<input type="radio"/> N
Operate photocopiers 10% of the time	<input checked="" type="radio"/> Y	<input type="radio"/> N
Use other office machines	<input checked="" type="radio"/> Y	<input type="radio"/> N

Specify:

Currently take any medications?

☐ Y ☒ N

Reason:

6. Office Characteristics:

1 Number of persons sharing same room/work area2 Number of windows in room/work area

Do windows open?

☒ Y ☐ N

Rate adequacy of work space per person:

Poor		Average		Excellent
1	2	3	<input checked="" type="radio"/> 4	5

Rate room temperature:

Poor		Average		Excellent
1	2	3	<input checked="" type="radio"/> 4	5

Are there smokers in your area?

☐ Y ☒ N

7. How long have you worked:

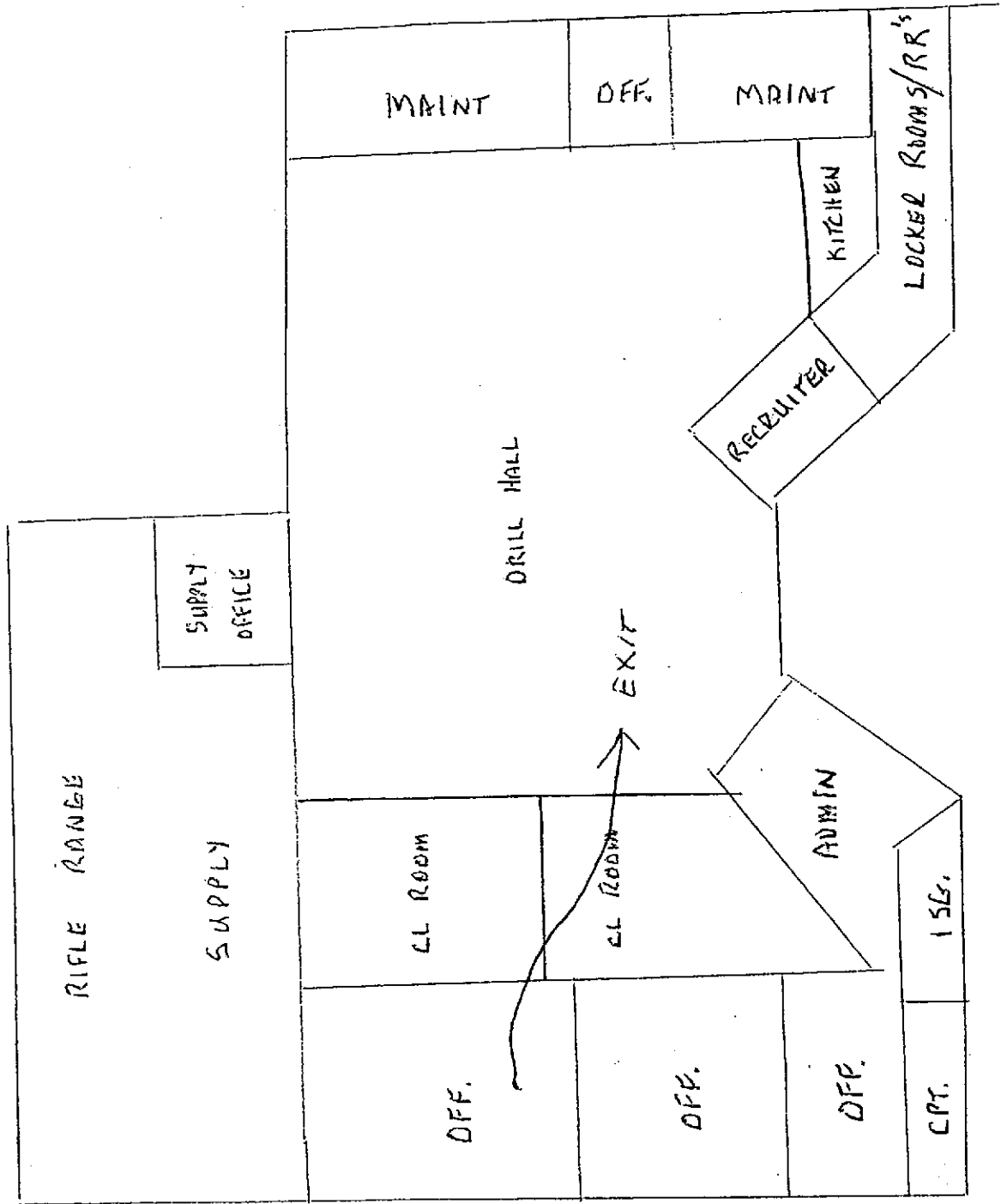
3 mos In this room/area1.5 years In this building

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL GUARD ARMOY
WAUCHULA, FLORIDA

MOTOR POOL



ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Behind Plenum



Sample #2 Plenum Wall

ARMORY PHOTOGRAPHS



Sample #3 Middle of Range Floor



Sample #4 In Front of Trap

ARMORY PHOTOGRAPHS



Sample #5 On Front of Backstop

Photo Not Available

Sample #6 Kitchen, Top of Ice Maker

ARMORY PHOTOGRAPHS

Photo Not Available

Sample #7 Kitchen Upper Shelf



Sample #8 Drill Floor Northeast Corner

ARMORY PHOTOGRAPHS



Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Center

ARMORY PHOTOGRAPHS



Sample #11 Drill Floor Southeast Corner

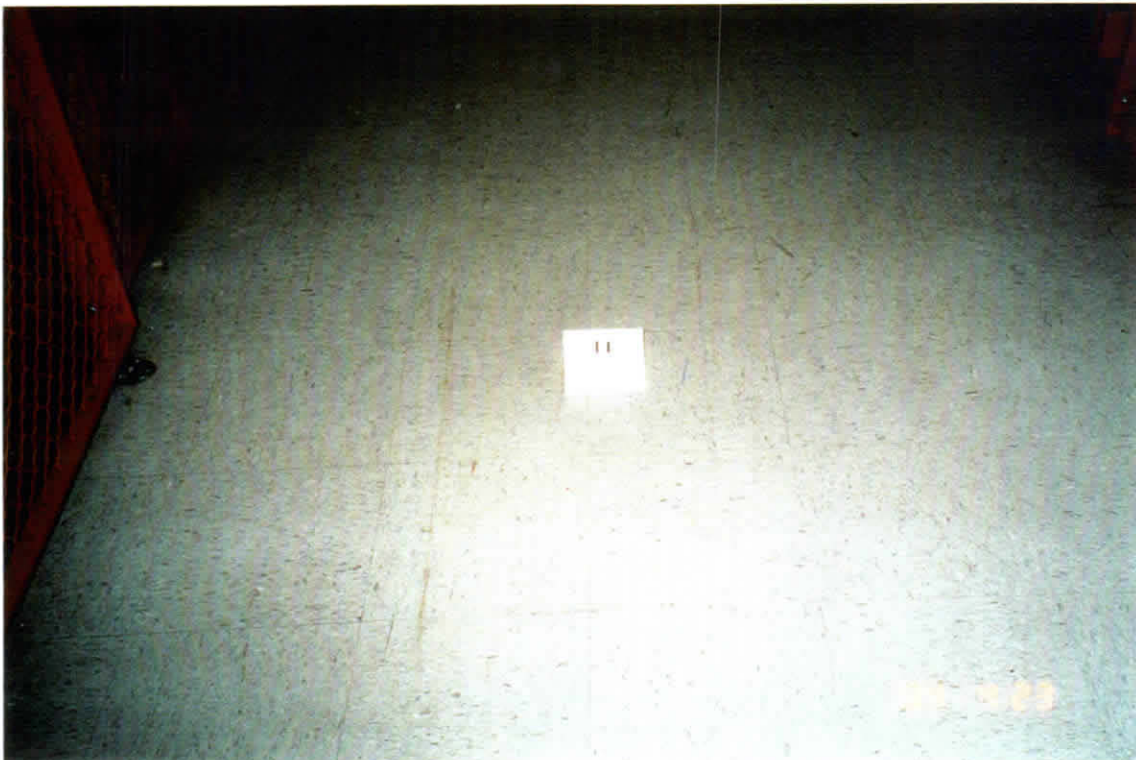


Sample #12 Drill Floor Southwest Corner

ARMORY PHOTOGRAPHS



Sample #13 Supply Room, at Door



Sample #14 Supply Room, Middle Floor

ARMORY PHOTOGRAPHS



Sample #15 Arms Vault at Door



Sample #16 Arms Vault Middle of Floor

ARMORY PHOTOGRAPHS



Photograph of Drill Floor



Photograph of Unit at Wachula

8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work in the building/ work area, use "PW".)

SYMPTOM:

Difficulty in concentrating	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Aching joints	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Muscle twitching	<input type="radio"/>	<input type="radio"/> F	<input type="radio"/> N/A	SW	PW
Back pain	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Hearing problems	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Dizziness	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Dry, flaking skin	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Discolored skin	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Skin irritation	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Itching	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Heartburn	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Nausea	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Noticeable odors	<input type="radio"/>	<input type="radio"/> F	<input type="radio"/> N/A	SW	PW
Sinus congestion	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Sneezing	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
High stress levels	<input type="radio"/>	<input type="radio"/> F	<input type="radio"/> N/A	SW	PW
Chest tightness	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Eye irritation	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Fainting	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Hyperventilation	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Problems with contacts	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Headache	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Fatigue/drowsiness	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Temperature too hot	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Temperature too cold	<input type="radio"/>	F	<input type="radio"/> N/A	SW	PW
Other (specify):					

Some other service members spending time in the
Building Experience Allergic Reactions.

Have you seen a doctor for any or all of these symptoms? Y ☐ N ☒ N/A

When do you experience relief from these symptoms?

TIME OF DAY: Morning Afternoon Evening DAY OF WEEK: S M T W T F S

MONTH: J F M A M J J A S O N D SEASON: Spring Summer Fall Winter

Do symptoms disappear? Y ☐ N ☒

When:

Not as much in certain times of the year as it
has been raining alot.

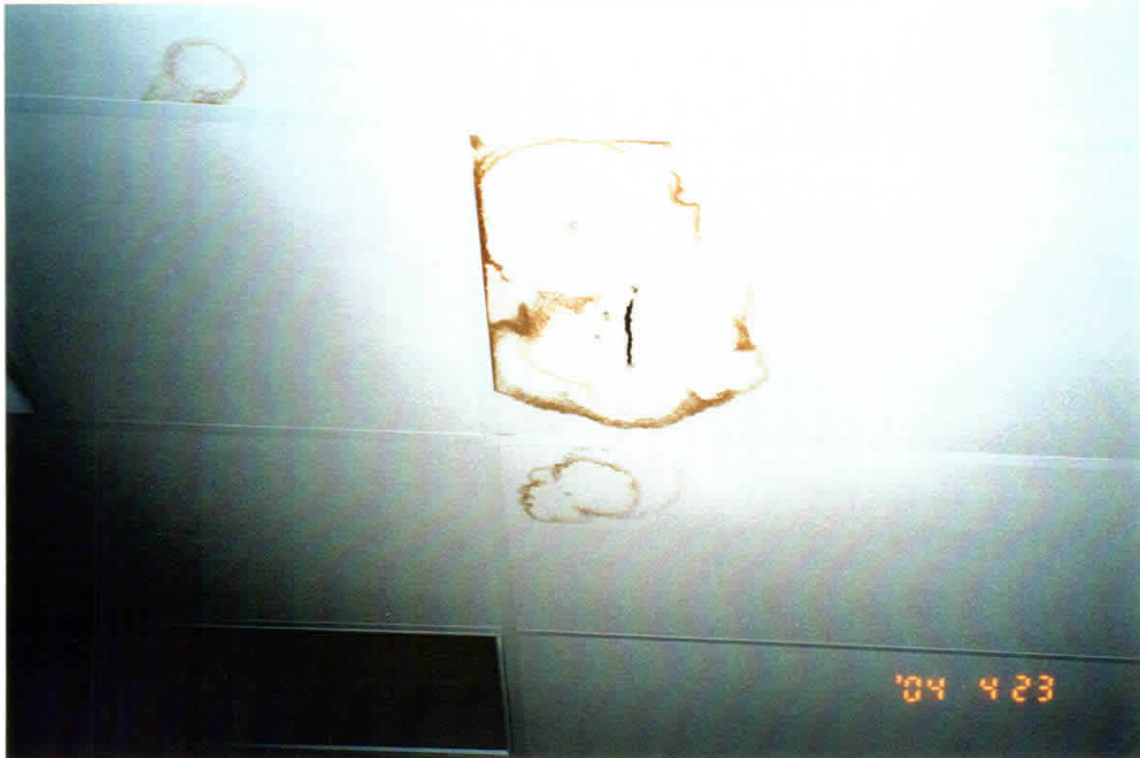
9. In your opinion, what is the cause of any possible indoor air quality problems within this building?

Not Sure.

10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

ARMORY PHOTOGRAPHS



Photograph of Water Damage



Photograph of Water Damage

ARMORY PHOTOGRAPHS

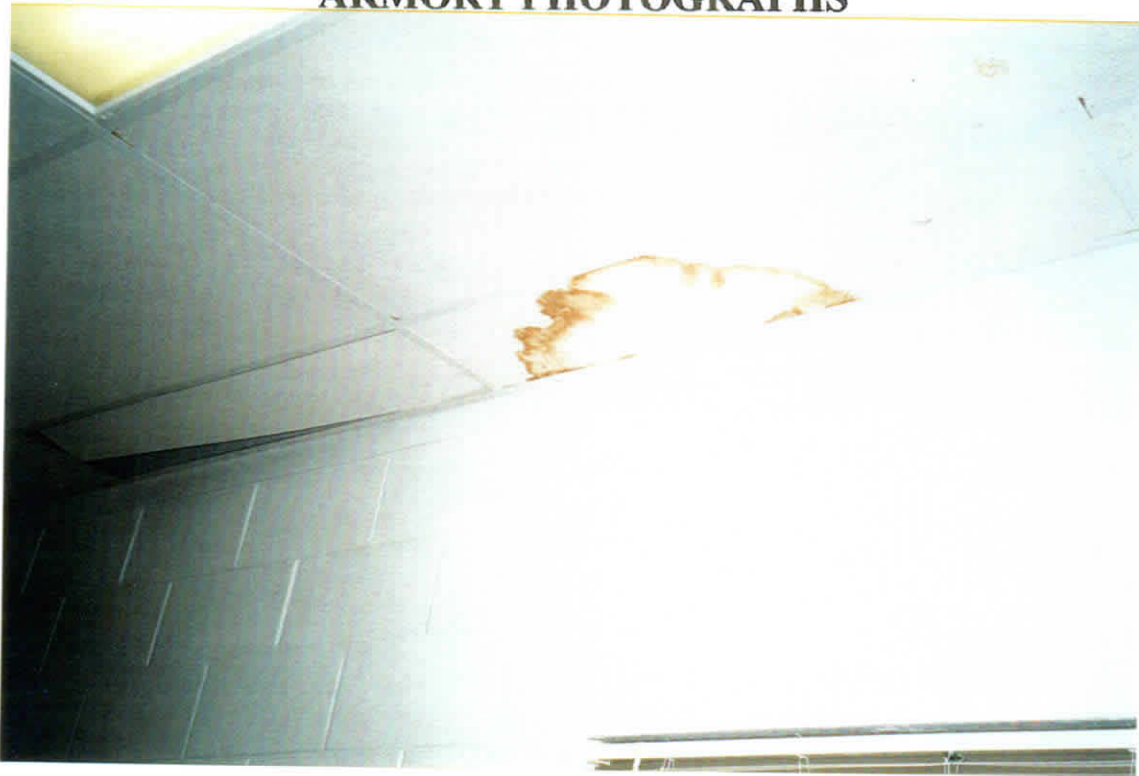


Photograph of Water Damage

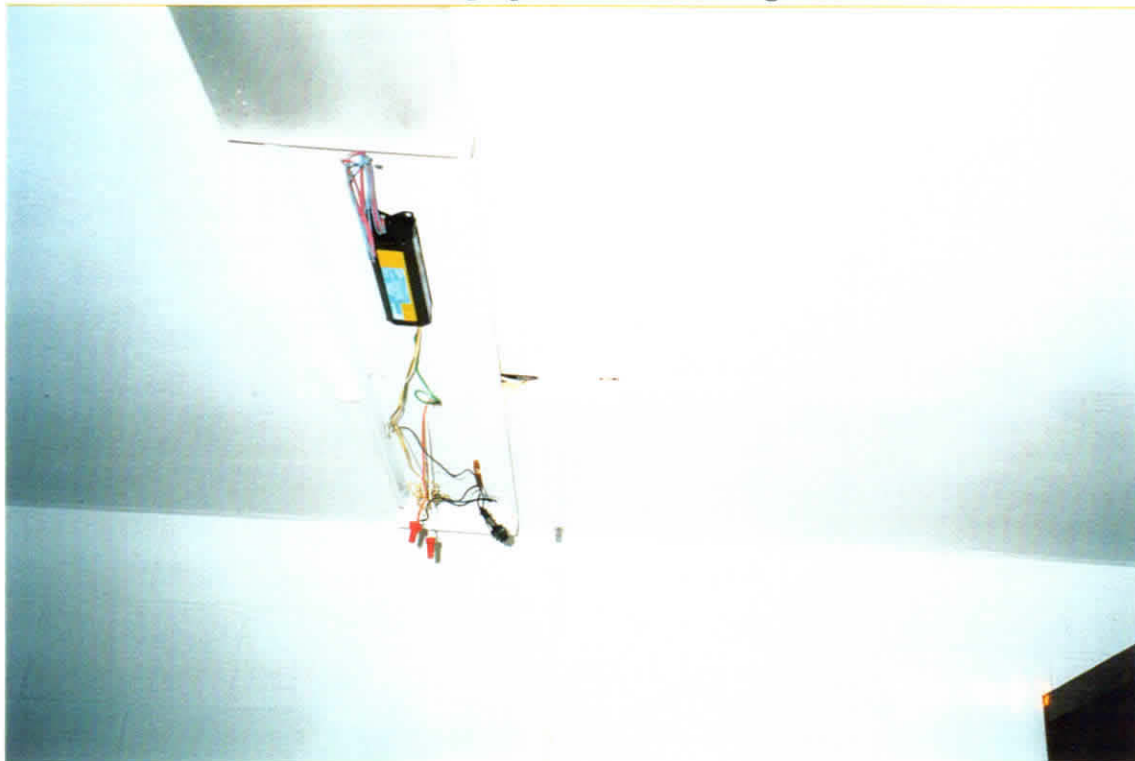


Photograph of Water Damage

ARMORY PHOTOGRAPHS



Photograph of Water Damage



Photograph of Water Damage

BEST AVAILABLE COPY

APPENDIX G
ARMORY WORKSHEET

**FLORIDA ARMY NATIONAL GUARD
ARMORY WORKSHEET**

NAME OF ARMORY: WACHULA ARMORY

LOCATION: 450 Rodeo Dr., Wachula, FL 33873

YEAR BUILT: 1995

SQUARE FOOTAGE: 26,408

FULL TIME PERS: 2

M-DAY: 20

UNIT(S) DRILLING AT THIS ARMORY: ORDET 3116 MLRS

ARMORY UTILIZED BY CIVILIANS: YES NO

WHAT FUNCTIONS: WEDDINGS/RECEPTIONS, FOOTBALL CAMP
APPROXIMATELY 15+ EVENTS/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY? YES NO

POORLY ILLUMINATED AREAS IN THE ARMORY? YES NO

STANDING WATER OR LEAKAGE IN THE ARMORY? YES NO
(SEE DISCUSSION AND PHOTOGRAPHS OF WATER DAMAGE)

KNOWN MOLD/MILDEW IN THE ARMORY? YES NO

INDOOR FIRING RANGE IN ARMORY? YES NO
(IF SO, LAST FIRED ON AND LAST CLEANED OR CONVERTED)
Never fired on, supply and arms vault (under construction)

NUMBER OF VAULTS IN ARMORY: ONE* SEE ABOVE

AFTER WEAPONS FIRING, WHERE ARE WEAPONS CLEANED?
WEAPONS ARE CLEANED IN THE MOTOR POOL AREA