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 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, Eugene M. Bass Armory, 120 Bartow Municipal Airport, Bartow Florida 33830-9504.

- 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. 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 contaction in the contractors report report

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

> Non-Responsive IH PE Tammer Sciences, Inc.

> > June 30, 2003

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Appendices

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- 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 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.

Тэріс	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.

Report Date: 30 June 2003

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

BACKGROUND:

Report Date: 30 June 2003

Introduction. At the request of Mr. Non-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.

<u>Site Description</u>. 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.

<u>Scope of Work.</u> 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 SSGNon-1886 (863) 534-7147.

<u>Lead Wipe Samples:</u> 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:

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
Sample #	Description	% Asbestos Ty

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.

<u>Noise Survey</u> 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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 9 footcandles 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

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.

<u>Ergonomics</u> 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.

<u>Personal Protection Equipment (PPE)</u> 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.

<u>Posters and Bulletin Posting</u> 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.

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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.

APPENDIX A

BEST AVAILABLE COPY

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

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3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800

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

Phone: 630-369-7956



Attn:

Fax:

Tammer Science Inc 3744 Lawrence Drive

Naperville, IL 60564 (630) 369-7957

Project: **Bartow** Customer ID:

Customer PO:

TS80

Received:

04/28/03 11:10 AM

EMSL Order:

200304247

EMSL Project ID:

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

Client Sample De	escription	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 in²	150.0 μg/ft²
BTW002		0002	5/9/03	144 in²	4100.0 µg/ft²
BTW003		0003	5/9/03	144 in²	6100.0 µg/ft²
BTW004		0004	5/9/03	144 in²	18.0 µg/ft²
BTW005		0005	5/9/03	144 in²	10.0 µg/ft²
BTW006		0006	5/9/03	144 in²	85.0 µg/ft²
BTW007		0007	5/9/03	144 in²	13.0 µg/ft²
TW008		0008	5/9/03	144 in²	40.0 µg/ft²
BTW009		0009	5/9/03	144 in²	<10.0 µg/ft²

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

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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



Attn:

Fax:

Project:

ammer Science Inc.

3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Phone: 630-369-7956

Customer ID:

TS80

Customer PO: Received:

04/28/03 11:32 AM

EMSL Order: EMSL Project ID:

Analysis Date:

5/7/2003

040306863

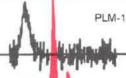
Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized **Light Microscopy**

					Non-A	Asbestos		
Sample	Location	Appearance	Treatment	% Fi	brous	% No	n-Fibrous	% Type
BTW01A		Gray/White	Dissolved			100%	6 Non-fibrous (other)	None Detected
040306863-0001		Non-Fibrous Heterogeneous						
BTW02A		Gray	Dissolved			929	Non-fibrous (other)	8% Chrysotile
040306863-0002		Non-Fibrous Heterogeneous						20.
BTW03A		Tan/White	Dissolved	95%	Cellulose	59	Non-fibrous (other)	None Detected
040306863-0003		Fibrous Heterogeneous						
BTW04A		White/Yellow	Teased	95%	Glass	5%	Non-fibrous (other)	None Detected
0306863-0004		Fibrous Heterogeneous	Dissolved					
BTW05A		Gray	Teased	40%	Cellulose	20%	Non-fibrous (other)	None Detected
040306863-0005		Fibrous Heterogeneous		40%	Min. Wool			
BTW06A		Black	Dissolved	5%	Glass	95%	Non-fibrous (other)	None Detected
040306863-0006		Non-Fibrous Heterogeneous					52	

Analyst(s)

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, c. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government nalysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872



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APPENDIX C

CHAIN OF CUSTODY

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MSL Rep:			DATE:	Third party billing require: from third party	written authorization
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City/State:	Naperville	Zip: <u>_</u>	City/State:		
Phone Results to:	Non-Responsive	9	Fax Results to: Name:	Non-Responsive	22-2
elephone #:	630 369	7956	Fax #:	630-369-	1951
Project lame/Number:			Purchase Order #:		
MATRIX	ME	THOD	INSTRUMENT	mdis	TAT
ead Chips*	SW846-74 AOAC 5.0	09 (974.02)	Flame Atomic Absorption	0.01% ++	
	SW846-7	120	Flame Atomic Absorption	0.4 mg/l water	
ead Wastewater	341040-1-	¥2U		50 mg/kg (ppm) soil	
ead Soil +	or SW846	-6010	ICP	0.1 mg/l water	
			en e	10 mg/kg (ppm) soil	protes (construction and construction)
ead in Air***	NIOSH 70	182	Flame Atomic Absorption	5 ug/filter	
	or NIOSH	7300	ICP	3.0 ug/filter	
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	or SW846		ICP	3.0 ug/wipe:	
	THE RESERVE AND PARTY OF THE PA		Flame Atomic Absorption	0.4 mg/l (ppm)	27.005 articulation-content of the fact of the
CLP Lead **	SW846-1	311//420			
	or SW846		ICP	0.1 mg/l (ppm)	
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ead Wastewater	SW846-7	421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
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and the second s	A NEW YORK THE PARTY OF THE PAR	as male and the sale of	Graphite Furnace Atomic	0.002 mg/(com)	Men Service Control
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EMSL ANALYTICAL

CHAIN OF CUSTODY

20036 424 ZEAD

Revised 7/1/99

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CHAIN OF CUSTODY

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Date 4/26/03	Date	4/4/3111-46
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EVISL Analytical, Inc. Revised 07/07/99



CHAIN OF CUSTODY

Ashestes

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Phone Results to:	Non-Respons	sive	Fax Results	to: Non-Re	sponsive	
Vame:	1.20 -	369-7956	Fax #:		0-369-79	57
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EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

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

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 µg/ft 2 on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/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 0.13microns 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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- (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 endow 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 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.



Photo 1: Bartow Armory Front Entrance



Photo 2: East side of Armory

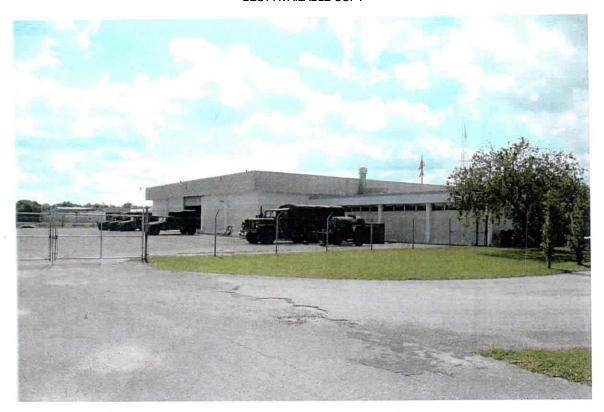


Photo 3: Armory west and rear side



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.

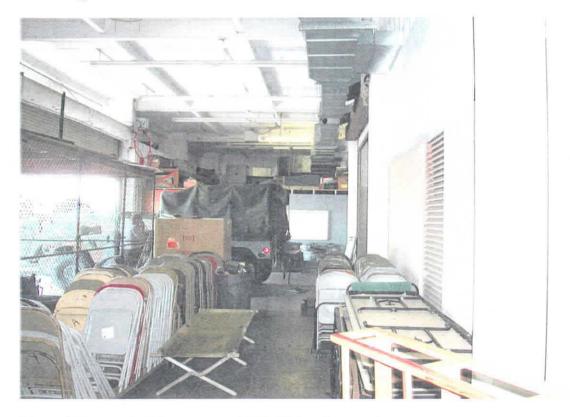


Photo 6: East end of the converted IFR (Firing line area).



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



Photo 8: Armory kitchen

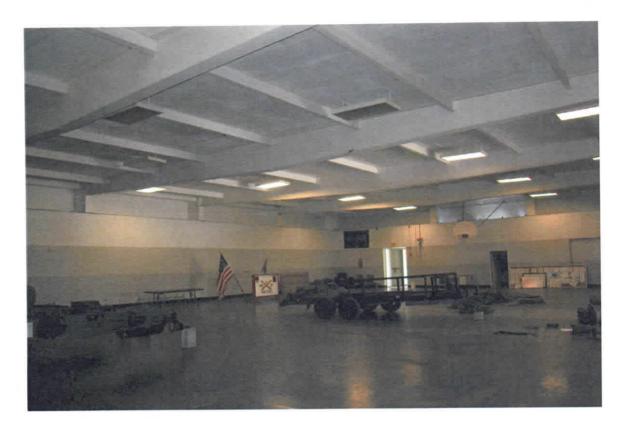


Photo 9: Drill hall.



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



Photo 11: Lounge area.



Photo 12: Janitor's storage room.

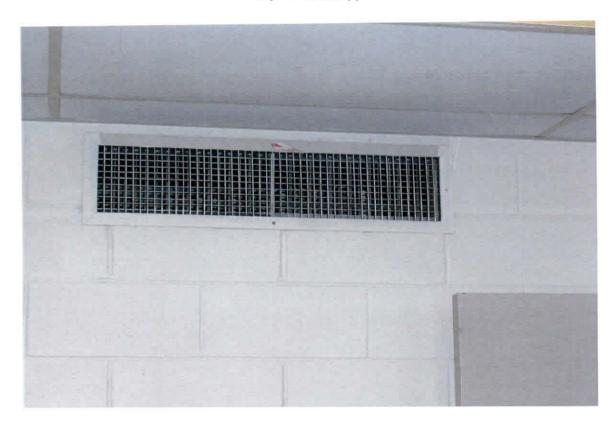


Photo 13: Air supply grill to office area.



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.



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

- 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 meet 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-	Mechanic Room	Not Detected
18-12		
1-153 CAV MMN 202 09-	Mechanic Room	Not Detected
18-12		
1-153 CAV MMN 203 09-	Outside Supply Room	Not Detected
18-12		
1-153 CAV MMN 204 09-	Outside Supply Room	Not Detected
18-12		
1-153 CAV MMN 205 09-	Outside Supply Room	Not Detected
18-12		
1-153 CAV MMN 206 09-	Inside vault on back floor	Not Detected
18-12		
1-153 CAV MMN 207 09-	Inside vault on cabinet	Not Detected

18-12		
	Outside vault	Not Detected
18-12	<u></u>	

6. Illumination

a) Light samples where taking throughout the facility.

	Number of		
	Fixtures/ Lights	Number of burned	Illumination Foot
Location	per Fixture	out tubes	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.

- 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 bred 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 SSGNon-Responsive Industrial Hygiene Technician, at (404) 559-4174 ext. 37 or Non-Responsive Regional Industrial Hygienist, NGB-CSG-P, COMMERICAL (404) 559-4174 ext. 11.



Regional Industrial Hygienist

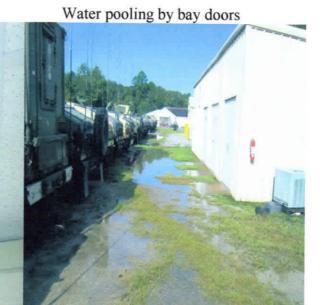
CF: Office of the Adjutant General, ATTN: MAJ Non-Occupational Health Manager, St. Francis Barracks, 82 Marine Street, St. Augustine, FL 32085-1008

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

BEST AVAILABLE COPY NATIONAL GUARD BUREAU

REGIONAL INDUSTRIAL HYGIENE OFFICE AIRPORT PLAZA SUITE 1530 510 PLAZA DRIVE COLLEGE PARK, GA 30349

Watermark Room 114





Analytical Environmental Services, Inc

Lab Order:

1209J10

Client:

National Guard Bureau Region-South IH

Project:

Bonifay Fl

Matrix:

Wipe

Wipe

Date Received: 9/25/2012 1:50:00 PM

Date:

30-Sep-12

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Clieut 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]		09/18/2012	09/27/2012	MW
1209J10-002A	I-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	I-153 CAV MMN 204 09-18-12	BRL	ug, Total	20	i		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	I-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



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

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.
- 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 Tevealed 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
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	
	Oviow 200 interesting per square 1000	
		- Control of the Cont

¹ Results reported in micrograms per square feet (µg/ft²)

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.

² BRL = Below Reportable Limits

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.

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 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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SUBJECT	Page	1
BACKGROUND		
Introduction	Page	1
Site Description	Page	1
Scope of Work	Page	1
Methodology	Page	2
FINDINGS		
Indoor Firing Range	Page	3
Room Behind Plenum Wall	Page	3

APPENDICES

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

APPENDIX A

REFERENCES

APPENDIX A

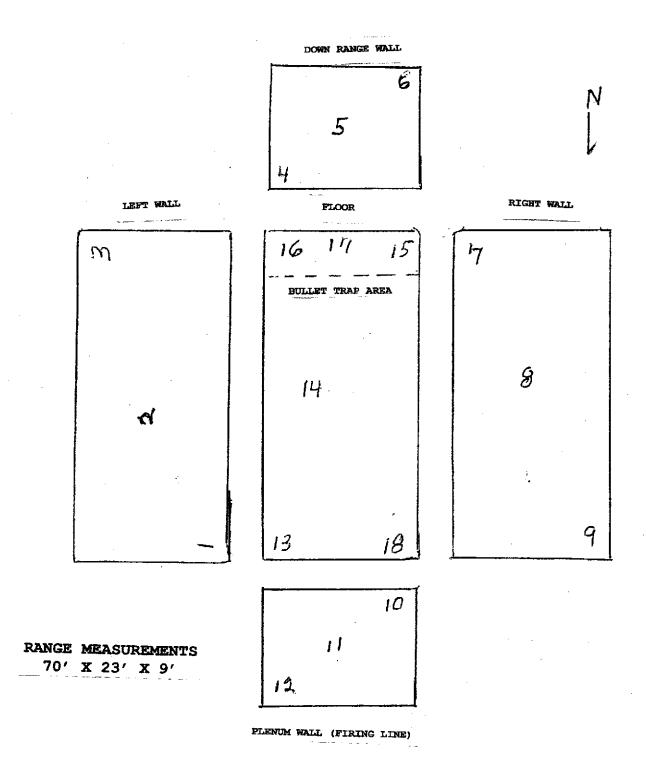
REFERENCES

- 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.
- 1. 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

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

PLENUM WALL

2.1

RIGHT WALL

PLOOR

24

19

20

22

BACK WALL

23

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

DATE	SAMPLE NUMBER	LOCATION
05 JUL 11	00-00L	BLANK
05 JUL 11		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 TRAP WALL, TOP
05 JUL 11	00-0 6 L	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) MIDDLE FLOOR
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 ROO	M BEHIND FIRING LINE
05 JUL 11	00-19L	FLOOR, LEFT SIDE
05 JUL 11	00-20L	FLOOR, RIGHT SIDE SOUTH WALL, PLENUM
05 JUL 11	00-21L	SOUTH WALL, PLENUM
05 JUL 11	00-22L	WEST WALL
05 JUL 11		NORTH WALL
05 JUL 11	00-24L	EAST WALL

APPENDIX C LABORATORY SUBMISSIONS

TO:

07 JULY 2011

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

FROM:

Non-Responsive

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 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

Dba HINCHCO

ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

www.aesatlanta.com

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

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05	JUL 11	00-00L	BLANK
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	JUL 11		
05	JUL 11	00-03L	
05	JUL 11	00-04L	
05	JUL 11	00-05L	TRAP WALL, MIDDLE
05	JUL 11	00-06L	
	JUL 11	00-07L	RIGHT WALL, LOWER
05	JUL 11	00-08L 00-09L	RIGHT WALL, MIDDLE
05	JUL 11	00-09L	RIGHT WALL, TOP
	JUL 11	00-10L	PLENUM WALL, LOWER
05	JUL 11	00-11L	PLENUM WALL, MIDDLE
05			PLENUM WALL, TOP
	JUL 11	00-13L	FLOOR, LEFT SIDE (NE)
		00-14L	
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
			FLOOR, RIGHT SIDE (NW)
RO	OM BEHIN	D PLENUM WALL OR RO	OOM 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.



Project Manager

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ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

1107790

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ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

www.aesatlanta.com

1107790

Page 70 of 1021

25.00 00-17 Turnaround Time: 8-2 · 761-00 7 18-00 00-18 Client Name: Comments: 140 Alea = 159.44 SAMPLE ID SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE FOLLOWING BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT Relinquished By: Received By: Address: Relinquished By: Ľ. Received By: SAMPLE DESCRIPTION (e.g. Locations, Name, etc) Ø Normal (5 days): 10 CHAIN OF CUSTODY FORM FOR AIR SAMPLE ANALYSIS WAT ASIGNED S STRANGE HELDERS NUMBER PUMP Date/Time Date/Time Date/Time Date/Time 3 Days Rush: e chathlink ist START TIME END DA A ST INITIAL Samplers Name: Project Name/#: Sampling Date: FLOW RATE 2 Days Rush: Delivered Direct to Lab: FINAL Broker. Method of Shipment: Lab Recipient: ۸VG VOLUME Next Day Rush: REQUESTED/REMARK Sequested Record #J-15-0085 (FL) Shipped: 280 1211 10:00 Ω keleased by National Guard Bureau

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

Reporting Date

Laboratory ID	Client Sample ID	Result	Units	Limit	DF Qua	l Collected	Analyzed	Analyst
1107790-001A	00-00 L	BRL	μg/fl²	20	1	07/05/2011	07/14/2011	MΡ
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	BR1.	$\mu g/ft^2$	20	1	07/05/2011	07/14/2011	MP
1107790-005A	00-04 L	BRL	$\mu g/ft^2$	20	1	07/05/2011	07/14/2011	MP
1107790-006A	00-05 L	BRL	$\mu g/fl^2$	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	$\mu g/ft^2$	20	1	07/05/2011	07/14/2011	MP
110 77 90-009A	00-08 L	BRL	$\mu g/\Omega^2$	20	1	07/05/2011	07/14/2011	MP
1107790-010A	00-09 L	BRL	μ g/ft²	20	1	07/05/2011	07/14/2011	MP
1107790-011A	00-10 L	27	$\mu g/f t^2$	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	МР
1107790-013A	00-12 L	BRL	$\mu g/ft^2$	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	$\mu g/ft^2$	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	$\mu g/f l^2$	20	1	07/05/2011	07/14/2011	MP
1107790-021A	00-20 L	699	μ <u>α</u> /ft²	20	1	07/05/2011	07/14/2011	MP
1107790-022A	00-21 L	22	$\mu g/ft^2$	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

Analytical Environmental Services, Inc.

I

Sample/Cooler Receipt Checklist

Client GA AMY		Work Order Number 1107790
Non-Responsive Checklist completed by Sign Date	7/13/11	·
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?	Yes _	No Not Present
Container/Temp Blank temperature in compliance? (4°C±27°	Yes C	No
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 C	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 L
Water - VOA vials have zero headspace? No VOA vials su	bmitteti	Yes No
Water - pH acceptable upon receipt?	Yes	No Not Applicable
		ked by
Sample Condition: Good 1 Other(Explain)		·
(For diffusive samples or AIHA lead) Is a known blank included? Yes No		
See Case Narrative for resolution of the Non-Conformance.		
* Semulas do not have to comply with the given range for certain parameters		

\L\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

DA:	<u>pe</u>		SAMPLE NUMBE	R L	OCATION
05	JUL	11	00-00L	В	LANK
05	JUL	11	00-01L	L	EFT WALL, LOWER
05	JUL	11	00-02L	L	EFT WALL MIDDLE
05	JUL	11	00-03L	L	EFT WALL, TOP
05	JUL	11	00-04L	T	RAP WALL. LOWER
05	JUL	11	00-05L	T	RAP WALL, MIDDLE
05	JUL	11	00-06L	T	RAP WALL, TOP
05	JUL	11	00-07L	R	IGHT WALL, LOWER
05	JUL	11	00-08L	R	IGHT WALL, MIDDLE
Λ5	TITE.	11	00-09T.	R	IGHT WALL, TOP
(11/05	JUL	11	00-10L	P	LENUM WALL, LOWER
(~ 1/05	JUL	11	00-11L	P	LENUM WALL, MIDDLE
05	JUL	11	00-12L	P	LENUM WALL, TOP
(1 <i>20</i>)05	JUL	11	00-13L	F	LOOR, LEFT SIDE (NE)
<i>(95)</i> 05	JUL	11	00-13L 00-14L	M	IDDLE FLOOR
A A/1 - 05	TITT.	11	00-151.	Ŧ	TOOR, RIGHT SIDE (SW)
9540-05	JUL	11	00-16L	· F	LOOR, LEFT SIDE (SE) LOOR, MID BULLET TRAP
2910-05	JUL	11	00-17L	F	LOOR, MID BULLET TRAP
1134705	JUL	11	00-18L	F	LOOR, RIGHT SIDE (NW)
` ROC	OM BE	EHIND	PLENUM WALL OR	ROOM BEHI	ND FIRING LINE
207-05	JUL	11	00-19L 00-20L	F	LOOR, LEFT SIDE
699-05	JUL	11	00-20L	F	LOOR, RIGHT SIDE
	TITT.	11	00-21L	Ś	OUTH WALL, PLENUM
(0)105	JUL	11	00-22L	W	EST WALL
05	JUL	11	00-23L	N	ORTH WALL
(<i>89</i>)05				E	AST 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)



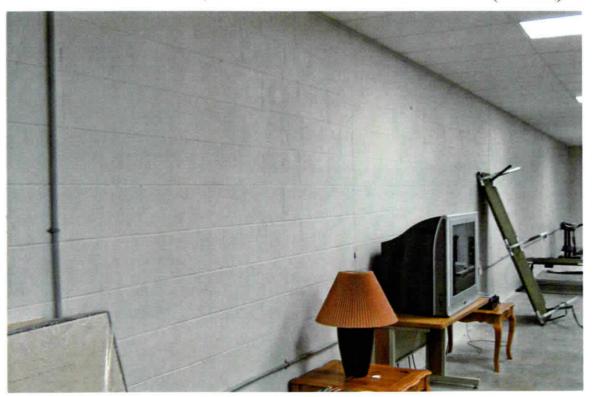
#1 - BROOKSVILLE ARMORY



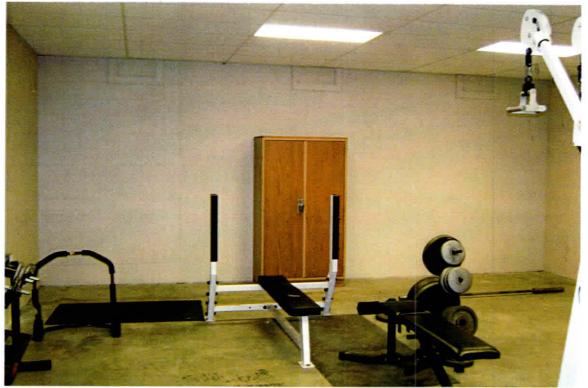
#2 - INDOOR RANGE, LOOKING DOWN RANGE (SOUTH)



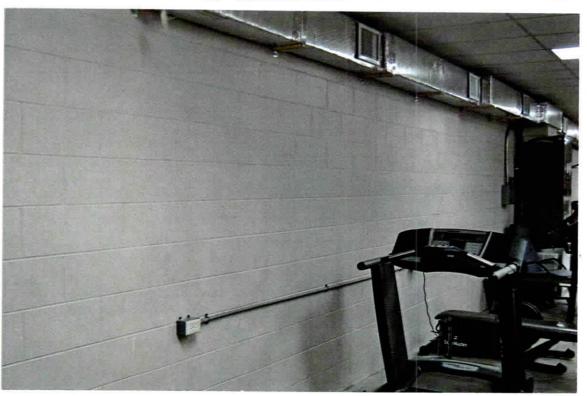
#3 - INDOOR RANGE, UP RANGE TOWARD FIRING POINT (NORTH)



#4- LEFT WALL



#5 - BULLET TRAP WALL



#6- RIGHT WALL



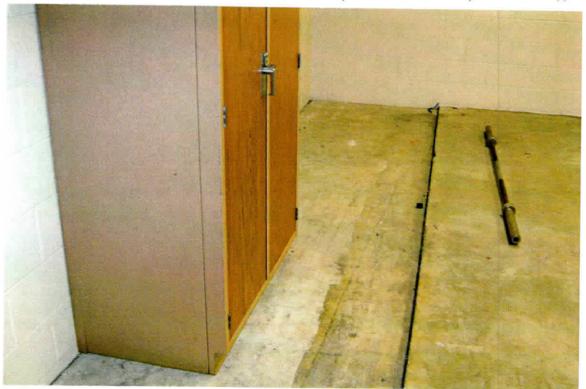
#7 - PLENUM WALL



#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)



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.
- 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.

COMMERCIAL (404) 559-4174.
Non-Responsive

Regional Industrial Hygienist

CF:

Office of the Adjutant General, ATTN: Office of the Adjutant General, ATTN: MAJ 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

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

Ву

Non-Hesponsive

SES Solutions May 23, 2011

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4. Personne			
5. Design F			
	ean Up Proced	lures	
7. Reference			
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-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:
 - 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 40μg/ft². One sample was above the National Guard Standard of 200μg/ft². 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:µg/ft² 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
1SG 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:

- 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.

or agreement

HHIMS Industrial Hygiene Survey Form

Back page

This operation was		Operation described is	Porsonnel data pro	 Social Security Number or Unique identifier	COLUBEOIL	POELSHOCK	POSHARPOB	POLIFTING	POFLAMHAZ POFLAMHAZ	POFLYPROJ	POFOOTHAZ	PONOISECO CAS code
This operation was explained to the evaluators, but was not actually observed. There is a noise date sheet attached to this form		s and Lagistica	Porsonnol data provided by the facility is attached to this form									ode la
		L' SUPPLES RECOR	m Insert Privacy Act S	Lest Name (20 characters max) Fire								PAC EPC Hazard Description
(comments continued is a ventilation data sheet attached to this form		D RECEING, promotions	Act Statement	First Name (20 characters max) MI Sex					The major of the proof of the state of the s		April 10 mary	cription
(comments continued on attached)) es		Category	IA Re	equest leased	ted Fo	ecord lation	#J-1 a Gu Page	5-008 ard E 92°o	5 (F) Burea f 102	L) au 21

						(0		Pacific	D						,	OPY		BLE	ILA	AVA				Hos	Hos		-											•
	Manufacturer	Enterprise Paint Co		Spartan	Spartan	Sheila Shine, Inc.	Spartan	Pacific West Chemical Corp	Digital Innovations	LHB Industries	Rustoleum	MINWAX	Macco or ICI Paints	Behr	Valspar	Clean Strip	Johnson Diversary	Behr	3M		Johnson Diversary	Spartan	Spartan	Hospitality Specialty Co	Hospitality Specialty Co	Spartan	LHB Industries	Spartan	Spartan	Spartan	Spartan	Spartan	Johnson Wax	Kutol Products Co.	State	Spartan	Spartan	Spartan
Stor	Product	Latex Paint	FLAMM	₽F6	Superior High Shine	Sheila Shine	Dust Mop/Dust Cloth Treatment	PWC	Air Dr	So Sure	Fluorescent Orange Paint	PolyShades	Liquid Nails	Latex Paint	Latex Paint	Mineral Spirits	Good Sense	Behr Premium Plus Paint	Spray Buff		Windex	SparCling	CDC-10	Health Gards - Cherry	Health Gards - Mint	HDQC2	Kitchenmate	Shine Line	Foamy Q & A	Grub Scrub	I-Shine	Spray Buff	Bravo	Antibacterial Hand Soap	Shower Supreme	Clean on the GO	Clean on the GO	Clean on the GO
Storage Room	Use	Interior 1 Coat Latex Wall and Trim	FLAMMABLE CABINET	Flying Insect Killer	Stainless Steel Cleaner and Polish	Stainless Steel Cleaner and Polish	Dust Mop/Dust Cloth Treatment	Polyurethane 280	Dust Remover-Liquid Air	Lacquer-Aerosol 15080 Blue	Spray Paint	Stain and Varnish-Bombay Mahogany	Adhesive Sealant-Small Project	Premium Plus-Deep Base	Zone Marking Paint-Interior/Exterior	Odorless Mineral Spirits	Air Freshner Refills		Cleaner and Polish	CORROSIVE CABINET	Glass Cleaner	Toilet Bowl Cleaner	Clinging Cleaner	Urinal Deodorizer/Splash guard	Urinal Deodorizer/Splash guard	Cleaner - Disinfectant - Detergent	Dishwashing Detergent	MuttiSurface Cleaner	Porcelain Cleaner	Hand Cleaner	Floor Finish	Floor Polish Mist	Floor Stripper	Soft and Silky	Shower Soap w/aloe	#2	#3	#4
	Detail	Semi Gloss Enamel				7930-00f018138		34031 Green	30111	8010-00-079-3758	1932830	Satin 380	LN-275	5340 or 7453401	49440 White		ActScent	556099H11002				7228,7498		01991	03904					2809;2810				NDC 50865-951-12	52152			•
	Size	5 gal		ZO	ZO	10 oz	16 oz	0Z	10 oz	10.5 oz	11 oz	quart	4 oz tube	gallon	gallon	gallon	.67 oz	gallon	gallon		quart	quart	quart	×	×	quart	gallon	quart	quart	gallon	5 gal	quart	†	<u> </u>	22.8 oz	2 ltr	211r	211
i	Max	-		2	ω	12	ω			_	ω	-	-		: -	-	12	_	1		12	57	رن د	12	12	w	· -	2	. 12		-	12			ω	σ,	6	מכ
MSDS	TAB#	8	i	4				080	req	8	8	req	13	8	8	7	_	·		1							_					· 				- - -		_

Analytical Environmental Services, Inc

Lab Order:

1105L41

Client:

SES

Project:

Brooksville, Fl Annory

Matrix:

Wipe

N7082

Date:

LEAD ON WIPES (N9100/7082)

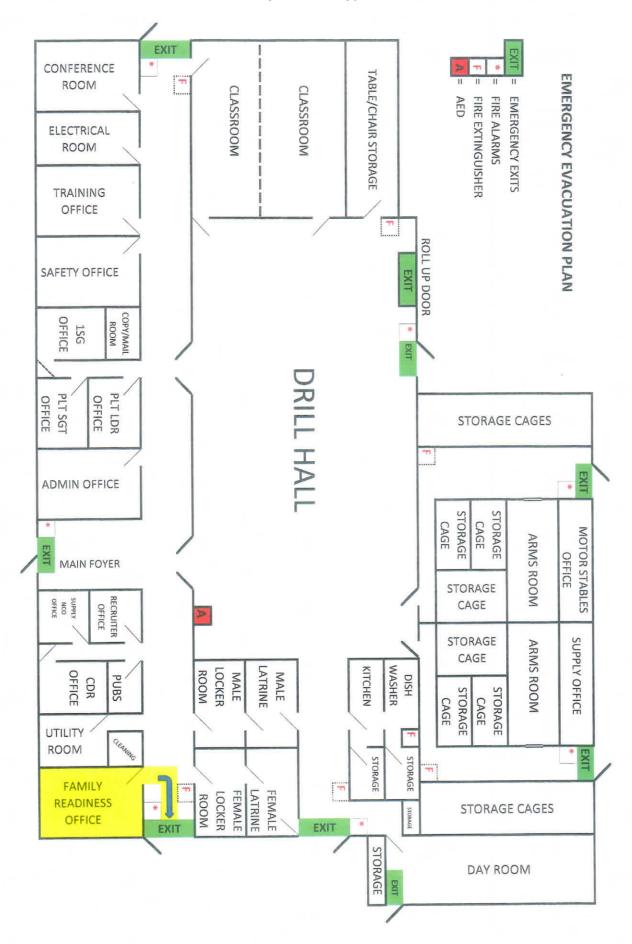
3-Jun-11

Date Received: 5/25/2011 9:35:00 AM

Laboratory ID	Client Sample ID	Result	Units	Reporting	DF	Quai	Date	Date	A I
Laboratory ID	Cheft Sample 1D	Result	Units	Limit	Dr	Quai	Collected	Analyzed	Analyst
1105L41-001A	M193	BRL	ug, Total	20]		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	į		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	l		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	l.		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	ì		05/23/2011	05/31/2011	MP

Brooksville Armory Full Time Support Personnel





ARMORY CLEANUP REQUIREMENTS

High Test Results

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

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.

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. <u>NOTE:</u> 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. <u>NOTE:</u> 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.

- 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.

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 <u>Do Not Shake Mop Head</u> have mop head laundered after use. <u>Always keep used dust mop heads in sealed double plastic bags when stored at an armory or facility</u>. Shaking of a pre-treated mop head may release unwanted contaminants into surrounding atmosphere.
- 2. <u>Frequency of Cleanup</u> 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.)

- 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. <u>If lead cleanup work was contracted out, a third party should do the clearance sampling.</u>
- 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.

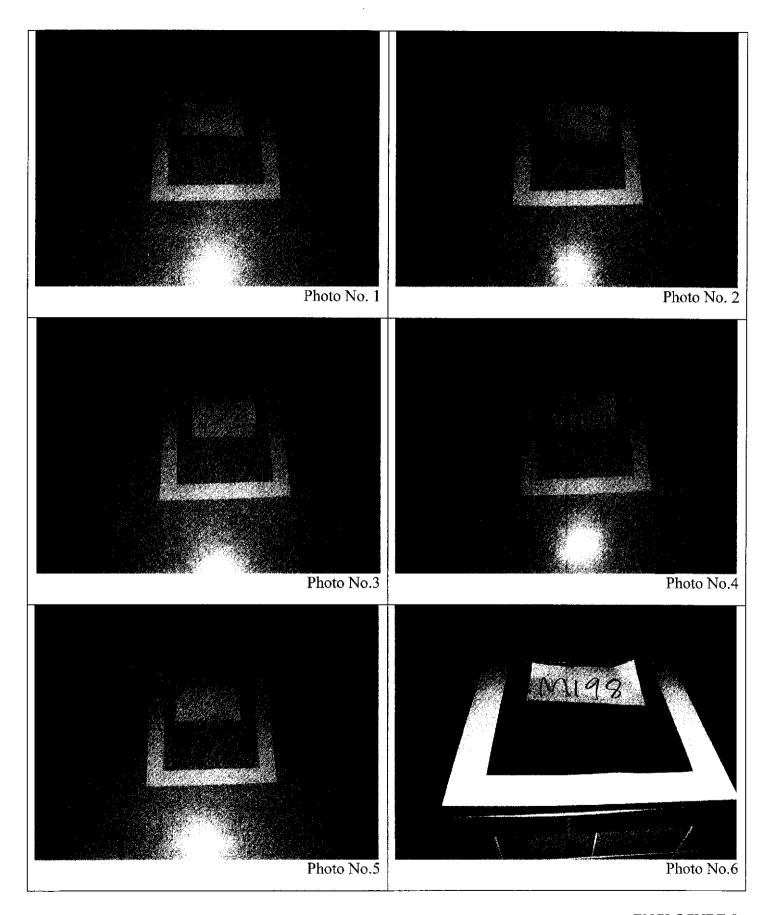
TB MED 503, The Army Industrial Hygiene Program.

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



ENCLOSURE 8 Page 1 of 5



Photo No.7



Photo No.8

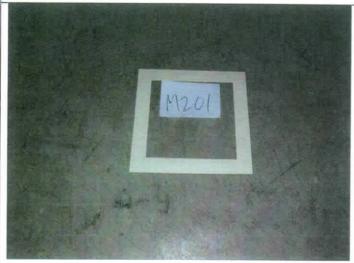


Photo No.9



Photo No.10



Photo No.11



Photo No.12



Photo No.13



Photo No.14



Photo No.15



Photo No.16



Photo No.17



Photo No.18

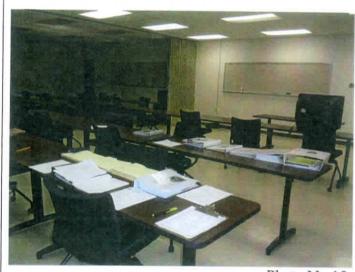


Photo No.19



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-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.
- T. 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.
- Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



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 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

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
- 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.
- National Electrical Code Handbook Eighth Edition, 1999
- 2. BACKGROUND: At the request of Mr 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 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 & Kiaer, 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.
 - 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.
- 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).

AREA/LOCATION	FOOT CANDLES (FC)
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



Industrial Hygiene Technician

CF:

Florida Army National Guard
St. Francis Barracks
Occupational Health Office ATTN: MAJ
Non82 Marine St.
St. Augustine, Florida 32084

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

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	Z. GLOVES ACID OIL SOLVENTS HCT SURFACES COLD SURFACES NBC AGENTS CTION 4. HAZ	R/A / / / / / ARD	L EYES/FACE CHEMICAL/SPLASH SAFETY/IMPACT CHEMICAL/SAFETY FULL FACE SHIELD WELDING HELMET INVENTORY DATA L. HAZ	XxX 1 1 1 ARD D	EARPLUGS CANAL CAPS HELMETS ESCRIPTION DUSTS	× , × , × , × , × , × , × , × , × , × ,	APRONS CITYERALLS FULL BODY SUIT SAFETY BELTY HARMESS- "LAT REFLECT BDU'S UMES, AS PI	y/x/x	IMPERME SAFETY SAFETY TIVE SH	S. MEDICAL SURVEILLAN PECOMMENDA (YES OF NO YES) J- 5-0085 (FL) Guard Bureau	, , , , , , , , , , , , , , , , , , ,
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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 F001



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 11, 2002

Non-Responsive

MINCKLER ASSOCIATES 1503 ZAIGER DR COLORADO SPRINGS CO

CHIPLEYARMORYFL

Company #: 6776

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

80915-2240

	Lab# Fiel	d# Value	Unit	Analyte
	931599 1A	275	ug/wipe	Lead
	931600 2B	<=17	ug/wipe	Lead
1	931601 3C Comments:	648 Diaper wipes are not walld media	ug/wipe	Lead sampling, work will

Comments: Disper wipes are not valid media for lead dust wipe sampling. WORL 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

IH, Chemist Supervisor

				BULK SAMPLE	DATA				
	For use of this form see USAEEA TG 14.; the proponent is ESEB-LO.								
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Replaces AEHA Form 8, 1 Oct 80 which is obscious.

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Non-Responsive				1	Non-Resp	onsive				Parge 121 of 1021

Enclosure 5

Company C, 3 Battalion, 124th Infantry Personnel Roster

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

AGR: Active Guard Reserve

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

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	RECRUIT	N B C	STORAGE	STORAGE			
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FRONT ENTRANCE

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

The [occupational safety and health manage (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 chemicals is the facility. The list 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 mansger 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 necessary. The [local OS&H manager or designee] must clear all new 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 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 will be accomplished by a meeting of supervisors and the OS&H manager with affected employees before such work is begun.

noisemoinl IsnoisibbA IV

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

Enclosure 8

Hazardous Material Inventory Sheet

Date:

Facility Name:

Storage Areas:

Amount Stored	Size/Type of Container	NSN	Trade Name/Nomenclature	SGSM
			<u> </u>	
 -				
	· · · · · · · · · · · · · · · · · · ·		<u> </u>	 -
		-		
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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

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

- 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.
- 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.
- Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC 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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Findings and Discussion		
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Noise Survey	Page	4
Illumination Survey	Page	4
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 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

Page 1

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.

Page 2

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination reading 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 SSG Non-Responsive PH# 352-795-0362.

<u>Lead Wipe Samples:</u> 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
04~16QA	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.

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

AREA	READING	IN	FOOT-CANDLES
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.
- 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. Page 5

APPENDIX A

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

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

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

APPENDIX B

LABORATORY CHAIN OF CUSTODY

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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

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

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 0	05-Apr-04
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CLIENT: Project:	Non-Responsive Crystal River Armor	/ Hinchco y			ĭ	ab Order	: 0403178
Lab ID:	0403178-001			(Collection Date	e: 3/23/20	04 9:25:00 AM
Client Sample I	D: 04-00CR				Matrix	K: WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL' Lead	YSIS	U	N7 7.50	082	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:48:00 AM
Lab ID:	0403178-002			•	Collection Date	e: 3/23/20	04 9:30:00 AM
Client Sample I	D: 04-01CR				Matri	x: WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL Lead	YSIS	93.1	N7 7.50	082	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:55:00 AM
Lab ID:	0403178-003	··-	•	(Collection Dat	e: 3/23/20	04 9;32:00 AM
Client Sample l	D : 04-02CR				Matri	x: WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	269	N7 7.50	082	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 5:03:00 AM
Lab ID:	0403178-004			•	Collection Dat	e: 3/23/20	004 9:35:00 AM
Client Sample	ID: 04-03CR				Matri	x; WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	10300	N7 375	082	(N7082) μg/ft²	500	Analyst: MCL 4/2/2004 8:02:00 PM
Lab ID:	0403178-005				Collection Dat	e: 3/23/20	004 9:40:00 AM
Client Sample	ID: 04-04CR				Matri	x: WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	12800	N7 375	082	(N7082) µg/ft²	500	Analyst: MCI 4/2/2004 8:09:00 PM
Lab ID:	0403178-006				Collection Dat	te: 3/23/20	004 9:42:00 AM
Client Sample	ID: 04-05CR				Matri	x: WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	208	N7 7.50	7082	(N7082) µg/ft²	10	Analyst: MCI 4/2/2004 8:17:00 PM

Prairie Analytical Systems, Inc.

Date:	05-Apr-04
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CLIENT:	lon-Responsive Crystal River Armory	Hinchco		L	ab Orde	r: 0403178
Lab ID: Client Sample ID:	0403178-007 04-06CR			Collection Date:		004 9:45:00 AM
Analyses		Result	Limit Qua	Units	DF	Date Analyzed
METALS ANALYSI Lead	ıs	57.4	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:24:00 PM
Lab ID: Client Sample ID:	0403178-008 04-07CR	• • • • • • • • • • • • • • • • • • • •		Collection Date: Matrix:		004 9:47:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s .	37.3	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 6:03:00 AM
Lab ID: Client Sample ID:	0403178-009 04-08CR			Collection Date: Matrix:		004 9:50:00 AM
Analyses		Result	Limit Qual	Units	ÐF	Date Analyzed
METALS ANALYSI Lead	s	32.7	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 6:11:00 AM
Lab ID: Client Sample ID:	0403178-010 04-09CR			Collection Date: Matrix:		04 9:55:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	30.1	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 6:18:00 AM
Lab ID: Client Sample ID:	0403178-011 04-10CR			Collection Date: Matrix:		04 9:57:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 6:26:00 AM
Lab ID: Client Sample ID:	0403178-012 04-11CR			Collection Date: Matrix:		04 10:00:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI	s	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 6:34:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

SEJEDI VIV	-Responsive ystal River Armory	'Hinchco			La	b 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		7.61	N7 0 7.50	082	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 6:41:00 AM
Lab ID: Client Sample ID:	0403178-014 04-13CR				Collection Date: Matrix:		10:12:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS	,	U	N7 (7.50	082	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 6:49:00 AM
Lab ID: Client Sample ID:	0403178-015 04-14CR				Collection Date: Matrix:		4 10:15:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	U	N7 7.50	082	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 6:56:00 AM
Lab ID: Client Sample ID:	0403178-016 04-15CR	•			Collection Date: Matrix:		4 10:20:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	7.78	N7 7.50	082	(N7082) µg/ft²	10	Analyst: MCI 4/2/2004 7:04:00 AM
Lab ID: Client Sample ID:	0403178-017 04-16CR		_		Collection Date: Matrix:		4 10:25:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	35.0	N7 7.50	082	(N7082) μg/ft²	10	Analyst: MCI 4/2/2004 7:34:00 AM
Lab ID:	0403178-018 04-17CR				Collection Date:		4 11:15:00 AM
Client Sample ID: Analyses	04-17CIX	Result	Limit	Qual	Units	ÐF	Date Analyzed
METALS ANALYSI	s	43.5	N7 7.50	082	(N7082) µg/ft²	10	Analyst: MC 4/2/2004 7:41:00 AM

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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:

Hinchco

Lab Order:

0403178

Project:

Crystal River Armory

Lab ID:

0403178-019

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

Matrix: WIPE

Analyses

Client Sample ID: 04-18CR

DF

Date Analyzed

METALS ANALYSIS

Result

Limit Qual Units

(N7082)

Analyst: MCL

Lead

102

7.50

N7082

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

(4)

FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 148 of 1021

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms where you spend the most time in the building: The Orderly Room	River, FL
Does any of your work activities produce dust or odor? YES Describe:	NO
Condon Mala (Carallel	
Gender: Male (Female) Age: Under 25 25-34 35-44 45-54 55 and over	•
Do you:	
Smoke Y N	
Have fever/pollen allergies Y	
Have skin allergies/dermatitis Y	
Have a cold/flu Y N	
Have sinus problems (T) N	
Have other allergies Wear contact lenses N	•
Wear contact lenses N	
Operate video display terminals (computers) N Operate photogoniers 10% of the time	
Operate photocopiers 10% of the time Use other office machines	
Currently take any medications?	
Reason:	
Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area	
Do windows open?	. •
Rate adequacy of work space per person:	
TD	
Poor Average Excellent	
Poor Average Excellent 1 2 3 4 5	
1 2 3 4 5	
1 2 3 4 5 Rate room temperature:	•
1 2 3 4 5 Rate room temperature:	
1 2 3 4 5 Rate room temperature: Poor Average Excellent 1 2 3 4 5	
1 2 3 4 5 Rate room temperature: Poor Average Excellent	

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 aching joints Auscle twitching	. 0	F	NI/A-	SW	PW			
	ŏ	F	dVA->	SW	PW	-		
	· ŏ	F	AV/A>	SW	PW			· .
ack pain	ŏ	F	NIA	SW	PW			
earing problems	ŏ	F	NIA	SW	PW			
izziness	ő	F						
ry, flaking skin	_		N/A	SW	PW			
scolored skin	0	F	OV/A	SW	PW			-
	O	F	(N/A	SW	PW			
in irritation	O	Ę	(N/A	SW	PW			
ching	· O	F	• QVA	SW	PW			
cartburn	0	F	(N/A/	SW	PW	-		* .
ausca	О	F	ZN/A⊇	SW	PW			
oticeable odors	0	F	AN7AZ	SW	PW .			
inus congestion	0	F	MAZ	SW	PW			
neezing	0	F	ONA	SW	PW			
ligh stress levels	. 0	F	(VA)	SW	PW			•
hest tightness	0	F	₫ V A	sw	PW			
ye irritation	0	F	(N/A)	SW	PW			
ainting	0	F	(N/A)	SW	PW		•	
Iyperventilation	0	F	NIA	SW	PW			
roblems with contacts	Ö	F.	STA	SW	PW			
leadache	ŏ	F	(VA)	SW	PW			
atigue/drowsiness	ŏ	F	NIAD	SW	PW			
emperature too hot	ŏ	r	ANTA)	SW	PW			•
emperature too cold	ŏ	F	777	S₩	PW			
ther (specify):	Ŭ		Gar	77.54	E 44			
ave you seen a doctor for any or Then do you experience relief for	om these sympto	oms?	Y	N	(N/A)	æ		
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NOTH: J F M A N	M J J A	S O N	D SEA	ASON:	Spring	Summer	Fall	Winter
Oo symptoms disappear?	Y		N					
When:		NIA	•					
** · · · · · · · · · · · · · · · · · ·	·	MA						
. In your opinion, what i	is the cause o	f any possi	ble indoor	air qua	ality probl	ems with	in this b	mildine?
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10. COMMENTS: Please	take this op	portunity to	o commen	t on any	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ou consid	RET FO OF	mportant_
10. COMMENTS: Please concerning the quality of y	our work en	vironment:			. ,			
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THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms where you spend the most time in the building:	
Name/Location of Facility: UAO+ MP CO, Crystal R Area or rooms where you spend the most time in the building: Ne QOINESS, QOMIN OFFICE Does any of your work activities produce dust or odor? YES NO Describe: 1. Gender: Make Eemale Age: Under 25 25-34 35-44 45-54 55 and over Smoke Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: Currently take any medications? Reason: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent	
Gender: Male (Female)	
Do you:	•
Smoke v (N)	
Have skin allergies/dermatitis Y	
Have a cold/flu Y	:
Have sinus problems Y N	
Have other allergies Y	
Wear contact lenses Y	•
	•
Use other office machines N	
Specify:	
Office Characteristics	·
Number of windows in room/work area	
D	
Poor Avances	
DACTION	•
1 2 3 4 5	
1 2 3 4 5	
1 2 3 4 5	•
1 2 3 4 5 Rate room temperature: Poor Average Excellent	
1 2 3 4 5	
1 2 3 4 5 Rate room temperature: Poor Average Excellent	
Rate room temperature: Poor Average Excellent 1 2 3 4 Are there smokers in your area? Y N	
Rate room temperature: Poor Average Excellent 1 2 3 4 5	

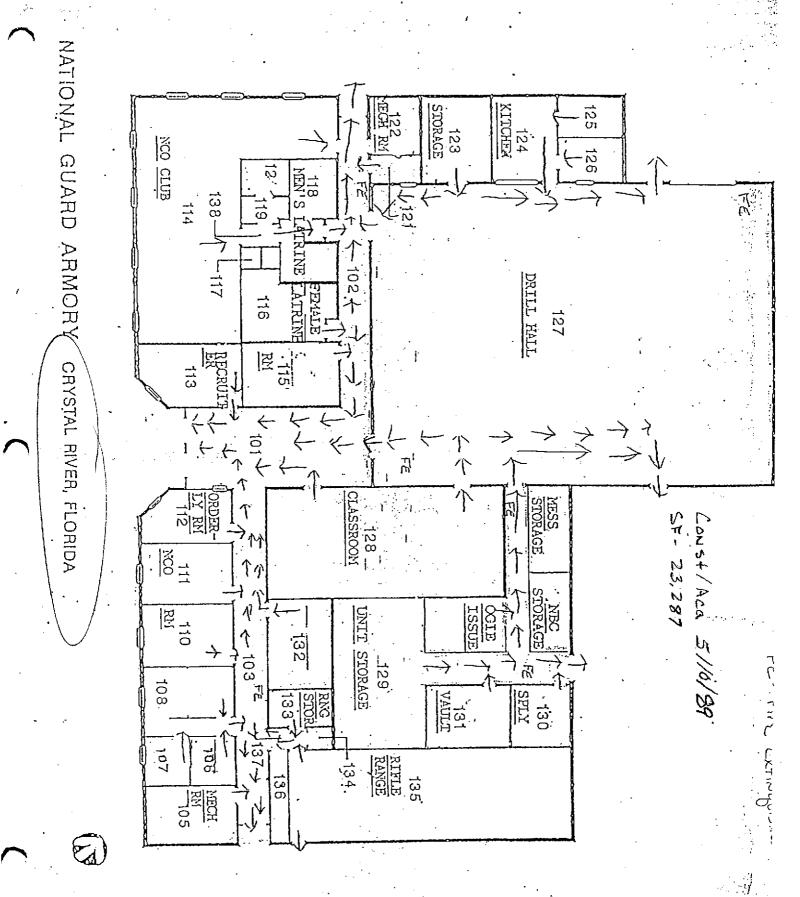
8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work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

SYMPTOM:															•			
Difficulty in concentration Aching joints Muscle twitching Back pain Hearing problems Dizziness Dizziness Dry, flaking skin Discolored skin Skin irritation Itching Heartburn Nausca Noticeable odors Simus congestion Sneezing High stress levels	ug.	•						(国是国民国国国国国国国民国国民		SW SW SW SW SW SW SW SW SW SW SW SW SW	PW PW PW PW PW PW PW PW PW PW							
Chest tightness Eye irritation Fainting Hyperventilation Problems with contacts Headache Fatigue/drowsiness Temperature too hot Temperature too cold Other (specify):				1	000000000000000000000000000000000000000	F F F F F F F		(इंडिइइइइइइइइइइ		SW SW SW SW SW SW SW SW	PW PW PW PW PW PW PW							٠
Have you seen a doctor f When do you experience TIME OF DAY: Mo		from		e sy	mpton			Y	V OF	N WEEK:	N/	<u>(</u>	·	w		F	s	
					•	<u> </u>							_	••	_	_		
MONTH: J F M Do symptoms disappear When:	A ?	M	J	J	А Ү	S O	N	D N	SEA	SON:	Spring	S	ummer	· F	aii	Win	ter	<u> </u>
9. In your opinion	wha	t is t	the c	c l	e of	any p	ossit	ole ind	loor E.C	air qual	lity pro	blen		hin t			ng?	· .
10. COMMENTS: concerning the qual	Plea ity of	set f you	ake ur w	this ork	opp envi	ortuni ronme	ty to ent:	comm	nent	on any	factor	s you	ı cons	ider	to be	imp	ortant	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS



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Sample #1 Indoor Firing Range Behind Firing Line



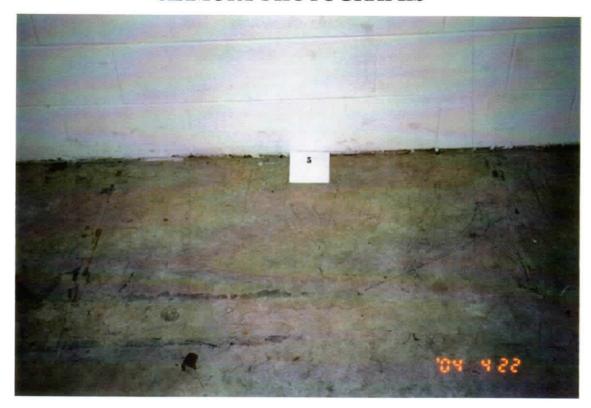
Sample # 2 Indoor Firing Range 15' In Front of Firing Line



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



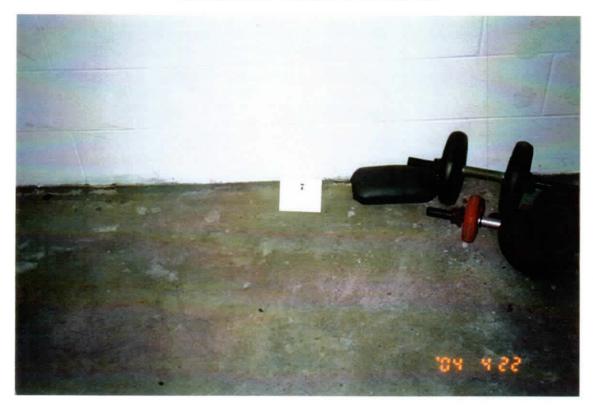
Sample # 4 Indoor Firing Range in Trap Area



Sample #5 Indoor Firing Range Wall Behind Backstop



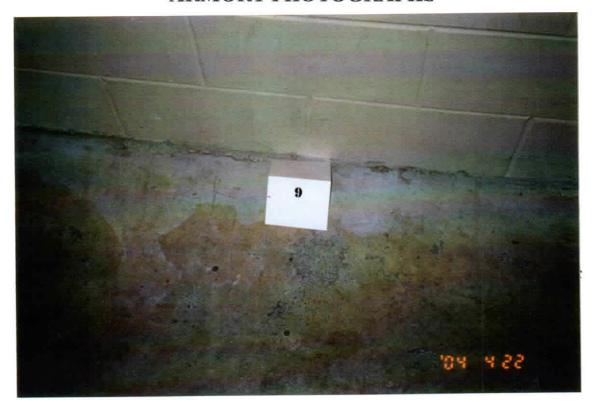
Sample # 6 Indoor Firing Range Left Wall Trap Area



Sample #7 Indoor Firing Range Right Wall Trap Area



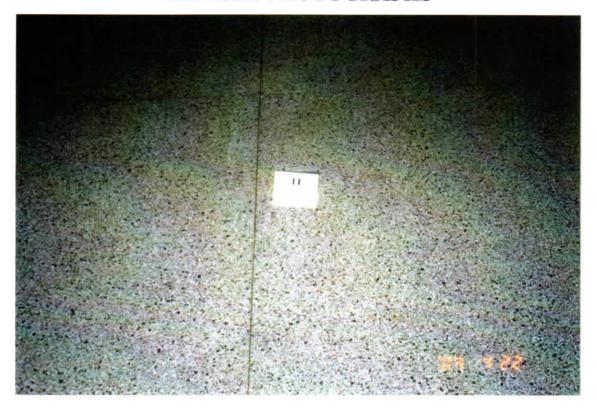
Sample #8 Indoor Firing Range Plenum Face



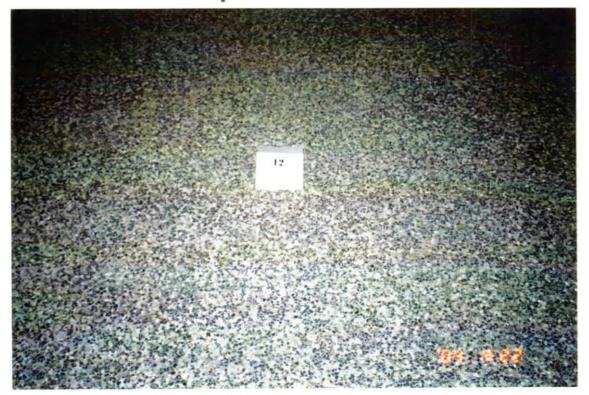
Sample #9 Indoor Firing Range Wall Behind Plenum



Sample # 10 Drill Floor Southeast Corner



Sample #11 Drill Floor Center



Sample # 12 Drill Floor Northeast Corner



Sample #13 Drill Floor Northwest Corner



Sample # 14 Drill Floor Southwest Corner



Sample #15 Kitchen, Top of Cooler, Room 123



Sample # 16 Kitchen, Top of Cooler, Room 124



Sample #17 Arms Vault, Inside Door



Sample # 18 Arms Vault, Center of Floor



Photograph, Indoor Firing Range, From Firing Line



Photograph, Crystal River Unit Sign

APPENDIX G

ARMORY WORKSHEET

FLORIDA ARMY NATIONAL GUARD ARMORY WORKSHEET

NAME OF ARMORY: CRYS!

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

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

(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

NO



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-16690th 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 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) \$59-4174.

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
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

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 Plan6. Lead Clean Up Procedures
- 7. References
- 8. Pictures: 1-24

SESS May 23, 2011

MEMORANDUM FOR: Florida Army National Guard, ATTN: SFC Non- 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.
- 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 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:
 - 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).
 - Twelve lead dust wipe samples were taken, using a 12 inch by 12 inch template. One sample was above the federal standard of 40μg/ft² and the National Guard Standard of 200μg/ft². 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:

Surveyor's Field No:	Results:
M181	BRL
M182	BRL
M183	BRL
M184	BRL
M185	BRL
M186	BRL
M187	BRL
M188	350
M189	BRL
M190	BRL
M191	BRL
M192	37
	BRL
	M181 M182 M183 M184 M185 M186 M187 M188 M189 M190 M191

Note 1:µg/ft² 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
1SG 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 Sorunons

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.

3)

HHIMS Industrial Hygiene Survey Form

Front page

chemical splash full face shield chem/safety impact safety impact welding goggles/glasses laser eye protection other chemical splash (>85-108 dBA steady) earplugs (108-118 muffs alone muffs alone muffs alone muffs and earplugs (118 or >) with time limit safety belt/harness other chem/safety impact	acid abrasive blasting hood faces full face air purifying oil 1/2 face air purifying powered air purifying powered air purifying floves 1/4 face air purifying other self-contained other	07H (3-79) F 07H (5-36) F	Supervisor, or Point of Contact Telephone Number DSN Commercial Frequency (firs/day) No. CIVs Lab Hoods: Vapor Degresser's Spray Booths Open Surface Tanks Ventilation Units Controls Present (If >6, continue in comments)[25] Evaluation (25 characters max) Unit code	ARLOC Installation Building Location Operation Survey Date month day Evaluator Macom Submacom Supervisor Mr. APPL Mr. Me. Rank Rank
Head and Feet e* R U cold weather boots/hat hard hats impermeable boots safety shoes (conductive) safety (nonconductive) other other other	NIOSH TC # or Foreign equivalent (10 characters max)	20-50 FTC 20-50 FTC 20-50 FTC	No. MIL Contractors No. LOCs expensed (25 characters max) Controls Required (25 characters max)	Unit / Organization (45) Unit / Organization (45) John Stream S

e = evaluator's recommendation or agreement

Reminders: ergonomics - dermatitis - physical agents - flammable storage EYE (permanent) ______ · EYE (portable) _____ · SHW · GMV · LEV

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

HHIMS Industrial Hygiene Survey Form

Back page

There is	Personnel data provided by the facility Comments Operation described is AJMIN EXTENSION PERSONN	POFOOTHAZ POFLYPROJ POEYEHAZA POFLAMHAZ POFLAMHAZ POUFTING POSHARPOB POHOTOBJE POELSHOCK COLUBEOIL	PONOISECO CAS code
歌歌 fins operation was explained to the evaluators, but was not actually observed. There is a noise data sheet attached to this form	Personnel data provided by the facility is attached to this formments TENSION PERSONNEL AND RECTIVE ON PERSONNEL AND RECTIVE OF THE PROPERTY		de
y observed. There is a ventilation data s	Last Name (20 charages max) First Nam Insert Privacy Act S VE OPERATION HOINC VE OPERATION		PAC EPC Hazard Description
heet atteched to this form	Statement Statement KEOKD KEEPING		ition
(comments continued on attached)	Sex Category Roughous	FO A Requested Record #↓-15-0085 (I Released by National Guard Bure Page 178 of 10	FL) eau 021

Hazardous Material Storage Inventory

Activity Name: 699th MP COMPANY (GUARD)				C TELLSTETAL SHOOT REFER	iai Storage Inventory			
SILN	Activit	y Name: <u>6</u>	90th MP COMPANY (GUARD)					
SIAN	Storag	e Location	: Master					
SI.N	Invent	ory Perfor	med By <u>: SGT<mark>S + ®</mark> 8 5 5 8 0</u>					:
SLN Product Name NSN Container Container Max. Min. A01 Go Jo Hand Cleaner Spartan 32oz. Spray Bortle 6 1 A02 Spart Gener Spartan 32oz. Spray Bortle 6 1 A03 Simple Green 32oz. Spray Bortle 6 1 A04 Dust Mory Treatment Spartan 16oz. Spray Bortle 6 1 A05 Stuinless Stoci Cleaner Spartan 167 oz. Spray Bortle 6 1 A06 Time Mist Johnson Diversey 16oz. Spray Bortle 6 1 A07 Streak Master Oil GBC Office 15oz. Spray Can 6 1 A07 Streak Master Oil GBC Office 15oz. Spray Can 6 1 B01 Furniture Polish Hedge 32oz. Spray Bortle 6 1 B02 Errack Spol Remover Tilex 32oz. Spray Bortle 6	Date P	erformed:	20 Jan11					
A01 Go Jo Hand Cleener		CT ST						
A01 Go Jo Hand Cleaner Spartan 32oz. Spray Bortle 6 1 A02 SpartCling Spartan 11qt. Spray Bottle 6 1 A03 Simple Green Simple Green 32oz. Spray Bottle 6 1 A04 Dust Mop Treatment Spartan 16oz. Spray Bottle 6 1 A05 Straintess Steel Cleaner Spartan 67 oz. Spray Bottle 6 1 A06 Time Mist Johnson Diversey 16oz. Spray Bottle 6 1 A07 Shred Master Oil GBC Offfice 15oz. Spray Can 6 1 B01 Furniture Polish Pledge 32oz. Spray Bottle 6 1 B02 Firmiture Polish Window Cleaner Tilex 32oz. Spray Bottle 6 1 B03 Window Cleaner Misty 75 Wipes Can 6 1 Carpet Spot Remover Misty 15al. Bottle <th>Loc.</th> <th>SLN</th> <th>Product Name</th> <th>NSN</th> <th></th> <th>Container Type</th> <th>Max. Stored</th> <th>Min. Stored</th>	Loc.	SLN	Product Name	NSN		Container Type	Max. Stored	Min. Stored
A02 SparCling Spartan Iqt. Spray Bortle 6 1 A03 Simple Green 32oz Spray Bortle 6 1 A04 Dust Mop Treatment Spartan 16oz Spray Bortle 6 1 A05 Stainless Steel Cleaner Spattan .67 oz. Spray Bortle 6 1 A06 Time Mist Johnson Diversey 16oz Spray can 6 1 A07 Shred Master Oil GBC Offfice 15oz Spray Can 6 1 B01 Senbing Powder AJAX 21oz Can 6 1 B02 Firmiture Polish Pledge 32oz Spray Bottle 6 1 B03 Carpat Spot Remover Mistry 75 Wipes Spray Bottle 6 1 B05 Carpet Spot Remover Mistry 75 Wipes Can 6 1 C01 All Purpose Cleaner Hospical Specialty 4oz Brocks 1 1	FL01	A01	Go Jo Hand Cleaner	Spartan	32oz.	Spray Bottle		1
A03 Simple Green Simple Green 32oz. Spray Bottle 6 1 A04 Dust Mop Treatment Spartan 16oz. Spray Bottle 6 1 A05 Stainless Steel Cleaner Spartan 67 oz. Spray Bottle 6 1 A06 Time Mist Johnson Diversey 16oz. Spray Bottle 6 1 A07 Shred Master Oil GBC Office 15oz. Spray Can 6 1 B01 Firmiture Polish AJAX 20z. Spray Bottle 6 1 B03 Window Cleaner Pledge 32oz. Spray Bottle 6 1 B04 Mildew Remover Mist 32oz. Spray Bottle 6 1 B05 Carpet Spot Remover Mist 32oz. Spray Bottle 6 1 B06 Armor-All 12oz. Spray Bottle 6 1 C01 All Purpose Cleaner Pin-Sole 1Gal. Bottle 8 1 <td>FL01</td> <td>A02</td> <td>SparCling</td> <td>Spartan</td> <td>lqt.</td> <td>Spray Bottle</td> <td>6</td> <td>1</td>	FL01	A02	SparCling	Spartan	lqt.	Spray Bottle	6	1
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B03 Window Cleaner WINDEX 32oz Spray Bottles 8 1	¥L01	B02	Furniture Polish	Pledge	32oz.	Spray Bottle	6	—
B04 Mildew Remover Tilex 32oz. Spray Bottle 6 1 B05 Carpet Spot Remover Misty 75 Wipes Can 6 1 C01 All Purpose Cleaner Pin-Sole 1 Cgal. Bottle 8 1 C02 Urinal Blocks Hospital Specialty 4oz. Blocks 18 1 C03 Floor Polish I Shine 1 Gal. Bottle 4 1 C04 Floor Restorer Sun Swept 1 Gal. Bottle 4 1 Bottle 4 1 1 1 1 1 C04 Floor Restorer Sun Swept 1 Gal. Bottle 4 1 1	₹L01	B03	Window Cleaner	WINDEX	32oz	Spray Bottles	8	-
B05 Carpet Spot Remover Misty 75 Wipes Can 6 1 B06 Armor-All Armor-All 12oz. Spray Bottle 8 1 C01 All Purpose Cleaner Pin-Sole 1Gal. Bottle 8 1 C02 Urinal Blocks Hospital Specialty 4oz. Blocks 18 1 C03 Floor Polish I Shine 1 Gal. Bottle 4 1 C04 Floor Restorer Sun Swept 1 Gal. Bottle 4 1 Bottle 4 1 1 1 1 1	SL01	B04	Mildew Remover	Tilex	320 z .	Spray Bottle	6	
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C01 All Purpose Cleaner Pin-Sole 1Gal. Bottle C02 Urinal Blocks Hospital Specialty 4oz. Blocks C03 Floor Polish I Shine 1 Gal. Bottle C04 Floor Restorer Sun Swept 1Gal. Bottle	FL01	B06	Armor-All	Armor-All	12oz.	Spray Bottle	8	
C02 Urinal Blocks Hospital Specialty 4oz. Blocks C03 Floor Polish I Shine 1 Gal. Bottle C04 Floor Restorer Sun Swept 1 Gal. Bottle	FL01	C01	All Purpose Cleaner	Pin-Sole	1Gal.	Bottle	8	1
C03 Floor Polish I Shine I Gal. Bottle C04 Floor Restorer Sum Swept I Gal. Bottle	FL01	C02	Urinal Blocks	Hospital Specialty Company	4oz.	Blocks	18	1
C04 Floor Restorer Sun Swept 1Gal. Bottle	FL01	C03	Floor Polish	I Shine	1 Gal.	Bottle	4	
	FL01	C04	Floor Restorer	Sun Swept	1Gal.	Bottle	4	,
		-						
	-							

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Released by National Guard Bureau
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Analytical Environmental Services, Inc

Date:

05/23/2011

05/27/2011

MP

1-Jun-11

Lab Order:

1105K39

Client:

SES

Project:

1105K39-013A

Crystal River, Fl Armory

Matrix:

Wipe Date Received: 5/25/2011 9:35:00 AM

BLANK

BRL

LEAD ON WIPES (N9100/7082)

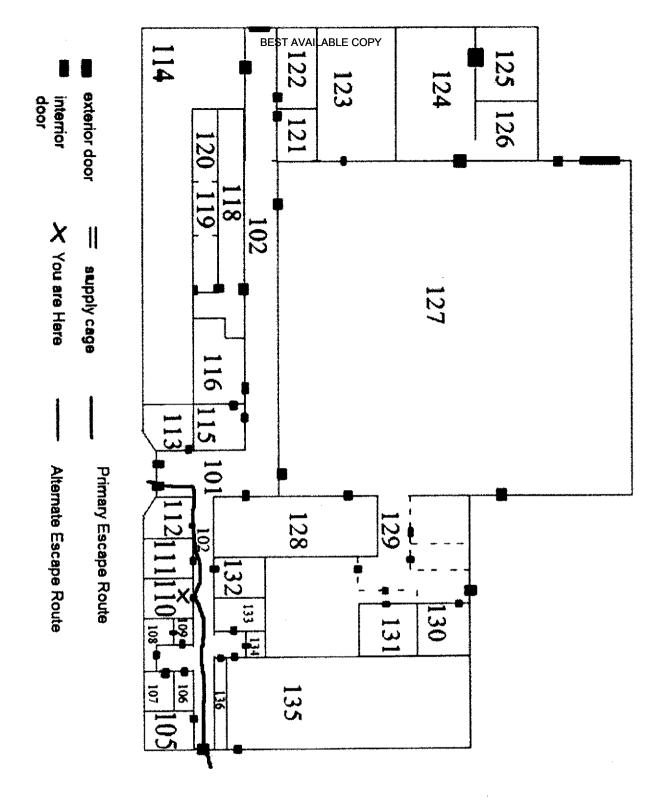
N7082

Laboratory ID	Client Sample 1D	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1105K39-001A	M181	BRL	ug, Total	20	ı		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	i		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	ı		05/23/2011	05/27/2011	MP
1105K39-006A	M186	BRL	ug, Total	20	l		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	ì		05/23/2011	05/27/2011	MP

ug, Total

20

Non-Responsive SFC	iness NCO
SSG	oply S G T
SSG	ining NCO
SG ³	Admin NCO
SSG	ADOS
SGT	os



ARMORY CLEANUP REQUIREMENTS

High Test Results

If the public utilizes your facility and the test results for lead came back above $40 \mu g/ft^2$ you are responsible for cleaning this area and adjoining areas to meet the $40 \mu g/ft^2$ 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.

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.
- 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.

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:

- <u>NOTE</u>: 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. <u>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.</u>
- 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.

- 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.

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.

<u>NOTE:</u> 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 <u>Do Not Shake Mop Head</u> have mop head laundered after use. <u>Always keep used dust mop heads in sealed double plastic bags when stored at an armory or facility.</u> Shaking of a pre-treated mop head may release unwanted contaminants into surrounding atmosphere.
- 2. <u>Frequency of Cleanup</u> 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.)

- 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. <u>If lead cleanup work was contracted out, a third party should do the clearance sampling.</u>
- 4. <u>If young children and pregnant females are, or may be present, signs shall be posted</u> on all facilities, warning of the potential <u>danger of exposure to lead dust.</u>

Page 6 of 6

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.

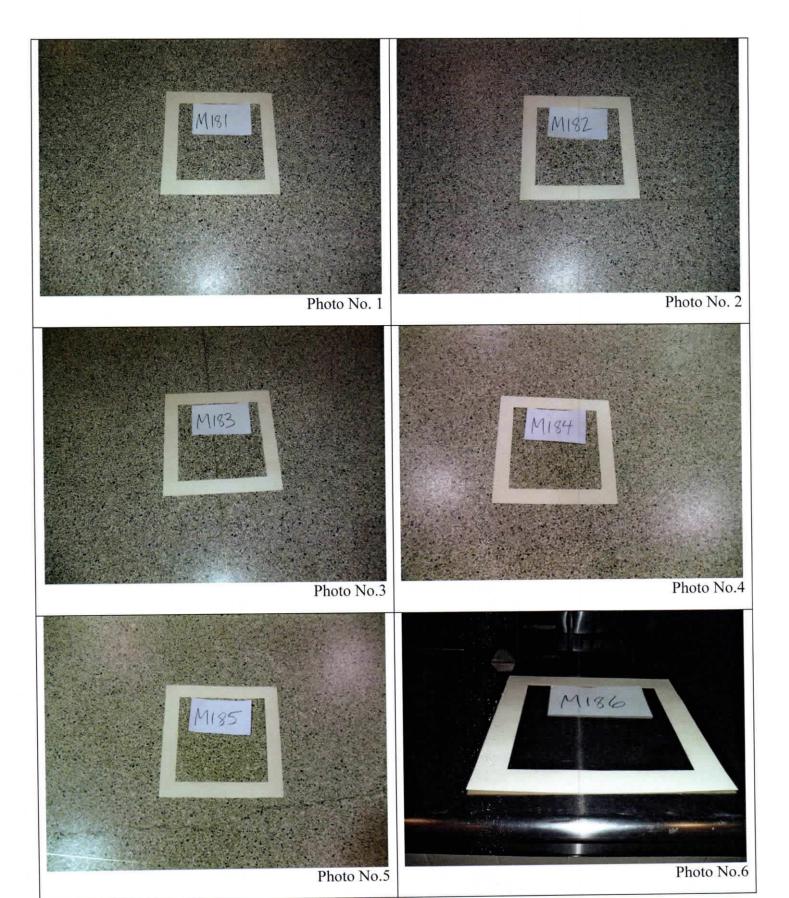
TB MED 503, The Army Industrial Hygiene Program.

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



ENCLOSURE 8 Page 1 of 5





Photo No.7

Photo No.8







Photo No.10







Photo No.12

ENCLOSURE 8 Page 2 of 5



Photo No.13



Photo No.14



Photo No.15



Photo No.16





Photo No.18









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 April 22, 2004

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

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

- 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 Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC Non-Responsive 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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Appendices

- A. References
- B. Laboratory Chain of Custody
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- 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 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

Page 1
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.

Page 2

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination reading 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 SSG Non-Response 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. 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 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.

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

AREA	READING	IN	FOOT-CANDLES
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

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

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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 into@prairieanalytical.com

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Prairie Analy	tical Systems, l	Inc.	Date: 05-Apr-04			04
	n-Responsive rystal River Armory	Hinchco		La	b Order:	0403178
Lab ID: Client Sample ID:	0403178-001 04-00CR			Collection Date: Matrix:		4 9:25:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:48:00 AM
Lab ID: Client Sample ID:	0403178-002 04-01CR			Collection Date: Matrix:		4 9:30:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	93.1	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 4:55:00 AM
Lab ID: Client Sample ID:	0403178-003 04-02CR		(Collection Date: Matrix:		4 9:32:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	269	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 5:03:00 AM
Lab ID: Client Sample ID:	0403178-004 04-03CR			Collection Date: Matrix:		4 9:35:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	10300	N7082 375	(N7082) μg/ft²	500	Analyst: MCL 4/2/2004 8:02:00 PM
Lab ID: Client Sample ID:	0403178-005 04-04CR		(Collection Date: Matrix:		4 9:40:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	;	12800	N7082 375	(N7082) µg/ft²	500	Analyst: MC L 4/2/2004 8:09:00 PM
Lab ID: Client Sample ID:	0403178-006 04-05CR		(Collection Date: Matrix:		4 9:42:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	208	N7082 7.50	(N7082) µg/ft²	10	Analyst: MC L 4/2/2004 8:17:00 PM

Date: 05-Apr-04

DF

DF

DF

Date Analyzed

Date Analyzed

Date Analyzed

Prairie Analytical Systems, Inc.

Analyses

Analyses

Analyses

CLIENT: 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 Result

METALS ANALYSIS N7082 (N7082) Analyst: MCL Lead 57.4 µg/ft² 4/2/2004 8:24:00 PM 7.50 10

Limit Qual Units

Limit Qual Units

Limit Qual Units

Lab ID: 0403178-008 Collection Date: 3/23/2004 9:47:00 AM

Client Sample ID: 04-07CR Matrix: WIPE

Result Limit Qual Units DF Analyses Date Analyzed

METALS ANALYSIS N7082 (N7082)Analyst: MCL 37.3 4/2/2004 6:03:00 AM Lead 7.50 µg/ft² 10

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

Matrix: WIPE Client Sample ID: 04-08CR Result

N7082 (N7082) **METALS ANALYSIS** Analyst: MCL

32.7 7.50 µg/ft² 10 4/2/2004 6:11:00 AM Lead

0403178-010 Collection Date: 3/23/2004 9:55:00 AM Lab ID:

Matrix: WIPE Client Sample ID: 04-09CR Result

METALS ANALYSIS N7082 (N7082) Analyst: MCL 10 4/2/2004 6:18:00 AM Lead 30.1 7.50 μg/ft²

Lab ID: Collection Date: 3/23/2004 9:57:00 AM 0403178-011

Matrix: WIPE Client Sample ID: 04-10CR

Result Limit Qual Units DF Date Analyzed Analyses

METALS ANALYSIS N7082 (N7082) Analyst: MCL 4/2/2004 6:26:00 AM U 7.50 µg/ft² 10 Lead

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

Matrix: WIPE Client Sample ID: 04-11CR

Result Limit Qual Units DF Date Analyzed Analyses

METALS ANALYSIS N7082 (N7082) Analyst: MCL

U 7.50 μg/ft² 10 4/2/2004 6:34:00 AM Lead

Prairie Analy	, Inc.	Date: 05-Apr-04					
CLIENT:	on-Responsive Crystal River Armor	Hinchco			La	b Order:	0403178
Lab ID: Client Sample ID:	0403178-013 04-12CR			(Collection Date: Matrix:		4 10:10:00 AM
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	s	7.61	N708 7.50		(N7082) μg/fl²	10	Analyst: MCL 4/2/2004 6:41:00 AM
Lab ID: Client Sample ID:	0403178-014 04-13CR			(Collection Date: Matrix:		4 10:12:00 AM
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	S	Ü	N70 8 7.50	82	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 6:49:00 AM
Lab ID:	0403178-015			(Collection Date:		4 10:15:00 AM
Client Sample ID:	04-14CR				Matrix:	WIPE	
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	s	U	N708 7.50	82	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 6:56:00 AM
Lab ID:	0403178-016			(Collection Date:	3/23/200	4 10:20:00 AM
Client Sample ID:	04-15CR				Matrix:	WIPE	
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	S	7.78	N70 8 7.50	82	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 7:04:00 AM
Lab ID:	0403178-017			(Collection Date:	3/23/200	4 10:25:00 AM
Client Sample ID:	04-16CR				Matrix:	WIPE	
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	S	35.0	N70 8 7.50	82	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 7:34:00 AM
Lab ID:	0403178-018	<u> </u>		(Collection Date:		4 11:15:00 AM
Client Sample ID:	04-17CR				Matrix:	WIPE	
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYSI	S	43.5	N704	82	(N7082)	10	Analyst: MCL 4/2/2004 7:41:00 AM

4/2/2004 7:41:00 AM

7.50

μg/ft²

43.5

Lead

10

BEST AVAILABLE COPY

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:

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

102

Limit Qual Units

DF Date Analyzed

METALS ANALYSIS

Lead

N7082 7.50

(N7082)

Analyst: MCL 4/2/2004 7:49:00 AM

μg/ft² 10

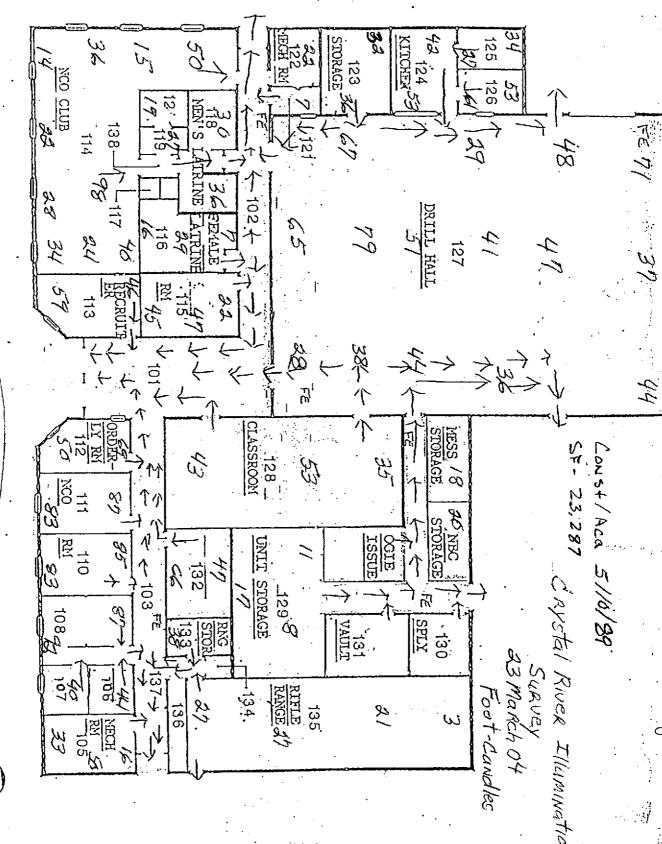
Prairie Analytical Systems, Inc.

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

(4)

FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 216 of 1021

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Name/Location of Facility: 690th Area or rooms where you spend the mo	•		l liver,	r L
The Orderly Room				
Does any of your work activities produ Describe:	. '	YES	MO	
Gender: Male (Female)	<u> </u>		<u></u>	
Age: Under 25 25-34 35-44 45-54	55 and over			
Do you: Smoke	*7	(T)		
Have fever/pollen allergies	Y. Y	(N)		-
Have skin allergies/dermatitis	Y			•
Have a cold/flu	Ÿ			1
Have sinus problems	a disp	N		
Have other allergies	$\widetilde{\mathfrak{P}}$	N		
Wear contact lenses		N		
Operate video display terminals (comp	uters) 😗	N	-	
Operate photocopiers 10% of the time	(N		
Use other office machines	uters) (Y)	N		
Specify:				
Currently take any medications?				
Reason:	Y	(N)		
Office Characteristics: Number of persons sharing sales Number of windows in room/v Do windows open?	me room/work ar vork area Y	rea N		
Rate adequacy of work space per person				•
Poor Average 1 2 3	Likeviien			
1 2 3 (4)	5			•
Rate room temperature:	•	•		•
Poor Average	Excellent	•	•	
1 2 3 4	5			
Are there smokers in your area?	Y	(\hat{N})	,	
How long have you worked:	-	~		•
2mos In this room/area				
The state of the s				

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".)

ching joints O F NA SW PW ack pain O F NA SW PW caring problems O F NA SW PW rearing problems O F NA SW PW rearing problems O F NA SW PW rearing problems O F NA SW PW rizciness O F NA SW PW riscolored skin O F NA SW PW rearrow rearrow rearrow rearrow rearrow O F NA SW PW rearrow rearrow rearrow rearrow O F NA SW PW rearrow	Aching joints O F NA SW PW Muscle twitching O F NA SW PW Hearing problems O F NA SW PW Dizziness O F NA SW PW Discolored skin O F NA SW PW Discolored skin O F NA SW PW Riching O F NA SW PW Sinus congestion O F NA SW PW Figh stress levels O F NA SW PW Figh stress levels O F NA SW PW Frainting O F NA SW PW Hyperventilation O F NA SW PW Frainting O F NA SW PW Frainting O F NA SW PW Hollens with contacts O F NA SW PW Frainting O F NA SW PW Hollens with contacts O F NA SW PW Frainting O F NA SW PW Hollens with contacts O F NA SW PW Frainting O F NA SW PW Hollens with contacts O F NA SW PW Holle
ching joints	Aching joints O F AVA SW PW Auscle twitching O F AVA SW PW Back pain O F AVA SW PW Back pain O F AVA SW PW Back pain O F AVA SW PW Bearing problems O F AVA SW PW Dizziness O F AVA SW PW Skin irritation O F AVA SW PW Reartburn O F AVA SW PW Reartburn O F AVA SW PW Reartburn O F AVA SW PW Noticeable odors O F AVA SW PW PW Chest tightness levels O F AVA SW PW Chest tightness O F AVA SW PW PW Frainting O F AVA SW PW
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	ONTH: J F M A M J J A S O N D SEASON; Spring Summer Fall Winter
	o symptoms disappear? Y N
	$\mathcal{N}\mathcal{A}$
Keepigthe air filty clean and the air at a reason	temperater.
temperature.	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Name/Location of Facility: 690+	*	. •	al Kiver
Area or rooms where you spend the mos	it time in the bu	uilding:	
Does any of your work activities produc Describe:	e dust or odor?	? YES	NO)
Gender: Male Female	· · · · · · · · · · · · · · · · · · ·		
Age: (Under 25) 25-34 35-44 45-54	55 and over		
Do you:		_	
Smoke	Y.	\mathcal{D}	
Have fever/pollen allergies Have skin allergies/dermatitis	. D	N	
Have a cold/flu	Y Y	Æ.	:
Have sinus problems	Y		•
Have other allergies	Ŷ	z (3 (2) (2) z	
Wear contact lenses	·		•
Operate video display terminals (compu	iters)	N	
Operate photocopiers 10% of the time	T T	N	
Use other office machines	●	N	
Specify:			
Currently take any medications? Reason:	Y	Ŋ	·
Office Characteristics: Number of persons sharing san			
Number of windows in room/w	ork area	ırea	
Do windows open?	Y	N	
<u>_</u>	•		•
Rate adequacy of work space per perso			
Poor Average	Excellent	•	
1 2 3 4	(3)		
Rate room temperature:			
Poor Average	Excellent		•
1 2 3 4	5		
•			
Are there smokers in your area?	Y	N	
		~	,
How loss bases 1 1			
How long have you worked:			

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".)

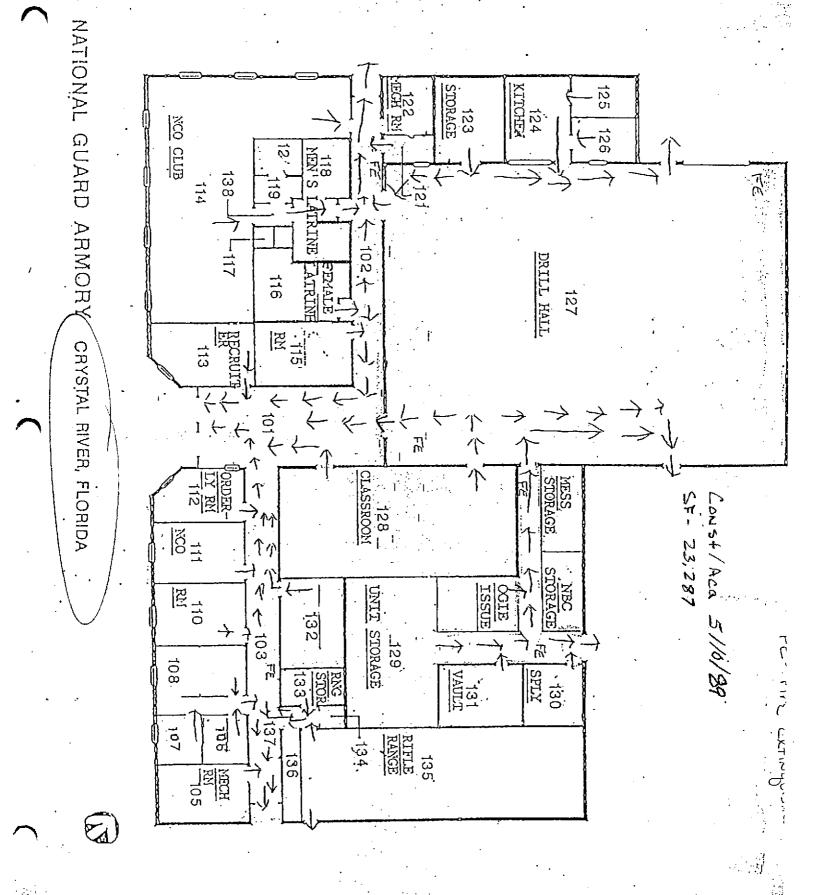
SYMPTOM:

ifficulty in concentration in the ching joints fuscle twitching tack pain	g	` 0 O	F	(N/A)	SW	THEFT			
fuscle twitching ack pain		Ω.			⊅.M	PW .			
ack pain			F	(NV)	SW	PW			
		· O	F	ATA)	SW	₽W			
		О	F	(N/A)	SW	PW			
caring problems		O	F	N/A)	SW	, PW			
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ry, flaking skin		0	F	N/A	SW	PW			-
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cantburn		_			SW	PW			
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oticeable odors		0	F	<u> DVA</u>	SW	PW .			•
nus congestion		O	F	N/A)	SW	PW			•
neezing		0	F	◯NØ.	SW	PW			
igh stress levels		0	F	NA	SW	PW			-
est tightness		O	F	NA	SW	PW			
e irritation		Ō	F	ेक्स्सरे	SW	PW			
inting		ŏ	F	NA	ŚW	PW			
perventilation		ő	F	> 100 P	SW				
oblems with contacts		. 0	F.			PW			
				- XXA)	SW	PW			
eadache		O	F	N.D	' SW	P.W			•
tigue/drowsiness						2			
-		О	F	(N/A)	SW	PW			
		o ·	F	NA)					
emperature too hot emperature too cold other (specify):	or any or al	0	F F		SW	PW			
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mperature too cold her (specify): ave you seen a doctor f hen do you experience ME OF DAY: Mo ONTH: J F M	relief from	O O O I of these symptom	F F ptoms? ms?	Y DAY (SW SW SW	PW PW PW			
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THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS





Sample #1 Indoor Firing Range Behind Firing Line



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



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



Sample # 4 Indoor Firing Range in Trap Area



Sample #5 Indoor Firing Range Wall Behind Backstop



Sample # 6 Indoor Firing Range Left Wall Trap Area



Sample #7 Indoor Firing Range Right Wall Trap Area



Sample #8 Indoor Firing Range Plenum Face



Sample #9 Indoor Firing Range Wall Behind Plenum



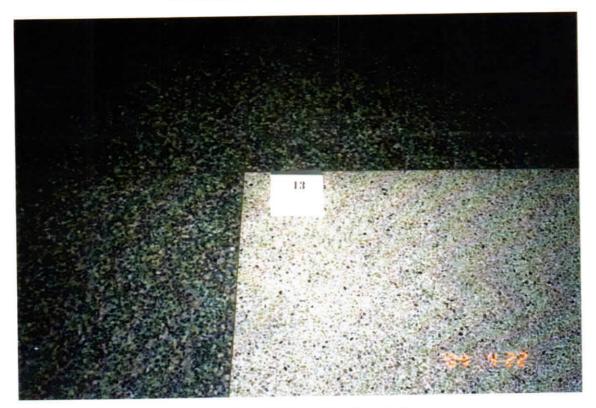
Sample # 10 Drill Floor Southeast Corner



Sample #11 Drill Floor Center



Sample # 12 Drill Floor Northeast Corner



Sample #13 Drill Floor Northwest Corner



Sample # 14 Drill Floor Southwest Corner



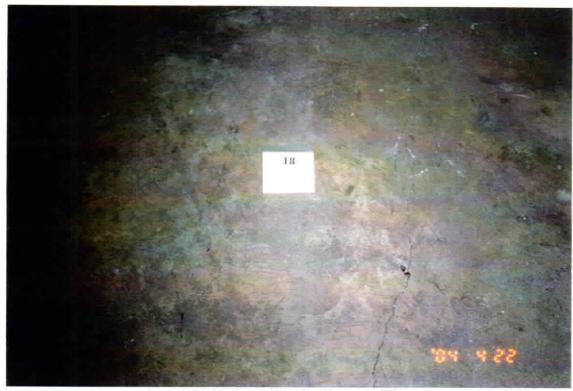
Sample #15 Kitchen, Top of Cooler, Room 123



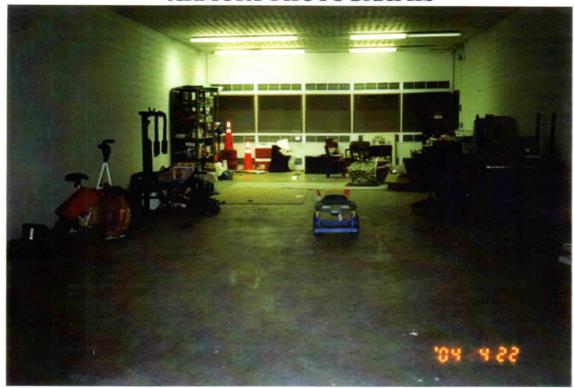
Sample # 16 Kitchen, Top of Cooler, Room 124



Sample #17 Arms Vault, Inside Door



Sample # 18 Arms Vault, Center of Floor



Photograph, Indoor Firing Range, From Firing Line



Photograph, Crystal River Unit Sign

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 N

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.

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.
- 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.



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

E Non-Responsive

dba HINCHCO

9 April 2004

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	ect Building Materials		
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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 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 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.

Page 2

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 reading 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-Non-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.

<u>Tllumination Survey</u> Lighting levels throughout the Dade City armory ranged from 21 foot-candles to 89 foot-candles. Specific readings were as follows:

AREA	READING	IN	FOOT-CANDLES
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 their 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

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 into@prairieanalytical.com

Prairie Malytical Systems, Mcorresated

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			1410	04-07 DC
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	1		1325	04-03 DC
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Chain of Custody Record

1210 Capital Airport Drive • Springfield, IL 62707-6480 • Phone (217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prarrieanalytical.com

Systems,
YICOL TOPINITE

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Prairie Analy	tical Systems,	Inc.		Date:	: 05-Apr-	04
	on-Responsive Pade City Armory	Hinchco		La	b Order:	0403179
Lab ID: Client Sample ID:	0403179-001 04-00DC (blank)			Collection Date: Matrix:		4 1:07:00 PM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	5	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:19:00 AM
Lab ID: Client Sample ID:	0403179-002 04-01DC		•	Collection Date: Matrix:		4 1:15:00 PM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS		U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:27:00 AM
Lab ID: Client Sample ID:	0403179-003 04-02DC		(Collection Date: Matrix:		4 1:20:00 PM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	3	6.63	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:35:00 AM
Lab ID: Client Sample ID:	0403179-004 04-03DC			Collection Date: Matrix:		4 1:25:00 PM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	44 .8	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:04:00 AM
Lab ID: Client Sample ID:	0403179-005 04-04DC			Collection Date: Matrix:		4 1:30:00 PM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	50.6	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:12:00 AM
Lab ID:	0403179-006			Collection Date: Matrix:		4 2:00:00 PM
Client Sample ID: Analyses	04-05DC	Result	Limit Qual		DF	Date Analyzed
METALS ANALYSI		47.6	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:20:00 AM

Prairie Analytical Systems, Inc.

Date:	05-Apr-04
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CLIENI.	on-Responsive Dade City Armory	Hincheo			La	b Order:	0403179
Lab ID: Client Sample ID:	0403179-007 04-06DC			(Collection Date: Matrix:		14 2:03:00 PM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	65.2	N7(7.50	082	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 9:28:00 AM
Lab ID: Client Sample ID:	0403179-008 04-07DC			•	Collection Date: Matrix:		04 2:10:00 PM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	52.0	N7 (082	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:35:00 AM
Lab ID: Client Sample ID;	0403179-009 04-08DC			•	Collection Date: Matrix:		04 2:12:00 PM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	13.3	N7 5.00	082	(N7082) µg/ft²	10	Analyst: MCI 4/2/2004 9:43:00 AM
Lab ID: Client Sample ID:	0403179-010 04-09DC				Collection Date: Matrix:		04 2:20:00 PM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS Lead	IS	14.3	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MCI 4/2/2004 9:51:00 AM
Lab ID: Client Sample ID:	0403179-011 04-10DC		-		Collection Date: Matrix:		
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	18	32.4	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MC 4/2/2004 9:58:00 AM
Lab ID: Client Sample ID:	0403179-012 04-11DC				Collection Date: Matrix		04 2:45:00 PM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	U	N 7	7082	(N7082) µg/ft²	10	Analyst: MC 4/2/2004 8:47:00 PM

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Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:	n-Responsive Pade City Armory	Hinchco		La	b Order:	: 0403179
Lab ID:	0403179-013			Collection Date:		04 2:47:00 PM
Client Sample ID:	04-12DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF _	Date Analyzed
METALS ANALYSIS	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:16:00 PM
Lab ID:	0403179-014			Collection Date:	3/23/200	04 2:50:00 PM
Client Sample ID:	04-13DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSII	s	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:23:00 PM
Lab ID:	0403179-015			Collection Date:	3/23/200	04 2:55:00 PM
Client Sample ID:	04-14DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:30:00 PM
Lab ID:	0403179-016			Collection Date:	3/23/20	04 3:00:00 PM
Client Sample ID:	04-15DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 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).

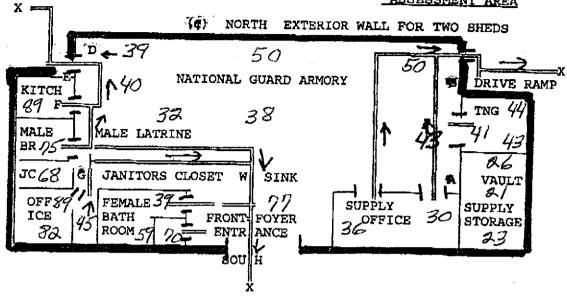
APPENDIX D

ILLUMINATION SURVEY DIAGRAM

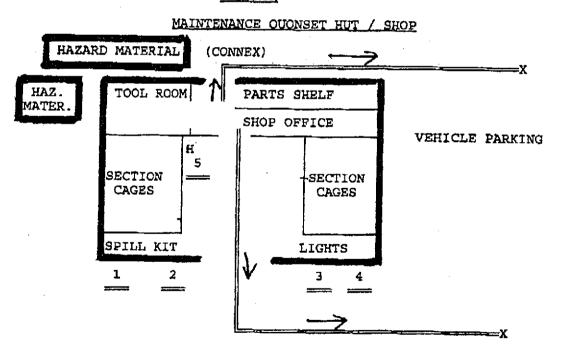
PART 4A: FACILITY EMERGENCY EVACUATION DIAGRAM

FIRE EXTINGUISHER IDENTIFIED BY ALPHABET LETTER A-H

X= PERSONNEL HOLDING/ ACCOUNTABILITY / OPERATIONS
ASSESSMENT AREA



NORTH



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

Area or rooms where you spend the most time in the building:	
Does any of your work activities produce dust or odor? YES NO	•
Moving Equipment	•
Gender: Male Female	
Age: Under 25 25-34 35-44 45-54 55 and over	•
Do you: Smoke	
Iave fever/pollen allergies	
lave skin allergies/dermatitis	
Iave a cold/flu Y N	
lave sinus problems	
Iave other allergies N	
Have other allergies Vear contact lenses Vear video display to refeat (constant)	
Speciate video dispiny terminais (computers) / Y) N	-
Operate photocopiers 10% of the time Y N N N	
N N	
pecify:	
	· · · · · · · · · · · · · · · · · · ·
Currently take any medications?	
Currently take any medications? Reason:	
Currently take any medications? Reason:	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? N Rate adequacy of work space per person:	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Rate adequacy of work space per person:	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons sharing same room/work area Number of persons sharing same room/work area Number of persons sharing same room/work area Number of windows in room/work area Number of windo	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent Rate room temperature: Poor Average Excellent Excellent Excellent	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons sharing same room/work area Number of persons sharing same room/work area Number of persons sharing same room/work area Number of windows in room/work area Number of windo	
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent Rate room temperature: Poor Average Excellent Excellent Excellent	

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 I	N/A	SW PW		
Aching joints	0 1	· NA	SW PW		
Muscle twitching	· O F	(AVA)	SW PW		
Back pain	O · I		SW PW		
Hearing problems	Ŏ I		SW PW		
Dizziness	Ŏ F				
Dry, flaking skin	0 F				
Discolored skin			SW PW		
Skin irritation	0 1		SW PW		•
	O I		SW PW		
Itching	0 1		SW PW		
Heartburn	0 1		SW PW		
Nausca	0 1		SW PW		
Noticeable odors	O I		SW PW		•
Sinus congestion			SW PW		
Sneezing	1 (D)		SW PW		
High stress levels	0 1	F N <u>/A</u>	SW PW		
Chest tightness	<u>0</u> !	$\mathbf{F} = (\mathbf{N}/\mathbf{A})$	S <u>W</u> PW		•
Eye irritation		F N/A	SW PW		
Fainting	O I	P (NA)	SW PW		
Hyperventilation		F MA	SW PW		
Problems with contacts		F. AVA	SW PW		
Headache	(a) i		SW PW		
Fatigue/drowsiness	0 1		SW PW		
Temperature too hot		F N/A	SW PW	•	
Temperature too cold		F AVA	SW PW		
Other (specify):	0 1	CIVA	DA LA		
o (aprom)).					•
			······································		•
Have you seen a doctor for any or When do you experience relief fro		? Y <	N/A		
	Afternoon Evening	DAY O	FWEEK: S	M T W T	F S
MONTH: J F M A M	I J J A S C	N D SEA	ISON: Spring	Summer Fall	Winter
Do symptoms disappear?	V	N			
When:	C				•
					
		- · · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
O In your opinion what i	a the course of ann.		-1		
9. In your opinion, what i	s me cause of any	possible mooor	air quality prol	blems within this b	uilding?
- B 7011	9			•	
•	, .				
					
		······		- · · · · · · · · · · · · · · · · · · ·	
		•	•		
10. COMMENTS: Please	take this opportur	ity to comment	on any factors	you consider to be	important
concerning the quality of y	our work environn	sent.		7	
concerning me quanty or y	our work on thom	TO THE REAL PROPERTY.			
		1 1			
·	<u> </u>	11/2			
	1	~ · · ·			,
				······································	<u> </u>
			,		· · · · · · · · · · · · · · · · · · ·
			.,		
				·	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms w RECRUITING	here you spend	the most tin	ne in the bu	ilding: N + GP	y 200m	
Does any of your Describe:	work activities	produce du	st or odor?	YES	NO	
	-		· · · · · · · · · · · · · · · · · · ·			
Gender: Male					-	
Age: Under 25 (25-34 35-44	45-54 55	and over			
Do you:				~		
Smoke			Y.			
Have fever/policy	n allergies		Y	⚠		
Have skin allergi	ies/dermatitis		. Y	X)		•
Have a cold/flu			Y	€		
Have sinus probl			Y	∆ V		
Have other allers			Y	$\delta \hspace{-0.5em} D$		
Wear contact len			Y	$\overline{\mathcal{N}}$		
Operate video di	splay terminais (computers)	· •	Ň		
Operate photoco	piers 10% of the	time	¥	6 €		
Use other office 1	nachines		Y	නික්කක්කක්ක කිහි		
Specify:			·			
Currently take a Reason:	ny medications?		Y	©		
Office Characte	ristics: · of persons shar · of windows in r	ing same ro com/work :	om/work a	rea		
Do windows ope	n?		\mathcal{A}	N		•
•			O .			
Rate adequacy of	f work space per	person:				
Poor	Average	E	ccellent	•		4
1 2	3	4	/ 5)		•	
	•		<i>O</i> ,			* •
Rate room temp	erature:					
	Average	E	cellent		•	
1 2	3	4	(5)			
Are there smoke	ers in your area?		Y	N		
How long have y	zou worked					•

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	0	F	NIA	SW	PW	•			
Aching joints	ō	F	NIA	SW	PW				
Muscle twitching	ŏ	F	NA	SW	PW				
Back pain	Õ -	F	900	SW	PW				
Hearing problems	ō	F	STA .	SW	PW				
Dizziness	Ō	F	STA	SW	` PW				
Dry, flaking skin	Ŏ.	F	SOTA)	SW	PW				
Discolored skin	Ō	F	AN/A	SW	PW				
Skin irritation	0	F	ATA	SW	PW				
Itching	Ŏ	F	GAA)	SW	PW				
Heartburn	0	F	24/A)	SW	PW				
Nausca	0	F	AV/B	SW	PW				
Noticeable odors	0	F	SNA	SW	PW				
Sinus congestion	О	F	A/A	SW	PW				
Succing	О	F	SM/A	ŚW	PW				
High stress levels	0	F	NA	SW	PW				
Chest tightness	0	F	N/A	SW	PW				
Eye irritation	O	F	NIA	SW	₽₩				
Fainting	O ·	F	AV/A	ŚW	PW		•		
Hyperventilation	0	F	NA	SW	PW				
Problems with contacts	Ō	F	ZN/A	S₩	₽W				
Headache	O	F	AND .	SW	PW				
Fatigue/drowsiness	o	F	ZM/A)	SW	PW				
Temperature too hot	o	F		SW	PW				
Temperature too cold Other (specify):	0	F	M/A	SW	PW				
			·						
Have you seen a doctor for any or	all of these symp	toms?	Y	N	€N/A				
When do you experience relief fro	on these sympton	ns?	NA				-		
TIME OF DAY: Morning	Afternoon Eve	aing	DAYC	F WEEK	: S 1	M T	W T	F	s
MONTH: J F M A M	I J J A ;	S O 1	D SE	ASON:	Spring	Summer	Fall	Winter	
Do symptoms disappear? When:	Y		N		٠.				•
				· · · · ·		· · · · ·			
9. In your opinion, what is	s the cause of	any pos	sible indoor	rairqua	lity prob	lems with	nin this b	uilding	?
									,
					· · · · · · · · · · · · · · · · · · ·				
	· · · · · · · · · · · · · · · · · · ·								
10 COMMENTS Places	stake this own	it.	ta aamma						
10. COMMENTS: Please concerning the quality of y	our work envi	ronment	to commen :	t on any	/ factors y	/ou consi	der to be	import	ant
		· · · · · ·							
	· · · · · · · · · · · · · · · · · ·				 			·	
					 				
									
	 			· · · · · ·					

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

	Name/Location of Facility: Area or rooms where you spend the most time in the building: TRAINING OFFICE	
	Does any of your work activities produce dust or odor? YES NO	· · · · · · · · · · · · · · · · · · ·
	Gender: Male Fomale	
•	Age: Under 25 25-34 35-44 45-54 55 and over	
	Do you:	
	Smoke Y N	_
	Have fever/pollen allergies Y N	
	Have skin allergies/dermatitis Y N	
	Have a cold/flu Y	
	Have sinus problems Y	•
	Have other allergies Y	•
	Wear contact lenses Operate video display terminals (computers)	
	Operate photocopiers 10% of the time Y	
	Use other office machines Y N	
•	Specify:	·
	Currently take any medications? Y	
	Office Characteristics:	
	Number of persons sharing same room/work area	
	Number of windows in room/work area	
	Do windows open?	
	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?	
	How long have you worked:	• .
	Yes In this room/area	
	/ Val In this poons orga	

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 Aching joints Muscle twitching Back pain Hearing problems Dizziness	O F O F O F O F	NIA SW SW SW SW SW SW SW	PW PW PW PW	
Dry, flaking skin Discolored skin Skin irritation	O F O F O F	SW SW SW SW SW SW	PW PW PW	
Itching Heartburn Nausea Noticeable odors	O F O F O F	NA SW	PW PW PW PW	
Sinus congestion Sneezing High stress levels Chest tightness	O F F F F	SW N/A SW N/A SW SW	PW PW PW PW	•
Eye irritation Fainting Hyperventilation	0 F 0 F 0 F	NA SW NA SW NA SW	PW PW PW	
Problems with contacts Headache Fatigue/drowsiness Temperature too hot	O F O F O F	N/A SW SW SW SW SW SW	PW PW PW PW	
Temperature too cold Other (specify):	O F	N/A SW	PW	
Have you seen a doctor for an	•	Y (N)	N/A	
When do you experience relief TIME OF DAY: Morning	4	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? When:	Y	A N		
9. In your opinion, wha	t is the cause of any po	ossible indoor air qua	lity problems within	this building?
	XA	·		
10. COMMENTS: Pleaconcerning the quality o	se take this opportunit	ty to comment on any	factors you consider	to be important
				· · · · · · · · · · · · · · · · · · ·
	$=$ $\Delta I/I$			

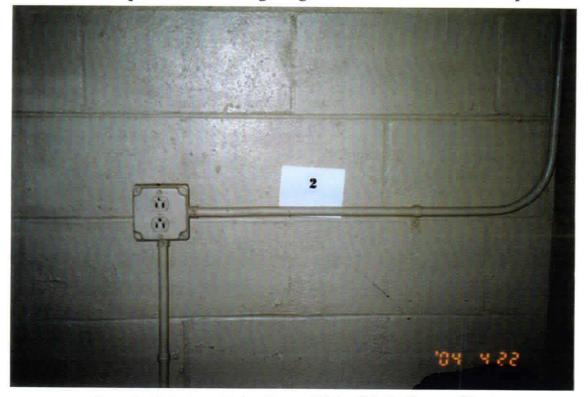
THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS



Sample #1 Indoor Firing Range Left Side in Front of Backstop



Sample #2 Indoor Firing Range Right Side in Front of Backstop



Sample #3 Indoor Firing Range Left Side in Front of Bullet Trap



Sample #4 Indoor Firing Range Right Side in Front of Bullet Trap



Sample #5 Arms Vault, in Front of Door



Sample #6 Arms Vault, Middle of Vault



Sample #7 Supply Room, Front Section



Sample #8 Supply Room, Rear Area



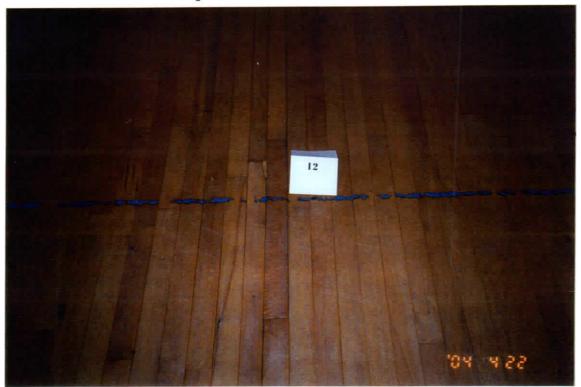
Sample #9 Kitchen, Top of Locker



Sample #10 Kitchen, Top of Cooler



Sample #11 Drill Floor Southeast Corner



Sample #12 Drill Floor Center



Sample #13 Drill Floor Northeast Corner



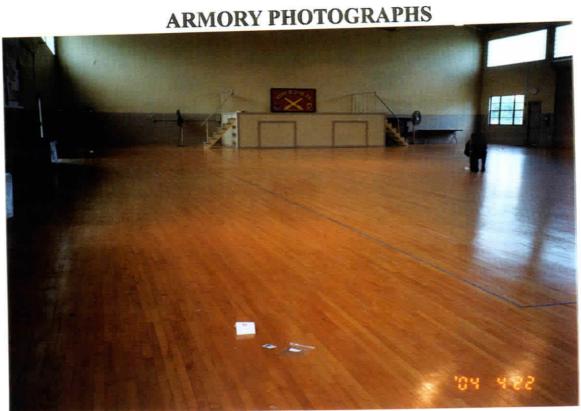
Sample #14 Drill Floor Northwest Corner



Sample #15 Drill Floor Southwest Corner



Photograph of Indoor Firing Range



Photograph of Drill Floor

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.

- 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.
- Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



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

Ву

Non-Responsive

dba HINCHCO

9 April 2004

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Findings and Discussion	
Lead Wipe Samples	4 4 4 5 5 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 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.

Page 2

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 reading 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.

<u>Lead Wipe Samples:</u> 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 04-01DC 04-02DC 04-03DC 04-04DC 04-05DC 04-06DC 04-07DC 04-08DC 04-09DC 04-10DC 04-11DC 04-12DC 04-13DC 04-14DC 04-15DC	FIELD BLANK IFR BULLET TRAP AREA IFR BULLET TRAP AREA IFR LEFT SIDE IN FRONT OF BULLET TRAP IFR RIGHT SIDE IN FRONT OF TRAP ARMS VAULT, FLOOR, BY DOOR ARMS VAULT, FLOOR, MIDDLE OF VAULT SUPPLY ROOM, FRONT SUPPLY ROOM, REAR KITCHEN, TOP OF LOCKER KITCHEN, TOP OF COOLER DRILL FLOOR SOUTHEAST CORNER DRILL FLOOR NORTHWEST CORNER DRILL FLOOR NORTHWEST CORNER DRILL FLOOR SOUTHWEST CORNER	UNDETECTED UNDETECTED 6.63 44.8 50.6 47.6 65.2 52.0 13.3 14.3 32.4 UNDETECTED UNDETECTED UNDETECTED UNDETECTED UNDETECTED 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.

<u>Tllumination Survey</u> Lighting levels throughout the Dade City armory ranged from 21 foot-candles to 89 foot-candles. Specific readings were as follows:

AREA	READING	IN	FOOT-CANDLES
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.

Moise 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 their 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

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

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

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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 into@prairieanalytical.com

Prairie Analytical
Systems, recognization

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Page 4 4

Special Instructions:

* P = Preservative Code:

Type of Container Size of Container

M = Matrix Code

Division Dirking Water

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:	on-Responsive Dade City Armory	Hinchco			ab Order:	0403179
Lab ID: Client Sample ID:	0403179-001 04-00DC (blank)			Collection Date:		04 1:07:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS Lead	IS	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:19:00 AM
Lab ID: Client Sample ID:	0403179-002 04-01DC			Collection Date: Matrix:		04 1:15:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS Lead	IS	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:27:00 AM
Lab ID: Client Sample ID	0403179-003 : 04-02DC			Collection Date: Matrix		04 1:20:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS	is	6.63	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:35:00 AM
Lab ID: Client Sample ID	0403179-004 : 04-03DC			Collection Date Matrix	: 3/23/200 : WIPE	04 1:25:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS	iis	44.8	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 9:04:00 AM
Lab ID: Client Sample ID	0403179-005 : 04-04DC			Collection Date Matrix	: 3/23/20 : WIPE	04 1:30:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS	sis	50.6	N7082 5.00	(N7082) µg/tt²	10	Analyst: MCL 4/2/2004 9:12:00 AM
Lab ID: Client Sample ID	0403179-006 : 04-05DC			Collection Date Matrix	: 3/23/20 : WIPE	04 2:00:00 PM
Analyses		Result	Limit Qu	al Units	DF	Date Analyzed
METALS ANALYS	sis	47.6	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCI 4/2/2004 9:20:00 AM

Date: 05-Apr-04

Prairie Analytical Systems, Inc.

Prairie Analytical Systems, Inc.			Date . 03-Apr-04					
CLIENT.	on-Responsive Dade City Armory	Hinchco		La	b Order:	0403179		
Lab ID:	0403179-007			Collection Date:	3/23/200	4 2:03:00 PM		
Client Sample ID:	04-06DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	s	65.2	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:28:00 AM		
Lab ID:	0403179-008	•	(Collection Date:	3/23/200	4 2:10:00 PM		
Client Sample ID:	04-07DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI	S	52.0	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:35:00 AM		
Lab ID:	0403179-009	-		Collection Date:	3/23/200	4 2:12:00 PM		
Client Sample ID:	04-08DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	s	13.3	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 4/2/2004 9:43:00 AM		
Lab ID:	0403179-010			Collection Date:	3/23/200	4 2:20:00 PM		
Client Sample ID:	04-09DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	s	14.3	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:51:00 AM		
Lab ID:	0403179-011			Collection Date:	3/23/200	4 2:23:00 PM		
Client Sample ID:	04-10DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	\$	32.4	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:58:00 AM		
Lab ID:	0403179-012			Collection Date:	3/23/200	4 2:45:00 PM		
Client Sample ID:	04-11DC			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 8:47:00 PM		

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT:	on-Responsive Dade City Armory	Hinchco		La	ab Order	0403179
Lab ID:	0403179-013			Collection Date:	3/23/200	04 2:47:00 PM
Client Sample ID:	04-12DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	·	N7082 5.00	μg/ft² (N7082)	10	Analyst: MCL 4/2/2004 9:16:00 PM
Lab ID:	0403179-014			Collection Date:	3/23/200	04 2:50:00 PM
Client Sample ID:	04-13DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS Lead	IS	Ù	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:23:00 PM
Lab ID:	0403179-015			Collection Date:	3/23/200	04 2:55:00 PM
Client Sample ID:	04-14DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS Lead	IS	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 9:30:00 PM
Lab ID:	0403179-016			Collection Date:	3/23/200	04 3:00:00 PM
Client Sample ID:	04-15DC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS	ıs	υ	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 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).

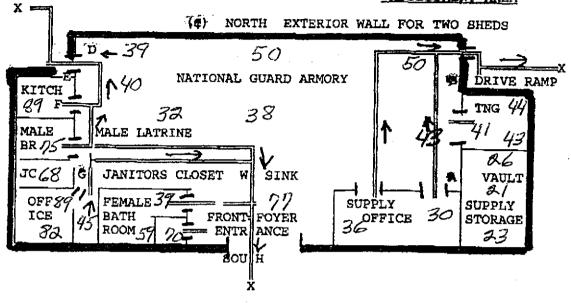
APPENDIX D

ILLUMINATION SURVEY DIAGRAM

PART 4A: FACILITY EMERGENCY EVACUATION DIAGRAM

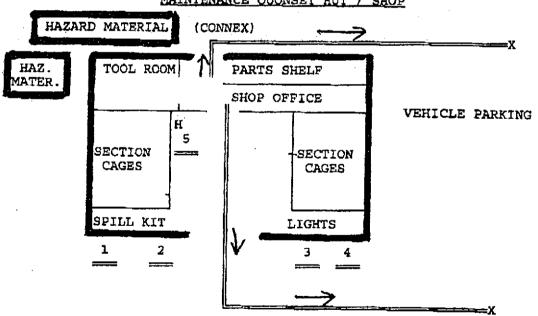
FIRE EXTINGUISHER IDENTIFIED BY ALPHABET LETTER A-H

X- PERSONNEL HOLDING/ ACCOUNTABILITY / OPERATIONS ASSESSMENT AREA



NORTH

MAINTENANCE OUONSET HUT / SHOP



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

. N	me/Location of Facility: Dade City	٠	
. A ı	ea or rooms where you spend the most time in the building:		
	Supply		
			
	es any of your work activities produce dust or odor? YES		
	moving Equipment		·
	ender: Male Female		
A	ge: Under 25 25-34 35-44 45-54 55 and over		
	loke v		
H	eve fever/pollen allergies		
H	ive skin allergies/dermatitis Y		
	eve a cold/flu Y N		
	ive sinus problems N		
	ear contact lenses		•
O:	perate video display terminals (computers) Y N Derate photocopiers 10% of the time Y		•
Us	e other office machines		
Sp —	ecify:	·	
Cı	rrently take any medications?		·
R	ason:		
6. O	ffice Characteristics: Number of persons sharing same room/work area		
_	Number of windows in room/work area		
D	o windows open?		
R	ate adequacy of work space per person:		
	oor Average Excellent		
	1 2 3 4 3		
ъ	24a POOTs tampopatrino		
	ate room temperature: OOr Average Excellent	•	
_	1 2 3 4 Excellent		
A	re there smokers in your area?		
7 27			
14	ow long have you worked: <u>VE</u> S In this room/area <u>VE</u> S In this building		

YMPTOM:					-		
ifficulty in concentrating	o	F	(NA)	SW	PW .		
ching joints	0	F		SW	₽₩		
fuscle twitching	• 0	F	NVA)	SW	PW		·
ack pain learing problems	0	F	N/A	SW SW	PW PW		
oizziness	ŏ	F	N/A	SW	PW		*
ry, flaking skin	ŏ	F	NA	SW	PW		
discolored skin	Ō	F	NVA	SW	PW		
kin irritation	0	F	NIA	SW	PW		
ching	· O	F	CNA	SW	PW		
leartburn	ó	F		SW	PW .		
lausea	0	F		SW	PW		
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neezing	() () () () () () () () () ()	F	N/A ' N/A	SW SW	PW PW		
High stress levels		F	N/A	SW	PW		
Thest tightness	ŏ	F	(NIA)	sw	PW		
ye irritation	7 5)	F	N/A	SW	PW		
ainting	0	F	(N/A)	ŚW	PW		
Typerventilation	0	F	N/A	SW	PW		
roblems with contacts	0	F.	₹¶A)	SW	PW		
leadache atigue/drowsiness	@	F F	N/A		P.W		
emperature too hot	ŏ	F	N/A ~N/A	SW SW	PW PW		•
emporature too cold	ŏ	P	ANA.	SW	PW		
Other (specify):							
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lave you seen a doctor for any o	r all of these sympto	oms?	Y	N	N/A		······································
When do you experience relief fr	om these symptoms	7					r
TIME OF DAY: Morning	Afternoon Even	ing	DAYO	F WEEK:	S M	T W	T F S
MONTH: J F M A N	AJJAS	0	N D SEA	ASON: C	Spring Su	ımmer Fall	Winter
Do symptoms disappear? When:	(Y)		N	-			
9. In your opinion, what			sible indoor			s within this	building?
, ,	*						

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Name/Location of Facility: DADE CITY Area or rooms where you spend the most time in the bu	uilding:	
RECRUITING DEFICE, TRAINING/ADM.	IN + COPY KOOP	ч.
Does any of your work activities produce dust or odor? Describe:	? YES (NO)	
Gender: Male Female		
Age: Under 25 (25-34) 35-44 45-54 55 and over		•
Do you:		
0.1.		
The state of the s	CN CN	
	(X)	0.00
Have skin allergies/dermatitis Y Have a cold/flu v	· 🔉	
YY.	· • • \$ \$}	
Have sinus problems	₫	
Have other allergies y	(A)	•
Wear contact lenses Operate video display terminals (computers)	∆ 0	
Operate video display terminals (computers)	N	
Operate photocopiers 10% of the time Y	මු අ _ම පැතිකින් කියි.	
Use other office machines Y	Ø	
Specify:		
Currently take any medications? Y Reason:	(N)	
Office Characteristics:	2742	
3 Number of windows in room/work area	ui va	
Do windows open?	N	·
	•,	
Rate adequacy of work space per person:		* *
Poor Average Excellent		
1 2 3 4		
Rate room temperature:		
Poor Average Excellent	•	
1 2 3 4 S	•	
Are there smokers in your area?	®	
·		•
How love horse was marks ?		
How long have you worked:		
How long have you worked: 24/5. In this room/area 24/5. 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".)

Difficulty in concentrating OFF SW PW Aching joints OFF SW PW Mascle twicking OFF SW PW Back pain OFF SW PW Bearing problems OFF SW PW Dizziness OFF SW PW Rearring OFF SW P	SYMPTOM:	·								
Aching joints Mussel twitching OF SW PW Mussel problems OF SW PW Decines SW PW Decines SW PW Decines Decines OF SW PW Decines OF SW PW Decines Decines Decines OF SW PW Decines Decines Decines OF SW PW Decines	Difficulty in concentrating	- 0	F	NIA	G/IN	13517				
duscle twicking				· 2005			•			
Sack pain Idearing problems OFFSW PW Dizziness 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? When: OCOMMENTS: Please-take this opportunity to comment on any factors you consider to be importate concerning the quality of your work environment:		_								
iterating problems O F SW PW Discolored skin O F SW PW Dates tightness O F SW PW Discolored skin O		-		4						
pizziness pizzin										
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? 10. COMMENTS: Please-take this opportunity to comment on any factors you consider to be importazone concerning the quality of your work environment:						•				
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kin irritation ching										
ching clearburn ching ch				A						
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intus congestion OFF SW PW interesting OFF	loticeable odors	0	F	- Cx(7)	SW	PW				
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concerning the quality of your work environment:				· · · · · · · · · · · · · · · · · · ·						
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		ur work envi	ronment	:						
	· · · · · · · · · · · · · · · · · · ·		·							
					· · · -				·	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms where you spen TRAINING OFFICE	d the most time in the building	
Does any of your work activities Describe:	es produce dust or odor?	YES NO
Gender: Male Female		
Age: Under 25 25-34 35-44 Do you:	45-54 55 and over	•
Do you:		√
Smoke	Y N	\bigcup
Have fever/pollen allergies Have skin allergies/dermatitis	Y SN	3
Have a cold/flu	Y N Y N	\prec
Have sinus problems	Y N	
Have other allergies	Ŷ Ŝ	2
Wear contact lenses		
Operate video display termina	ls (computers)	[· · · · · · · · · · · · · · · · · ·
Operate photocopiers 10% of	the time Y N	7
Use other office machines	Y N	フー・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・
Specify: Currently take any medication Reason:	s? Y (N	D
Office Characteristics:		
	aring same room/work area	
5 Number of windows i	n room/work area	
Do windows open?	Y N	ľ
Rate adequacy of work space	ner narcon	•
Poor Avenue	Per persou. Excellent	
1 2 3	4 5	
Rate room temperature:		
Poor Average	Excellent	•
1 2 3	4 /5/	
Are there smokers in your are	ea? Y (N	0
How long have you worked:		
How long have you worked:		
z izel in thic Poom/orgo		

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	CAVA	SW PW	,		
Aching joints	Ŏ F	NT/A	SW PW			
Muscle twitching	• O F	STIA S				
Back pain		CN/A)	SW PW		•	
Hearing problems	O F		SW PW			
	O F	○N/A	SW PW			
Dizziness	O F		SW PW			
Dry, flaking skin	O F		SW PW			
Discolored skin	O F		SW PW			
Skin irritation	O F	CNA)	SW PW	Ţ		-
Itching	O F	N/A	SW PW	7		
Heartburn	O F	C MAC	SW PW	I .		
Nausca	O F	ZNA_	SW PW	7		
Noticeable odors	O F	NIA	SW PW	<i>T</i> .	•	
Sinus congestion	, O , ~ F		SW PW	7		•
Sneezing	Q F	CAVA	SW PW	1		
High stress levels	F	N/A)	SW PW			
Chest tightness	F F	ENTA>	SW PW			
Eye irritation	✓ O\ F	NA	SW PW			
Fainting	/ O F	CN/A	SW PW			
Hyperventilation	O F	(N/A)	SW PW			
Problems with contacts	O F	NA)	SW PW			
Headache	Ŏ F	N/A	SW PW			
Fatigue/drowsiness	Ŏ F	CN/A	SW PW			
Temperature too hot	ŏ F	N/A	SW PW			
Temperature too cold	O F	NA	SW PW			
Other (specify):	0 1	(IVA)	SM IN	!		
Have you seen a doctor for any or a When do you experience relief from		Y	N N	A		
_						
TIME OF DAY: Morning A	flernoon Evening	DAY OF	WEEK: S	M T W	T F	S
MONTH: J F M A M	JJASO	N D SEAS	ON: Spring	Summer	Fall Wi	nter
Do symptoms disappear?	Y	/ N .		-		-
When:	All	/ A				
	/\/	7				
-						
O To seem dealers on the second						,
9. In your opinion, what is	me cause of any pos	ssible indoor a	ir quality pro	oblems within	this build	ing?
	N Lat			****		
	-//-//			· · · · · · · · · · · · · · · · · · ·	 · . · · ·	
		 	· · · · · · · · · · · · · · · · · · ·			
10. COMMENTS: Please to	ake this opportunity	to comment o	n any factor	s vou consider	to be im	nortant
concerning the quality of you	ır work environmer	nt:		2		P
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	/_/					<u> </u>
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THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

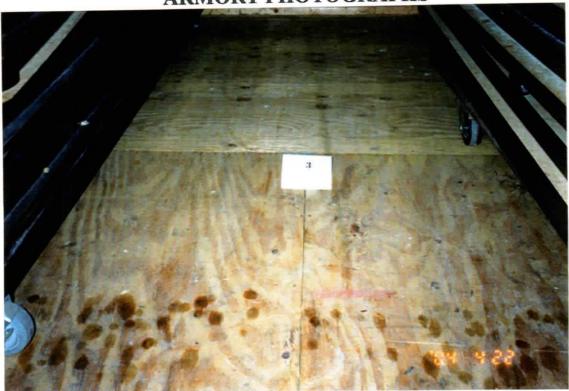
ARMORY FLOOR PLAN AND PHOTOGRAPHS



Sample #1 Indoor Firing Range Left Side in Front of Backstop



Sample #2 Indoor Firing Range Right Side in Front of Backstop



Sample #3 Indoor Firing Range Left Side in Front of Bullet Trap



Sample #4 Indoor Firing Range Right Side in Front of Bullet Trap



Sample #5 Arms Vault, in Front of Door



Sample #6 Arms Vault, Middle of Vault



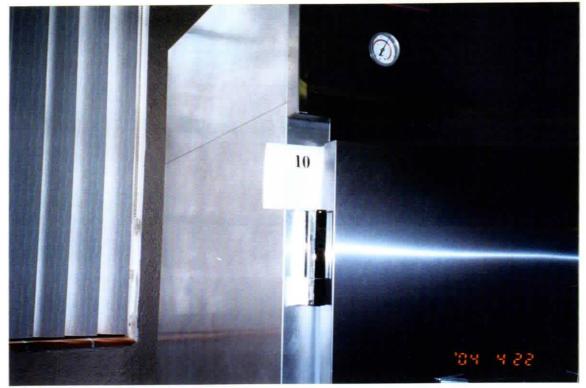
Sample #7 Supply Room, Front Section



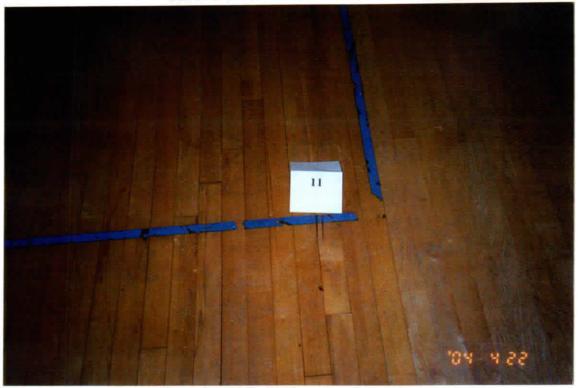
Sample #8 Supply Room, Rear Area



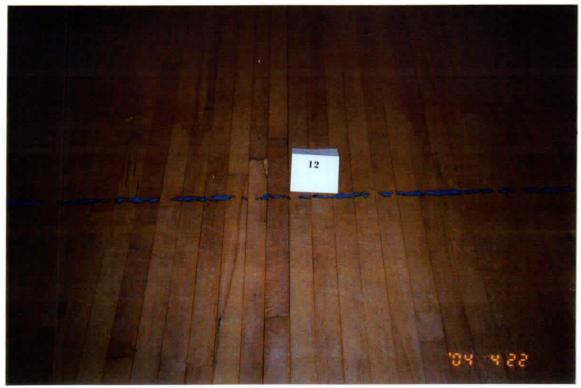
Sample #9 Kitchen, Top of Locker



Sample #10 Kitchen, Top of Cooler



Sample #11 Drill Floor Southeast Corner



Sample #12 Drill Floor Center



Sample #13 Drill Floor Northeast Corner



Sample #14 Drill Floor Northwest Corner



Sample #15 Drill Floor Southwest Corner



Photograph of Indoor Firing Range



Photograph of Drill Floor

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

6 1 x &

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

COLLEGE PARK, GA 30349 210 PLAZA DRIVE, SUITE 1530 INDUSTRIAL HYGIENE OFFICE NATIONAL GUARD REGION SOUTH

20 June 2002

NGB-YAN-2I

Florida 32724. Readiness MCO, B Brty, 1st 265 ADA, 401 South Alabama Avenue, De Land, MEMORANDUM FOR The Florida Army National Guard, ATTN: SFC.

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

References.

Environmental Services, L.L.C. a. Report submitted 11 June 2002, Industrial Hygiene Survey, Aiken Global

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

.8891

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.

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

j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering

Society of North America.

Ceneral.

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

of Aiken Global Environmental Services, L.L.C.

conducted the survey.

 $(2ee\ ENC\Gamma\cdot 1)$ 3. Findings. All HHIM field survey forms and survey findings of the report are enclosed.

4. Recommendations.

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

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

NG PAM 385-16 as guides to clean and convert the indoor firing range. Facility Management Office and the Environmental Office. Use NG PAM 385-15 and c. Discuss the high Lead level with the Safety and Occupational Health Office, the

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

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

COMMERCIAL (404) 559-4174.

Regional Industrial Hygienist, ARNG-1HS, 1-800-362-0262 OR 5. If additional information is needed about the contractors report, please contac

Regional Industrial Hygienist

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



GLOBAL ENVIRONMENTAL SERVICES, L.L.C.

INDUSTRIAL HYGIENE SURVEY

B Btry, 1st 265 ADA 401 South Alabama Avenue De Land, Florida 32724

Prepared for

Florida National Guard

St. Francis Barracks
Occupational Health Office
Attention: MA.

82 Marine Street
St. Augustine, Florida 32084

3475 North Desert Drive Building 1, Suite 100 Atlanta, Georgia 30344 (404) 684-7172 Business (404) 684-7173 Fax www.acaiken@aikenglobal.com



GLOBAL ENVIRONMENTAL SERVICES, L.C.

MEMORANDUM FOR: Florida Army National Guard, ATTN: SFC April 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.

I. REFERENCES:

7.

- 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
- 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 an industrial hygiene survey was conducted at the De Land National Guard Armory in De Land, Florida on 31 May 2002 by an industrial hygiene Services L.L.C. 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 offices, kitchen/mess hall, Drill hall, Supply room, Petroleum Oil and Lubricant (POL) atorage, Arms Room, Boiler Room, two (2) class/training rooms, and a converted indoor firing range used for storage which was converted in 1999.

Findings:

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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 I). One of the six samples was above the action level for lead (200mg/ft2) as indicated in reference g.

TABLE 1

Floor of pit (sand)	BKT
Ceiling of pit	BKT
Rear of Cinder Wall	BKT
Left Wall Cinder block of pit	BKT
Right Wall Cinder block of pit	Below Reporting Limits (BRL)
Floor of pit (wood and sand)	Ω∄\gu 0≷θ,ĉ
SAMPLE LOCATION	RESULTS

b). Material Safety Data Sheets (MSDS) were on file and readily available for each person at this Armory. Sergeant Danny Fuqua, 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 TA/50 room, and there is a separate storage room for storage of communication equipment and night vision equipment. RADAC meters/ slarms 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 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 potential risk of weapon repair in non ventilated areas. Personnel stated there is no

communication repair performed in the Communication equipment storage room. This area was visually inspected and there was no evidence of repair.

- 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 fiberous 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 perform these vehicles. All vehicle maintenance is performed at OMS.

Recommendations:

- Brytonmental Protection and Facility Management Office (CWZ 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/flZ) 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/flZ), 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.
- 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 chemicals through the local environmental office excess POLs known to be hazardous chemicals through the local environmental office or contact the Florida Safety and Health office for technical assistance.

Technical Assistance. For technical assistance regarding information found in this report please contact assistance Southeast Regional Industrial Hygiene Office, 800-326-0262.

Enclosures

1. Building Diagram

2. Photos of Deactivated Range

3. Laboratory Results

4. Facility Photographs

5. HHIM

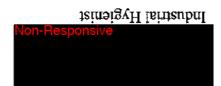
6. Listing of personnel

CF: Florida Army National Guard

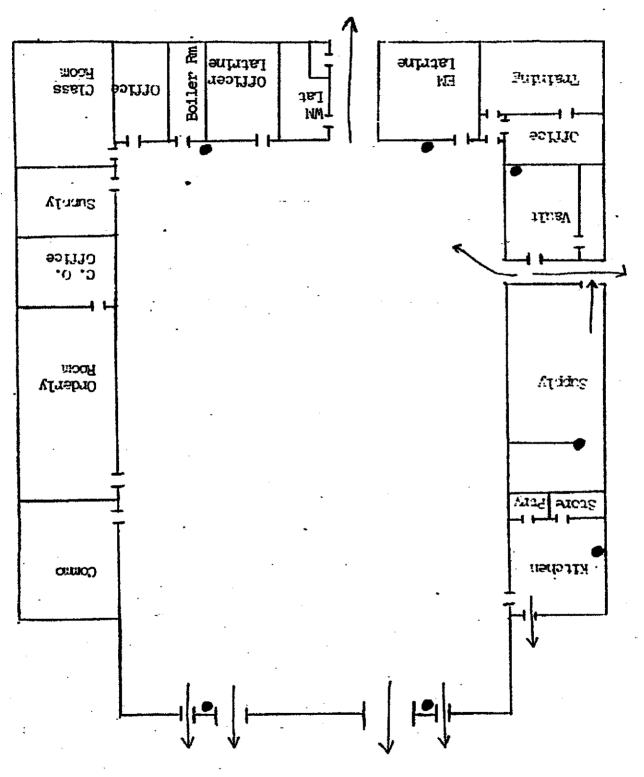
St. Francis Barracks Occupational Health Office ATTN: MAJ

82 Marine Street

St. Augustine, Florida 32084



ENCIO2018 1



• Shows location of fire extingulahers

Ashows all exits to outside

EVACUATION PLAN AND LOCATION OF FIRE EXTINGUISHERS

ENCLOSURE 2

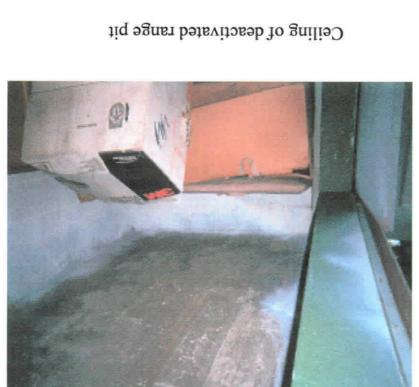
Panel doors removed from entrance to deactivated range pit

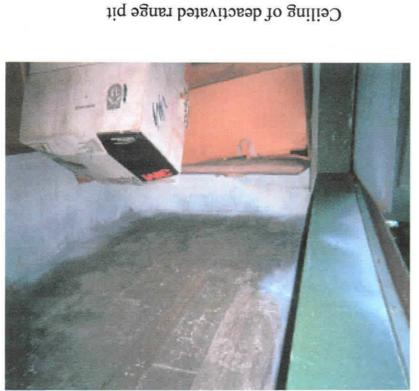


Entrance to deactivated range pit



Right wall cinder block of range pit





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Floor of deactivated range pit

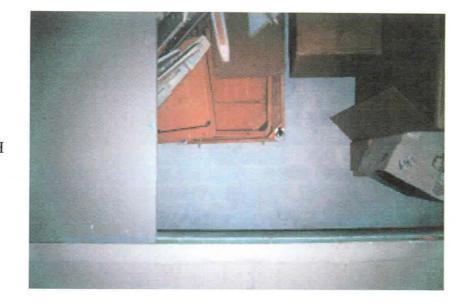


Outside rear of deactivated range pit





Floor and bottom front wall of deactivated range pit



Rear wall of deactivated range pit

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ENCIORNE 3

INCELLA LABORATORIES, INC.



1300 Pribling Drive, Suite A - Kintenia, Georgia 30066-6299 - (770) 514-6956, 191X (770) 514-6966

Report Date: 6/10/02 1 of 3

M0506042

Lab Project No.

Ollent Name: Aiken Global Environmental Services, LLC

Contact: SAY5 N. Desert Drive Address: 3475 N. Desert Drive

7 golbliu8

001 etius

8/2/2005

Atlanta, GA 30344

Project Marne: None

Receipt Date:

Project ID: None

Case Narrative

- The spiriple holding times were met for all analyses.
- 2. Where applicable, results & reporting limits are based on well weight.
- 3. The temporature of the sample cooler as received by the Isboratory was at room temperature.

Respectively Submitted:





Sample Identification

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20/1/9	Other	80.ACIA28S	W0206042-00
20/1/9	Officer	265ADA-05	W0500043-09
20/1/9	1947O	\$66APA-04	W0206042-04
20/1/9	Diffier	\$0-ACJA28S	M0\$00042-03
20/1/9	Other	S65ACA-02	M0206048-D\$
20/1/9	Oivet	266ADA-01	W0500045-04
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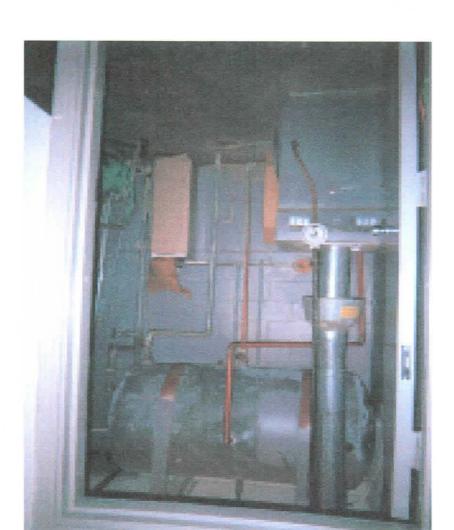
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ENCLOSURE 4



Boiler Room (bulk asbestos samples taken)

Motor pool



Ceiling of mess hall



FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 346 of 1021

Arms Room



Supply room



Commo storage



POL Storage



ENCIORNE 2

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY
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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 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.

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.
 - c. 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.

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 IIIIIM 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 (III) 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 COMMERCIAL (404) 559-4/174.



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 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

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
- 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.
- National Electrical Code Handbook Eighth Edition, 1999
- 2. BACKGROUND: At the request of Mr. 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.
 - Drill Hall: The hall was rented out to tool shows, community events and other iii) 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 encl.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 encl. 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).

AREA/LOCATION	FOOT CANDLES (FC)
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.

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).
- 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-Res



Industrial Hygiene Technician

CF:

Florida Army National Guard
St. Francis Barracks
Occupational Health Office ATTN: MAJ
Respons
82 Marine St.
St. Augustine, Florida 32084

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

CFOT DATA

OF DEMOGRAPHIC DATA

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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

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

P201



Wisconsin Occupational Health Laboratory

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P.O. Box 7996

Madison, WI 53707-7996 Madison, WI 53718 Phone: (800) 446-0403

Packages: 2601 Agriculture Dr.

Fax: (608) 224-6213

Wisconsin State Laboratory of Hygiene

University of Wisconsin

January 10, 2002

MINCKLER ASSOCIATES 1503 ZAIGER DR

80915-2240 COLORADO SPRINGS CO

Company #: 6776

DEFUNIAKSPRINGSARMO

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

	Lab#	Field#	8	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

Chemist Supervisor IH,

BULK SAMPLE DATE FOR USAEBA TG 14.;		ment is ES	BB-LO.
	2011	A 05 (201	CT (** conc / AllTOVON)
Non-Responsive	No.		0-9639
Sampled Installation Project Number		ARLOE	2000
De Funick Speines Armony, Florida Date Collected		Date Ship	
Non-Responsive Dec 19, 200) (Dec 2	6.2001
Description or Operation LEHU WIFE SAMPLI		Location	(0, 200) (BLDG/AREA)
Inactive Indoor Firing Range		ŧ	ne Firing Range
Associated Complaints (be specific)		<u> </u>	
· ADAJE			
Associated Air Samples It yes, list s	ample num	bers	
☐Yes ☑No			
Label Informatio	n		
Trees Name NSN	Manuta	cturer	
	MARKE	-washad	
Address	MSCS /	Trached Yes	□ No
		1 Tes	
Analysis Desired			
MISAILW wines			
Cap Use Sample Constituents Only No.	Result	\$	Remarks
931596 1 (A) left wall-indoor Firing range			
31597 2 (B) center wall- indoor fishy range	e		
1			
931598 3 (C) right wall-indoor Fichy of	Ιζ		
4			
		-	
Comments to Lab:	<u> </u>		
Lab Use Only	, , , , , , , , , , , , , , , , , , , 	<u></u>	
Analyst (initials) Review t by (initials)	9a1	e Received	Date Reported
Procedures Performed Comments:			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. —		
AEHA Form 8-B. 1 Oct 84	. Arish in abou		

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

WOHL OFFICE MDSN WI → 815097574846

			BULK SAMPLE DA	TA			1-10	
Return Ac	For use	of this form	see USAEBA TO 14:	ocia)	Paul	of Contac	T (name/AUTOVON)	
IVOI	1-Respons 22 Tables Dc. 00 Butle, CO 3	IVE			(7	19) 570-90	639	
Sampled I			Project Number	•		ARLOS	000	
Samples C	ollected E	Armory, F	Date Collected			Date Shipp	ed	
Non-Res	ponsive		Dec 3, 20			Dec. 26.	2001	
Description	n of Oper	snou baint a	nip sample. TAKE	N FR	om			
THE WE	st wall	IN THE !	REMORY DRILL	HAL		Defuniak	Springs, FL	
		nts (be speci	f(c)				Ť	
Associate	NONE d'Air Sam	ples	if yes, list	samp l e	nua	ers		
	· 🔀 No	P					^	
			Label Informati	ori				
Trede Nam	···		NSN	M.	Manufacturer			
Address						Attached		
			**.		[Yes		
aiaytinA	Desired Lead	-		*****				
tab Ute Only		Cor	stituents	Ŕ	esults		Remarks	
931595	TIM2001	3 IN X 3 IN	takeni off wall					
	-		-				·	
	 							
		-			-	-		
Comment	s to Lab:	<u> </u>				L		
Anaiyst	(initials)	Revie	Lab Use Oni	Υ	Dat	e Recsived	Date Reported	
Procedur	es Perfor	best	Comments:		<u> </u>			
i								

AEHA Form 8-R, 1 Oct 84

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

JAN 2 - REETB



Wisconsin Occupational Health Laboratory

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consin State Laboratory of Hygiene

University of Wisconsin

January 8, 2002

Page 1 of 1

MINCKLER ASSOCIATES 1503 ZAIGER DR COLORADO SPRINGS CO Company #: 6776

DEFUNIAKSPRINGSARMO

The results for the analyses of the Bulk Asbestos samples we received on 01/02/02 are as follows:

80915-2240

Lab# Field#

Sample Description

Unit Value

Analysis

931594 TLM2001100

BEIGE GRANULAR STRIPS

NÜ

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



Chemist Supervisor

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6716

	For use	B of this form se	ULK SAMPLE D <i>u usaeba tg 14</i>		onent is ESH.	B-LO.
Non		complete adaress	including Zip	Code) Po	on-Responsive	t (name/AUTOVON)
Sampled In Defuviak S Samples C			Project Numb		ARLOC 12	1000
Non-Respo	onsive	ation Asbesto	Dec 3, 2	001	Dec. 26	3, 200 BLDG/AREA)
From De	e Funtaki	Springs Av	mory Sup	ply Rm	DeFuniak	Springs Armory
Associated		Near write	if yes, list	sample num	alcy era	mgiy .
			Label Informa	tion		
Trade Name	<u> </u>	NS		Manufa	cturer	
Andress				MSDS /	Yes	No
Analysis I	bestos					
Lab Use Only	No.	Constit	1	Result	s	Remarks
A9933	TLM 2001-100	I inch x lin	taken Och fenceling			
brek	9315		σ		Ì	
		····				
					-	
Comments	to Lab:					
		<u> </u>	Lab Use On	ıly		
Analyst (i	nitials)	Review	by (initials)	Dat	e Received	Date Reported
Procedure	s Perform	ed Com	ments:		·	

AEHA Form 8-R, 1 Oct 84

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

BEST AVAILABLE COPY

			ISE SURV Level Mete						
OA (Year Month Day)		T	YPF SURV						
0111203	,			1-INITIAL	SURV	E Y	2-RE-SU		3-OTHER
SOUND LEVEL METER	MA	NUFACTU	MICROPH RER	IUNE		MAN	UFACTUR	CALIBRATO ER	<u> </u>
Bruel & Kyaer							Brüe	+ Ky	aer
TYPE 2236 SERIAL NO	мог	DEL		SERIAL NO	•	MODI	PE 22	36	SERIAL NO
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WIND SCREEN USED	NOT USE			MENTS OB] :NDO0	A6. 🗀	OUTDOORS
DESCRIPTION OF AREAS/DUTIES WHE additional sheet and attach to form)						l		CE OF NO	
Florida Arm De Funiak P Company C, 124th INFANT	y No	ational	Guar	ď			e itei	m desi	cription
De Funiak F	LMOL	y +	1 7 8	attion,	i	SECO	NDARY S	OURCE OF	NOISE
Company C,	vetacn Pov	imen i	٠ د رــ	,					
Defuniak, F	locida								
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Drill Hall Exhaust FANS	S		78	IVC	\geq	\leq			
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NOTES: Range of levels noted by METER ACTION: Ente	/; i.e., 101 r F for fa	2/109. A st meter ac	t operator	r work states for slow	tions, i meter	neasu) action	re at ea r i n.	eveL	
REMARKS (i.e., Area and equipment									
	<u>ا</u>								
Cal pre + po	ST Lacourage	<u> </u>	res K	NO (II)	'YES''.	identif	'v type eva	luation need	ed.)
MOHE DETAILED NOISE EVALUATION	V REGUINS			,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Noise evaluation			MED I	AT THE	E SC	UR	CE more space	is needed an	d attach to form)
		_							
See PERSONNEL	KOSTE	K PERVISOR	OF NOISE	-HAZARDO	OUS AF	REA O	A OPERA	TION	
Non-Responsive	NCOI	C, Co	. C, De	+ 1, 3	Bn,	124	LINF.	(850)	892-8095
SURVEY PERFORMED BY (Last Name	First Nam	e, MI)	H	ARING CO	NSER	ATIO	N MONITO	R (Last No	me, Firel Name, MI)
Non-Responsive			Nor BEST	n-Respons	sive			ested Recor	A 1#J 15 0085 (FL)
								ed by Natio	onal Guard Bureau Page 369 of 1021

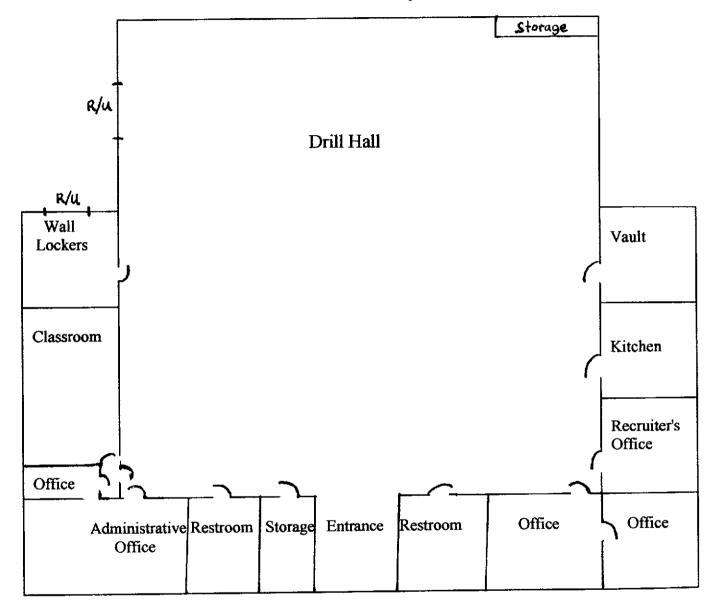
Company C, Detachment 1, 3rd Battalion, 124th Infantry Personnel Roster

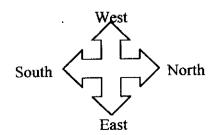
Personnel		LAST 4 SSN	Rank	Job/Title
1. Non-Responsive	(Tech)	Non-	SGT	NCOIC
2.	(AGR)	Responsive	SFC	Recruiter

AGR: Active Guard Reserve

Company C, Detachment 1, 3 Bn, 124th Inf

DeFuniak Armory





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 manage (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].

Hazardous Material Inventory Sheet

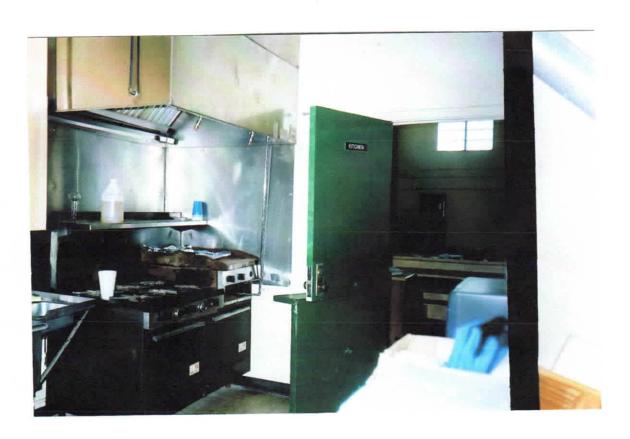
Facility Name:	Date:
Storage Areas:	

MSDS	Trade Name/Nomenclature	NSN	Size/Type of Container	Amount Stored
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$\begin{array}{c} {\tt BEST\,AVAILABLE\,COPY} \\ {\tt Appendix\ 2,\ photo\ 1} \end{array}$



photo 2



FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 375 of 1021

BEST AVAILABLE COPY

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. <u>Purpose</u> 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.
- 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-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.

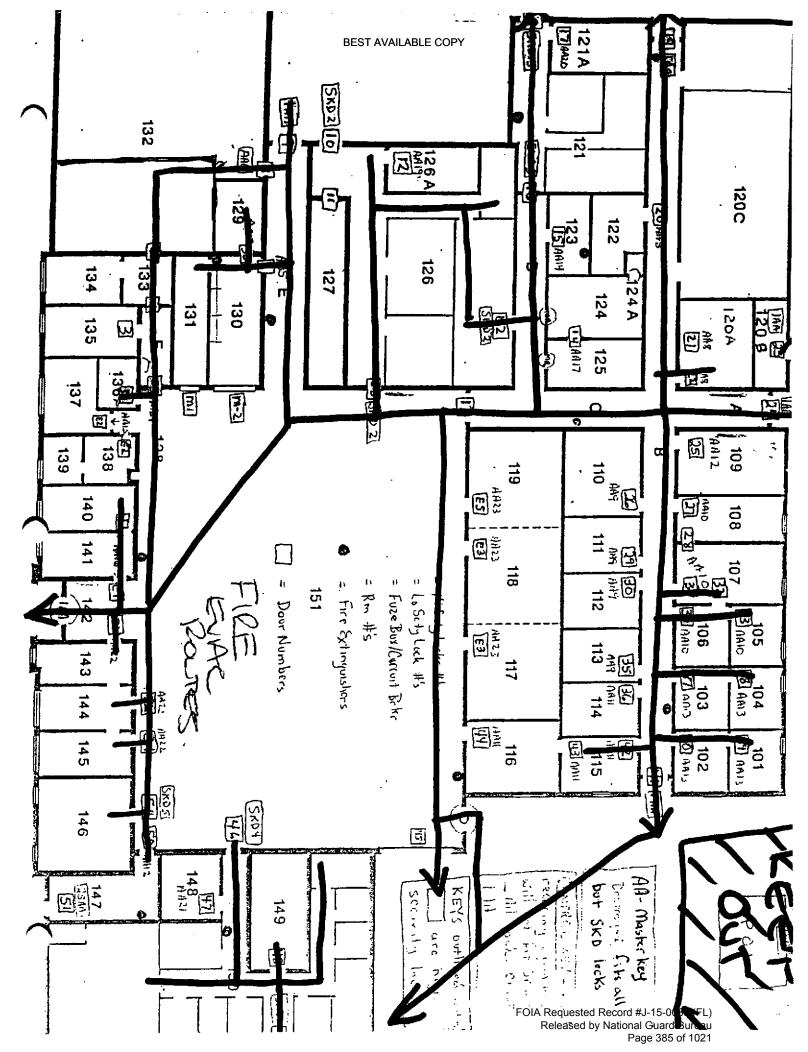
- a. Replace all broken and stain tile all over this building
- b. Keep up the good housekeeping plus regular maintenance of the Armory, ventilation system and all other area as needed.
- 8. If additional information is needed about this report, please contact Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

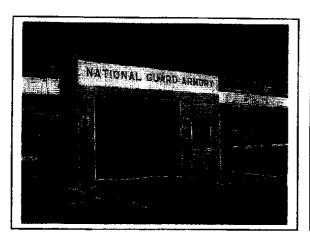


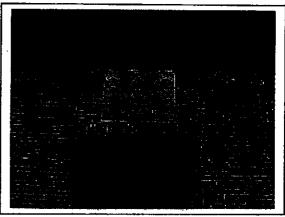
Regional Industrial Hygienist

CF: State Safety and Occupation Health Office Florida National Guard

Diagram layout of Facility Facility Photos Wipe Sample Results Health Hazard Inventories Personnel List





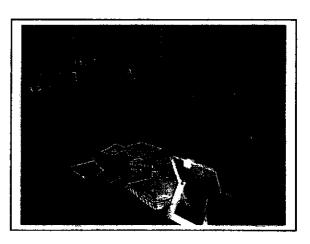


Ferm Creek Amory

Ferm Creek Armory







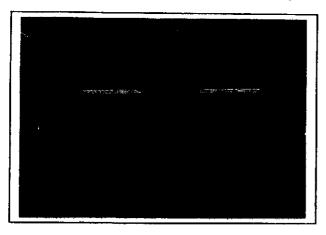
Administrative Offices



Drill Hall and Gym



Broken Ceiling Tile

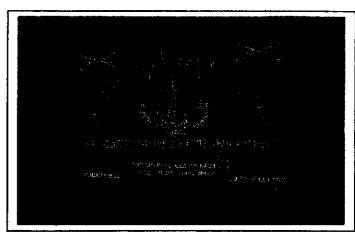




Dark Weight Room

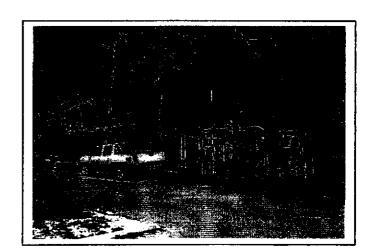
Small Class room (Old IFR)





Distant Class Room (Old IFR)





Armory outside parking lot

Q- Huts

Analytical Environmental Services, Inc.

Date: 3/31/2004

TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

National Guard Bureau Region-South IH

Lab Order:

0403C15

Project:

Ferm Creek Armory

Date Received:

3/25/2004 11:25:

Project No:

Ferm Creek Arm

Matrix: Analyst:

Wipe

PO No:

						Pach	
Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
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0403C15-001A	ı	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	Ó	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	μ g, 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

Qualiflers:

MDL - Method Detection Limit

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

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Industrial Hygiene Surface Wipe Sample Sheet								
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Comments to Lab:								

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Analytical Environmental Services, Inc.

Date: 3/31/2004

TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

National Guard Bureau Region-South IH

Project:

Ferm Creek Armory

Project No:

Ferm Creek Ann

PO No:

Lab Order:

0403C15

Date Received:

3/25/2004 11:25:

Matrix: Analyst:

Wipe 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
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0403C15-004A	4	BRL	μg, Total	2.83	1	3/17/2004	3/30/2004
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MDL - Method Detection Limit

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HEALTH HAZARD INFORMATION MODULE FIELD SURVEY FO	PM .	
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Page 399 of 1021

	SECTION 5. PERSONNEL	DATA		
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SECTION 8. C	OMMENTS (Add blank sheet o	enner II necess	arvì	

PRIVACY ACT STATEMENT

Title 5 US Code, Section 301; 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 such DA civilian and military employee exposed to a hererform workplace of operation. The use of this information is to provide histories of exposures for any given morker.

iscidence of your Social Security Number is not mendatory; however conditioning and property of provision of proper section and security Number is not mendatory; however conditioning.

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.

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- 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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SUBJECT: Industrial Hygiene Survey of Fern Creek National Guard Armory, Orlando, Florida

- <u>Purpose</u> 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.
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4. Findings.

- 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
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5. Table #1

Noise

Sample #	Sample Location	Results
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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.
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 - ✓ Gray Wolf Model AS-201, S/N: 02-229 calibrated Sep 03.
 - ✓ Compag iPAQ S/N 4G28DW3370M4

7. Recommendations.

- a. Replace all broken and stain tile all over this building
- 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 Regional Industrial Hygienist. ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

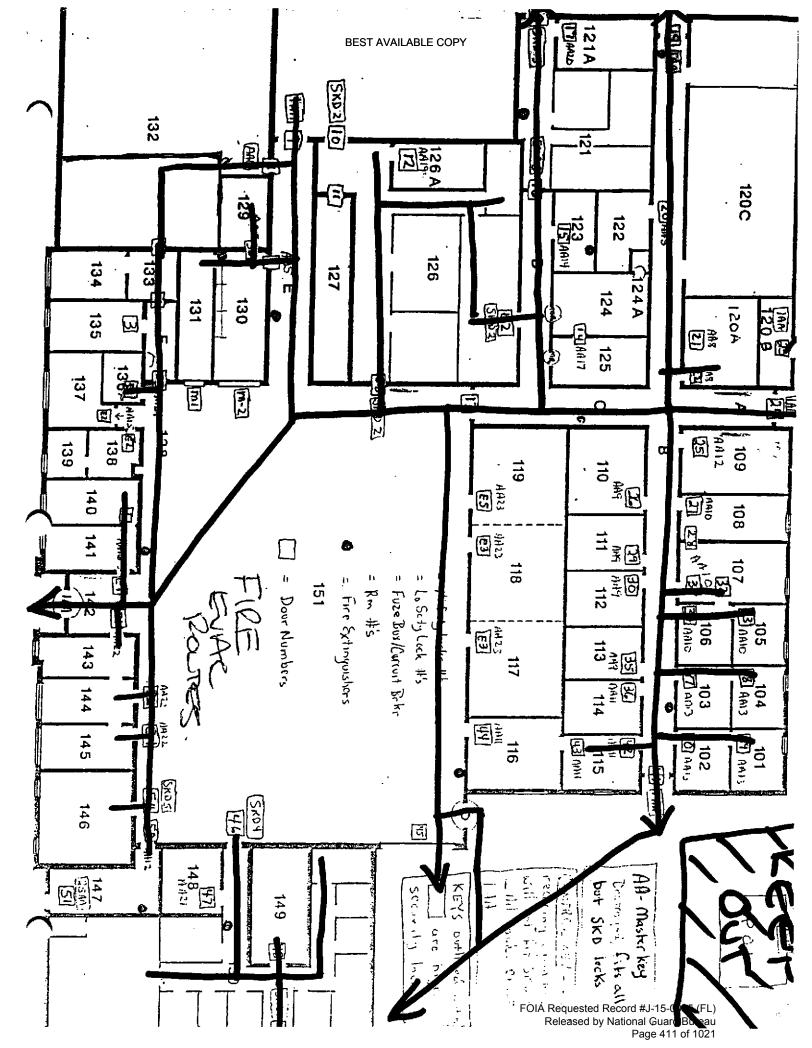


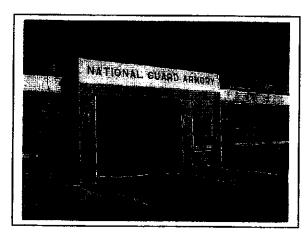
Regional Industrial Hygienist

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

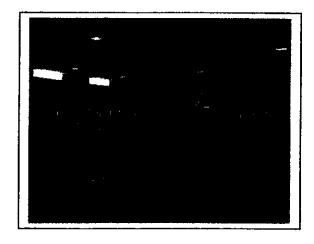
Ferm Creek Armory



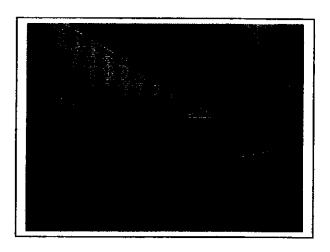




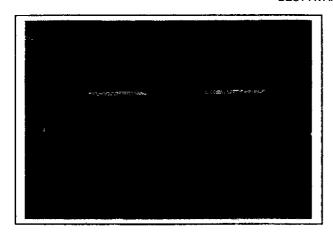
Administrative Offices



Drill Hall and Gym



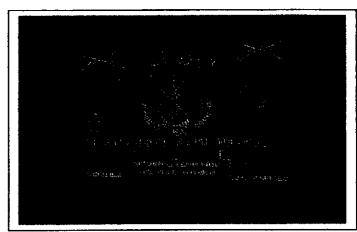
Broken Ceiling Tile



Dark Weight Room

Small Class room (Old IFR)





Distant Class Room (Old IFR)



Q- Huts

Armory outside parking lot

Analytical Environmental Services, Inc.

Date: 3/31/2004

TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

National Guard Bureau Region-South IH

Lab Order:

0403C15

Project:

Date Received:

3/25/2004 11:25:

Project No:

Ferm Creek Armory Ferm Creek Arm

Matrix: Analyst:

PO No:

•	O 110.							
_	Laboratory ID	Client Sample	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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	0403C15-004A	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	I	3/17/2004	3/30/2004
	0403C15-008A	8	BRL	μg, Total	2.83	1	3/17/2004	3/30/2004
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	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
	0403C15-014A	15	BRL	μg, Total	2.83	1	3/17/2004	3/30/2004
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ND - Not Detected at the Reporting Limit

DF - Dilution Factor

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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 Arm

PO No:

Lab Order:

0403C15

Date Received:

3/25/2004 11:25:

Matrix:

Wipe

Analyst:

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
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0403C15-003A	3	BRL	μ g , 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
0403C15-01IA	11	BRL	μg, Total	2.83	1	3/17/2004	3/30/2004
0403C15-012A	12	BRL	μg, Totał	2.83	I	3/17/2004	3/30/2004
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0403C15-014A	14	BRL	μg, Total	2.83	1	3/17/2004	3/30/2004
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MDL - Method Detection Limit

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

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SECTION 5. PERSONNEL DATA NAME ŒΧ SSN CATEGORY D M M M SECTION B. COMMENTS (Add blank sheet of paper if necessary)

PRIVACY ACT STATEMENT

Fittle 5 US Code, Section 201; Executive Order 9397 authorizes the use of your Social Security Number as an identification number. The purpose of this information is to identify and munitur data relating each DA civilian and military employee exposed to a housedone workplace or operation. The use of this information is to provide histories of exposures for any given marker.

Disclosure of your Social Security Number is not mendatory; homever, nondisclosure of proper sedical conitoring.

FOIA Requested Record #J 15-0085 (FL)

Page 427 of 1021

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

NGB-AVN-SI

April 22, 2004

MEMORANDUM POR The Florida Army National Guard, ATTN: SFC Non-Non-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 Amory, 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-Hesponsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC Non-Responsive 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



dba HINCHCO

9 April 2004

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Site Description		
Scope of Work		
Methodology		
Findings and Discussion		
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Asbestos Suspect Building Materials	Page	4
Illumination Survey	Page	4
Noise Survey		
Heating Ventilation and Air Conditioning	g (HVAC).Page	5
Ergonomics	Page	5
Personal Protection Equipment		
Recommendations	_	

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 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 Ouestionnaire.

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 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 reading 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-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.

<u>Illumination Survey</u> Lighting levels throughout the Fort Myers armory ranged from 2 foot-candles to 76 foot-candles. Specific readings were as follows:

AREA	READING IN FOOT-CANDLES
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

- 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.
- Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
- Consider increasing the illumination levels where recommended and as depicted on the illumination survey diagram.
- 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 into@prairieanalytical.com

Prairie II
AND VICTORIONATE SYSTEMS, INCORPORATE

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² Type of Container	G * Glass (Clean)	ri. AG - Glass (Amber) -	VC-A	Jaille Core	O - Other (Specify)
³ M = Matrix Code	A Aqueous	bw-spabking water	NA - Non-aqueous Liquid SE	SE SalingWaler S Solids	O Other (Specify)
P = Preservative Code	A Note:	A AB-HNO	c Hso.	DINJOHE TELLER BEHELVER	0 Other (Specify)
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(217) 753-1148 • Facsimile (217) 753-1152 • E-mail info@prairleanalytical.com

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Page of R

Special Instructions:

Copies: White - Client Yellow - PAS, Inc. PC 3ampler

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

	n-Responsive . Myers Armory	/ Hinchco	0-		La	b Order:	0403181
Lab ID: Client Sample ID:	0403181-001 04-00FM (blank)			(Collection Date: Matrix:		4 8:00:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead		U	N70 5.00	82	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 3:27:00 AM
Lab ID: Client Sample ID:	0403181-002 04-01FM			(Collection Date: Matrix:		4 8:05:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	}	5.10	N7 0	082	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 3:35:00 AM
Lab ID: Client Sample ID:	0403181-003 04-02FM			•	Collection Date: Matrix:		4 8:07:00 AM
Analyses		Result	Limit	Qual	Units	DF —	Date Analyzed
METALS ANALYSIS	5	13.0	N7 5.00	082	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 3:42:00 AM
Lab ID: Client Sample ID:	0403181-004 04-03FM				Collection Date: Matrix:		04 8:10:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	7.57	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MC L 4/3/2004 3:49:00 AM
Lab ID: Client Sample ID:	0403181-005 04-04FM				Collection Date: Matrix:		04 8:12:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	S	59.0	N7 5.00	082	(N7082) µg/ft²	10	Analyst: MCI 4/3/2004 3:57:00 AM
Lab ID:	0403181-006				Collection Date:	: 3/26/20 : WIPE	04 8:25:00 AM
Client Sample ID: Analyses	04-05FM	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSI	S	18.0	N 7 5.00	7082	(N7082) µg/ft²	10	Analyst: MC 4/3/2004 4:04:00 AM

Prairie Analytical Systems Inc.

Client Sample ID: 04-11FM

Analyses

Lead

METALS ANALYSIS

Prairie Analy	tical Systems	s, Inc.		Date	: 05-Apr-	04
CDIDI(1.	n-Responsive t. Myers Armory	/ Hinchco		La	ıb Order:	0403181
Lab ID:	0403181-007	-		Collection Date:	3/26/200	4 8:27:00 AM
Client Sample ID:	04-06FM			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	6.81	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 4:12:00 AM
Lab ID:	0403181-008			Collection Date:	3/26/200	4 8:38:00 AM
Client Sample ID:	04-07FM			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI	\$	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCI 4/3/2004 4:41:00 AM
Lab ID:	0403181-009			Collection Date:	3/26/200	4 8:40:00 AM
Client Sample ID:	04-08FM			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCI 4/3/2004 4:49:00 AM
Lab ID:	0403181-010			Collection Date:	3/26/200	4 8:42:00 AM
Client Sample ID:	04-09FM			Matrix;	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI	S	U	N7082 5.00	(N7082) μg/fl²	10	Analyst: MCI 4/3/2004 4:56:00 AM
Lab ID:	0403181-011			Collection Date:	3/26/200	94 8:44:00 AM
Client Sample 1D:	04-10FM			Matrix:	WIPE	
Analyses	· 	Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCI 4/3/2004 5:04:00 AM
Lab ID:	0403181-012			Collection Date:	3/26/200	04 8:46:00 AM

Date Analyzed

4/3/2004 5:11:00 AM

Analyst: MCL

Result

U

Limit Qual Units

N7082

5.00

Matrix: WIPE

(N7082)

µg/ft²

DF

10

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CLIENT: Project:	Non-Responsive Ft. Myers Armory	Hinchco			L	ab Order:	0403181
Lab ID: Client Sample	0403181-013 ID: 04-12FM	<u> </u>		C	Collection Date: Matrix		9:05:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANAI	LYSIS	78.9	N7 0 5.00	082	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 5:19:00 AM
Lab ID: Client Sample	0403181-014 ID: 04-13FM			(Collection Date Matrix	: 3/26/200 : WIPE	04 9:10:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANA	LYSIS	13.6	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 5:26:00 AM
Lab ID: Client Sample	0403181-015 e ID: 04-14FM			1	Collection Date Matrix	: 3/26/20 :: WIPE	04 9:12:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANA	LYSIS	16.1	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MC 4/3/2004 5:33:00 AM
Lab ID: Client Sample	0403181-016 e ID: 04-15FM	-	-			e: 3/26/20 k: WIPE	904 9:15:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANA	LYSIS	47.5	N7 5.00	7082	(N7082) μg/ft²	10	Analyst: MC 4/3/2004 5:41:00 AM
Lab ID: Client Sampl	0403181-017 e ID: 04-16FM			•		e: 3/26/26 x: WIPE	004 9:17:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANA	ALYSIS	U	N7 5.00	7082	(N7082) µg/ft²	10	Analyst: MC 4/3/2004 6:10:00 AM
Lab ID: Client Sampl	0403181-018 e ID: 04-17FM					e: 3/26/20 x: WIPE	004 9:20:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANA	ALYSIS	24.9	N7 5.00	7082	(N7082) µg/ft²	10	Analyst: MC 4/3/2004 6:18:00 AM

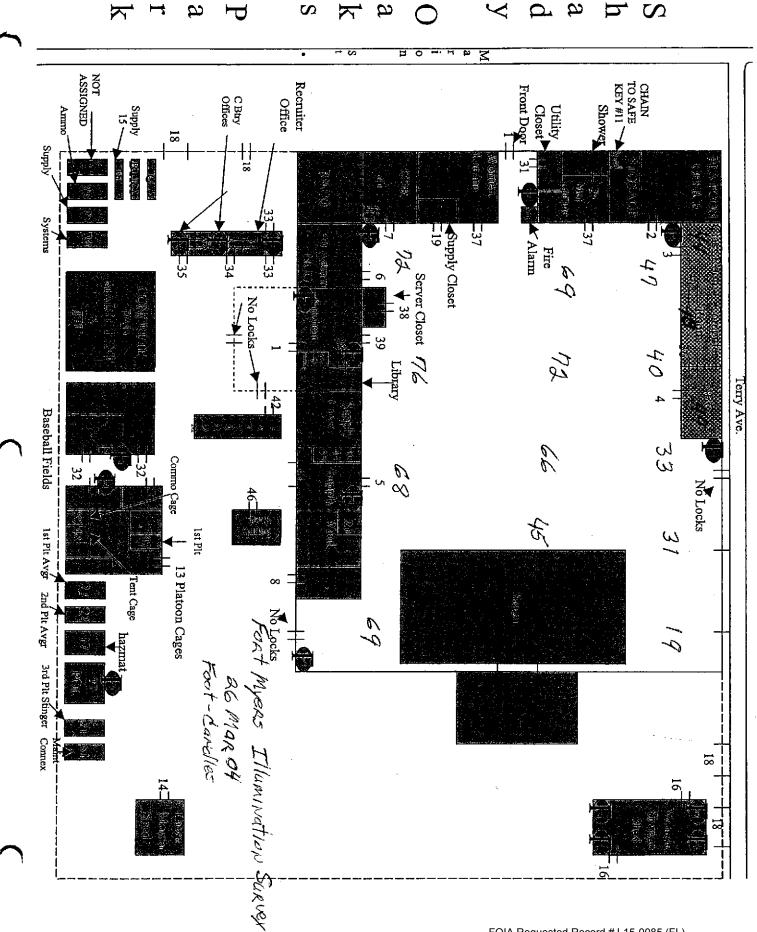
Prairie Analytical Systems, Inc.

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.
- ${\rm J}$ 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



FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 450 of 1021

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

15/3 - UN NOJ 11411

BEST AVAILABLE COPY

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Name/Location of Facility;	4 45 2 2 41		,	•
Area or rooms where you spend the mos Drill hall Floor, off	t time in the bu c <i>ce</i>	ilding:		
				
Does any of your work activities produc	e dust or odor?	XES)	NO	
Describe:	•	<u> </u>		•
Cleaning Bemary		-	· · · ·	-
Gender: Male Female				
Age: Under 25/25-34) 35-44 45-54	55 and over			
Do you:				
Smoke	(Y	N		
Have fever/pollen allergies		N		
Have skin allergies/dermatitis	Y	Ô		
Have a cold/flu Have sinus problems	\mathcal{Q}	. 14		
Have other allergies	\mathcal{L}	Ŋ		
Wear contact lenses	<u>v</u>	N		
Operate video display terminals (compu	famel (V)	(N) N		
Operate photocopiers 10% of the time	(iii)	N .		
Jse other office machines	(state)	N		
5	ري	41		
Specify:				
				
Currently take any medications?	Y	Æ)		
Reason:		ري		<u>. </u>
Office Characteristics:			,	
Number of persons sharing sam	e room/work a	rea		•
/ Number of windows in room/wo	ork area	•		
Do windows open?	Y	(N)		
Rate adequacy of work space per persor				•
Poor Average	Excellent			
1 2 3 4)	5			
	3			
Rate room temperature:	•			
Poor Average	Excellent		•	
1 2 3 4	5			
	T 7			
Are there smokers in your area?	Y	(13)		
Are there smokers in your area? How long have you worked:	Y	(B)		

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	0	F.	NIA	SW	PW -	
Aching joints	ŏ	F	MA	SW	PW	
Muscle twitching	. 0	F		SW	PW	
Back pain		F	NTA	SW	PW	
Hearing problems	@	F	ASTA	SW	PW	
Dizziness	. 0	F			•	
Dry, flaking skin	ő	F	**	SW	PW	
Discolored skin	0	·F	WA.	SW	PW	
Skin irritation	0	F	DI A	SW	PW	
Itching	. 0	F	100 A	SW	PW	
Hearthurn	0	r F	N/A)	SW	PW	
Naisca				SW	PW .	
	0	F	. CVA	S₩	PW	
Noticeable odors	0	F	(NA	SW	PW	
Sinus congestion	Q (F	797A	SW	PW	•
Sneezing	Ō,	F	N/A	SW	PW	
High stress levels	Ŏ	Œ	N/A	SW	PW	
Chest tightness	800000	F	(N/A)	SW	PW	
Eye irritation	@ /	F	N/A	SW	PW	
Fainting	0 -	F	<u> (NA)</u>	SW	PW	•
Hyperventilation	o	<u>F</u>	(NA)	S₩	PW	•
Problems with contacts	0	F	(MAY)	SW	PW	
Headache	8	E)	N/A	SW	PW	•
Fatigue/drowsiness		F	N/A	SW	PW	•
Temperature too hot	o	F	(N/A)	SW	PW	
Temperature too cold	0	F	₹V/A	SW	PW	
Other (specify):	* .					
	Afternoon Ever	_	DAYO	ome o of Week: Ason:		T W T F S
Do symptoms disappear?	α		N			
When:	1					
Ocas ima	1 Symp	toms (recur			
9. In your opinion, what Droken Floor,				air qual	lity probler	ns within this building?
						<u> </u>
concerning the quality of	your work envi	ronment:			-	u consider to be important old, water Quality drag 15 page
				·	•	
	<u> </u>	· · ·				
				- 7	-	
		· · · · · · · · · · · · · · · · · · ·	•			

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

. Name/Location of Facility: FORT MIERS ARMORY . Area or rooms where you spend the most time in the building: office area						
Does any of your work activit		_			_	
Three is a lo Supply area an	A DRILL HOLL	ted	while	wark	mi	the
Male Female Age: Under 25 25-34 (35-4 5. Do you:	45-54 55 and over	·				
Smoke Have fever/pollen allergies Have skin allergies/dermatitis	Ø Ø	N N				
Have a cold/flu Have sinus problems Have other allergies	W Y	N N N				
Wear contact lenses Operate video display termins Operate photocopiers 10% of Use other office machines	als (computers)	N N N				
Specify: Fax and sca	mning wach;	wc_		· · · · · · · · · · · · · · · · · · ·	· _	
Currently take any medication Reason: 01/ cegics	to dub of	N				
 Office Characteristics: Number of persons s Number of windows 	haring same room/work a in room/work area	rea	,	. *		
Do windows open?	Y	(B)				
Rate adequacy of work space Poor Average 1 2						
Rate room temperature: Poor Average 1 2 3	Excellent 4 5		•			
Are there smokers in your ar	rea? Y	(Ñ)				
7. How long have you worked: 24 In this room/area 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 N/A SW PW Aching joints WA SW PW Muscle twitching N/A SW PW Back pain N/A PW Hearing problems (N/A) PW Dizziness PW Dry, flaking skin 0 PW Discolored skin Ó PW Skin irritation 0 PW Itching Ó PW Heartburn Ð PW Ō Nausea Noticeable odors O PW ō Sinus congestion N/A PW Ó Sneezing N/A PW 00000 High stress levels N/A PW Chest tightness N/A PW Eye irritation PWFainting Hyperventilation PW Problems with contacts PW Headache PW Fatigue/drowsiness PW Temperature too hot SW PW Temperature too cold PW Other (specify): Have you seen a doctor for any or all of these symptoms? N N/A When do you experience relief from these symptoms? TIME OF DAY: Morning Afternoon (Evening) DAY OF WEEK: MONTH: J F JA S O N SEASON: Winter Spring Summer Do symptoms disappear? When: been WORK 9. In your opinion, what is the cause of any possible indoor air quality problems within this building? walls and Door ventilation

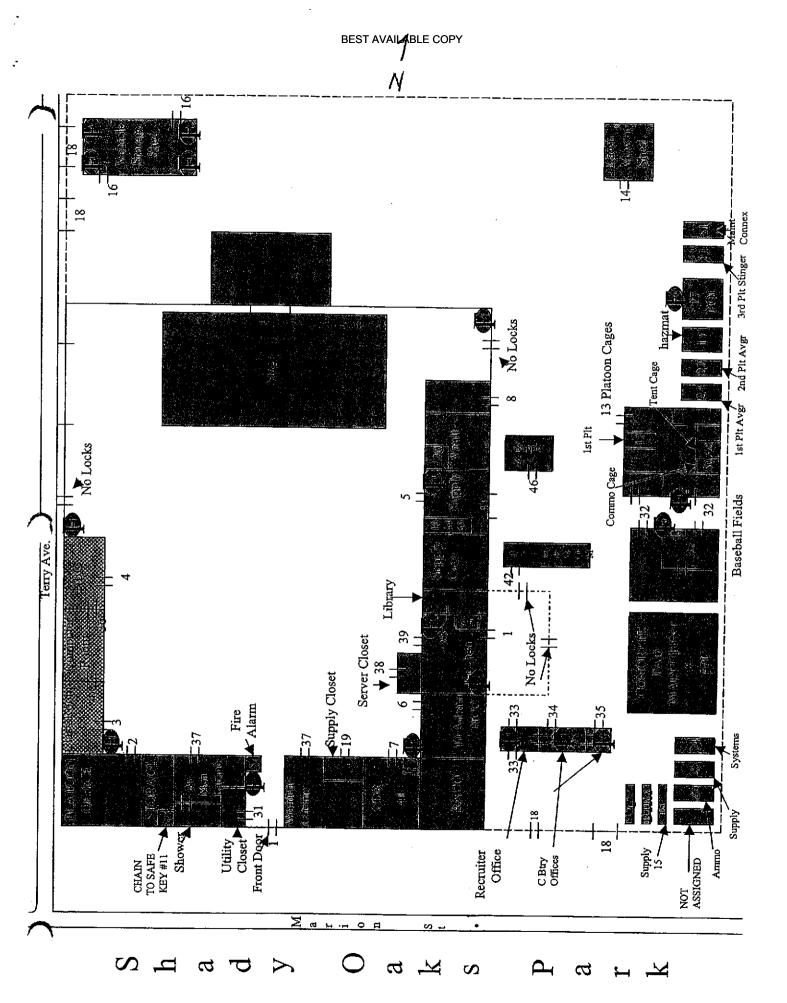
10. COMMENTS: Please take this opportunity to comment on any factors you consider to be important

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

concerning the quality of your work environment:

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS





Sample #1 Supply Room, at Door (Inside)



Sample #2 Supply Room, Middle of Floor



Sample #3 Arms Vault, at Door (Inside)



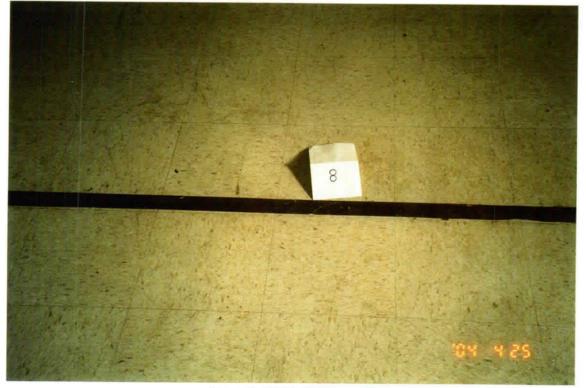
Sample #4 Arms Vault Middle of Floor

Sample #5 Kitchen, Top of Ice Maker



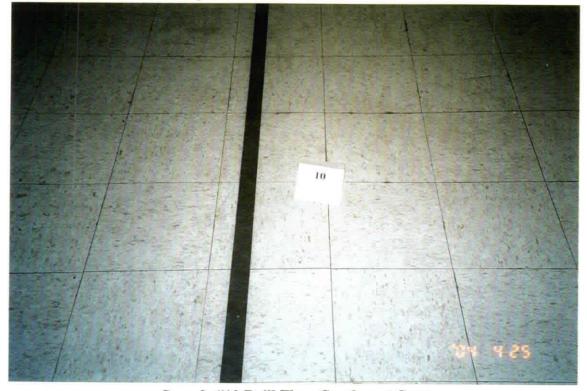
Sample #6 Kitchen, Top of Cooler

Sample #7 Drill Floor Northeast Corner



Sample #8 Drill Floor Center

Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Southwest Corner



Sample #11 Drill Floor Southeast Corner



Sample #12 Indoor Firing Range Left Side Wall



Sample #13 Indoor Firing Range Right Side Wall



Sample #14 Indoor Firing Range Left Side in Front of Trap



Sample #15 Indoor Firing Range Right Side in Front of Trap



Sample #16 Indoor Firing Range Rear Wall



Sample #17 Indoor Firing Range Blade on Middle Exhaust Fan



Photograph, Drill Floor Depicting Range and Fans



Photograph, Depicting Broken/Friable Asbestos Tiles



Photograph, Depicting Broken/Friable Asbestos Tiles

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

BEST AVAILABLE COPY



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

ARNG-CSG-P

25 April 2011

MEMORANDUM TO CW2 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.

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 Jus.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-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)

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. (ARNG) Region South Industrial Hygiene Office, 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 SGTNon-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 is 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 half is approximately $100 \times 55 \times 15$ 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

Slm 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 75.0° 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 Armorv 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 airhandling 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, February2002

American Industrial Hygiene Association, Report of microbial Growth
Taskforce, May, 2001
29 CFR 1926.62, & 29 CFR 1910.1025
24 CFR 35.61

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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	/ Regulati	on (AR) 11-34 Respiratory protection Program
ш	4	"(AR) 40-5 Preventative Medicine
66	£4	(AR) 385-10 Army Safety Program
NGF	R 385-10	National Guard Safety and Occupational Health Program
TB N	1ED 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

POLINIAN TOWNS INVENTORY TOWNS INVENTORY HAZAROJUS MATERIAL STORAGE INVENTORY

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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

on-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.



Project Manager

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Analytical Environmental Services, Inc

Date: 1

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.

BEST AVAILABLE COPY

Analytical Environmental Services, Inc.

1104313

Client: Ramassa

ARMORY Haines City Project:

Matrix:

Lab Order:

Wipe

LEAD ON WIPES (N9100/7082)

Date:

11-Apr-11

N7082

ľ	Date	Recei	ved:	4/5/2011	12:30:00	PM	
-							-

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
one of the contract of the con									
1104313-001A	HCVF	BRL	ug, Total	20	1		03/30/2011	04/07/2011	MW
1104313-002A	HCR 111 K	BRL	ug, Total	20	i		03/30/2011	04/07/2011	MW
1104313-003A	HCR 114	51	ug, Total	20	I		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

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Ramassa		Work Order Number
Checklist completed b Signature Date	1-5-11	
Carrier name: FedBx 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? (4PC±2)*	Yes 🗸	No
Cooler #1 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 sa	ıbmitted 🗹	Ycs No
Water - pH acceptable upon receipt?	Yes	No Not Applicable
Adjusted?	Che	cked by
Sample Condition: Good Other(Explain) (For diffusive samples or AIHA lead) Is a known blank include	ded? Yes	No

See Case Narrative for resolution of the Non-Conformance.

\L\Quaity Assurance\Checkilsts Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklists

^{*} Samples do not have to comply with the given range for certain parameters.

Work Order: CHAIN OF CUSTODY

ANALYTICAL ENVIRONMENTAL SERVICES, INC

TEL.: (770) 457-3177 / TOLL -FREE (800) 972-4889 / FAX: (770) 457-8188 3785 Presidential Parkway, Atlanta GA 30340-3704

BEST AVAILABLE COPY No # of Containers Same Day Rush (north req.) your results, place bottle to check on the status of FLC Y/N www.aesatlanta.com Standard 5 Business Days Next Business Day Rush Turnercural Little Regin 2 Business Day Rush Visit our website Total # of Containers orders, etc. STATE PROGRAM (if my): REMARKS DATA PACKAGE: o Per 5-mail? Y/N. **20000** Y; IF NO TAT IS MARKED ON COCAES WILL PROCEED AS STANDARD TAT. 1107 KJ. COMMERCE AVE. HAINES CAY HAMES PROJECT INFORMATION ANALYSIS REQUESTED PRESERVATION (See codes) INVOICE TO: (IF DIPPERENT PROM ABOVE) NA TIO MA END REPORT TO PROJECT #: OUOTE #: 0627 DATE/TIME (sopos sog) X(1)&(A) APORKA FL 32712 SHEWENT METHOD ds:D AMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVE GREYHOUR CLERNT Fer SAMPLED 1 085 5 FAX DATE/IL KAMBES ENVIRO 0746 088 10th and SAMPLEID ECIAL INSTRUCTIONS/COMMENTS 2

ed by National Guard Bureau Page 490 of 1021

O = Other (specify) NA = Note White Copy - Original; Yellow Copy - Client

AMPLES ARE DISPOSED OF 39 DAYS AFTER CONPLETION OF REPORT UNITES OTHER ARRANGEMENTS ARE MADE.

AATELIC COES: A = A± GW = Groundwater SE = Sadinant SO = Suit 3W = Surface Water W = Water (Blanks) DW = Draiting Water (Blanks) D = Other (speechy) WW = Water Water

N = Nitric acid S+1 = Sulfaric acid + ice SAA+1 = Socium Bisulfate/Methanol + ion

[* Lee only

Fi+1 = Hydrochloric acid + ioc

PRESERVATIVE CODES:

ATTACHMENT 4 PHOTOS



Haines City Armory.



POC's office. Ceramic tile flooring.



Locker room..typical for both men and women.



Other view of armory.

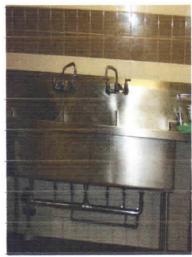


Shower area..typical for both men and women.



Copying area with storage cabinet

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Kitchen area



Conference and break/lunch room.



Kitchen area.



Common hallway.



Janitors closet..shelves with bathroom tissues.



closet.



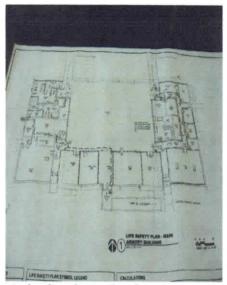
Contents of corrosive cabinet..skin soap, all purpose cleaner.



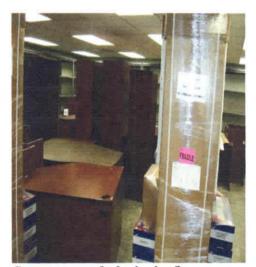
The drill hall



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.

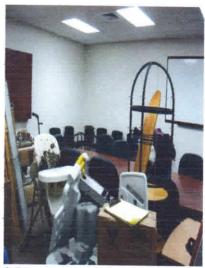


Another storage area.

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Still another storage area.



More storage



Man lift in another storage area.



Storage in refurbished range.

ATTACHMENT 5

SITE SCHEMATIC

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-Non-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.

- 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.
- 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. Personal 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)
- 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.



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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Heating Ventilating and Air Conditioning (HVA	C)Page 4
Hazard Communication Program	Page 4
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Appendices

- A. References.
- B. Laboratory Analytical Results.

- C. Lab Chain of Custody.
 D. Floor Layout and Photographs.
 E. Indoor Firing Range Cleaning Guidance.
 F. Copy of the Asbestos Management Plan.

Survey Date: 22 APRIL 2003

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.

Торіс	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.	
нvаслао	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	

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:

Report Date: 30 June 2003

Introduction. At the request of Mr. Non-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.

<u>Site Description</u>. 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.

Survey Date: 22 APRIL 2003

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SGT Non-Responsive (863) 499-2217.

<u>Lead Wipe Samples:</u> 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

Survey Date: 22 APRIL 2003

asbestos. A copy of the survey findings and asbestos plan are included in Appendix F. No new suspect materials were identified in this survey.

<u>Noise Survey</u> 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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 19 footcandles 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.

<u>Hazard Communication Standard</u> 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.

<u>Ergonomics</u> 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

Report Date: 30 June 2003 Page 4

Survey Date: 22 APRIL 2003

terminal ergonomic training or awareness. Such awareness should emphasize the importance of proper posture and set-up of the workstation to fit the user.

<u>Personal Protection Equipment (PPE)</u> 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.

<u>Posters and Bulletin Posting</u> 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.

APPENDIX A

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

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

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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.

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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

BEST AVAILABLE COPY

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800

Fax: (856) 868-9551 Email: gmiller1@emsl.com

Phone: 630-369-7956



Attn:

Fax:

Project:

Tammer Science Inc

3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Haines City

Customer ID:

Customer PO:

TS80

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 (D	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 in²	330.0 µg/ft²
HC002		0002	5/9/03	144 in²	1300.0 μg/ft²
HC003		0003	5/9/03	144 in²	1100.0 µg/ft²
HC004		0004	5/9/03	144 in²	150.0 µg/ft²
HC005		0005	5/9/03	144 in²	36.0 µg/ft²
HC006		0006	5/9/03	144 in²	540.0 µg/ft²
HC007		0007	5/9/03	144 in²	<10.0 µg/ft²
0008		0008	5/9/03	144 in²	200.0 µg/ft²
HC009		0009	5/9/03	144 in²	45.0 µg/ft²
HC010		0010	5/9/03	144 in²	<10.0 µg/ft²

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 comment section.

REDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

rinted: 5/9/03 3:33:41 PM

APPENDIX C

EMSL ANALYTICA	L CHAIN	N OF CUSTODY	2 (430424	5 LEAD
EMSL Rep:		DATE:	Third party billing requires a from third party	written authorization
Your Company	С т	EMSL-Bill to:	Same	
	mmer Science, I	Street:	30000	
Street:	-Responsive	Box #:		
	44 Lawrence D		·	Zip:
City/State:	serville 21p.	TI DIGITALIS		
Phone Results to:	n-Responsive	Fax Results to:	Non-Responsive	
Name:	n-Responsive	Name:	Non-Responsive	2-7
Telephone #: 503	30 369 7956	Fax #:	630-369-7	<u> 45 + </u>
Project		Order#:		
Name/Number:				
MATRIX	METHOD	INSTRUMENT	mdls	TAT
Lead Chips*	SW846-7420 or	Flame Atomic Absorption	0.01% ++	
	AOAC 5.009 (974.02)			CHEST MANUFACTURED TO SERVED THE
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 50 mg/kg (ppm) soil	
	or SW846-6010	ICP	0.1 mg/l water	
Lead Soil +			10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
1,830 ID AU	or NIOSH 7300	ICP	3.0 ug/filter	
		A STATE OF THE PARTY OF THE PAR	and the second s	
Lead in Wipe	SW846-7420	Flame Atomic Absorption	_10 ug/wipe	6-10 day;
	or SW846-6010	ICP	3.0 ug/wipe	J
	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/i (ppm)	
TCLP Lead **			0.1 mg/l (ppm)	
	or SW846-6010	ICP .	o. mg/ (pp.m/	
Lead in Air	NIOSH 7105	Graphite Furnace Atomic	0.03 ug/filter	
		Absorption		a legitorizat de moras de como
ead Wastewater	SW846-7421	Graphite Furnace Atomic	0.003 mg/i (ppm) water	
		Absorption	0.3 mg/kg (ppm) soil	
Lead Soil +			*	·
	EPA 239.2	Graphite Furnace Atomic	0.003 mg/l (ppm)	
Lead in Drinking Water (check state Certification Requirements)	CFA 208.2	Absorption		
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	<u> </u>
TAT (Turnaround) - 3 hours, 6 h	nours, Please call ahead to	schedule.		
12 hours (must arrive by 11:00 24 hours (1day), 48 hours (2 da	a.m), .vs) 72 hours, 96 hours (3 d	ays), 120 hours(4 days), 144	hours (6-10 days)	
* ** *** *** +, ++ Please Re	fer to Price Quote			145.4
SAMPLE#		LOCATION	Air volume, L	LAB#
			Area, in ²	· · · · ·
BTWOOI			144 Eu 4	
BTW 002			 	
BTW 003	•		5	
BTWC04			*	
Relinquished By; (Person)	Non-Responsive	Received at EMSL	By: Non-	

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

Date:

Date:

Page 1 of 3

LEAD

Revised 7/1/99

i	SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB#
	BTW 005		144 in =	
	BTW 006			
	BTWOOT			
1 1	BTWOOB			
	BTWOO9			
	LW001			
77	LW002			
'	LW603	•)	
1 1	LW004		/	
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1 1	LW006			
	LW007			
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	HCOOL			64245-1
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1	Hc009			-5
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	LL 003		 	
	L1004			
	1-005		 	
	h1006		- 	
	14.007			
1 1	LLOGB		 	
	LL009			
1	1-010			

Relinquished By; (Person)Non-Responsive	Received at EMSL By:	Non-
Date 4/26/03	Date	Hesponsive 47213 line

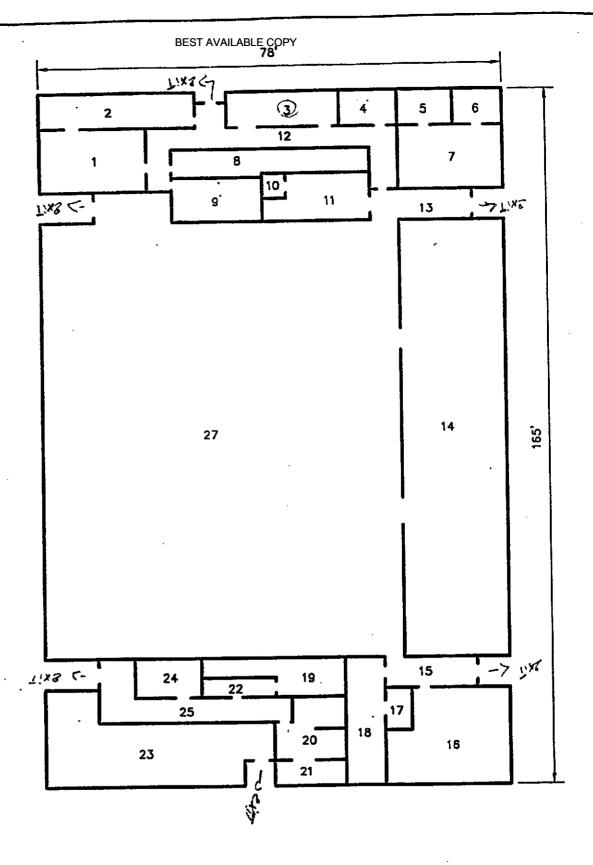
Note: Please duplicate this form and use additional sheets if necessary.

Seperate Report

Page 2 of3

APPENDIX D

APPENDIX E



HAINES CITY ARMORY 1107 COMMERCE AVENUE HAINES CITY, FL 33844-3203

Evans Environmental & Geosciences EE&G 8049 Arlington Expresswoy
Jocksonville, Florida 32211
Phone (804) 727-3604 Fee 727-3412

PROJECT No.	
DATE	11/04
OCHONICS IIT	D. RCCO
DILLING BY	ED.
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HAINES CITY ARMORY

ARMORY FLOOR PLAN

SHEET: 1

Released by National Guard Bureau Page 517 of 1021

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/ft 2 on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/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 0.13microns 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 endow 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 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 onsite 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.

APPENDIX F

ASBESTOS SURVEY REPORT - FORM 1

BUILDING IDENTIFICATION

County: Polk	•
Agency: Dept. of Military Affairs Facility	y: Armory Facility
Building Name: Haines City - Armon	
Building No.: A-01132	
Building No.: A-01132 Address and/or Geographic Location:	1107 Commerce Ave.
	Haines City, FL 33844
Building Asbestos Contact Person: Mr.	N-
Agency Contact: Mr. Non-Responsive Telep	none No.: (904) 823-0276
SURVEY IDENTIFICATION	
Date of Survey: 9/28/98	Data of Douglas data
Contract No.: MA97033 Consu	_Date of Report:12/9/98
Address: 8049 Arlington Expressway, Suite	itant's Firm: <u>EE&G</u>
Jacksonville, Florida 32211	#8
Telephone No.: (904) 727-3504	
1 displicate (10.: 1004) 121-0004	
BUILDING INFORMATION	
Year of Construction: 1976Renov	ation Dates: Unknown
Type of Occupancy: Administrative	dien Bates. Orknown
Typical Number of Occupants: 1 - 200	
Building Documents/Drawings Available/Co	nsulted: Generic Floor Plan
Types (Plans, Specifications, Other): Plans	and Specifications were Not Available
Availability of Asbestos Documents; Asbesti	os Documents were Not Available
Location of Asbestos Documents: N/A	
Number of Stories (Floors): 1 Area E	ach Floor: 13.200 square feet
Penthouse Area: N/A Attic A	ea: N/A
Basement Area: N/A Crawl S	Space Area: N/A
Number of Elevators: <u>N/A</u> Numbe	r of Spots: N/A
STRUCTURAL DATA	1
/ertical Support: Concrete Block Horizor	ital: Concrete
Roof: Built-Up Roof Floors:	Concrete/VFT
Ceilings: Ceiling Tile/Plaster Exterior	Walls: Masonry Brick
'aπition walls: Concrete Block	
Vas an HVAC System Present? (Yes or No.	
Vas an Air Handler Present? (Yes or No):	
Vas a Boiler Present? (Yes or No):	
Vas 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:

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> December 18, 1998 Project No.: 0601000038

EE&G: Asbestos Operations and Maintenance Plan

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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:

- 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.

- 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 asbesto's 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.
- 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.

- 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.
- 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.

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

	7/		T		T	7	+	
Comments							QAVQC	
Air Monitor Results	A'N .	N/A	N/A	NA	A'A	N/A	N/A	N/A
Response Priority	7	7	7	N/A	NA	¥N Y	NA	N.A.
Hazard Assess- ment	•	-	-	N/A	K/A	XX X	N/A	N/A
Damage Potential	Low	Low	Low	Low	Low	Low	Low	Low
Condition	Good	Good	Good	Good	Good	Good	Good	Good
Type 6.% Asbestos	VFT 3% Chrysotile & Mastic 10% Chrysotile	Not Analyzed	Not Analyzed	QN	QN	QN	QN	QΝ
Frlable (Y-N)	z	z	z	z	z	z	Z	z
Total Quantity	2,500 square feet (s.f.)	See Sample 001	See Sample 001	500 s.f.	See Sample 004	See Sample 004	260 s.f.	See Sample 004
Sallent Area	NIA	W/A	N/A	WA	NA	NA	NA	N/A
Functional Space	Office	Office	Office	Shop	Shop	Shop	Office	Office
Homo- geneous Area	10	04	01	0.5	05	02	. 03	50
Material	12" x 12" Off- White VFT w/ Black Mastic	12" x 12" Off- White VFT w/ Black Mastic	12" x 12" Off- White VFT w/ Black Mastic	12" x 12" Brown VFT	12" x 12" Brown VFT	12" x 12" Brown VFT	Baseboard Mastic	Baseboard Mastic
Sample #	5	005	803	904	900	900	200	800

EE&G: Asbestos Survey Report

Sample #	Material	Homo- geneous Area	Functional Space	Satient Area	Total Quantity	Friable (Y-N)	Type & % Asbestos	Condition	Damage Potential	Hazard Assess-	Response Priority	Air Monitor	Comments
608	Baseboard Mastic	603	ОПсе	N/A	See Sample 007	z	Q	Good	Low	NA	N/A	N/A	
010	Plaster Celling System	04	Kitchen/ Latrine	N/A	750 s.f.	z	Q	Good	Low	NA	NA	N/A	
011	Plaster Ceiling System	04	Kitchen/ Latrine	W.A.	See Sample 010	z	QN	Good	Low	N/A	V/V	N/A	
012	Plaster Ceiting System	90	Kitchen/ Latrine	N/A	See Sample 010	z	<u>S</u>	Good	Low	N/A	N/A	N/A	
013	2' x 4' White Ceiling Tile (CT)	90	Throughout	N/A	8,050 s.f.	>	£	Good	Low	N/A	N.A	NA	
014	2'x 4' White CT	50	Throughout	A'N	See Sample 013	>	<u>S</u>	Good	Low	N/A	NIA	A'N	
015	2'x4'White CT	05	Throughout	N.A	See Sample 013	>	2	Good	Low	N/A	N/A	A'N	
016	2' x 4' White CT	90	Throughout	N/A	See Sample 013	>	2	Poog	Low	A/A	NA	Y.A	
017	2' x 4' White CT (Worm Pattern)	98	Shop	A/A	500 s.f.	>	Q	Good	Low	N/A	NA	¥.N	CAVOC
018	2' x 4' White CT (Worm Pattern)	8	Shop	N/A	See Sample 013	>	9	Poog	Low	NA	N/A	NA	
019	2' x 4' White CT (Worm Pattern)	90	Shop	N/A	See Sample 013	>	9	Good	Low	N/A	N/A	N/A	
020	2' x 4' White CT (Tight Dot Pattern)	20	Shop	>	175 s.f.	>-	ð	Good	Low	N/A	N/A	N/A	

Department of Military Affairs

EE&G: Asbestos Survey Report

Sample *	Material	Homo- geneous Area	Functional Space	Salient Area	Total Quantity	Friable (Y-N)	Type & % Asbestos	Condition	Damage Potential	Hazard Assess- ment	Response Priority	Air	Comments
021	2" x 4" White CT (TigM Dot Pattern)	20	Shop	> -	See Sample 020	>	Q.	Good	Low	N/A	N/A	N/A	
022	2' x 4' White CT (Tight Dot Pattern)	20	Shop	>	See Sample 020	>-	Ö.	Good	row	N/A	N/A	N/A	
023	Black Ducl Maslic	0.8	Office/ Mechanical Room	A.V.	200 s.f.	z	10% Chrysotile	Good	Low	-	7	N/A	
024	Black Duct Mastic	80	Office/ Mechanical Room	N/A	See Sample 023	z	Not Analyzed	Good	Low	-	7	N/A	
025	Black Duct Mastic	90	Office/ Mechanical Room	Y/N	See Sample 023	z	Not Analyzed	Good	Гом	-	7	Y.Y.	
970	Door Caulk	60	Door System	N/A	98.f.	z	Q	Good	Low	N/A	N/A	N/A	
027	Door Caulk	60	Door System	N/A	See Sample 026	z	Q.	Good	Low	A/A	N.A	N/A	
028	Door Caulk	60	Door System	N/A	See Sample 026	z	Q.	Good	Low	NIA	N.A	K'N	
Υ/N	Fire Door	10	Throughout	N/A	33	z	Assumed	Good	Low	-	7	A/A	
A/N	Vault Door	11	Vault	N/A	1	z	Assumed	Good	Low	-	7	N/A	
N/A	Built-Up Roof	12	Roaf	N/A	13,200 s.f.	z	Assumed	Fair	Moderate	S	6	N/A	

Department of Military Affairs

EE&G: Asbestos Survey Report

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	EMOVAL COST 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	-	\$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.

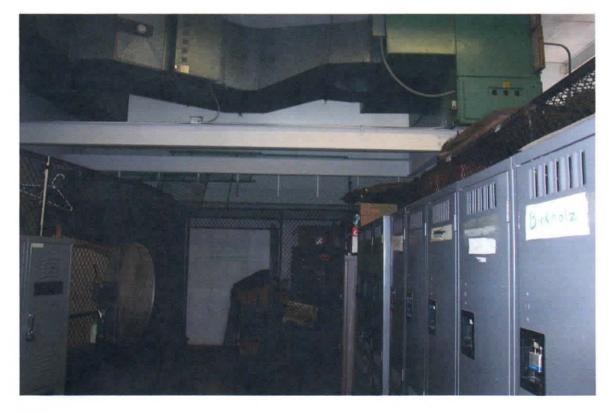


Photo 6: East end of the converted IFR (Firing line area).



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.

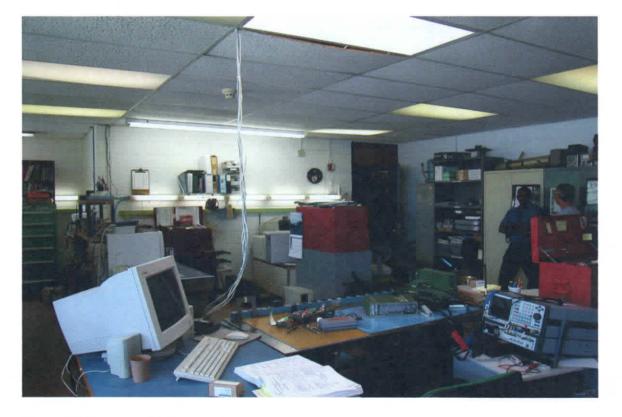


Photo 10: Communication repair area.



Photo 11: Ceiling tiles.



Photo 12: Air handling units to the office areas.

BEST AVAILABLE COPY



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



ARNG-CSG-P

25 April 2011

MEMORANDUM TO SFO<mark>NOT-</mark>, 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.

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.
- 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)
 - 1. 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 Ous.army.mil. For State follow up, contact MA. Non-Responsive Occupational Health Manager at commercial 904-823-0470 or the Safety and Occupational Health Office.



SE Regional Industrial Hygienist

CF: Non-Hesponsive 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

BEST AVAILABLE COPY

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-

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-

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.



Certified Hazard Control Manager (CHCM)
President

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NEA <u>NICHOLS ENVIRONMENTAL ASSOCIATES</u>, INC.

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

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-Non-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	11.3
	Pit	
HW-13, layer 1	Wall Bulk Asbestos	None Detected
HW-13, layer 2	Wall Bulk Asbestos	None Detected

A bulk sample (HW-!3, 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

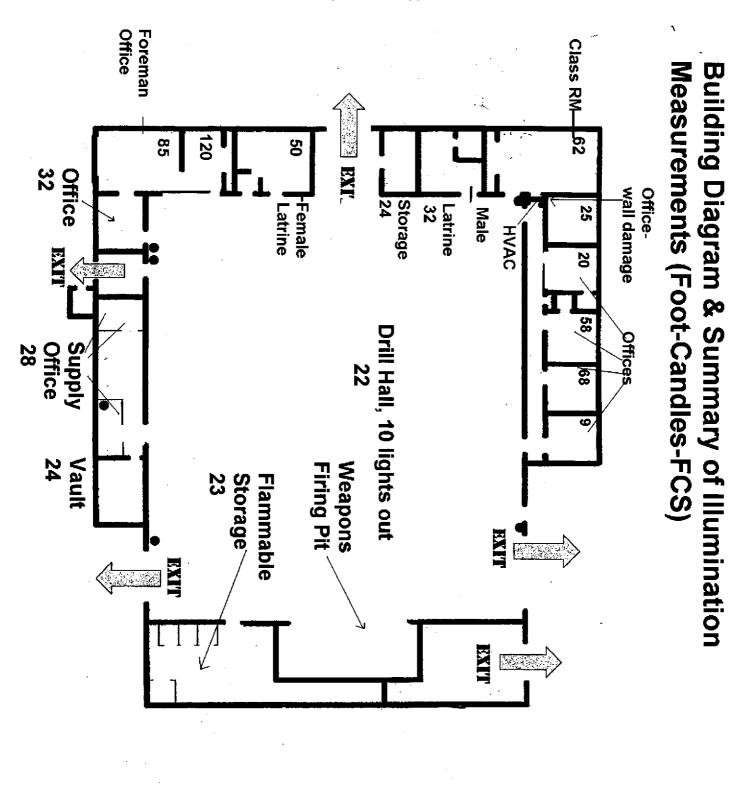
A list of references used during the course of this survey is included in Appendix C.

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.



COALEACOM & Statutatos

DG 415-2 01 MARCH 2005

Table 8. Electrical Requirements

	PARCTICINAL ANEA	LIGHTING	OUTLETS	NOTE
Om	co Arten			
1	General Supervisor	70 FC. FL	i dupes per eni	
2	Supervisor	70 FC. FL	i dupma per erai	!
3	Production Controller	70 FC. FL	I Output per wat	-
4	Inspection and Library	70 FC, FL	I Output per 10 LF of wait	
6	Automation Clea	70 FC, FL	I Chapter per 10 LF pl wat	
£	Common (T Space	70 FC, FL	1 Outper per 10 LF of wat	1
7	IT Support Activities	70 FC, FL	1 Gupes, per 10 LF of wall	2
•	Claserborn	70 FC. FL		2
Per	SCHOOL A/PAS	1 .0,0,16	1 dupos per 10 LF of mail	L
1	Total/Shower	40 FC. FL	Labora OSCI mana di	,
2	Locker Room	40 FC, FL	I duples GFCI per 2 sinus	
<u>, </u>	Brown Arms	30 FC. FL	I Ouplint OFCI	
Ť	Physical Filmes Area		I dupout per 10 LF of wait	
	L Arms	50 FC, FL	1 duples per 12 LF of was	2
1	Tog Acom	1 10 50 5	y	
<u>-</u>	Supply Room	50 FC. FL	1 Output per 20 LF of wall	
- -	Battery Room	30 FC, FL	1 duples per 20 LF of mail	
<u> </u>	 	30 FC, FL	# spletion proof	4
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of	2
\$	Instrument Repair Shop	70 FC. FL	1 duples per 2 LF of	2
7	Small Arms Repair Smoo	70 FC FL	HORNDONCH I duples per 2 LF of	
	 	7070,72	eprisonen	2
7	Small Arms Test Room	70 FC, FL	i dupes per 2 LF at wondench	2
	Vaul (Small Arms)	20 FC, FL	I OLDEA	
<u>. </u>	Yaut (CRT Vehicle Arms)	20 FC, FL	I (Appea	
10	Injector Test Room	70 FC, FL	I Ouples per 2 LF of	2
11	Fuel and Ignition Repair Shop	70 FC, FL	I griber bat 5 F. of	2
12	Bu Storage/iseue	20 FC. FL	I Oupon per 20 LF of each	
13	Machine Shop	50 FC. FL	1 dupms per 10 LF of war	2
14	Carpenter Shop	50 FC, FL	1 Output per 10 LF or war	
15	Lumber Storage Shed	10 FC, FL	Locher by 10 Ct 01 M 81	4



DG 415-2 01 MARCH 2005

Table 8. Electrical Requirements (Continued)

	PLANCTIONAL AREA	LIGHTING	CUTLETS	HOTE
18	Carvas Shop	50 FC. FL	s duples per 10 LF of was	
17	Madie Report Shop	TO FC, FL	I onber bet 10 ft bl eart	2
18	Yauft (Masde)	20 FC, FL	1 Overs	2
19	Calibration Room	70 FC, FL	1 Outbox per 2 LF of	┼
20	Caltraton Storage	20 FC, FL	1 duples per 20 LF of wait	
21	Class Repair Room	50 FC. FL	1 duples per 10 LF of wall	
22	Redistor Test & Papel: Poom	50 FC, FL	1 Gupta per 10 LF of wall	2
23	COMSEC Repair Room	50 FC, FL		3
24	Radiation Calibration Room	70 FC. FL	1 duplex per 10 LF of wait	2
26	Built POL Storage for Lucricating Systems	20 FC, FL	I Gupto A	 -
24	Buth POL Storage	20 FC, FL	1 duple a per 20 L of eral	
27	Controlled Waste Hariding	30 FC, FL	1 duples per 20 LF of stall	
28	Bussy Equipment Storage	20 FC, FL	I duple a per 20 UF of wall	
21	Flammable Materials Storage	20 FC, FL	I duples explosion proof	
30	Enclosed Unite Albid Storage	20 FC, FL	I dupos per 20 LF of wall	├──
Yark	bay s			<u> </u>
1	General Purpose Workbay	SO FC. FL	1 Supplex per 10 LF of wall	2
2	Warm-Up Bay	SO FC, FL	1 Output per 10 LF of sml	2
3	Westing Shop	SO FC. FL	I GUPTE A POR TO UF OF WAS	
<u>-</u>	Wash Bay	50 FC, FL	NA NA	2
٤	Paint Stripping Bay	60 FC, FL	1 Outpet per 10 UF of was	2
•	Paint Properties Bay	50 FC, FL	1 aupea per 10 LF of wait	- 2
7	Pairs Scott	SO FC, FL	1 Output per 10 UF of wait	
•	Lucrication Bay	SO FC, FL	I output per 10 LF of wall	
•	Engine/Transmission Test Cell	50 FC, FL	1 Output per 10 LF of wall	2 2
10	Electronics Bay	SO FC, FL	1 GUPTER PET 10 LF OF WAL	
11	Body Shop	50 FC FL	I duple a part 10 LF of wall	2 2

Lead Samples Location

(All Samples Collected on Floor)

Drill Hall

HW-02 HW-04

HWP10 └── HWP-11

HW-05 Storage, Inactive

Weapons Fring Pit

HW-01 HW-03

Vault

HWV-06 HWV-07

HWV-08 HWV-09



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: 1103O57

Analytical Environmental Services, Inc. received for the analyses presented in following report.

14 samples on 3/28/2011 10:00:00 AM

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.



Project Manager

Y 114000100, 110 a of Same Day Ruch (auch req.) your results, place bottle to check on the status of www.aesatlanta.com 19.) None White Copy - Umphal Dellow Copy - Chem Length Land Long Rower Fuel YAR Steedure's Blamess Daw Next Business Day Ruch 2 Business Ony Rush out a est Contration orders, etc. REMORKS DATE PROCEduze of any) بر ند: 8,00000 ANPLIS RECEVED AFTER PPU OR NATURDAY ARE CONNIDERED AS RECEPTION THE NEXT BUNINESS DAY: IF NO TAT IS WARKED ON COULARS WILL, PROFESID AS STANDARD. 510 Plaza Dr., Suite 1530, College Park TANK THEN STATES WALYSIS REDUESTED CHAIN OF CUSTODY NVOICE TO THE DIFFERENT PRINT OF THE BILL OF The second of the Selection of the Selec GA 30349 DATE TING (see coger) 0 MARK 1881 1108 East Dolphin Drive SHIPMENT NETHOLD The Man Oak Island, NC 28465 TEL (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX 1770:457-8188 10:30 PM ANALYTICAL ENVIRONMENTAL SERVICES, INC 910-278-5186 SANDY, ED 3.3E.V.) RICKATOR 3785 Presdential Parkway. Attenta GA 30340-3704 F. SIGN DYILL Nichols Environmental Associates PROBLEM TRANSCORPERATE
Please Fax or Email Results ASAP Tout An - Day Sandayanani (1-1) SAVORER TO 443-807-0848 9 ARCHARACTOR SALES MOULDRY

11,03057 Mare of Containers your results, place bottle to check on the status of Nume Day Rush (much req.) www.aesatlanta.com NA - None White Copy + Original: Vellow Copy - Ellent Stadyrd 5 Blumess Den Next Business Day Ruch 2 Beender Day Ruch Focil a of Contamps orders, etc. REMARKS TATE PROGRAMMENT DATA PACKACE 80000 KAMPLES RECEIVED AFTER JPM OR KATURDAY ARE CONNIDERED ON MECHIN DIN THE MINT BUSINESS DAY: IFNO TAT IS MARKED ON CUCAES WILL PROCPED AS STANDARD TAT SAMPLES ARE DISPOSED OF OUT ASSAULL, PROCPED AS STANDARD TAT 510 Plaza Dr., Suite 1530, College Park N. W. Waste Waste ANALYSIS REQUESTED PRESERVATION (See codes) CHAIN OF CUSTODY (mode) out (second) O Pather typecoty IN OUTSERENT SRING GRAVE. BIIITO! LEAD No New Act. Set Submitted the SAINT Seam Bradist Median And Services GA 30349 SEND REPORT AVOICE TO * YOU'CH (254 coasts) 10,00 13128-10. 1108 East Dolphin Drive COLUMN TARVET SWN SAN Oak Island, NC 28465 TEL. (770) 457-8177 / TOUL-FREE (800) 972-4189 / FAX (770) 457-8188 7 1 ANALYTICAL ENVIRONMENTAL SERVICES, INC 910-278-5186 SAMPLED CARA SICHATURE 3785 Presidential Parkway, Atlanta GA 50340-5704 ξ; Θ Nichols Environmental Associates Please Fax or Email Results ASAP 15-1 Hydrodylond and 150 SAMPLE ID BCANK PECIAL INSTRUMENTONS/PROMENTS 443-807-0848 PACEMENTAL PARTIES Va Calles Color

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Analytical Environmental Services, Inc

Date:

1-Apr-11

Nichols Environmental Associates, Inc. Client:

Project: Hollywood, Fl Armory Case Narrative

Lab ID: 1103057

3/24/2011 was used as the collection date for all samples with collection dates not listed on the Chain of Custody per Nonvia 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.

LEAD ON WIPES (N9100/7082)

Project: Matrix:

Hollywood, Fl Armory

Wipe

N7082

3/28/2011 10:00:00 AM Date Received:

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1103O57-001A	HW-01-DRILL HALL	BRI.	ug, Total	20	ı	•	03/24/2011	03/31/2011	MP
1103O57-002A	HW-02-DRILL HALL	BRL	ug, Total	20	- 1		03/24/2011	03/31/2011	MP
1103O57-003A	HW-03-DRILL HALL	40	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103O57-004A	HW-04-DRILL HALL	BRL	ug, Total	20	- 1		03/24/2011	03/31/2011	MP
1103O57-005A	HW-05-DRILL HALL	BRL	ug, Total	20	- 1		03/24/2011	03/31/2011	MP
1103O57-006A	HW-BLANK DRILL HALL	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103O57-007A	HWV-06 VAULT	71	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103O57-008A	HWV-07	48	ug, Total	20	ı		03/24/2011	03/31/2011	MP
1103O57-009A	HWV-08	54	ug, Total	20	l		03/24/2011	03/31/2011	MP
1103O57-010A	HWV-09	63	ug, Total	20	t		03/24/2011	03/31/2011	MP
1103O57-011A	HWV-BLANK	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103O57-012A	HWP-10	BRL	ug, Total	20	1		03/24/2011	03/31/2011	MP
1103O57-013A	HWP-11	70	ug, Total	20	1		03/24/2011	03/31/2011	MP

Analytical Environmental Services, Inc

Date:

1-Apr-11

Client:

Nichols Environmental Associates, Inc.

Client Sample ID: Collection Date:

HWP-12 BULLET TRAP

Lab ID:

Project Name: Hollywood, Fl Armory 1103O57-014

Ma

3/24/2011 11:00:00 AM

|--|

Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C				(SW3	3050B)			
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

Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

Less than Result value

Estimated value detected below Reporting Limit

O 1103057-011A HWV-BLANK B 1103057-012A HWP-10 A 1103057-013A HWP-11 A 1103057-014A HWP-12 BULLET TRAP	1103O57-011A 1103O57-012A 1103O57-013A	1103057-011A 1103057-012A	1103O57-011A		P 1103O57-010A HWV-09	1103O57-009A HWV-08	1103O57-008A HWV-07	1103O57-007A HWV-06 VAULT	1103O57-006A HW-BLANK	1103O57-005A HW-05-DRILL HALL	1103O57-004A HW-04-DRILL HALL	1103O57-003A HW-03-DRILL HALL	1103O57-002A HW-02-DRILL HALL	1103O57-001A HW-01-DRILL HALL	Lab Sample ID Client Sample ID	Cilent: Nichols Environmenta Project: Hollywood, Fl Armory Lab Order: 1103O57	Analytical Environmental Services, Inc
	Б	•			(4)	(4)	(4)		HW-BLANK DRILL HALL			·	·			Nichols Environmental Associates, Inc. Hollywood, Fl Armory 1103057	Services, Inc
3/24/2011 11:00:00AM	14.00.00.00mm	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 10:30:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 12:00:00AM	3/24/2011 8:30:00AM	Collection Date	s, Inc.	;
Solid	;	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Wipe	Matrix		
TOTAL METALS BY ICP		LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	LEAD ON WIPES (N9100/7082)	Test Name		
															TCLP Date	Dates Report	
	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	03/30/2011	Prep Date	∍port	Date: 1-Apr-11
03/30/2011		03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	03/31/2011	Analysis Date		yr-11

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

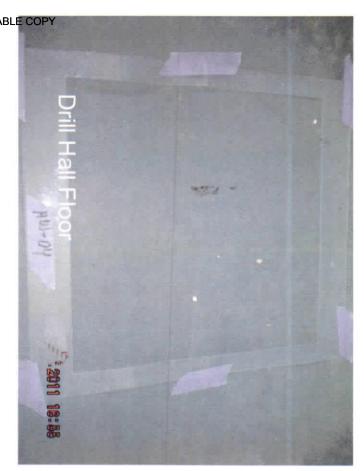
Client Vi chols Eur		Work Order	11.0305	_
Non-Responsive Checklist completed by Signature Date	3/28	2/11		
Carrier name: FedExUPS Courier Client US	S Mail Othe	r	_	
Shipping container/cooler in good condition?	Yes _	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes	No _	Not Present	
Custody seals intact on sample bottles? pr 1/18/14	Yes _	No	Not Present	
Container/Temp Blank temperature in compliance? (4°C±2)*	Yes _	No		
Cooler #1 Cooler #2 Cooler #3	_ Cooler #4	Coo	ler#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 _ \checkmark	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 su	bmitted	Yes	No	
Water - pH acceptable upon receipt?	Yes	No _	Not Applicable	
Adjusted?	Chec	cked by		
Sample Condition: GoodOther(Explain)				
(For diffusive samples or AIHA lead) Is a known blank includ	ed? Yes	_ N	0_	
See Case Narrative for resolution of the Non-Conformance	·.			

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

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

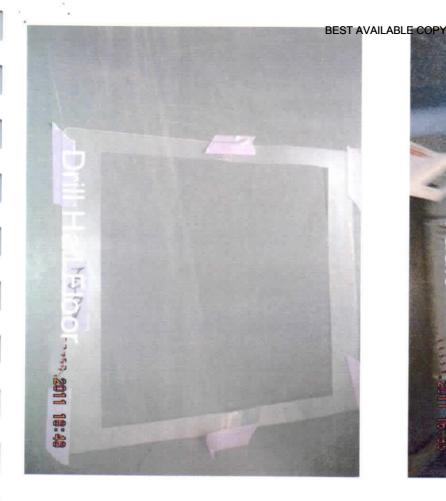






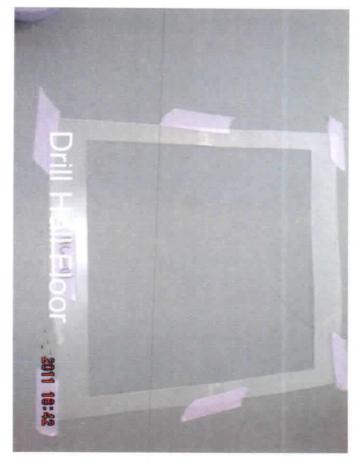


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 581 of 1021







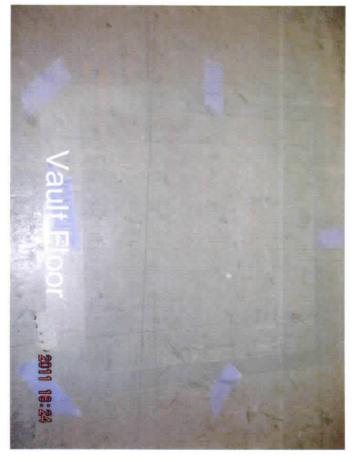


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 582 of 1021









FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 583 of 1021



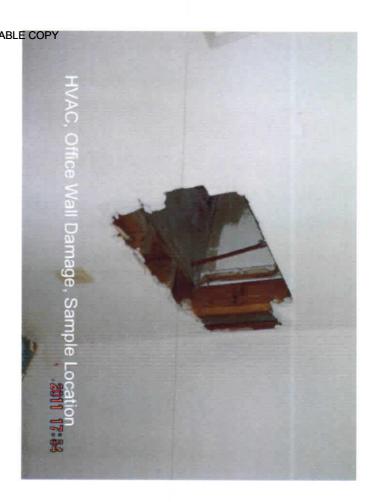




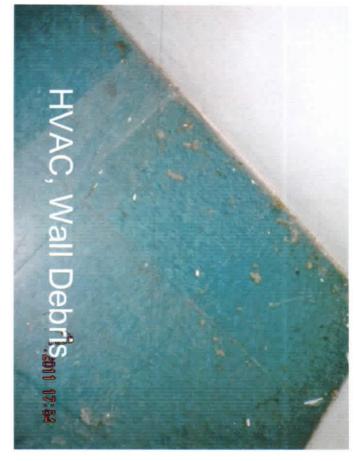


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 584 of 1021









FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 585 of 1021

Facility Information Form

State: FLORIDA Facility: HOLEY WOOD Armoey	Date Prepared: // MANCH 201/
Facility: HOLLY WOOD ARMORY Facility Address: 910 Near DIXIE HOGHWAY	Hory wood, FL 33020-3429
Phone#: (054) 967-1350	Fax #: (454) 9(07-14760
Work Schedule (Days of the Week, Time of Open and Close)	0700 - 1630 DAILY MON- FRI

	General Information						
Number of Maintenance Bays: Number of Exhaust Extensions:	NONE 3 (EXHINT FANS WEST EXTENDE WALL)						
Total Number of Personnel: Number of Maintenance Personnel:	3 FULL TIME / 130 ON DALL WEEKENDS						
Number of Administrative Personnel:	3						
Approximate area of facility (ft ²) ApproximateDate/ Construction	16,000 sunare FELT 1954						

	Operations	
	Yes (if Yes, How Many Hours per Day on Average)	No
Firing Range (active inactive?)		X
Aerosol Can Painting	VES: STORES IN HAZMAT LICKER	
Air Compressors (How many?)		λ
Battery Charging Room or Battery Storage Room		X
Brake/Clutch Repair and/or Replacement		X
Calibration of Equipment		×
Grinding, buffing, polishing, sanding		X
Hazardous Materials/POL Handling	HAZMAT /PAINT LOCKER	
Electronics Repair		X
Pneumatic Tool Operation		×
Respirators (what kind?) Refueling Vehicles		×
Solvent Tank Use (How Many)		×
Spray Paint Booth		×
Weapons Repair		\times
Weapons Storage	YES (VALLET)	
Soldering	YES (SUPPLY ROOM/CONNEXS)	\times
Supply/Warehouse	YES (SUPPLY ROOM/CONNEXS)	
Testing and Tuning of Engines		×
Welding (List Types)		
Other Noise sources		<u> </u>

Please write below any special concerns that you would like to have addressed during the survey:

OCCUPANT HEALTH AND COMPORT QUESTIONNAIRE Indoor Air Quality Survey (NO NAMES)

Date: 11(no-11
1. Location of Facility Hollywood, FL
2. Area or room where you spend the most time in the building: Training Office
3. Gender: Male Eemale Age: Under 25 25-34 35-44 45-54 55 and over
4. Do you: Smoke? Have hav 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? 5. Do anv of vour work activities produce dust or odor? Describe: Yes No
6. Office characteristics:
Number of persons sharing same room/work area
Please rate adequacy of your workspace (i.e. desk space, size of work area)
Poor Average Excellent I 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?In this building?
8. List symptoms you have experienced in this building. More than one answer may apply (for <u>example, headaches</u> <u>may occur frequently, and improve on vacation.).</u> 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 sust overall poor condition

Thank you very much for your cooperation.

OCCUPANT HEALTH AND CONTOUR TOUR STIONNAIRE Indoor Air Quality Survey (NO NAMES) 11 MAR 11 Date: 1. Location of Facility Hollywood, FL RE ANNELS OFFICE 2. Area or room where you spend the most time in the building: 3. Gender: Male Female Age: Under 25 25-34 45-54 55 and over 4. Do you: Smoke? Have hav fever/pollen allergies? Yes Have skin allergies/dermatitis? Yes Have a cold/flu? Have sinus problems? Have other allergies? Wear contact lenses? Yes Operate video display terminals? Yes Take medication for asthma, allergies sinus lung or immune problems? Yes 5. Do any of your work activities produce dust or odor? Describe: Office characteristics: Number of persons sharing same room/work area — Number of windows in room/work area — 2 Please rate adequacy of your workspace (i.e. desk space, size of work area) Poor Average Please rate room temperature: Poor Average 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? 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? NO / NOT SULL YET IF RELATED TO WORK PLACE When do symptoms disappear?

Thank you very much for your cooperation.

9. In your opinion, what is the cause of perceived indoor air quality problems?

AGE AND CONDITION OF THE FACILITY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE Indoor Air Quality Survey (NO NAMES)

Date: // MAN//
1. Location of Facility Hollywood, FL
2. Area or room where you spend the most time in the building:
3. Gender: Male Female Age: Under 25 25-34 35-44 45-54 55 and over
4. Do you: Smoke? Have hav 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? 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 I 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? (M In this building? (M)
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?
vmen do symptoms disappear;
9. In your opinion, what is the cause of perceived indoor air quality problems?

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LOCATION/CODE Arr	nory	1				-	OPERA	IOITA	N/CODE	E Ind	oor Fi	iring	Rang	e/IFR				
SURVEY DATE: March 24, 2011.	h Ev	aluator:	Non-	مينمم	CHCM	1												
WACOM/CODE National Guard Bure	eau/NG			SUBMAC ARNG	COM/COI	DΕ	_			SUF	Non-	SUB						
TELEPHONE . (954)967-1350		UNIT	/ORGA	RNIZATI	ON	P	RAC						HRS/	UENCY DAY eded	(hrs/da	ay		
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PERSONAL PROTECTIV	E EQUIPM	ENT (R= R	 EQÜIREC); U = UTIL	IZED)	<u> </u>			l									
GLOVES	R/U	RESPIRA	FOR			NIOS	SH TC NO.			MA	NUFAC	TUREF	}				R/U	
ACID COLD SURFACES	1	AIR LINE ABRASIZI		NG HOOD		+=											- I	
HOT SURFACES NBC AGENTS	1	FULL FAC		RIFYING		+											1/_	_
OIL	1	1/2 FACE	AIR PURI	FYING _		#										_	1	
SOLVENTS SURGICAL GLOVES	/	1/4 FACE SELF CO				+												
- CONSIGNAL GEOVEG		SEE GO				<u> </u>												
EYES/FACE	R/U	1	HEARI	NG	F	₹VU	<u> </u>	BODY	, -		R/U	1		HEAD	O/FIT		F	₹U
HEMICAL SPLASH	I	(CANAL C	APS		T_	1 .	JAPRONS				1	(COL	D WEAT	THER BOO	OTS/HAT	rs		

FULL FACE SHEILD	X/X	EARPLUGS	X/	fcOLD WEATHER CLC	THING /	7.00	RD HATS		/	
HEMICAL/SAFETY	1	HELMETS	1	FULL BODY SUIT	1	/ MPER		ERMEABLE BOOTS		
AFETY/IMPACT /ELDING HELMET	1	MUFFS dUFF/EARPLUG COMBO	/X	HEAT REFELECTIVE	VEST/SUIT /	SA	FETY/NCN-CO	NDUCTIVE SHOES	1	
ELECTION (ILLETTE)	1	MFF/EARPLUG W/TIME LIMIT	1	SAFETY BELT/HARNE					1	
		SECTION	4: HA	ZARD INVENTORY	DATA		عصوا			
AS CODE		HAZARD DESCRIPTION			PAC			EPC		
					3			A		
7664-93-9		Sulfuric Acid			3			A		
		- Salisi (S. F. ISIS								
1309-60-0		Lead oxide			3			A		
PONOISECO		Noise Continuous			2			A		
POLIFTING		Heavy Lifting			2			A		
FULIFILING		THEAVY LIMING								
POEYEHAZARD		Eve Hazard			3			A		
POFOOTHAZARI)	Foot Hazard			2			A		
7440 04 0		Tin			3			Α		
7440-31-3		Tin			3			1		
1439-92-1		Lead			3			Α		
1.22					1.50					
				74.						
1		CECT.	ION	S: PERSONNEL	DATA					
1 LAST NAME		FIRST		S. PERSUNNEL	MI	SEX	SSN	CATEGORY		
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33			-				O. P.	S		
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						_				
						_				
SECTIONS; C	OMN	MENTS								

1. Weapons firing pit (inactive).

ARLOC 22000		_ /	Alpha C	LATION company, od, FL 33	1 st Battal 020	ion, 124th, i	nfantry, 9	10 Dixie H	BLDG lighway,	;/ RMN0	D.	
LOCATION/CODE Arr	mory					OPI	ERATIO	N/CODE	Administr	ation/AD0	5	
SURVEY DATE: Marci 24, 2011.	h Ev	/aluator	Non-		CHCI	<u>Л</u>		· • • • • • • • • • • • • • • • • • • •			<u></u>	
WACOM/CODE National Guard Bure	au/NG			SUBMA ARNG	COM/CO	DE			SUPERVIS SFC Non-	OR		
TELEPHONE . (954)967-1350		UNI	T/ORG.	ARNIZAT	ION	RAC	:			HRS/I	JENCY (hrs/d	ay
NO. CIV(S)	NO 3). MIL			NO. CO 0	3 NTRACTOR	₹\$	NO. LO	C(S)0	10 NO. 0	THER	
LAB HOODS 0				VAPOR 0	SECTION DEGREA	ON 2 ∏ FA ASERS	CILITY	DATA_	SPRAY BO	OTHS		
MAINTENANCE BAYS	S		-	<u> </u>	URFACE	TANKS			VENTILATI	ON UNITS		
CONTROLS PRESENT				IATION		UNIT CODE		SECTI	I ON 3: SUR LS RÉQUIRE	VEY DATA	STATUS	
Air Conditioning (System. Fluorescent Lights Offices. Video Display Ter	s Drill H		Lighti in ma	of buildir ing inade iny area in & Tec outers	equate s.			75 Foot	-candles		Work requirements	est should be
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GLOVES ACID COLD SURFACES HOT SURFACES NBC AGENTS OIL SOLVENTS SURGICAL GLOVES	R/U / / / / /	RESPIRAT AIR LINE ABRASIZE DISPOSAE FULL FACE 1/2 FACE A 1/4 FACE A SELF CON	BLASTII BLE E AIR PU AIR PURII	RIFYING FYING FYING		NIOSH TC N	0.		MANUFACTU	RER		R/U // // // // // // // // // // // //
EYES/FACE	R/U I		HEARI	NG	1.0	/U I	BODY		IR/U		HEAD/FIT	R/U

JAPRONS

HEMICAL SPLASH

(CANAL CAPS

(COLD WEATHER BOOTS/HATS

-ULL FACE SHEILD	1	EARPLUGS	X/X	TOOLD WEATHER CLOTHIN	G /		AND HATS		1
CHEMICAL/SAFETY SAFETY/IMPACT	1	HELMETS	1	COVERALLS	-		PERMEARI	F BOOTS	X/x
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SECTIONS; C	OM	MENTS							

1. Computers are used in the shop and admin office. Lighting is inadequate.

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HEMICAL SPLASH

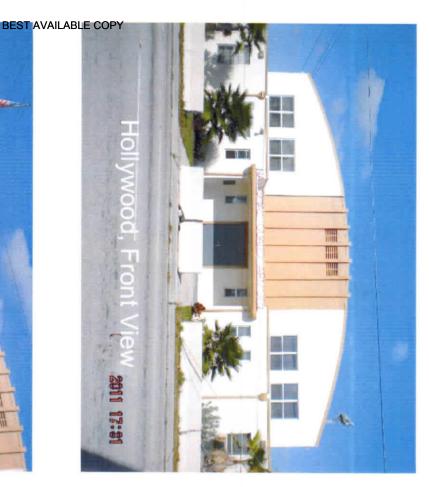
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(COLD WEATHER BOOTS/HATS

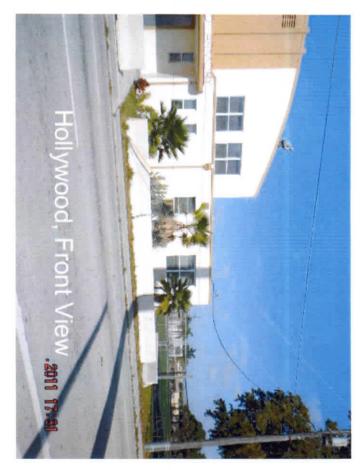
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ECTIONS; COMI	MENTS							
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1. Storage/handling and flammable storage cabinets.





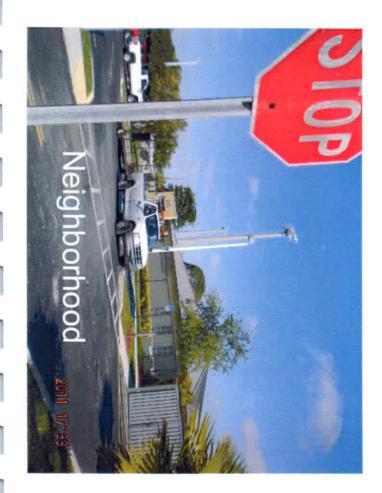


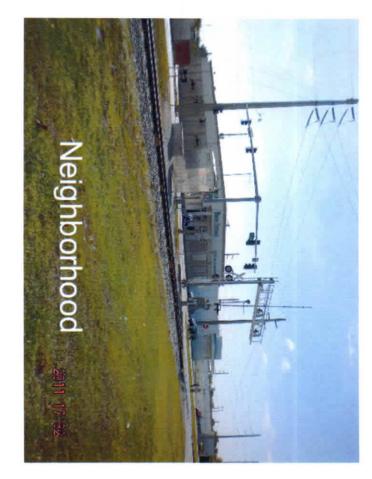


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 596 of 1021





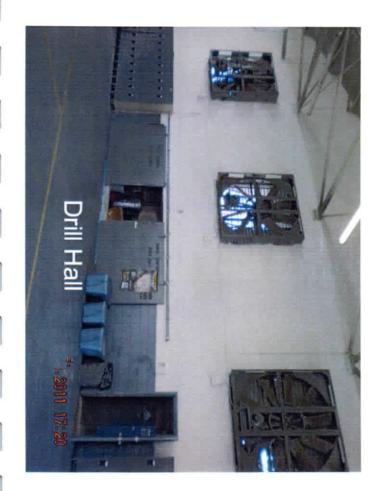


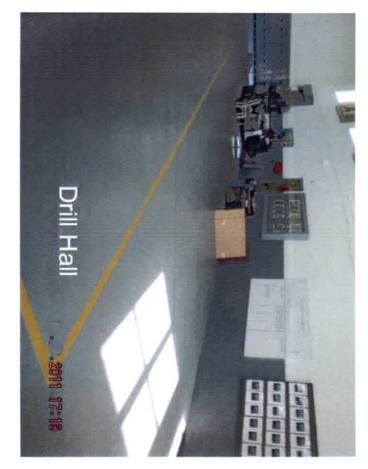


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 597 of 1021







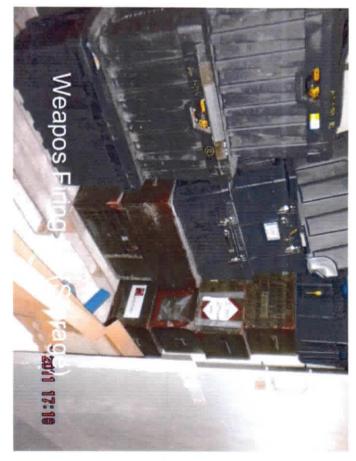


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 598 of 1021





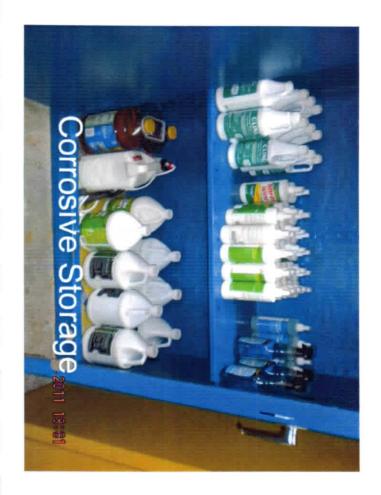




FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 599 of 1021









FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 600 of 1021

REFERENCES

- 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.
- 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-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.

- References.
 - a. Report dated 3 June 2010, Industrial Hygiene Survey. 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.
- 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- of LAE conducted the survey.
- 3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)
- 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.



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

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.
- TB MED 503, The Army Industrial Hygiene Program.
- 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. <u>Purpose</u>. 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. <u>Background.</u> At the request of Non-Responsive of the National Guard Bureau Region south Industrial Hygiene Office, Ms Non-pol LAE Consulting performed an Industrial Hygiene survey of Lake City Florida Armory on 3 June 2010.
- 4. <u>Facility Description</u>. 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. <u>Instrumentation and Laboratory Analysis.</u> 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 he central nervous system, kidney and blood cells. The effects on children can cause physical and mental develop 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

LAE Consulting

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

MEASURED FC	REQUIRED FC
5.3	20-30
11.4	20-30
20.9	50
31,8-36.1	50
24.6-30.7	50
	5.3 11.4 20.9 31.8-36.1

SUBJECT: Industrial Hygiene Survey of Lake City Florida National Guard Armory

7. <u>Technical Assistance</u>. 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

LAE Consulting

2 Encl

- 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

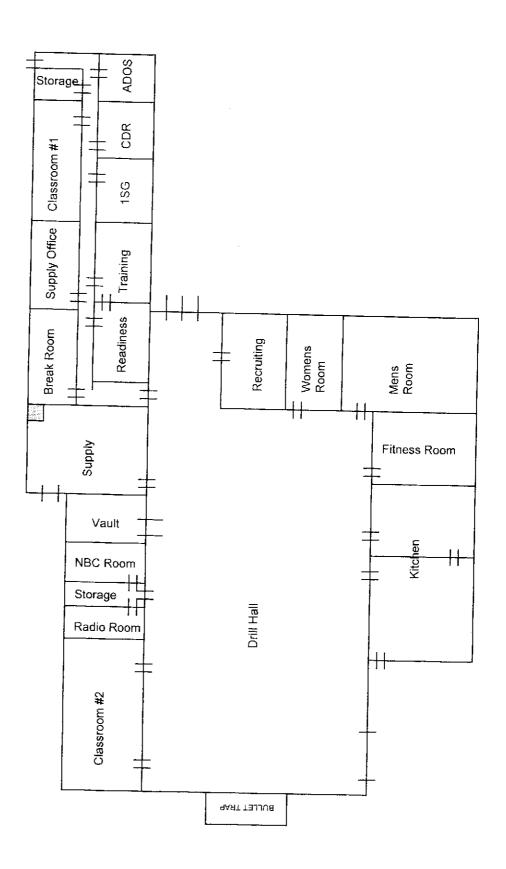
LAE Consulting

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)

LAE Consulting



A CO 53rd BSTB - LAKE CITY, FL





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 14, 2010

Non-

LAE Consulting 1218 Scattered Pines Ct

Severn

MD 21144

TEL: (410) 551-2717 FAX: (410) 551-7215

RE: LakeCity Armory

Dear Non-

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.



Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

CHAIN OF CUSTODY

Work Order: 10066-38

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188 3785 Presidential Parkway, Atlanta GA 30340-3704

	White Copy - Original: Yellow Copy - Client	Dinking Water (Blanks) O = Other (specify) juditate/Methanol + toc = O = Other (specify) = NA = Mone	SO Soil SW - Surface Winter W + Water (Blanks) D by N - Nitre acid S+1 - Sulface and + toe S/M-1 - Sodi	
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<u> </u>	- 2	QUOTE #: POW.	GREYHOUND OTHER	EXXX RESIDENCE
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	Visit our website	ANALYSIS REQUESTED	1218 Scattered Funct	1 48 CM2/4/A
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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

1006688

Client: LAE Consulting

Project: Matrix:

LakeCity Armory

Lab Order:

Wipe

Date Received: 6/8/2010 11:15:00 AM

Date:

14-Jun-10

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting	DF	Qual	Date	Date	Analyst
Laboratory ID	Cheut Sample ID	Wesuit	CHIIS	Limit	Dr	Quai	Collected	Analyzed	Auaiyst
1006688-001A	LW-BLANK-00	BRL	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-002A	LW-01	63	$\mu g/\Omega^2$	20	1		06/03/2010	06/09/2010	MW
1006688-003A	LW-02	BRL	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-004A	LW-03	BRL	μ <u>α</u> /ft²	20	1		06/03/2010	06/09/2010	MW
1006688-005A	LW-04	21	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-006A	LW-05	BRL	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-007A	LW-06	494	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-008A	LW-07	65	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-009A	ĿW-08	2160	μg/ft²	71	3.54		06/03/2010	06/09/2010	MW
1006688-010A	LW-09	BRL	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-011A	LW-10	22	μg/ft²	20	1		06/03/2010	06/09/2010	MW
1006688-012A	LW-BLANK-02	BRL	μg/ft²	20	1		06/03/2010	06/09/2010	MW

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client LAE Consulting		Work Ord	er Number	88 ducal
Non-Responsive Checklist completed by Signature Da	/8/10			
Carrier name: FedExUPS Courier Client U	JS Mail Othe	er		
Shipping container/cooler in good condition?	Yes 🗹	No _	Not Present	t _
Custody seals intact on shipping container/cooler?	Yes _	No _	Not Present	1
Custody seals intact on sample bottles?	Yes	No	Not Present	~
Container/Temp Blank temperature in compliance? (4°C±2)	•	No _		,
Cooler #1 AUBLEN Cooler #2 Cooler #3	6 Cooler #4	Co	oler#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 Appli	cable _
Water - VOA vials have zero headspace? No VOA vials	submitted	Yes _	No _	_
Water - pH acceptable upon receipt?	Yes	No	Not Applie	cable
Sample Condition: Good Other(Explain)				
(For diffusive samples of ATHA lead) Is a known blank inch	uded? Ve	•	No	

See Case Narrative for resolution of the Non-Conformance.

^{*} Samples do not have to comply with the given range for certain parameters.

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

Client: LAE Consulting
Project Name: LakeCity Armory
Workorder: 1006688

Analytical Environmental Services, Inc

ANALYTICAL QC SUMMARY REPORT

Date: 14-Jun-10

Batch1D: 130597

Sample ID: MB-130597 SampleType: MBLK	Client ID: TestCode: 1	Client ID: TestCode: LEAD ON WIPES (N9100/N7082)	0/N7082)		Batt	Units: ug, 10th BatchID: 130597		Frep Date: 06/09/2010 Analysis Date: 06/09/2010	06/09/2010	Kun No: 1/3394 Seq No: 3608876	Kun No: 173394 Seq No: 3608876
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	Val %RPD		RPD Limit Qual
Lead	BRL	20	0	0	0	0	0	0	0		0
Sample ID: LCS-130597 SampleType: LCS	Client ID: TestCode: 1	Client ID: TestCode: LEAD ON WIPES (N9100/N7082)	0/N/7082)		Units: BatchI	Units: ug, Total BatchID: 130597		Prep Date: 06/09/2010 Analysis Date: 06/09/2010	06/09/2010 06/09/2010	Run No: 173594 Seq No: 360887	Run No: 173594 Seq No: 3608878
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	Val %RPD		RPD Limit Qual
Lead	908.1	20	957	0	94.9	80	120	0	0		0
Sample ID: LCSD-130597 SampleType: LCSD	Client ID: TestCode: 1	Client ID: TestCode: LEAD ON WIPES (N9100/N7082)	0/N7082)		Units: BatchI	Units: ug, Total BatchID: 130597		Prep Date: 06/09/2010 Analysis Date: 06/09/2010	06/09/2010 06/09/2010	Run No: 173594 Seq No: 360887	Run No: 173594 Seq No: 3608879
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	Val %RPD		RPD Limit Qual
Lead	891.2	20	957	0	93.1	80	120	908.1	1.88		25

	Cubinets.	< Less than Result value	Alialyte detected to the associated months of and
BRL Below reporting limit	reporting limit	E Estimated (value above quantitation range)	H Holding times for preparation or analysis exceeded
J Estima	J Estimated value detected below Reporting Limit	N Analyte not NELAC certified	R RPD outside fimits due to matrix
Rpt Lim Reporting Limit	ing Limit	S Spike Recovery outside limits due to matrix	



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 17, 2010

Perpagaine

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.



Project Manager

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

MPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

VIRIX CODES: A * Air COV * Groundwater SE * Sediment SO * Soil SIV * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SE * Sediment SO * Soil SIV * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * Siv * Siv * Surface Water Water (Blanks) DW : Trinking Water (Blanks) O - Short Groundwater SIV * FCIAL INSTRUCTIONS COMMENTS 40.581,291) Spead in sonds WASTED B Roscueto in PPM LINQUISHED BY AE Consultivis AVAILABLE TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188 100-8 6-002 W B-003 LC 3785 Presidential Parkway, Atlanta GA 30340-3704 8-034-10 SAMPLE ID RECEIVED BY out 🕉 STUMPIO 1318 Statested Purso OT CLIENT (FedE) GRE YHOUND Ġ ; SHIPMENT METHOD Mr 201144 OTHER e aol.com UPS MAIL COURIER 2 2 6 × Composite DATE/TIME (See codes) Div .: Drinking Water (Blanks) Pbin PROJECT NAME LANG COY, FLOUR 510 PIAD De LOS NYOICE TO A GB-1HO FIXE END REPORT TO PM ake Cuty Amony PROJECT INFORMATION ANALYSIS REQUESTED PRESERVATION (See codes) Other (specify) DATA PACKAGE STATE PROGRAM (if any) NIA CIRLLE your results, place bottle to check on the status of www.aesatianta.com Visit our website Oliver Total # of Containers Same Day Rush (auth req.) 2 Business Day Rush Next Business Day Rush Standard 5 Business Days orders, etc. Turneround Time Request RELIARKS RECEIPT Fax? Y/N 7 No # of Containers 2 of 8 **BEST AVAILABLE COPY** FOIA Requested Record #J-15-0085 (FL)

ESERVATIVE CODES.

H+1 " Hydrochloste acid + too

(= lee only

N = Nitric need | 891 = Sulferic acid + ice

S/M+1 = Sodium Bisulfate/S/lethinal + icc

O = Other (specify)

NA * None White Copy + Original: Yellow Cony - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC

CHAIN OF CUSTODY

Work Order: 1000687

Date:

17-Jun-10

Analytical Environmental Services, Inc

Client:LAE ConsultingClient Sample ID:LB-001 LCProject:Lake City ArmoryCollection Date:6/3/2010Lab ID:1006687-001Matrix:Solid

Analyses	Result	Reporting Limit	Qual	Units I	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C				(SW3	050B)			
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

Client: LAE Consulting
Project: Lake City Armory
Lab ID: 1006687-002

Client Sample ID:

17-Jun-10

Collection Date: Matrix: LB-002 LC 6/3/2010 Solid

Date:

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C				(SW3	8050B)			
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

Streater 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: 1006687-003

Client Sample 1D: Collection Date: LB-003 LC

Matrix:

6/3/2010 Solid

Analyses	Result	Reporting Limit	Qual	Units]	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C				(SW3	8050B)			
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

LAE Consulting Lake City Armory

Lab ID: 1006687-004

Client:

Project:

Date:

17-Jun-10

Client Sample ID: Collection Date: LB-004 LC 6/3/2010

Matrix:

Solid

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010C				(SW:	3050B)			·
Lead	3710	48.9		mg/Kg-dry	130593	10	06/10/2010 12:44	T'A
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

6 of 8

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client LAE Consulting		Work Orde	r Number	1006687
Checklist completed by	8/10			
Carrier name: FedEx UPS Courier Client US	S MailOthe	r	_	
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? (400-1)	Yes 🗹	No		
Cooler #1 AUNIEN Cooler #2 Cooler #3	_ Cooler #4 _	Coo	ler#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 XV	. l.o	
Samples in proper container/bottle?	Yes	No _	1/2/	
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 Applicab	le
Water - VOA vials have zero headspace? No VOA vials su	bmitted _	Yes	No	_
Water - pH acceptable upon receipt?	Yes	No _	Not Applicab	le
/	Chec	ked by		
Sample Condition: Good Other(Explain)				_
(For diffusive samples or AIHA lead) Is a known blank include	ed? Yes	N	0	

See Case Narrative for resolution of the Non-Conformance.

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

Analytical Environmental Services, Inc

LAE Consulting Lake City Armory 1006687

> Project Name: Workorder:

Date: 17-Jun-10

ANALYTICAL QC SUMMARY REPORT

BatchID: 130593

							:				
Sample ID: MB-130593 SampleType: MBLK	Client ID: TestCode:	Client ID: TestCode: METALS, TOTAL SW6010C	SW6010C		Un Bat	Units: mg/Kg BatchID: 130593		Prep Date: Analysis Date:	Prep Date: 06/09/2010 Analysis Date: 06/09/2010	Run No: 173592 Seq No: 3609063	173592 3609063
Analyte	Result	RPT Limit	SPK value	SPK Rcf Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	rVal %RPD		RPD Limit Qual
Lead	BRL	866'0	0	0	0	0	0	0	0		
Sample ID: LCS-130593 Sample Type: LCS	Client ID: TestCode;	Client ID: TestCode; METALS, TOTAL	SW6010C		Units: Batchl	Units: mg/Kg BatchID: 130593		Prep Date: Analysis Date:	Prep Date: 06/09/2010 Analysis Date: 06/09/2010	Run No: 173592 Seq No: 3609060	173592 3609060
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	Val %RPD		RPD Limit Qual
Lead	49.62	5.00	80	0	99.2	80	120	0	0	0	
Sample ID: 1006687-001AMS SampleType: MS	Client ID: TestCode:	Client ID: LB-001 LC TestCode: METALS, TOTAL	3W6010C		Units: BatchI	Units: mg/Kg-dry BatchID: 130593		Prep Date: Analysis Date:	Prep Date: 06/09/2010 Analysis Date: 06/09/2010	Run No: 173592 Seq No: 3609069	173592 3609069
Analyte	Result	RPT Limit	SPK value	SPK Rcf Val	%REC	Low Limit	Low Limit High Limit	RPD Ref Val	'Val %RPD		RPD Limit Qual
Lead	93.13	4.95	49.54	35,44	116	75	125	0	0	0	
Sample ID: 1006687-001AMSD SampleType: MSD	Client ID: TestCode:	Client ID: LB-001 LC TestCode: METALS, TOTAL	SW6010C		Units: BatchII	Units: mg/Kg-dry BatchID: 130593		Prep Date: Analysis Date:	Prep Date: 06/09/2010 Analysis Date: 06/09/2010	Run No: 173592 Seq No: 3609071	173592 3609071

Sample ID: 1006687-001AMSD SampleType: MSD		Client ID: LB-001 LC TestCode: METALS, TOTAL s	SW6010C		Units: Batchl	Units: mg/Kg-dry BatchID: 130593		ن ن		Run No: 173592 Seq No: 3609071	92
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	al %RPD	RPD Limit Qual	Qual
Lead	93.94	4.94	49.39	35.44	118	75	125	93.13	0.868	20	

< Less than Result value Analyte detected in the associated method blank Analyte detected in the associated method blank	E Estimated (value above quantitation range)	N Analyte not NELAC certified	
Greater than Result value	Below reporting limit	Estimated value detected below Reporting Limit	
۸	BRL	ı	
Qualifiers: >			



View of Lake City Florida Armory



View of moisture absorption on bricks of the building



View of dirt and mold growth along fascia of the building



View of water staining and mold growth on brick of he building



Excessive moisture on bricks of the building



View of dirt and mold growth along fascia of the building



View of dirt and mold growth window



View of dirt and mold growth along fascia porch overhang. The need for an effective gutter OFA Recipies ted Record #0-4 5-0085 (FLS)

Released by National Guard Bureau
Page 625 of 1021



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 deactivatded IFR



View of sample 1.4, and 5 located in the deactivated IFR FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 627 of 1021



View of Lead wipe sample 2 and 4, located on the outside of



View of Lead wipe sample 6, located on top of a trunk lid



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 sample 5 and , located on the black folded screen located at the rear of the range



(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 7 located on the ceiling of the deactivated IFR



View of lead wipe sample 9, located on the plastic bag of plush toys



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 FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 628 of 1021



View of Bulk Lead sample location LB-001-LC



View of Bulk Lead sample location LB-003-LC



View of sealed plastic cups used to collect sand from the pit for Lead analysis



View of Bulk Lead sample location LB-002-LC



View of Bulk Lead sample location LB-004-LC



View of former backstop area behind sliding doors



View of plush toys stored in the former backstop area



View of concrete ceiling. The wood pattern may be from the wood that was removed when associated range items were removed.



View of more than 5 inches of sand located in the pit area



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 storage items, boxes, and cots stored in backstop area



View rear wall located in space (would have been behind backstop)



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 Non-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 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 Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



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



June 30, 2003

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Appendices

- A. References.

- B. Laboratory Analytical Results.
 C. Lab Chain of Custody.
 D. Floor Layout and Photographs.
 E. Indoor Firing Range Cleaning Guidance.

Survey Date: 22 APRIL 2003

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.

Торіс	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	

Report Date: 30 June 2003 Page 1

Survey Date: 22 APRIL 2003

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-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.

<u>Site Description.</u> 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.

Report Date: 30 June 2003

FINDINGS and DISCUSSION:

The Point of Contact during the survey was SFC Roosa Kay (863) 678-4161/4165.

<u>Lead Wipe Samples:</u> 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.

<u>Asbestos Suspect Building Material</u> 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:

Report Date: 30 June 2003 Page 3

Survey Date: 22 APRIL 2003

Survey Date: 22 APRIL 2003

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.

<u>Noise Survey</u> 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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 9 footcandles 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

Report Date: 30 June 2003

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 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.

<u>Hazard Communication Standard</u> 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.

<u>Personal Protection Equipment (PPE)</u> 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.

<u>Posters and Bulletin Posting</u> 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.

Report Date: 30 June 2003 Page 5

Survey Date: 22 APRIL 2003

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-Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

Report Date: 30 June 2003

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

107 Haddon Ave., Westmont, NJ 68108

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



Attn:

Project:

Tammer Science Inc.

3744 Lawrence Drive Naperville, IL 60564

(630) 369-7957

Fax:

Phone: 630-369-7956

Customer ID:

Customer PO:

TS80

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**

					<u>No</u>	n-Asbestos	<u>Asbestos</u>
Sample	Location	ocation Appearance	Treatment	_ % F	ibrous	% Non-Fibrous	% Туре
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% 35%		_ *** ********************************	None Detected

Analyst(s)

Delores Beard (4)

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 delected 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. med by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872

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FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 644 of 1021

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

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Phone: (856) 858-4800

Project: Lake Wales

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



^NAttn:

Fax:

Tammer Science Inc

3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Phone: 630-369-7956

Customer ID:

TS80

Customer PO:

Received:

04/28/03 11:10 AM

EMSL Order:

200304248

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 in²	300.0 µg/ft²
LW002		0002	5/9/03	144 in²	280.0 µg/ft²
LW003		0003	5/9/03	144 in²	44000.0 µg/ft²
LW004		0004	5/9/03	144 in²	97.0 µg/ft²
LW005		0005	5/9/03	144 in²	10.0 µg/ft²
LW006		0006	5/9/03	144 in²	<10.0 µg/ft²
LW007		0007	5/9/03	144 in²	<10.0 µg/ft²
LW008		0008	5/9/03	144 in²	<10.0 µg/ft²
V009		0009	5/9/03	144 in²	<10.0 µg/ft²

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 hije comment section.

CREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

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APPENDIX C

CHAIN OF CUSTODY

2004244

LEAD

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Name: Telephone #: <u>603</u> 6	2 369	7456		Fax #:	630-369	- 7957
Project				Purchase		
Name/Number:				Order#:		
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	or SW846	8.6010	ICP		0.1 mg/l waiter	
Lead Soll +					10 mg/kg (ppm) soil	2 - 10-2
Lead in Air**	NIOSH 7082		Flame	Atomic Absorption	5 ug/filter	
	or NIOSH 7300		ICP		3.0 ug/filter	
English Parish	SW846-7420 Flam		- Flame	Atomic Absorption (_10 ug/wipe	6-10 da
Lead in Wipe	or SW846-6010		ICP		3.0 ug/wipe	
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TCLP Lead **	SW846-1311/7420				0.1 mg/l (ppm)	
	or SW846-6010		ICP			
Lead in Air ****	NIOSH 7105		Graphite Furnace Atomic Absorption		0.03 ug/filter	
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Note: Please duplicate this form and use additional sheets if necessary.

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EMISI. Analytical, Inc.

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EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

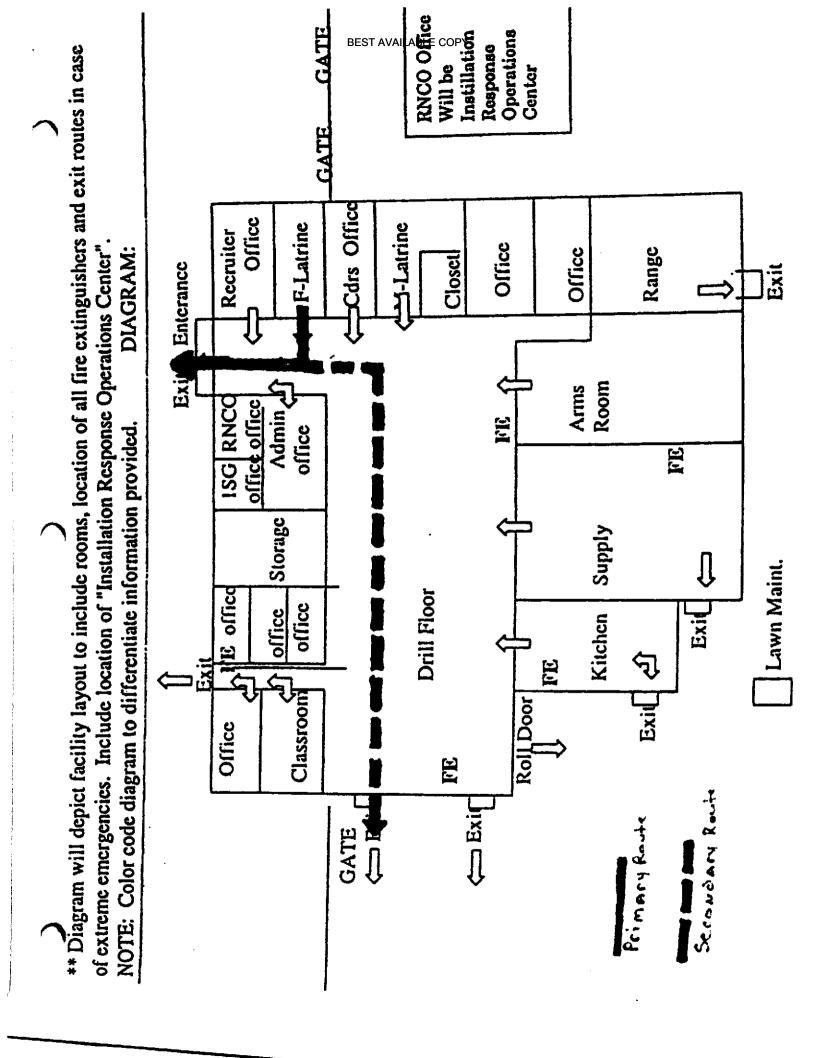
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Page 2 of 2 2

APPENDIX D



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 µg/ft 2 on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/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 0.13microns 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 endow 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 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 onsite 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-Non-Stafety 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-Bosponsius 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.



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

Non-Responsive CIH PE
Tammer Sciences, Inc.

June 30, 2003

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Appendices

- A. References.
- B. Laboratory Analytical Results.C. Lab Chain of Custody.

- D. Floor Layout and Photographs.E. Indoor Firing Range Cleaning Guidance.

Survey Date: 23 APRIL 2003

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.

Торіс	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

Report Date: 30 June 2003 Page 1

Survey Date: 23 APRIL 2003

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 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.

<u>Scope of Work.</u> 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.

<u>Lead Wipe Samples:</u> 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:

Report Date: 30 June 2003

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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 9 footcandles 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		

Report Date: 30 June 2003

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.

<u>Hazard Communication Standard</u> 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.

<u>Ergonomics</u> 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.

<u>Personal Protection Equipment (PPE)</u> 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.

<u>Posters and Bulletin Posting</u> 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-Regional Industrial Hygienist at the NGB ARNG Region South Industrial Hygiene Office at 1-800-326-0262.

APPENDIX A

BEST AVAILABLE COPY

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

3 Cooper St., Westmont, NJ 08108

BEST AVAILABLE COPY

Phone: (856) 858-4800

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



Attn:

Tammer Science Inc.

3744 Lawrence Drive

Naperville, IL 60564

Customer ID: Customer PO: TS80

Received:

04/28/03 11:10 AM

Fax:

(630) 369-7957 Project: Lakeland

Phone: 630-369-7956

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 ^a	23.0 µg/ft²
LL002		0002	5/9/03	144 in²	200.0 µg/ft²
LL003		0003	5/9/03	144 in²	<10.0 µg/ft³
LL004		0004	5/9/03	144 in²	270.0 μg/ft²
LL005		0005	5/9/03	144 in²	43.0 μg/ft²
LL006		0006	5/9/03	144 in²	31.0 µg/ft²
LL007		0007	5/9/03	144 in²	<10.0 µg/ft²
LL008		0008	5/9/03	144 in²	24.0 μg/ft²
009		0009	5/9/03	144 in²	13.0 µg/ft²
LL010		0010	5/9/03	144 in²	<10.0 µg/ft²

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 AlHA, unless specifically indicated otherwise in

CREDITATIONS: AIHA Environmental Lead Laboratory Approval Program #100194

Printed: 5/9/03 3:33:08 PM

THIS IS THE LAST PAGE OF THE REPORT:

Page 1 of 1

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

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



Attn:

Fax:

Project:

Tammer Science Inc 3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Phone: 630-369-7956

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**

			Non-Asbestos				Asbestos		
Sample	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous		% Туре	
LL01A 040306876-0001		Brown Non-Fibrous Homogeneous	Dissolved			10	00% Non-fibrous (other)	None Detected	
LL02A CoveBase 040306876-0002		Brown Non-Fibrous Homogeneous	Dissolved			10	00% Non-fibrous (other)	None Detected	
LL02A Adhesive 040306876-0004		Brown Non-Fibrous Homogeneous	Dissolved			10	00% Non-fibrous (other)	None Detected	
LL03A 040306876-0003		White/Brown Fibrous Heterogeneous	Dissolved Teased	45 3 5			20% Non-fibrous (other)	None Detected	

Analyst(s)

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 acted 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.

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

APPENDIX C

EMSL ANALYTICAL

Revised 7/1/99

EMSL Rep: Your Company Name: Street: Box #:	Tommer Sciences, Inc. Non-Responsive 3744 Lawrence Dr. Nonwrille Zip: II	DATE: EMSL-Bill to: Street: Box #: City/State:	Third party Silling requires written authorization from third party Some
City/State: Phone Results to: Name: Telephone #: Project	Non-Responsive 630 369 7756	Fax Results to: Name: Fax #: Fax #: Order #:	Non-Responsive (36 - 369 - 7957

10,000	•	Older w.		
Name/Number:		 -		
		INSTRUMENT	mdls	TAT
MATRIX	METHOD	Flame Atomic Absorption	0.01% ++	
	SW846-7420 or	Flame Atomic Accorpan	l .	
ead Chips*	AOAC 5.009 (974.02)			
The same of the sa	Name and Address of the Party o	Flame Atomic Absorption	0.4 mg/l water	
ead Wastewater	SW846-7420	1	50 mg/kg (ppm) soil	
		ICP	0.1 mg/l water	
ead Soil +	or SW846-6010	l ICP	10 mg/kg (ppm) soil	
620 OO.		The state of the s	and the same of the same of the same	Service Control of the Control
ead Soil +	NIOSH 7082	Flame Atomic Absorption	5 ug/filter	
ead in Air***	1000	ICP	3.0 ug/filter	
	or NIOSH 7300		and the second of the second o	
	The second secon	Absorption	10 ug/wipe)-	6-10 da
ENGR, STRORIOS ES SES COMPANION DE LA COMPANIO	SW846-7420	-Flame Atomic Absorption -	\	6-10 000
ead in Wipe		ICP	3.0 ug/wipe	١ `
•	or SW846-6010	IOT	and the second	
		Fiame Atomic Absorption	0.4 mg/l (ppm)	•
CLP Lead **	SW846-1311/7420	Figure Aminor Escription		
	or SW846-6010	ICP	0.1 mg/l (ppm)	
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FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 688 of 1021

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 µg/ft 2 on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/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 0.13microns 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 endow 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 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 onsite 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.

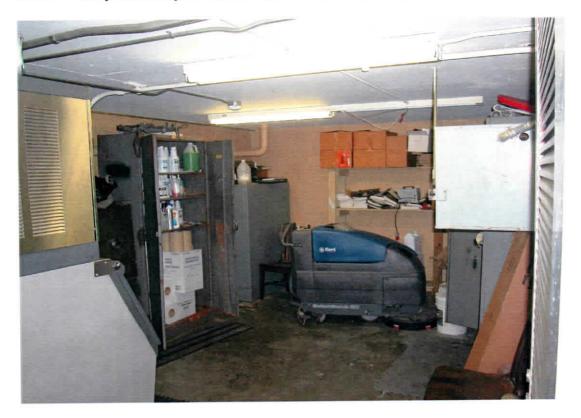


Photo 10: Janitor's Room.



Photo 11: Air handling unit room.



Photo 12: Air supply grill to office area.

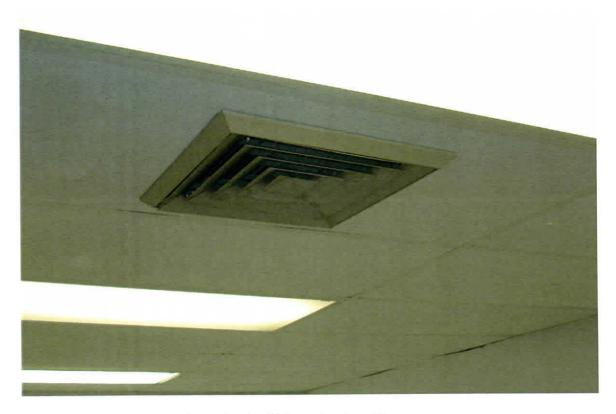


Photo 13: Another type of supply air diffuser for the office area.



Photo 14: Office floor tiles photo where sample was collected.

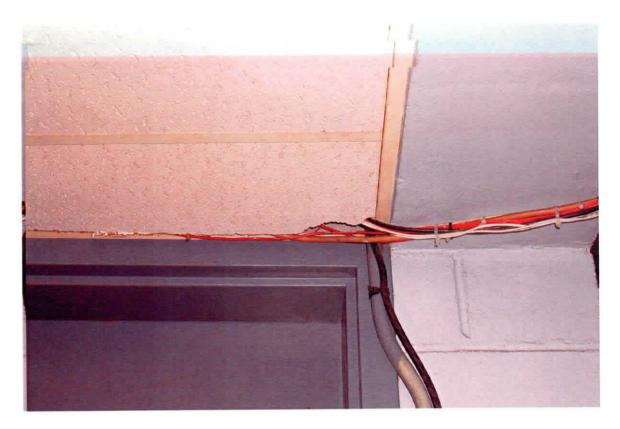


Photo 15: Ceiling tiles in office area.



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 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.

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.

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 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 Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-41/74.



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

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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

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. 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.
- Occupational Safety and Health Administration (OSHA), 29 CFR, 1926.1101, Asbestos

SUBJECT: Industrial Hygiene Survey of Lance National Guard Armory, St Augustine, Florida

- 2. <u>Purpose</u>. 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. <u>Background.</u> At the request of Non-Responsive of the National Guard Bureau Region South Industrial Hygiene Office, Ms. Non-off LAE Consulting conducted an industrial hygiene survey at the Lance National Guard Armory on January 14, 2003.
- 4. <u>Facility Description</u>. 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.

LAE Consulting 1218 Scattered Pines Court, Severn, Maryland 21144 Telephone: (410) 551-2717 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 Dug/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	$<12 \text{ ug/ft}^2$
8	Bulk sand sample from Pit of Range	< 40 mg/Kg
9	Blank	$<12 \text{ ug/ft}^2$

- 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.

LAE Consulting 1218 Scattered Pines Court, Severn, Maryland 21144 Telephone: (410) 551-2717 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 offfice	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" waning 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.

LAE Consulting 1218 Scattered Pines Court, Severn, Maryland 21144 Telephone: (410) 551-2717 7. <u>Technical Assistance</u>. 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

CF: Safety Occupational Health Office, Florida NG

Non-Responsive

LAE Consulting

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Released by National Guard Bureau Page 715 of 1021 OCATION OF FIRE EXTINGUISHERS

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Summary of Atomic Absorption Analysis for Lead

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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)

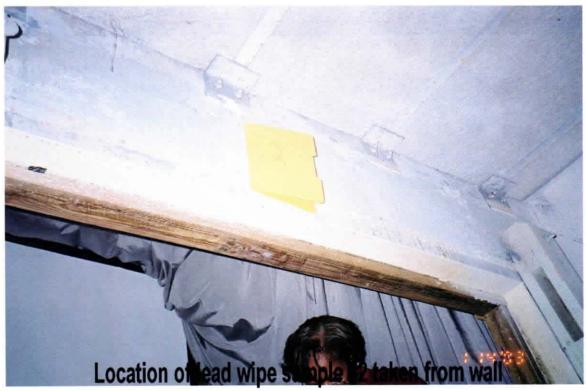


Views of sample locations (yellow cards) on the drill hall floor





Location of lead wipe sample #1 taken from wall near pit floor inside of the deactivated indoor firing range



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	PMQS
CPT	Non-Responsive		J	44A00
SGM			R.	73Z50
SFC			Т.	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			Α.	92Y20
SGT			L.	73C20
SPC			В.	92A10
PFC			M.	73C10
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Non-Responsive - FYI

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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Appendices

A. Sampling Strategy for Collection of Wipe Samples
 B. Interpretation of Sample Results (Prior to Ceaning)

C. Interpretation of Sample Results (After Cleaning)

D. OSHA Instruction CPL 2-2.20B

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

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).
- TB MED 502 (Occupational and Environmental Health Repiratory Protection Program).
- f. USAEHA 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).

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/ eq 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 adhered 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-Control of 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 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.
- 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. Responsive of LAE conducted the survey.
- 3. Findings. All survey findings of the report are enclosed. (See ENCL. 1)
- 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 Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.

Kegional 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

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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

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. <u>Purpose</u>. 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. <u>Background.</u> At the request of Non-Responsive of the National Guard Bureau Region south Industrial Hygiene Office, Ms. Non-Bureau of LAE Consulting performed an Industrial Hygiene survey of Live Oak Florida Armory on 2 June 2010.
- 4. <u>Facility Description</u>. 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. <u>Instrumentation.</u> 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

	- CAVIDED EC
MEASURED FC	REQUIRED FC
38	50
22.7-43.4	50
5-25.1	50
22.3	50
30.1-58.2	50
29.6-30.2	50
35.6	50
	50
	50
	22.7-43.4 5-25.1 22.3 30.1-58.2

LAE Consulting 1218 Scattered Pines Court, Severn, Maryland 21144 Telephone: (410) 551-2717

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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. <u>Technical Assistance</u>. 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

LAE Consulting

2 Encl

- Building schematics
- 2. Floor plans
- 3. Material Safety Data Sheets

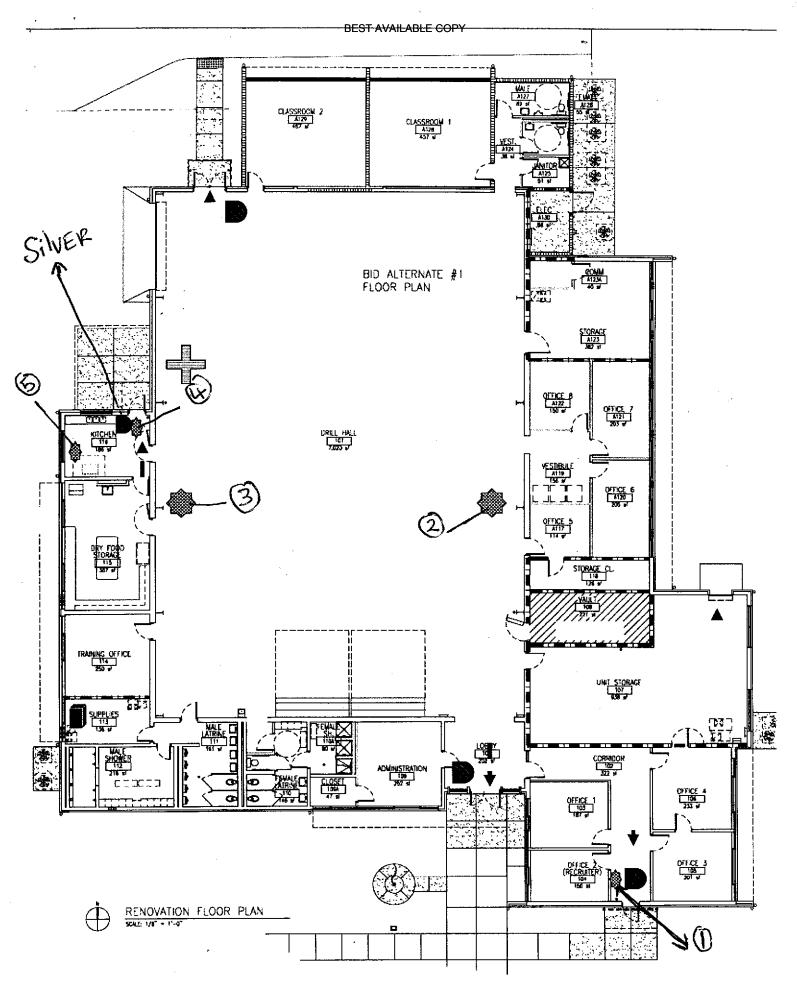
LAE Consulting

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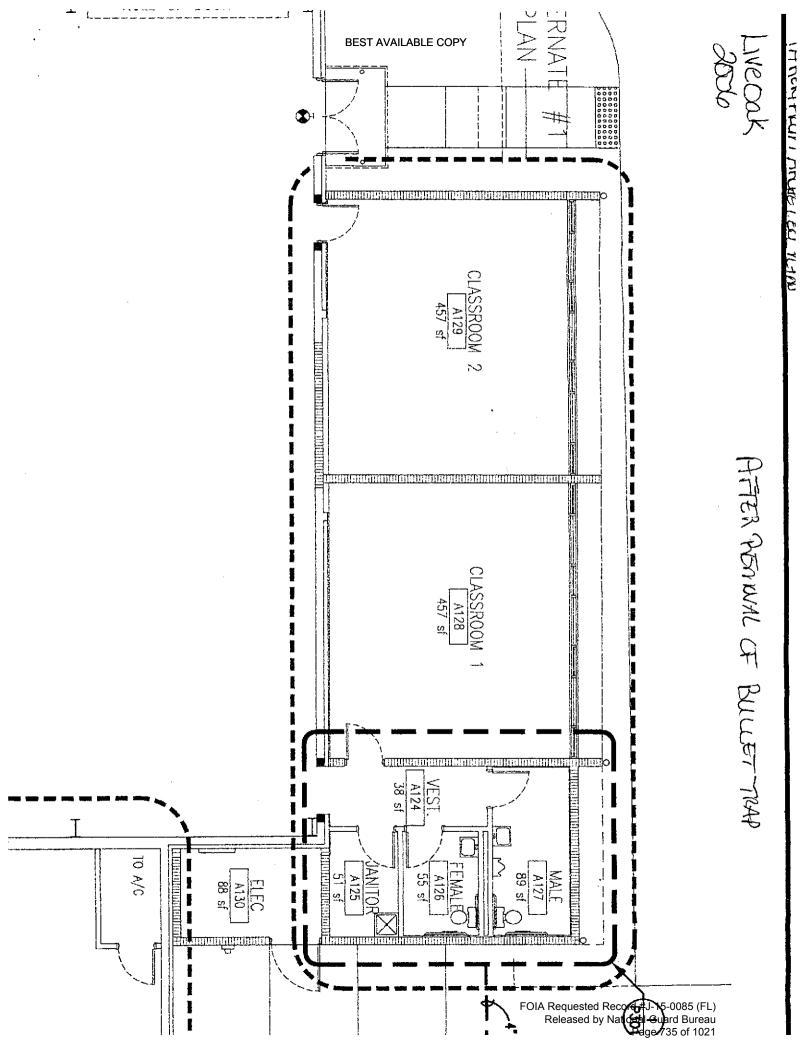
SUBJECT: Industrial Hygiene Survey of Live Oak Florida National Guard Armory

- 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

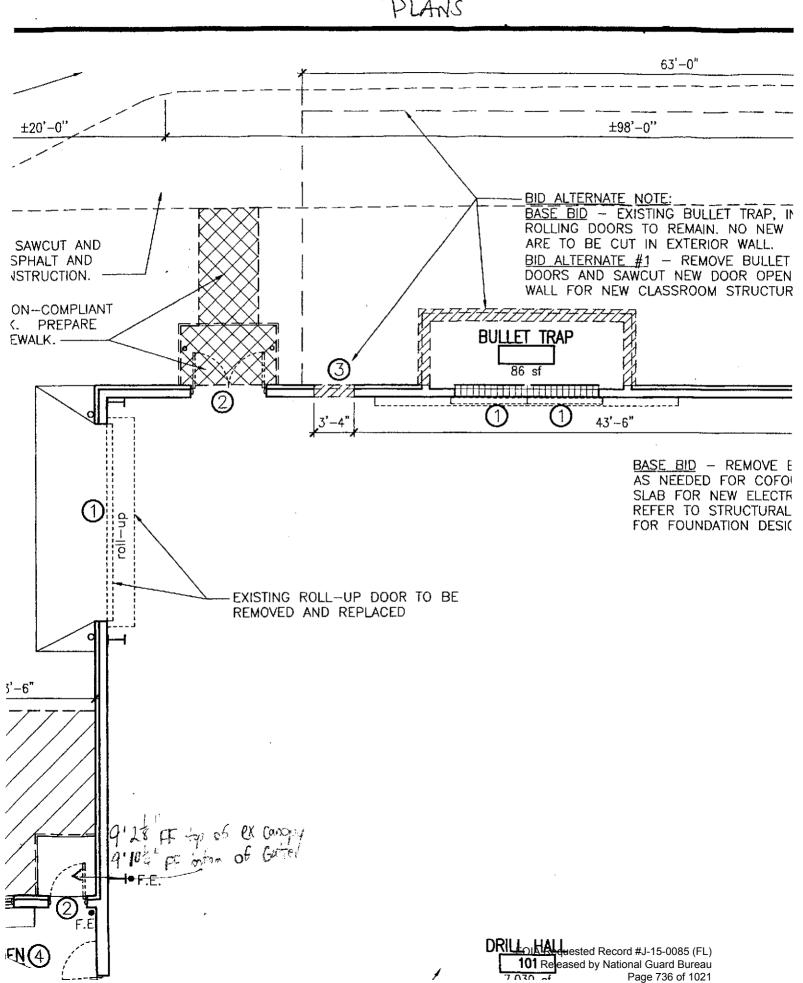
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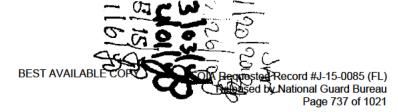
FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 734 of 1021



PRESTANKABLEGEPY BULLETTRAP PLANS



	HAZARDOUS M	HAZARDOUS MATERIAL STORAGE INVENT	ENTORY			
ACTIVITY NAME STORAGE LOCA INVENTORY PER DATE:	ACTIVITY NAME: STORAGE LOCATION: MAINTENANCE BAY FL01 NVENTORY PERFORMED BY: 2 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8					
			Container	Container	Max	Minimum
SLN(1)	PRODUCT NAME (2)	NSN ⁽³⁾	Size ⁽⁴⁾		ed(e)	Stored ⁽⁷⁾
FL01 A1	SPRAY PAINT	DUPLICOLOR	12 Oz	Ì		_
FL01 A5	SIMPLE GREEN DEGREASER	SIMPLE GREEN	1 Q	Pistc bti		
FL01 A6	SAFETY KLEEN SPRAY AND WIPE	SAFETY KLEEN	ည္	Pistc btl	2	_
FL01 B1	BFS SILICONE BRAKE FLUID	BFS		Steel on		-1
FL01 B1	NAPA SILICONE BRAKE FLUID	NAPA	1 Gal	Pistc bti	2	
FL.01 B1	NAPA SILICONE BRAKE FLUID	NAPA		Pistc bti	2	
FL01 B2	NAPA AUTOMATIC TRANSMISSION FLUID	NAPA	1 Qt	Pistc btl	4	1
FL01 B4	NAPA ANTI-FREEZE	NAPA	1 Gal	Pistc bti	2	_
FL01 B6	ALL BRITE GLASS CLEANER	ALL BRITE DIST		Pistc bti	2	1
FL01 C1	CUI EP-90 WT GEAR OIL	CUI	5 Gal	Plstc cn	1	1
FL01 C1	COASTAL MULTI-TRAC TRACTOR FLUID (HYD)	COASTAL	5 Gal	Plstc cn	1	
FL01 C1	CHEVRON 1000 TFH HYDRAULIC FLUID	CHEVRON	\sim	Pistc cn	1	_
FL01 C3	DELO 400 15W-40 MOTOROIL	CHEVRON	1 Gal	Pistc bti	3	
FL01 C4	DENATURED ALCOHOL	6810-00-543-7415	1 Gal	Steel cn	_1	1
(1) Shelf Lo	(1) Shelf Location (e.g., A01, B01)	(4) Size of container				
(2) Product Name	Name	(5) Type of container				
(3) National	^[3] National Stock Number, If non-military, use this space for	Maximum stored (high quantity)	gh quantity)			
manufacturer, etc	iter, etc.	ivialitimistored (low	(quantity)			



HAZARDOUS MATERIAL STORAGE INVENTORY

STORAGE LOCATION: DATE: INVENTORY PERFORMED BY: ACTIVITY NAME:

868th EN BN, LIVE OAK, FL

4-Oct-09

16	16) = \	757	VŽΔ	T A		t de l	DE							
CL01 C2	1	CL01 B6	CL01 B5	CL01 B4	SL01 B3	DL01 B2	CL01 B1	CL01 A6	CL01 A5	CL01 A4	CL01 A3	CL01 A3	CL01 A2	CL01 A1	SLN(1)	
"ZEP" HEAVY DUTY FLOOR STRIPPER	"ZEP" HEAVY DUTY FLOOR STRIPPER	PARADE BLEACH	PARADE BLEACH	WINDEX POWERIZED GLASS CLEANER	WINDEX POWERIZED GLASS CLEANER	WINDEX POWERIZED GLASS CLEANER	SKILLCRAFT "KITCHEN MATE"	STAINLESS STEEL MAINTAINER	STAINLESS STEEL MAINTAINER	SELIG HEAVY DUTY FLOOR STRIPPER	"GATOR" ODOR COUNTERACTANT	"PENNY LANE" PRIEMUM HAND SOAP	"GATOR" DISTINCT II GLASS CLEANER	SELIG COMMERCIAL GLASS CLEANER	PRODUCT NAME (2)	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	7930-00-880-4454	7930-01-360-8050	7930-01-360-8050	N/A	N/A	N/A	N/A	N/A	NSN ⁽³⁾	
5 Gal	5 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 Gal	1 ହା	1 Gal	1 Gal	1 Gal	Size ⁽⁴⁾	Container
Pisto cn	Pistc cn	Pistc bti	Pistc bti	Pistc btl	Pistc bti	Pistc btl	Pistc bti	Pistc btl	Pistc btl	Pistc bti	Pistc btl	Pistc btl	Pistc btl	Pistc bti	Type ⁽⁶⁾	Container
2	2	2	2	2	2	1	-4	2	2	-1		-1	2	2	Stored ⁽⁶⁾	Max
2	2		-1	-1	1			2	2		-1	-1			Stored ⁽⁷⁾	Minimum
						17	Ü		-	_	٤	Ni	3		_ (^ *

"ZEP" HEAVY DUTY FLOOR STRIPPER
"ZEP" HEAVY DUTY FLOOR STRIPPER
"ZEP" HEAVY DUTY FLOOR STRIPPER

Z/A Z }

5 Gal

Pisto cn Pistc cn

5 Gal

Pisto on

CL01 C3

L01 C4

"ZEP" HIGH TRAFFIC FLOOR FINISH

⁽²⁾ Product Name

Shelf Location (e.g., A01, B01)

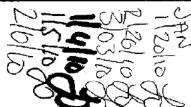
manufacturer, etc.

[3] National Stock Number, If non-military, use this space for

⁽⁵⁾ Type of container

Size of container

(i) Minimum stored (low quantity) (6) Maximum stored (high quantity)



STORAGE LOCATION (2) Product Name ACTIVITY NAME: (3) National Stock Number, If non-military, use this space for CSS01 A DATE: INVENTORY PERFORMED BY: manufacturer, etc CSS01 D Shelf Location (e.g., A01, B01) 3S01 b SS01 A SS01 B SS01 A 100 ii LOOR W ANTI-BACTERIAL LOTION SOAP ANTI-FOGGING GLASS CLEANER PROFESSIONAL DISHWASHING SOAP PRODUCT NAME (2) PBS URINAL BLOCK ENVIROSYSTEMS GREEN CLEAN DISINFECTING SPRAY STAINLESS STEEL CLEANER KIMCARE GENERAL LOTION SKIN CLEANSER PARADE BLEACH HEALTH GARDS URINAL SCREENS GLASS CLEANER TIME MIST CLEAN & FRESH AIR FRESHENER LEMON PLEDGE 7176 868th EN BN, LIVE OAK, FL 4-Oct-09 ORAGE ROOM 113 CHEMICAL STORAGE SHELF (CSS-01) HAZARDOUS MATERIAL STORAGE INVENTORY NSN(3) SELIG 6850-01-186-0859 SKILLCRAF (6) Maximum stored (high quantity) (5) Type of container KRYSTAL 6840-00-246-6438 CLOROX WATERBURY COMP KIMBERLY CLARKE SKILLCRAFT DAWN MICREL JOHNSON/JOHNSON (1) Minimum stored (low quantity) (4) Size of container プをきょるへ ار ار 6,6 Oz Size(4) 16 Oz 1 Gal Z N/A 16 Oz 16 Oz 16 Oz 17.7 Oz 7 1 Gal 1 Gal Container Gal 641 Container Box Pistc bil Aero cn Pistc bti Type⁽⁶⁾ Box Aero cn Aero cn Pisto bt Aero cn Pistc bt Pistc bti Pisto bt Pistc btl さそこ Stored⁽⁶⁾ Max Minimum Stored⁽⁷⁾

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Rear view of Live Oak, Alabama Armory



View of eyewash located outside the maintenance shop. The eyewash has no eye covers



View of batteries stored in the shop



Rear view of Live Oak, Alabama Armory



View of the unit's maintenance shop



Interior view of the unit's maintenance shop



View of batteries stored in the shop FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 740 of 1021





View of Fuel powerd forklift stored in maintenance bay area of shop



View of rodent bait station in the kitchen



View of the weight room of the Armory



View of Hazardous Waste storage container



View of Mess or kitchen of the Armory



View of mouse droppings in the kitchen



View of the Drill Hall within the Armory

FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 741 of 1021

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View of rear wall of the drill hall were the former IFR was located



View of rear wall of the drill hall were 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 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.
- 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.

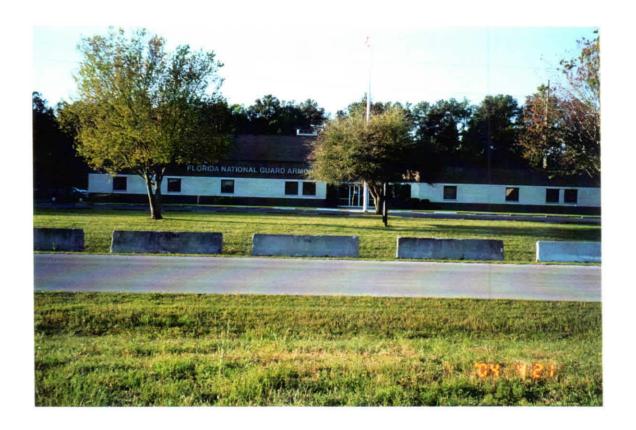
- a. Discontinue use of Indoor Firing Range (IFR) until the IFR has been properly cleaned of Lead and retested by the Florida State Safety and Occupational Health Office.
- b. Clean converted Indoor Firing Range (Supply/Storage room) of lead following NG PAM's 385-15 and 385-16. Keep in mind that EPA 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.



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC 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

Non-Responsive

dba HINCHCO

9 April 2004

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	ecommendations Page	

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 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.

<u>Site Description</u>. 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 reading 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



<u>Lead Wipe Samples:</u> 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
04-01OA	SOUTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-020A	EAST SIDE OF DRILL FLOOR	UNDETECTED
04-030A	NORTHEAST CORNER OF DRILL FLOOR	UNDETECTED
04-04OA	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
04-11OA	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
04-14OA	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.

Page 3

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.

<u>Illumination Survey</u> Lighting levels throughout the Ocala armory ranged from 5 foot-candles to 92 foot-candles. Specific readings were as follows:

AREA	READING	IN	FOOT-CANDLES
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.

Page 4

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

- 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.
- Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
- 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.

Page 5

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



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² Type of Container	G: Glass (Clear)	AG - Glass (Ambar)	Leon	P-HDPE	36	VC - Volatile Core	30.	SC - Sol Core	0 Other (Specify)	ā
³ M = Matrix Code	A - Aqueous	. DW - Drinking Water	350.2	- Non-aque	NA - Non-aggeous Liquid	SE Saline Water	Š.	Sellos	🖟 C - Other (Specify)	N.
⁴ P = Preservative Code		B HNO		C. Hgo	0,1	D NaOH		*************************************	O Other (Specify)	160
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Chair, of Custody Record

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³ M = Matrix Code	A. Addedus						
⁴ P = Preservative Code	A - None	B-HNO	6-129	so.	D NaOH		
Reling	Relinquished By	Date		Received By		Dale Time	Method of Shipment
Special Instructions:	(X) Fill I	of word 121 X 121					emperance
CII Sangles taken with	Section to the	To a diameter					

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

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Date: 02-Apr-04

CLIENT.	n-Responsive lorida Army National	Hincheo Guard		La	b Order	: 0403154
Lab ID:	0403154-001		(Collection Date:	3/22/200	04 8:36:00 AM
Client Sample ID:	04-00/0A (blank)			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	.	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:02:00 AM
Lab ID:	0403154-002			Collection Date: Matrix:		04 8:40:00 AM
Client Sample ID: Analyses	04-01/0A	Result	Limit Qual		DF	Date Analyzed
METALS ANALYSIS	3	υ	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 2:09:00 AM
Lab ID: Client Sample ID:	0403154-003 04-02/0A		(Collection Date: Matrix:		04 8:41:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	5	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:17:00 AM
Lab ID: Client Sample ID:	0403154-004 04-03/0A			Collection Date: Matrix:		04 8:43:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:24:00 AM
Lab ID: Client Sample ID:	0403154-005 04-04/0A			Collection Date: Matrix:		04 8:45:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	S	U	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 2:31:00 AM
Lab ID:	0403154-006		•	Collection Date:		04 8:47:00 AM
Client Sample ID: Analyses	04-05/0A	Result	Limit Qual	Matrix: Units	DF	Date Analyzed
METALS ANALYSI:	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCI 3/30/2004 2:39:00 AM

Prairie Analy	tical Systems	Date: 02-Apr-04						
CLIENT:	on-Responsive Torida Army Nation	/ Hinchco al Guard		0403154				
Lab ID:	0403154-007			Collection Date:	3/22/200	04 8:48:00 AM		
Client Sample ID:	04-06/0A			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) μg/ft²	1 0	Analyst: MCL 3/30/2004 2:46:00 AM		
Lab ID: Client Sample ID:	0403154-008 04-07/0A		****	Collection Date: Matrix:		4 8:50:00 AM		
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSIS	S	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 2:54:00 AM		
Lab ID:	0403154-009			Collection Date:	3/22/200	4 8:52:00 AM		
Client Sample ID:	04-08/0A			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSI: Lead	S	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 3:23:00 AM		
Lab ID:	0403154-010		1	Collection Date:	3/22/200	4 8:54:00 AM		
Client Sample ID:	04-09/0A			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSIS Lead	S	29.4	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:30:00 AM		
Lab ID:	0403154-011			Collection Date:	3/22/200	4 8:56:00 AM		
Client Sample ID:	04-10/0A			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSIS	S	U	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 3:37:00 AM		
Lab ID:	0403154-012			Collection Date:	3/22/200	4 8:59:00 AM		
Client Sample ID:	04-11/0A			Matrix:	WIPE			
Analyses		Result	Limit Qual	Units	DF	Date Analyzed		
METALS ANALYSIS	S	306	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 3:45:00 AM		

CISCISI VI.	on-Responsive Torida Army Nation	Hinchco al Guard		L;	ab Orde	r: 0403154
Lab ID:	0403154-013			Collection Date:	3/22/20	004 9:05:00 AM
Client Sample ID:	04-12/0A			Matrix:	WIPE	
Analyses		Result	Limit Qua	1 Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	6.35	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:52:00 AM
Lab ID:	0403154-014			Collection Date:		004 9:08:00 AM
Client Sample ID:	04-13			Matrix:	WIPE	
Analyses		Result	Limit Qua	l Units	DF	Date Analyzed
METALS ANALYSIS Lead	5	467	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:59:00 AM
Lab ID:	0403154-015			Collection Date:	3/22/20	004 9:10:00 AM
Client Sample ID:	04-14			Matrix:	WIPE	
Analyses		Result	Limit Qua	l Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	928	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 4:07:00 AM
Lab ID: Client Sample ID:	0403154-016 04-15			Collection Date: Matrix:		004 9:11:00 AM
Analyses		Result	Limit Qua	Units	DF	Date Analyzed
METALS ANALYSIS	3	2210	N7082 75.0	(N7082) µg/ft²	100	Analyst: MCL 3/30/2004 7:13:00 AM
Lab ID:	0403154-017			Collection Date:	3/22/20	004 9:14:00 AM
Client Sample ID:	04-16			Matrix:	WIPE	
Analyses		Result	Limit Qua	Units	DF	Date Analyzed
METALS ANALYSIS Lead	6	1140	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 4:22:00 AM
Lab ID;	0403154-018			Collection Date:	3/22/20	004 9:15:00 AM
Client Sample ID:	04-17			Matrix:	WIPE	
Analyses		Result	Limit Qua	Units	DF	Date Analyzed
METALS ANALYSIS Lead		2170	N7082 75.0	(N7082) µg/ft²	100	Analyst: MCL 3/30/2004 7:20:00 AM

Date: 02-Apr-04

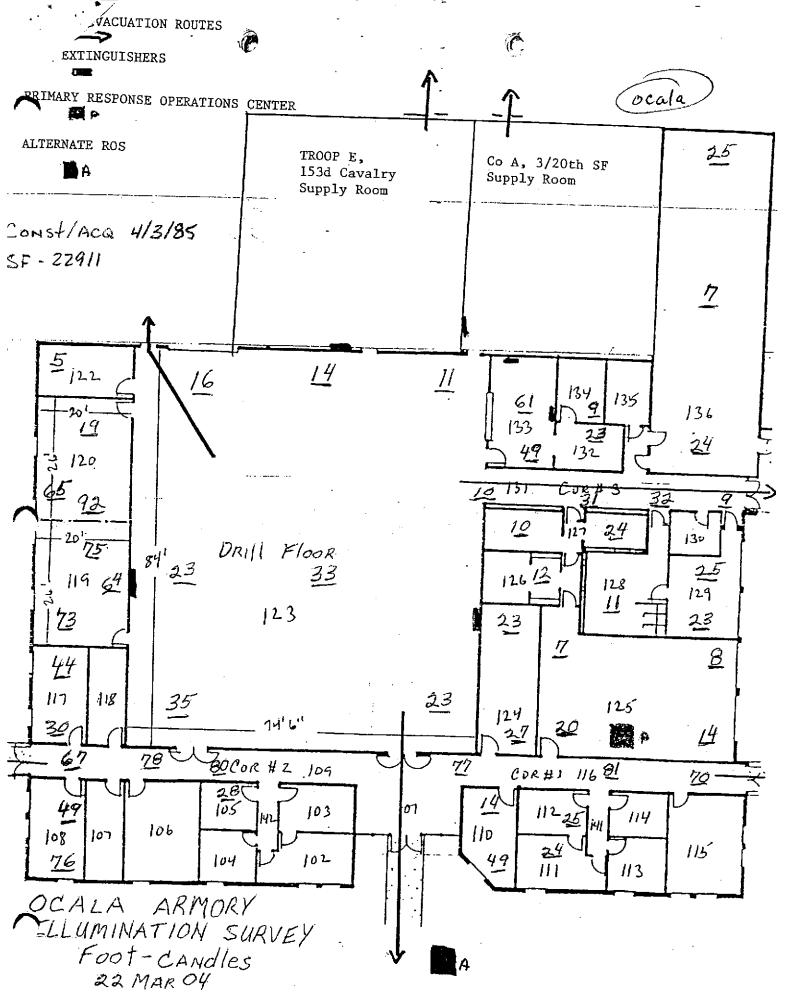
CLIENT:	on-Responsive Torida Army Natio	/ Hinchco nal Guard		I	Lab Order:	0403154
Lab ID:	0403154-019	<u> </u>		Collection Date	: 3/22/200	4 9:16:00 AM
Client Sample ID:	04-18			Matrix	: WIPE	
Analyses		Result	Limit Q	ual Units	DF	Date Analyzed
METALS ANALYSI Lead	S	108	N7082 5.00	! (N7082) µg/ft²	10	Analyst: MCL 3/30/2004 6:58:00 AM
Lab ID:	0403154-020			Collection Date	e: 3/22/200	4 9:20:00 AM
Client Sample ID:	04-19			Matrix	: WIPE	
Analyses		Result	Limit Q	ual Units	DF	Date Analyzed
METALS ANALYSI	s	31.7	N7082 7.50	! (N7082) μg/ft²	10	Analyst: MCL 3/30/2004 7:05:00 AM
Lab ID:	0403154-021			Collection Date	: 3/22/200	4 9:40:00 AM
Client Sample ID:	04-20			Matrix	: WIPE	
Analyses		Result	Limit Qu	ual Units	DF	Date Analyzed
METALS ANALYSIS	\$	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 7:50:00 AM
Lab ID:	0403154-022			Collection Date	: 3/22/200	4 9:42:00 AM
Client Sample ID:	04-21			Matrix	: WIPE	
Analyses	·	Result	Limit Qu	ial Units	DF	Date Analyzed
METALS ANALYSI	\$		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	3/22/200	4 9:43:00 AM
Client Sample ID:	04-22			Matrix	: WIPE	
Analyses		Result	Limit Qu	ial Units	DF	Date Analyzed
METALS ANALYSIS	S		N7082	(,		Analyst: MCL
Lead		21.5	5.00	μg/ft²	10	3/30/2004 8:26:00 AM

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



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms where you spend the most time in the building: Office Scilltail, Copy Rom of Classicoum	
Does any of your work activities produce dust or odor? YES NO Describe:	
Gender: Male Female	
Age: Under 25 25-34 35-44 45-54 55 and over	
Do you:	
Smoke Y	
Have fever/pollen allergies Y	
Have skin allergies/dermatitis Y	•
Have a cold/flu Y	
Have sinus problems	•
Have other allergies Wear contact lenses Operate video display terminals (computers) N Operate photocopiers 10% of the time	
Wear contact lenses N	
Operate video display terminals (computers) N	
- France bronsesbiers 10 to the time	
Use other office machines N	
Specify:	
Currently take any medications? Y	
OFF. CIL. I. I.	
Office Characteristics: / Number of persons sharing same room/work area	
Number of persons sharing same room/work area Number of windows in room/work area	
Number of persons sharing same room/work area Number of windows in room/work area	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Number of persons sharing same room/work area Y N	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person:	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent Excellent	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? 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	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? 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? How long have you worked:	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? 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	

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	0	F	N/A	SW	PW			
Aching joints	0	F	N/A	SW	PW			
Muscle twitching	0	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	0	F	N/A	SW	PW			•
Discolored skin	. 0	F	N/A	SW	PW			
Skin irritation	Ō	F	N/A	SW	PW			
Itching	0	F	N/A	SW	PW			
Heartburn	ŏ	F	N/A	S₩	PW			
Nausca	ō	F	NA	SW	PW			
Noticeable odors	ŏ	F	N/A	sw	PW			
Sinus congestion	ŏ	F	N/A	ŝw	PW			
Sneezing	ŏ	F	NA	sw	PW			
High stress levels	ŏ	F	N/A	SW	PW			
Chest tightness	ŏ	F	N/A	SW	PW			
Eye irritation	ŏ	F	N/A	SW	PW			
Fainting	ŏ.	F	N/A	SW	PW	•		
Hyperventilation	ŏ	F	N/A	SW	PW			
Problems with contacts	ŏ	F.	N/A	SW	PW			
Headache	ŏ	F.	N/A	SW	PW			
Fatigue/drowsiness	ŏ	F						
Temperature too hot	ŏ	.F	N/A/	SW	PW			
Temperature too cold	ŏ	F	NA	SW	PW			
Other (specify):	U	Г	₹	SW	PW			
Olici (specity).	• •		•					
When do you experience relief from TIME OF DAY: Morning A			DANC	NE THEFFE	0 16			
TIME OF DAY: Morning A	sternoon Ever	aung	DAYC	OF WEEK:	S M	T W	T F S	
MONTH: J F M A M	JJA	SON	I D SE	ASON:	Spring Su	mmer Fall	Winter	
Do symptoms disappear?	Y		N				÷	
When:			,					
								
						 	<u> </u>	
9. In your opinion, what is	the course of		ible indee	- aial	ites manhlana		1	
7. In your opinion, what is	the cause of	arry hoss	mic mideo	ı an yuai	Try brootests	2 MINTHE OTES	ominmig	· · .
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				•				
	, , , , , , , , , , , , , , , , , , , ,							
10. COMMENTS: Please	ake this onne	artonity t	o commen	t on any	factore way	consider to	ha im mastas	.+
	ancours oppi	manif (O COMMICE	ii Oii airy	iaciois you	consider to	oe miportan	и
concerning the quality of yo	m work envi	ronment			•			
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	•	· · · · · ·					4	
·			"					

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

RM # 112			
Does any of your work activities produce dust or odor? Describe:	YES	NO	
Gender: Male Female	· .		
Age: Under 25 25-34 (35-44) 45-54 55 and over			
Do you:			
Smoke Y.	$\langle \overline{\mathbf{N}} \rangle$		
Have fever/pollen allergies Y	(N)		•
Have skin allergies/dermatitis Y	\mathbb{N}		i.
Have a cold/flu Y			
Have sinus problems Y			
Have other allergies Y			
Wear contact lenses Operate video display terminals (computers)	(N)		
Operate visco	N		
Operate photocopiers 10% of the time	(N)		
Use other office machines (Y)	N		
· · · · · · · · · · · · · · · · · · ·			
Currently take any medications?	Ñ		
Currently take any medications? Y Reason:	Ñ		
Reason: Office Characteristics:	Ñ		
Reason: Office Characteristics: Number of persons sharing same room/work a	Ñ N		
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area			
Reason: Office Characteristics: Number of persons sharing same room/work a	Ñ N rea N		
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Y			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Y Rate adequacy of work space per person:			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Y Rate adequacy of work space per person:			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature:		•	
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature:			
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent		•	
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? 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 Rate room temperature: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y	N N	•	
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent 1 2 3 5 Are there smokers in your area? Y How long have you worked:	N N	•	
Reason: Office Characteristics: Number of persons sharing same room/work a Number of windows in room/work area Do windows open? 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 Rate room temperature: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y	N N	•	

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".)

SIMI TOM:									
Difficulty in concentrating	o	F							
Aching joints	ő	F	XXX	SW	PW	•		14	
Muscle twitching	. 0	F	XXX	SW	PW				
Back pain	ŏ	F	× × × × × × × × × × × × × × × × × × ×	SW	PW				
Hearing problems	ŏ	F		SW	PW				
Dizziness	ŏ	F		SW	PW				
Dry, flaking skin	. 0	F F	W.	SW	PW				
Discolored skin	ŏ	r F	A SUPPLY	SW	PW				
Skin irritation	ŏ	r F		SW	PW				
Itching	·ŏ		A A	SW	PW				
Heartburn	ŏ	F	, A M A	SW	\mathbf{PW}				
Nausea	ŏ	F		SW	PW				
Noticeable odors	Ö	F	W.	SW	PW				
Sinus congestion	ŏ	F	QWAY .	SW	PW		•		
Succeing	ŏ	F		SW	PW			*	
High stress levels	ő	F	NAMA C	SW	PW				
Chest tightness	-	F	A A	SW	PW				
Eye irritation	0	F	XXXX	SW	PW				
Fainting	ŏ	F F		SW	₽₩		-		
Hyperventilation	0			ŚW	PW				
Problems with contacts	ő	F	X-4X	SW	PW				
Headache	ŏ	F	NA A	SW	₽W				
Fatigue/drowsiness	ŏ	F	λ απ α√	SW	PW				
Temperature too hot	ő	F	NAME OF THE PERSON OF THE PERS	SW	PW				
Temperature too cold	ŏ	F		SW	PW				
Other (specify):	0	r	NA	SW	PW				
Have you seen a doctor for any or a When do you experience relief from			Y	(N)	N/A				
W	flemoon Ever		DAY OF	Week.	S M			<u> 14</u> .	
MONTH: J F M A M	JJAS		_			T	W T	F	5
		ОИ	D SEAS	SON: S	Spring S	Summer	Fall	Winter	
Do symptoms disappear? When:	Y		N		ė				٠.
				 -		-			
In your opinion what is a	L C					 ,,,			·
DIPNY REALIST	ne cause of a	ny possii	ole indoor a	ir quali	ty problen	ns withi	n this b	uilding?	
DIDN'T REALIT	ZG WE	HA	2 AVR	QUA	HUTM	280	340	wc.	
····							~ ~ ~ .		
				· · · · · · · · · · · · · · · · · · ·					
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0. COMMENTS: Pleasesta	ke this anno			,					
10. COMMENTS: Please ta	we are obbot	rumty to	comment o	on any fa	actors you	consid	er to be	importa	int
oncerning the quality of you	r work envir	onment:							
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								<u>. </u>	
			<u></u>						
									
									
		· - ·		 -					

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Name/Location of Facility: Florida Army NATISAL G. 900-1 SW 30th STRUT OCAGE FC. Area or rooms where you spend the most time in the bu		
or ca or rooms where you spend the most time in the hir	344 /Y-331 / ildino:	
106-107-108-117-118, Supply down		
Does any of your work activities produce dust or odor? Describe:	YES NO	
Dust Coming out of Air D	uds.	
Gender: Male Female		
Age: Under 25 (25-34) 35-44 45-54 55 and over		
Do you;		
Smoke Y	\bigcirc	
Have fever/pollen allergies Y	₩	
Have skin allergies/dermatitis Y	(N)	
Have a cold/flu Y	Ō	
Have sinus problems $\hat{\mathbf{Y}}$	N	
Have other allergies y	66666	
Wear contact lenses Y	(B)	•
Operate video display terminals (computers)	N	•
Operate photocopiers 10% of the time	N	
Use other office machines	N N	•
Specify:		
	(N)	
Office Characteristics:	(N)	·
Office Characteristics: Number of persons sharing same room/work as	(N) rea	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area	•	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area	n rea N	
Office Characteristics: Number of persons sharing same room/work at a Number of windows in room/work area Do windows open?	•	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area Do windows open? Rate adequacy of work space per person:	•	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent	•	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area Do windows open? Rate adequacy of work space per person:	•	
Office Characteristics: Number of persons sharing same room/work as Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5	•	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average 1 2 3 4 5 Rate room temperature:	•	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent	•	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average 1 2 3 4 5 Rate room temperature:	•	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent	•	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? 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?	N	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? 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? How long have you worked:	N	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Number of windows in room/work area Do windows open? 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? How long have you worked: Zy/ In this room/area	N	
Office Characteristics: Number of persons sharing same room/work at Number of windows in room/work area Do windows open? 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? How long have you worked:	N	

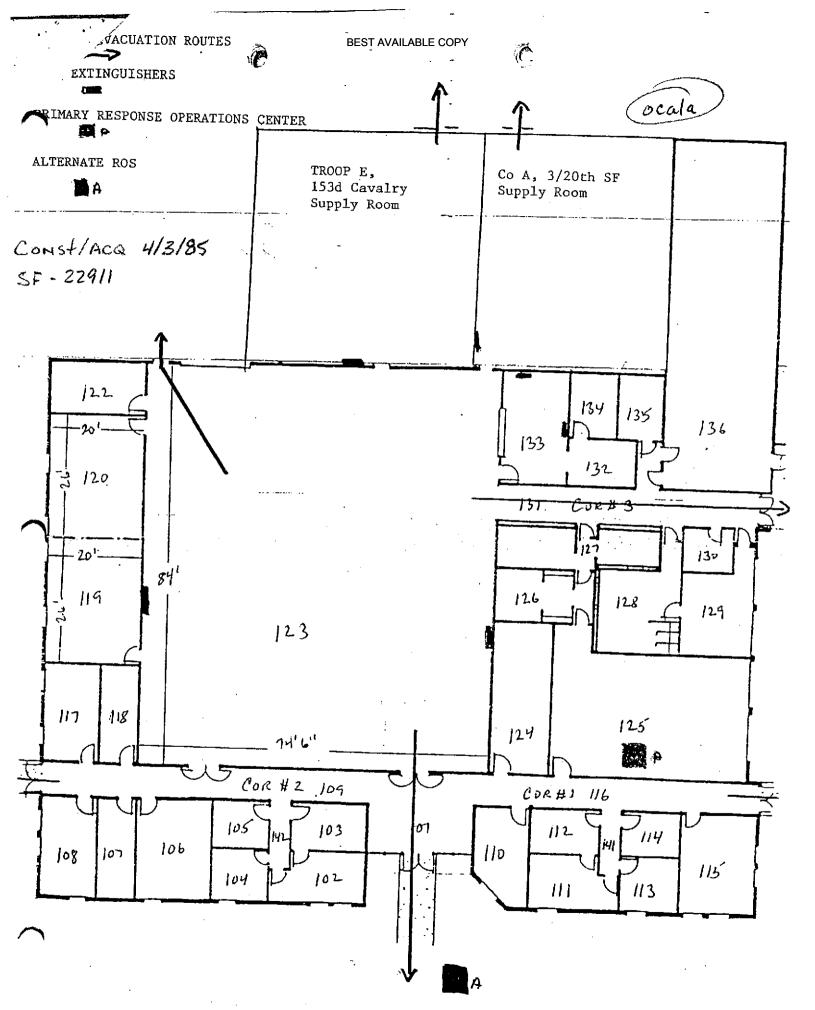
8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work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

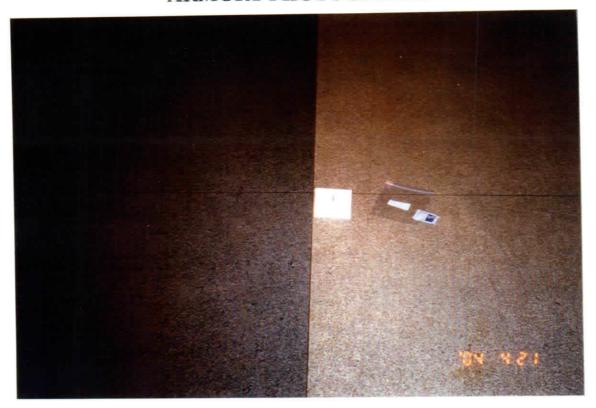
SYMPTOM:								
Difficulty in concentrating	0	F.	(TX	SW	PW ·			
ching joints	ő	F						
fuscle twitching				SW	PW			
ack pain	0	F	Service Control	SW	PW			
	0	F	X	SW	PW			
learing problems	o	F	NA)	SW	. PW			
izziness	0	F	WAR	SW	PW			
ry, flaking skin	O	F	(VA)	SW	PW			
Discolored skin	, O	F	WAD	SW	PW			
kin irritation	0	F	(NA)	SW	PW			
ching	- 0	F	N/A	SW	PW			
leartburn	0	F	WAD	SW	PW .			
iausea ´	Ō	·F	ATAS	SW	PW			
loticeable odors	ŏ	F	· 💥	sw	PW			
inus congestion	zŏ,	F	N/A	SW	PW			
neezing	88	F	N/A					
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ye irritation	o .	F	MAY.	SW	₽₩			
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lyperventilation	0	F .	NA)	SW	PW			
roblems with contacts	0	F.	NA	SW	PW			
leadache	0	F	NA)	SW	PW			
atigue/drowsiness	Ò	F	(N/A)	SW	PW			
emperature too hot	Ø	F	N/A	SW	PW			
emperature too cold	(নির্ব	F	N/A	SW	PW			
Other (specify):		•	1411	511	7 44			
Vhen do you experience relief from	n these symptom	s?						
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MONTH: J F M A M	J J A S	ои	D SEA	ASON;	Spring Sum	mer Fall	Winter	
Oo symptoms disappear?	Y		N					
Vhen:								
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. In your opinion, what is	the cause of a	my possi	ble indoor	air qual	ity problems	within this b	uilding?	
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10. COMMENTS: Please t	ake this oppo	rtunity to	o comment	on any	factors you co	onsider to be	important	
concerning the quality of yo	ur work envir	onment:						
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THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

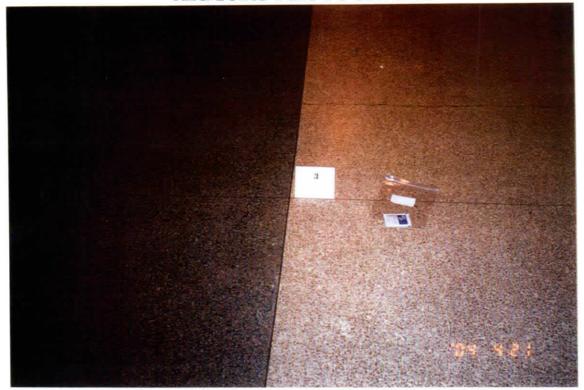




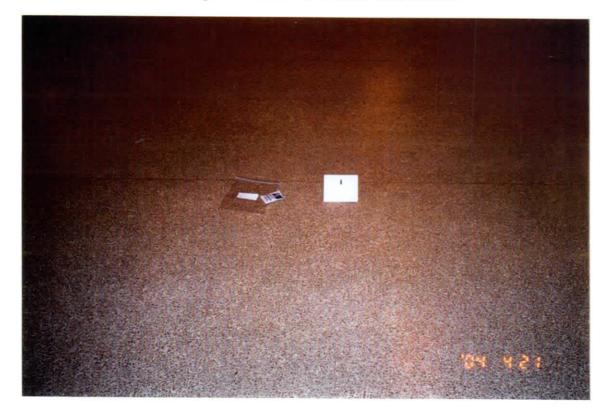
Sample #1 Southeast Corner of Drill Floor



Sample #2 East Side of Drill Floor



Sample #3 Northeast Corner of Drill Floor



Sample # 4 Center of Drill Floor



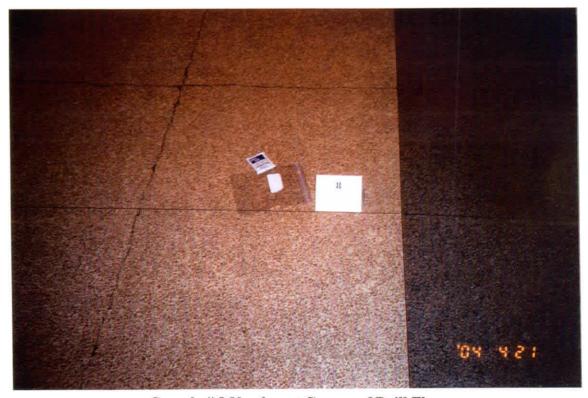
Sample #5 South Center of Drill Floor



Sample # 6 North Center of Drill Floor



Sample #7 West Side of Drill Floor



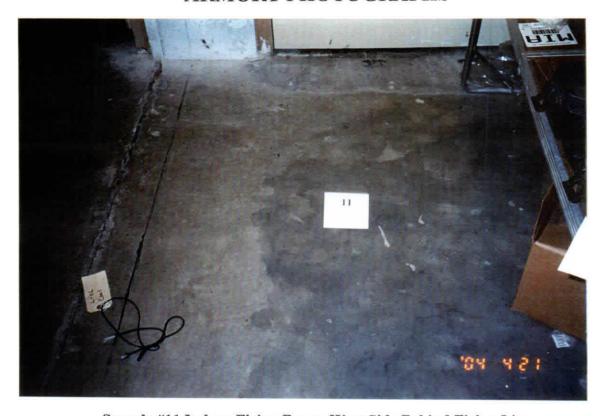
Sample #8 Northwest Corner of Drill Floor



Sample #9 Kitchen Top of Cooler



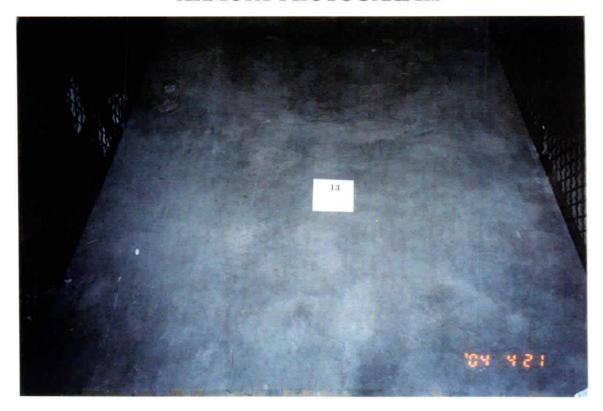
Sample # 10 Kitchen Top of Ice Maker



Sample #11 Indoor Firing Range West Side Behind Firing Line



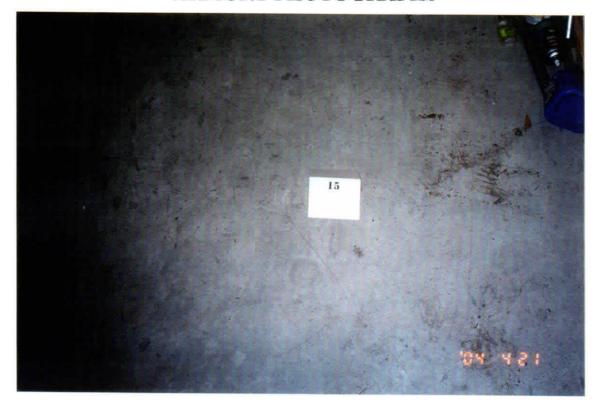
Sample # 12 Indoor Firing Range East Side Behind Firing Line



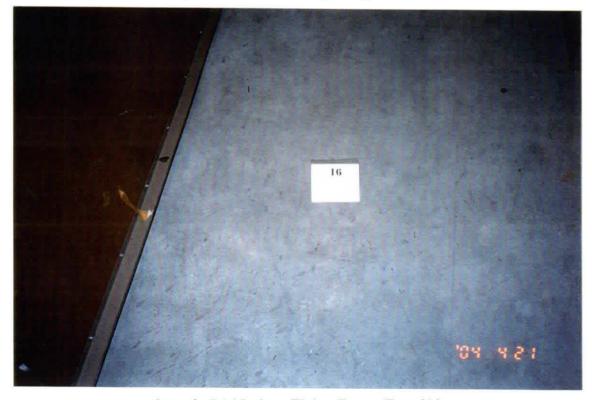
Sample #13 Indoor Firing Range North End Middle Floor Area



Sample # 14 Indoor Firing Range South End Middle Floor Area



Sample #15 Indoor Firing Range West Side



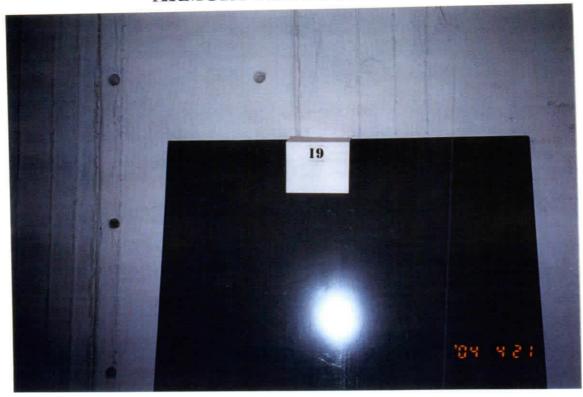
Sample # 16 Indoor Firing Range East Side



Sample #17 Indoor Firing Range East Side in Front of Bullet Trap



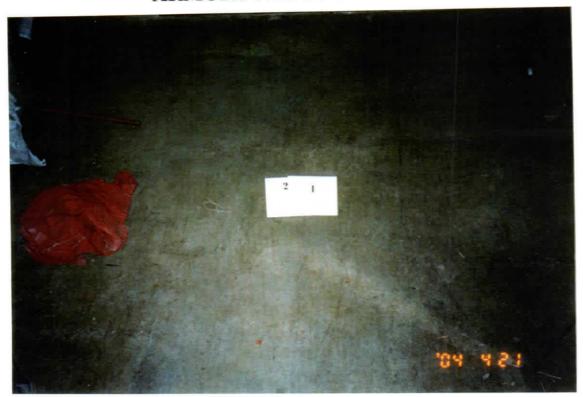
Sample # 18 Indoor Firing Range West Side in Front of Bullet Trap



Sample #19 Indoor Firing Range South (Back) Wall Behind Bullet Backstop



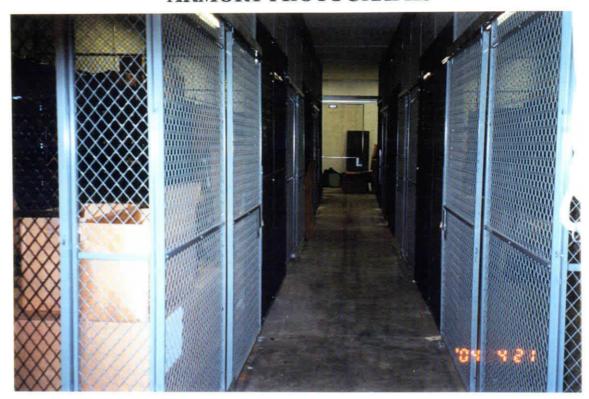
Sample # 20 Middle of Floor in Arms Vault



Sample #21 Floor Just Outside of Arms Vault



Sample # 22 Floor Inside Arms Vault by Door



Sample #23 Indoor Firing Range Converted to Supply Room



Sample # 24 Ocala Units Occupying Armory

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-Readiness NCO, 900 SW 20th Street, Ocala, Florida 34474.

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

- 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.
- 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.



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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Site Description		
Scope of Work Methodology		
Findings and Discussion		
Lead Wipe Samples	Page	3
Asbestos Suspect Building Materials		
Noise Survey	Page	4
Illumination Survey	Page	4
Heating Ventilation and Air Conditioning (
Ergonomics	Page	5
Personal Protection Equipment		
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 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

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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.

Mathodology. 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 reading 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	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
04-22OA	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.

Page 3

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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.

<u>Illumination Survey</u> Lighting levels throughout the Ocala armory ranged from 5 foot-candles to 92 foot-candles. Specific readings were as follows:

AREA	READING	IN	FOOT-CANDLES
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.

Page 4

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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

- 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.
- 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

hai, Jr Custody Record

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



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⁴ P = Preservative Code	A None	B. HNO.	C-4,50;	D-NaOK	(E-HO)		
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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Date: 02-Apr-04

Prairie Analytical Systems, Inc.

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Lab ID:	0403154-001			Collection Date:	3/22/20	004 8:36:00 AM
Client Sample ID:	04-00/0A (blank)			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	S	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 2:02:00 AM
Lab ID:	0403154-002			Collection Date:	3/22/20	04 8:40:00 AM
Client Sample ID:	04-01/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:09:00 AM
Lab ID:	0403154-003		(Collection Date:	3/22/20	04 8:41:00 AM
Client Sample ID:	04-02/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:17:00 AM
Lab ID:	0403154-004			Collection Date:	3/22/20	04 8:43:00 AM
Client Sample ID:	04-03/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:24:00 AM
Lab ID:	0403154-005		(Collection Date:	3/22/20	04 8:45:00 AM
Client Sample ID:	04-04/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI: Lead	s	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MC L 3/30/2004 2:31:00 AM
Lab ID:	0403154-006		(Collection Date:	3/22/20	04 8:47:00 AM
Client Sample ID:	04-05/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	s	Ų	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:39:00 AM

Prairie Analytical Systems, Inc.

Prairie Analy	tical Systems,	Inc.		Date	: 02-Apr-	04
	on-Responsive Iorida Army Nation:	Hincheo al Guard		La	ıb Order:	0403154
Lab ID: Client Sample ID:	0403154-007 04-06/0A			Collection Date: Matrix:		4 8:48:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	s	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 2:46:00 AM
Lab ID:	0403154-008			Collection Date:	3/22/200	4 8:50: 00 AM
Client Sample ID:	04-07/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 2:54:00 AM
Lab ID:	0403154-009	<u></u>	<u>-</u>	Collection Date:	3/22/200	4 8:52:00 AM
Client Sample ID:	04-08/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 3:23:00 AM
Lab ID:	0403154-010			Collection Date:	3/22/200	4 8:54:00 AM
Client Sample ID:	04-09/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI:	s	29.4	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:30:00 AM
Lab ID:	0403154-011			Collection Date:	3/22/200	4 8:56:00 AM
Client Sample ID:	04-10/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS!	s	U	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:37:00 AM
Lab ID:	0403154-012			Collection Date:	3/22/200	4 8:59:00 AM
Client Sample ID:	04-11/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	306	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:45:00 AM

Date: 02-Apr-04

Prairie Analytical Systems, Inc.

Client Sample ID: 04-17

METALS ANALYSIS

Analyses

Lead

	ticai Systems	, IIIC.		24.0	. 02-Apr-	• •
CLIENT:	on-Responsive Iorida Army Nation	/ Hinchco al Guard		La	b Order:	0403154
Lab ID:	0403154-013			Collection Date:	3/22/200	4 9:05:00 AM
Client Sample ID:	04-12/0A			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	6.35	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:52:00 AM
Lab ID:	0403154-014			Collection Date:	3/22/200	4 9:08:00 AM
Client Sample ID:	04-13			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	5	467	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 3:59:00 AM
Lab ID:	0403154-015			Collection Date:	3/22/200	4 9:10:00 AM
Client Sample ID:	04-14			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	928	N7082 7.50	(N7082) μg/ft²	10	Analyst: MCL 3/30/2004 4:07:00 AM
Lab ID:	0403154-016			Collection Date:	3/22/200	4 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	4 9:14:00 AM
Client Sample ID:	04-16			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	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	4 9:15:00 AM

Matrix: WIPE

(N7082)

μg/ft²

DF

100

Limit Qual Units

N7082

75.0

Result

2170

Date Analyzed

3/30/2004 7:20:00 AM

Analyst: MCL

Prairie Analytical Systems, Inc.

Date:	02-Apr-04
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CLIENT:	on-Responsive Iorida Army Nation	Hincheo al Guard		La	b Order:	0403154
Lab ID:	0403154-019	<u> </u>		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	3	108	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 6:58:00 AM
Lab ID:	0403154-020		(Collection Date:	3/22/2004	19:20:00 AM
Client Sample ID:	04-19			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS Lead	3	31.7	N7082 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	3	U	N7082 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	S	28.5	N7082 5.00	(N7082) μg/ft²	10	Analyst: MC L 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	3	21.5	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 3/30/2004 8:26:00 AM

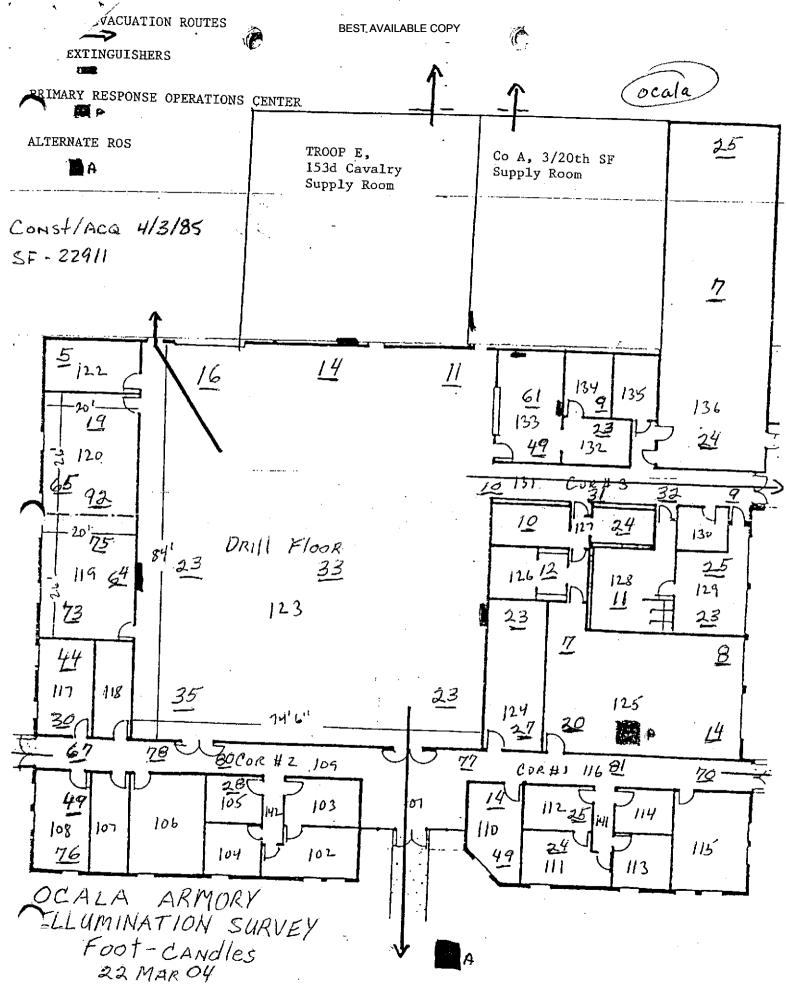
Prairie Analytical Systems, Inc.

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).

APPENDIX D

ILLUMINATION SURVEY DIAGRAM



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

2.	Name/Location of Facility: Ocale Associational Guard Association of Facility: Ocale Associati	
	Office DrillHall, Copy Rom & Classroom	·
.	Does any of your work activities produce dust or odor? YES NO	
4. 5.	Gender: Male Female Age: Under 25 25-34 35-44 45-54 55 and over Do you:	
	Smoke Y N	
	Have fever/pollen allergies Y	
	Have skin allergies/dermatitis	
	Have a cold/flu Y	
	Have sinus problems	
	Hove other alleries	
	Have other allergies Wear contact lenses N	
	Operate video display terminals (computers) / Y/ N	
	Use other office machines	
	Specify:	
	Currently take any medications? Y	
б.	Office Characteristics:	
	Number of persons sharing same room/work area	
	Number of windows in room/work area	
	Do windows open? $Y N (\mu/A)$	
	Potradorna a stant	
	Rate adequacy of work space per person:	•
	Poor Average Excellent 1 2 (3) 4 5	
	1 2 3 4 5	
	Rate room temperature:	
	Excenent	
	1 2 3 4 5	
	Are there smokers in your area?	
7.	How long have you worked:	
	Calls In this room/area	•
	Bus 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".)

YMPTOM:						\sim							
ifficulty in concentrating			0	· F		NA	SW	PW					
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uscle twitching			ŏ	F		NA	SW	PW					
iscie twitching ick pain			Ö	F		NA							
			_			11	SW	PW					
aring problems			0	F		N/A	SW	, PW					
zziness			O	F		N/A	SW .	PW					
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THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY,

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

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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".)

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TIME OF DAY: Mo MONTH: J F M Do symptoms disappear When: 9. In your opinion	A ?	Ai M	flerno	J	A Y	s o	ossil	D S	EASON:	Spring	Su	mmer	Fa	uis b	Wint	er
TIME OF DAY: Mo MONTH: J F M Do symptoms disappear When: 9. In your opinion	A?	M M t is i	the c	aus	A Y se of	any p	ossil	D S	EASON: or air qual ve. マル	Spring Lity pro	Su blem	s with	Fa hin th	uis b	Wint wildir	ng?
TIME OF DAY: Mc MONTH: J F M Do symptoms disappear When: 9. In your opinion DIDNT 10. COMMENTS:	A?	M M sert	the c	aus	e of	any p	ossil	D S	EASON: or air qual ve. マル	Spring Lity pro	Su blem	s with	Fa hin th	uis b	Wint wildir	ng?
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TIME OF DAY: Mc MONTH: J F M Do symptoms disappear When: 9. In your opinion DIDNT 10. COMMENTS:	A?	M M sert	the c	aus	A Y ee of wo	any portuni	ossil	D S	EASON: or air qual ve マル nt on any	Spring Lity pro	blem Y	s with	Fa hin th	uis b	Wint wildir	ng?
TIME OF DAY: Mc MONTH: J F M Do symptoms disappear When: 9. In your opinion DIDNT 10. COMMENTS:	A?	M M sert	the c	aus	A Y ee of wo	any p	ossil	D S	EASON: or air qual ve マル nt on any	Spring Lity pro	blem Y	s with	Fa hin th	uis b	Wint wildir	ng?
TIME OF DAY: Mc MONTH: J F M Do symptoms disappear When: 9. In your opinion DIDNT 10. COMMENTS:	A?	M M sert	the c	aus	A Y ee of wo	any portuni	ossil	D S	EASON: or air qual ve マル nt on any	Spring Lity pro	blem Y	s with	Fa hin th	uis b	Wint wildir	ng?

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

1. Name/Location of Facility: Florida Army NATIONAL Copyed Armson	
	7
The two was trucked the street and the truck of the ferring.	
# 106-107-108-117-118, Supply from	
	
3. Does any of your work activities produce dust or odor? YES NO	1.
Describe:	
Dust Consing out OF Air Ducts.	
- I ST IN COURS	
1 C-4-100	
Gender: Male Female	
Age: Under 25 25-34 35-44 45-54 55 and over	
Smoke Y N	
Have fever/pollen allergies	
Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses	
Have a cold/flu Y	;
Have sinus problems Y N	
Have other allergies Y	
Wear contact lenses Y	
Operate video display terminals (computers)	÷
Operate photocopiers 10% of the time V N	•
Use other office machines N	
Specify:	
	
Currently take any medications?	
Reason:	
. Office Characteristics:	
Number of persons sharing same room/work area	
Number of windows in room/work area	
Do windows open?	
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?	
R	
How long have you worked:	•
Z4/ In this room/area	
Zyr In this building	

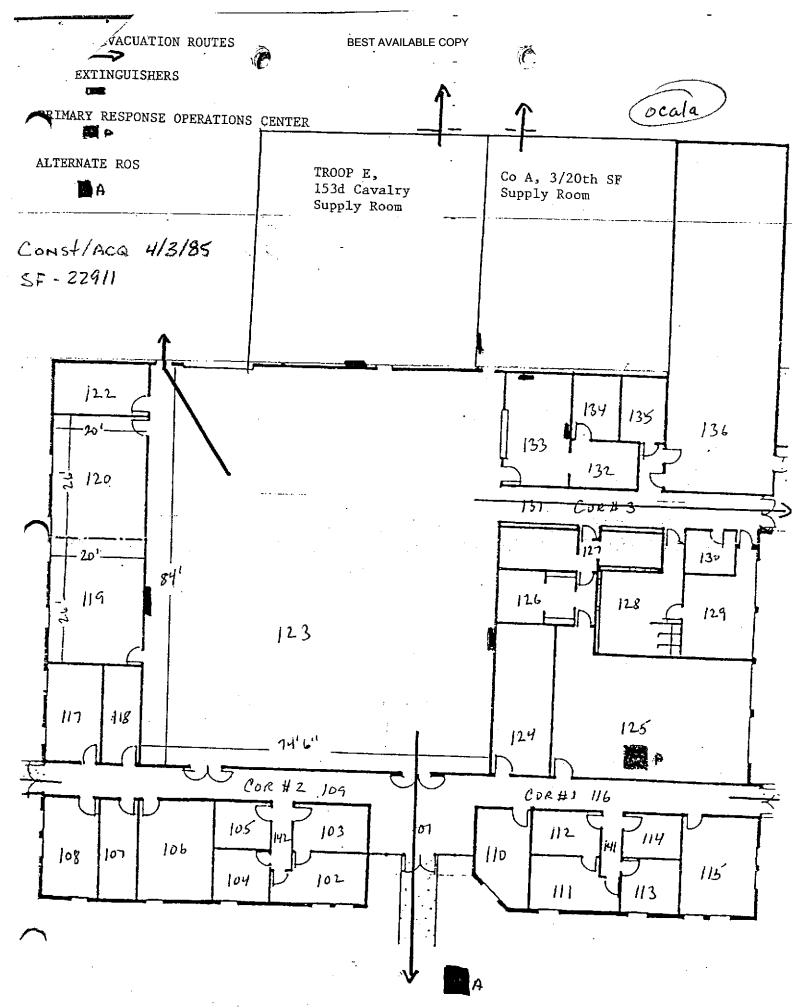
8. Symptoms: Select symptoms, if any, you have experienced in this building. (Use "O" for Occasionally and "F" for frequently. If symptom is not related to building use N/A. If symptom appeared after you started work in the building/work area, use "SW". If a prior symptom worsened after beginning work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

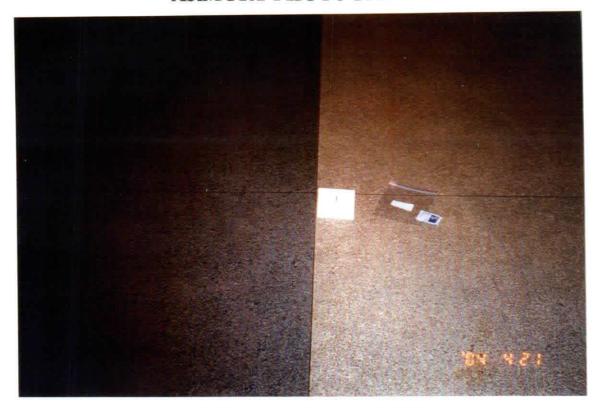
SYMPTOM:			٠						
Difficulty in concentrating Aching joints Muscle twitching Back pain Hearing problems	0 0 0 0	F F F F		SW SW SW SW	PW PW PW PW PW	·	• .		
Dizziness Dry, flaking skin Discolored skin Skin irritation Itching Heartburn	0 0 0 0 0	F F F F		SW SW SW SW SW	PW PW PW PW PW				
Nausea Noticeable odors Sinus congestion Succeing High stress levels	· • • • • • • • • • • • • • • • • • • •	F F F F		SW SW SW SW	PW PW PW PW PW				
Chest tightness Eye irritation Fainting Hyperventilation Problems with contacts	0 0 0 0	F F F F		SW SW SW SW	PW PW PW PW PW				
Headache Fatigue/drowsiness Temperature too hot Temperature too cold Other (specify):		F F F	N/A N/A	SW SW SW SW	PW PW PW PW				
Have you seen a doctor for any			Y	N	N/A			· · · · · · · · · · · · · · · · · · ·	
When do you experience relief: TIME OF DAY: Morning	Afternoon Even		DAVO	WEEK:	s M	T W	т	F S	,
MONTH: J F M A	M J J A S	Ū		SON:			rall	Winter	
Do symptoms disappear? When:	Y	-	N						
9. In your opinion, what	t is the cause of a	ny possi	ble indoor	air qua	lity proble	ns within	this b	ailding?	
10 COLOGENTS, Dis-					- C				
10. COMMENTS: Plea concerning the quality of				on any	tactors yo	u conside	e to de	шрога	iiii
DUST COMING ON	TOF DIF	vents	PWF	Build	υρ	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

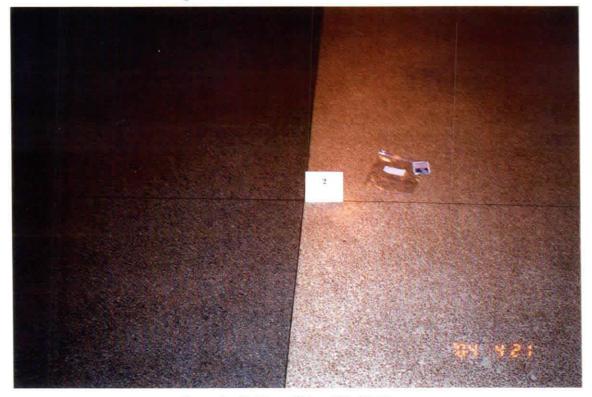
APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

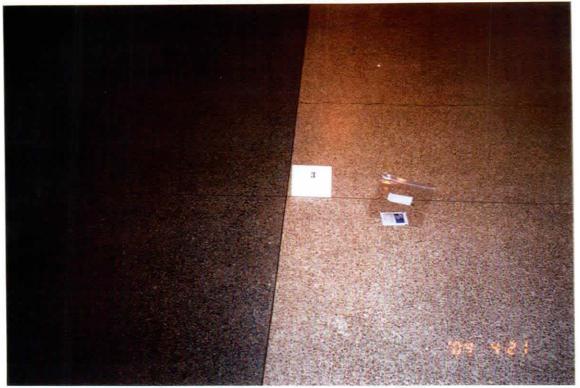




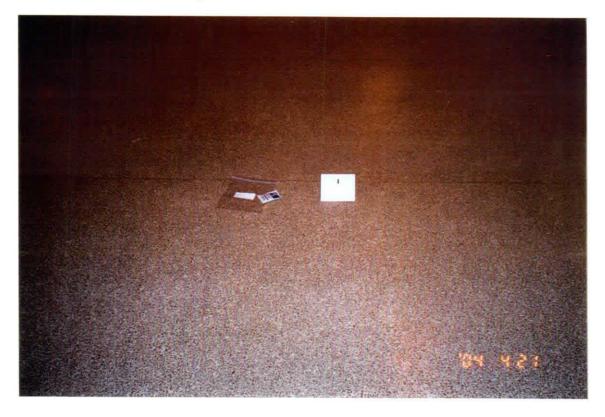
Sample #1 Southeast Corner of Drill Floor



Sample #2 East Side of Drill Floor



Sample #3 Northeast Corner of Drill Floor



Sample # 4 Center of Drill Floor



Sample #5 South Center of Drill Floor



Sample # 6 North Center of Drill Floor



Sample #7 West Side of Drill Floor



Sample #8 Northwest Corner of Drill Floor



Sample #9 Kitchen Top of Cooler



Sample # 10 Kitchen Top of Ice Maker



Sample #11 Indoor Firing Range West Side Behind Firing Line



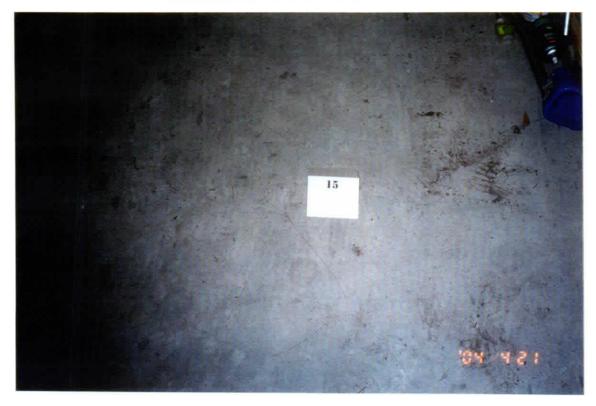
Sample # 12 Indoor Firing Range East Side Behind Firing Line



Sample #13 Indoor Firing Range North End Middle Floor Area



Sample # 14 Indoor Firing Range South End Middle Floor Area



Sample #15 Indoor Firing Range West Side



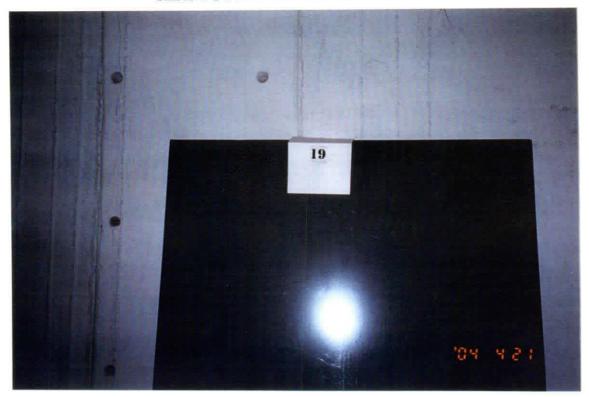
Sample # 16 Indoor Firing Range East Side



Sample #17 Indoor Firing Range East Side in Front of Bullet Trap



Sample # 18 Indoor Firing Range West Side in Front of Bullet Trap



Sample #19 Indoor Firing Range South (Back) Wall Behind Bullet Backstop



Sample # 20 Middle of Floor in Arms Vault



Sample #21 Floor Just Outside of Arms Vault



Sample # 22 Floor Inside Arms Vault by Door



Sample #23 Indoor Firing Range Converted to Supply Room



Sample # 24 Ocala Units Occupying Armory

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: YEŞ 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?

NO YES

STANDING WATER OR LEAKAGE IN THE ARMORY?

YES

KNOWN MOLD/MILDEW IN THE ARMORY?

YES NO

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 Readiness NCO, 4004 Airport Road, Plant City, Florida 33567.

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

- 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.
- 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.



Regional Industrial Hygienist

CF: Office of the Adjutant General, ATTN: LTC 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

Bv Non-Responsive dba HINCHCO

9 April 2004

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Scope of Work		
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Findings and Discussion		
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Heating Ventilation and Air Conditioning	(HVAC).Page	5
Ergonomics		5
Personal Protection Equipment	Page	5
Recommendations		

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- 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.

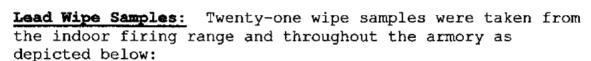
Page 2

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 reading 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-Non-PH# 813-757-9045.



SAMPLE #	SAMPLE LOCATION	MICROGRAMS OF LEAD PER SQUARE FOOT
		I Div Desired 1991
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.

Page 3

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.

<u>Illumination Survey</u> Lighting levels throughout the Plant City armory ranged from 4 foot-candles to 84 foot-candles. Specific readings were as follows:

AREA	READING IN FOOT-CANDLES
Drill Floor	5 to 10
Indoor Firing Range (Medical Clinic	c) 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.
- 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.

Page 5

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

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A TA CANADA Size Type Min Code The Container Manager The Containe	The sampler (3) Plane (45. 2) Contains: W. P. P. G. As involpe To P. Analysis and B. ANK (Lead B. ANK (Lead L. EAD 125 ml. 125 ml	Special Instructions:	Relinguistad by	⁴ P = Preservative Code:	³ M = Matrix Code A - Aquisous		n e c	04-11 PC	04-10 PC	04-09 PC	04-08 PG	04-02 PC	04-06 PC	0905 PC	04-14PC	040300				Sample Description Sam (16 Characters Only)	Contact Person	Phone / Facsimile No	City, State Zip Code: SOR/JUTE	NO N
Code P - HB	Sampler(s) / Phone No. Turnsround Time P.Q. # or involces to straigs Code BLANK (Lc. LEAD LEAD Some 500 P-HBPE VC-Vos VG-H ₂ SD P-N Received By			A-None B-MID)		5	40 mL 725 mL		0904	0906	0848	1 0880	0830	0826	0815	0810	0807	0805	1 0800	Jima Size		Į,		ı
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24-19 PC 24-18 PC

24-20PC

04-21 PC

1034

1030

1012 1010 04-14 pc

0916 0913

0920

54-16PC 24-15 PC

34-19 PC

0940 0930 29-13 PC D4-18 PK

(10 Characters Only)

34 MURCH

0909

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

	Systems, incorporate
Client	HINCHCO CLIENT PIONET FURDA ARMY Notional GUARD
Address 2702 Kith Hawk of	Projection Plant City ARMORY
City, State Zip Code Spannet Field #4 64707	Sampler(s) (Phone No. 27777761
Phone / Facsimille No 9/2-1777-2017	umaround Time Standard-K Rush [] Date Required:
Contact Person	PIO # OF INVOICE TO HIME HO
Sample Description Sampling . Seminative	Analysis and for Nethod Requested
(10 Characters Only) Pale (10 Characters Only)	Trea (No. 1) Sode Comments

Special Instructions:

P = Preservative Code

² Type of Container 'Size of Container

G. Glass (Clear)

PARE

Method of Shipment

Q - Other (Specify) O - Other (Specify) O - Other (Specify

O Other (Specify)

M = Matrix Code

Copies: White - Client Yellow - PAS, Inc. Pin ampler

APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

CLIENI:	on-Responsive Plant City Armory	Hinchco			La	b Order:	0403183
Lab ID:	0403183-001			-	Collection Date:	3/24/200	4 8:00:00 AM
Client Sample ID:	04-00PC (blank)				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	s	U	N7 6	082	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 7:39:00 AM
Lab ID:	0403183-002			•	Collection Date:	3/24/200	4 8:05:00 AM
Client Sample ID:	04-01PC				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	15.6	N7 5.00	082	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 7:47:00 AM
Lab ID:	0403183-003				Collection Date:	3/24/200	4 8:07:00 AM
Client Sample ID:	04-02PC				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	U	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 7:55:00 AM
Lab ID:	0403183-004				Collection Date:	3/24/200	14 8:10:00 AM
Client Sample ID:	04-03PC				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS Lead	IS	υ	N7 5.00	082	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 8:02:00 AM
Lab ID:	0403183-005				Collection Date:	3/24/200	4 8:15:00 AM
Client Sample ID:	04-04PC				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	U	N7 5.00	082	(N7082) µg/fi²	10	Analyst: MCL 4/3/2004 8:10:00 AM
Lab ID:	0403183-006				Collection Date:	3/24/200	4 8:26:00 AM
Client Sample ID:	04-05PC				Matrix:	WIPE	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	ıs	U	N7 5.00	082	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 8:17:00 AM

Prairie Analytical Systems, Inc.

Date: 05-Apr-04

CPIENT:	Non-Responsive Plant City Armory	Hinchco			La	b Order:	0403183
Lab ID: Client Sample ID:	0403183-007 04-06PC			(Collection Date: Matrix:		4 8:30:00 AM
Analyses		Result	Limit (Qual	Units	DF	Date Analyzed
METALS ANALYS	iis	U	N70 5.00	82	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 8:24:00 AM
Lab ID: Client Sample ID	0403183-008 : 04-07PC			(Collection Date: Matrix:		4 8:40:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	sis	. u	N70 5.00	82	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 8:32:00 AM
Lab ID: Client Sample ID	0403183-009 : 04-08PC			(Collection Date: Matrix:		4 8:48:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	sis	82.1	N70 5.00	82	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 8:39:00 AM
Lab ID: Client Sample ID	0403183-010 : 04-09PC			+	Collection Date: Matrix:		4 9:06:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	BIS	U	N70 5.00	182	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 9:09:00 AM
Lab ID: Client Sample ID	0403183-011 : 04-10PC				Collection Date: Matrix:		4 9:04:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	sis	U	N70 5.00	182	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 9:16:00 AM
Lab ID: Client Sample ID	0403183-012 : 04-11PC			1	Collection Date: Matrix:		94 9:07:00 AM
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYS	BIS	U	N70 5.00	82	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 9:24:00 AM

Date: 05-Apr-04

Prairie Analytical Systems, Inc.

CLIENT: Project:	Non-Responsive Plant City Armory	Hinchco	-	La	b Order	: 0403183
Lab ID:	0403183-013		(Collection Date:	3/24/20	04 9:09:00 AM
Client Sample II): 04-12PC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALY Lead	rsis	U	N7082 5.00	(N7082) μg/ft²	10	Analyst: MCL 4/3/2004 9:31:00 AM
Lab ID:	0403183-014			Collection Date:	3/24/20	04 9:13:00 AM
Client Sample D	D: 04-13PC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANAL)	rsis	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 9:39:00 AM
Lab ID:	0403183-015			Collection Date:	3/24/20	004 9:16:00 AM
Client Sample I	D: 04-14PC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANAL	rsis	6.18	N7082 5.00	(N7082) µg/ft²	10	Analyst: MC L 4/3/2004 9:47:00 AM
Lab ID:	0403183-016	···		Collection Date:	3/24/20	004 9:20:00 AM
Client Sample I	D: 04-15PC			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANAL'	YSIS	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 9:54:00 AM
Lab ID:	0403183-017			Collection Date:	3/24/20	004 9:30:00 AM
Client Sample I	D: 04-16PC			Matrix	: WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	99.9	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCi 4/3/2004 10:02:00 AM
Lab ID:	0403183-018			Collection Date		004 9:40:00 AM
Client Sample I	D : 04-17PC			Matrix	: WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANAL	YSIS	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

	on-Responsive	Hinchco		La	b Order:	0403183
Lab ID: Client Sample ID:	0403183-019 04-18PC		(Collection Date: Matrix:)4 10:10:00 AM
Analyses		Result	Limit Qual	Units		Date Analyzed
METALS ANALYSI	ıs	U	N7082 5.00	(N7082) µg/tt²	10	Analyst: MCL 4/3/2004 10:39:00 AM
Lab ID: Client Sample ID:	0403183-020 04-19PC			Collection Date: Matrix:		04 10:12:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS	IS	7.14	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 10:46:00 AM
Lab ID: Client Sample ID:	0403183-021 : 04-20PC			Collection Date Matrix		04 10:30:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS	SIS	33.5	N7082 7.50	(N7082) µg/ft²	10	Analyst: MC L 4/2/2004 3:47:00 AM
Lab ID: Client Sample ID	0403183-022 : 04-21PC	-			: 3/24/20 : WIPE	004 10:34:00 AM
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYS	sis	21.9	N7082 7.50	(N7082) µg/ft²	10	Analyst: MCL 4/2/2004 3:55:00 AM

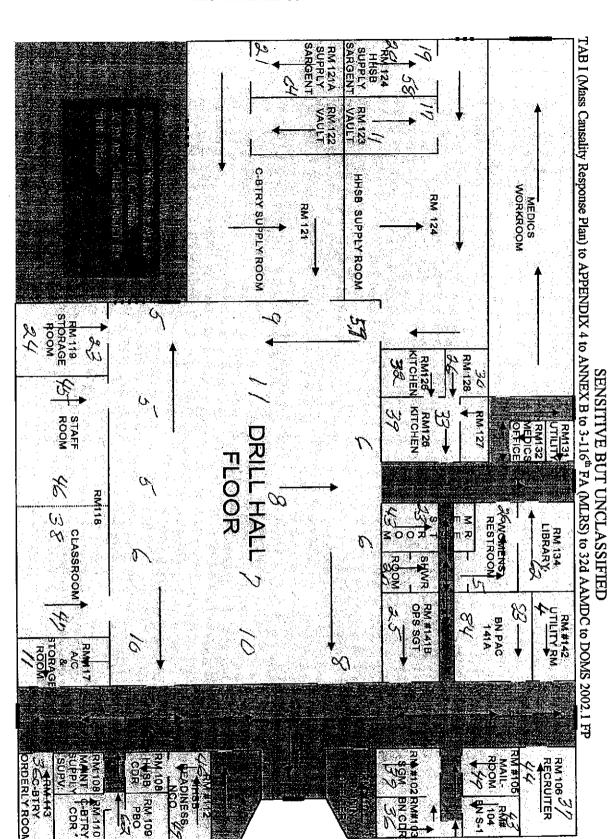
Prairie Analytical Systems, Inc.

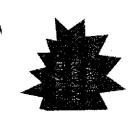
Qualifiers:

- 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).

APPENDIX D

ILLUMINATION SURVEY DIAGRAM





Plant City Illumination Survey 24 May 34 Foot-Candle

SENSITIVE BUT UNCLASSIFIED

B-4-I-1

3-116th FA (MLRS) FACILITY LAYOUT

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Gender: Male Female Age: Under 25 25-34 35-44 45-54 55 and over Do you: Smoke Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Currently take any medications? Y N Currently take any medications? Y N Overate photocopiers 10% of the time Y N Currently take any medications? Y N Overate photocopiers 10% of the time Y N	Room 112	t time in the build	•	•	· · · · · · · · · · · · · · · · · · ·
Gender: (Male Female Age: Under 25 25-34 35-44 45-54 55 and over Do you: Smoke Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: Currently take any medications? Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? How long have you worked:	Does any of your work activities produce Describe:	e dust or odor?	YES	NO	
Age: Under 25 25-34 (35-44) 45-54 55 and over Do you: Smoke					
Do you: Smoke Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: Currently take any medications? Y N Currently take any medications? Y N Currently take any medications? Y N Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 Rate room temperature: Poor Average Excellent 1 2 3 4 Rate room temperature: Poor Average Excellent 1 2 3 4 Are there smokers in your area? How long have you worked:	Gender: (Male Female				•
Smoke Have fever/pollen allergies Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: A Currently take any medications? Number of persons sharing same room/work area Number of windows in room/work area Number of windows in room/work area Number of work space per person: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? No N		55 and over			•
Have fever/pollen allergies Have skin allergies/dermatitis Have skin allergies/dermatitis Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines N Specify: Alt Currently take any medications? Number of persons sharing same room/work area Number of windows in room/work area Number of windows in room/work area Number of windows in room/work area Number of work space per person: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? How long have you worked:		***			
Have skin allergies/dermatitis Have a cold/flu Have sinus problems Have other allergies Wear contact tenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: Currently take any medications? No Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of windows in room/work area Number 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? We No Rate adequave you worked:		Y	N.		
Have a cold/flu Have sinus problems Have other allergies Wear contact lenses Operate video display terminals (computers) Operate photocopiers 10% of the time Use other office machines Specify: Currently take any medications? Number of persons sharing same room/work area Number of windows in room/work area Number of windows in room/work area Number 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 How long have you worked:			N		*
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		Y Y			
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		Y			
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		(1)	N		
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		· • • • • • • • • • • • • • • • • • • •	AND THE		
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		tore) (V)			
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:	Operate photocopiers 10% of the time	(v)			
Currently take any medications? Reason: Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of persons Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:	Use other office machines	(v)			
Office Characteristics: Number of persons sharing same room/work area Number of windows in room/work area Number of windows in room/work area Number of windows in room/work area Number of persons sharing same room/work area Y N Rate adequacy of work space per person: Excellent 1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:		·	, , <u>, , , , , , , , , , , , , , , , , </u>	·	
Number of persons sharing same room/work area Number of windows in room/work area Do windows open? Rate adequacy of work space per person: Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent 1 2 3 5 Are there smokers in your area? How long have you worked:	Currently take any medications?		N)	·	
Poor Average Excellent 1 2 3 4 5 Rate room temperature: Poor Average Excellent 1 2 3 5 Are there smokers in your area? Y How long have you worked:	Currently take any medications?		(Ñ)		
Rate room temperature: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/w	ne room/work are:			
Rate room temperature: Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/wood Do windows open?	ne room/work ares			
Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/webo windows open? Rate adequacy of work space per person	ne room/work are: ork area Y n: Excellent			
Poor Average Excellent 1 2 3 4 5 Are there smokers in your area? Y How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/well Do windows open? Rate adequacy of work space per person Poor Average	ne room/work are: ork area Y n: Excellent			
1 2 3 4 5 Are there smokers in your area? Y N How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/webo windows open? Rate adequacy of work space per person Average 1 2 3 4	ne room/work are: ork area Y n: Excellent			
Are there smokers in your area? Y N How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/wood windows open? Rate adequacy of work space per person Average 1 2 3 4 Rate room temperature:	ne room/work are: ork area Y n: Excellent			
How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/wood windows open? Rate adequacy of work space per person Average 1 2 3 4 Rate room temperature: Poor Average	ne room/work aresork area Ork area Y n: Excellent Excellent			
How long have you worked:	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/wood bowindows open? Rate adequacy of work space per person Average 1 2 3 4 Rate room temperature: Poor Average	ne room/work aresork area Ork area Y n: Excellent Excellent			
	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/wo Do windows open? Rate adequacy of work space per person Average 1 2 3 4 Rate room temperature: Poor Average 1 2 3 4	ne room/work are: ork area Y n: Excellent 5			
21 . 2 = GA	Currently take any medications? Reason: Office Characteristics: Number of persons sharing sam Number of windows in room/web owindows open? Rate adequacy of work space per person Poor Average 1 2 3 4 Rate room temperature: Poor Average 1 2 3 4 Are there smokers in your area?	ne room/work are: ork area Y n: Excellent 5		•	

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	. 0	F.	(N/A)	sw	PW					
Aching joints	ŏ	F	XI/A	SW	PW	•				
Muscle twitching	· ŏ	F	NA	SW	PW					
Back pain	ŏ	F	NI/A	sw	PW					
Hearing problems	ŏ	F	NT/A	ŚW	PW					
Dizziness	ŏ	F	ATTA	SW	PW					
Dry, flaking skin	ŏ	F	Ñ/Ã	SW	PW					
Discolored skin	Õ	F	N/A	SW	PW			•		
Skin irritation	Ō	F	NA	sw	PW					
Itching	· O.	F	N/A	sw	PW					
Heartburn	0	F	N/A	SW	PW					
Nausca	0	F	NVA	SW	PW					
Noticeable odors	O	F	N/A	SW	PW .					
Sinus congestion	(Q)	F	ΝΆ	sw	PW			•		
Sneezing	(6)	F	N/A.	SW	PW					
High stress levels	- G	F	(N/A	SW	PW					
Chest tightness	0	F	NA	sw	PW					
Eye irritation	©	F	N/A	SW	PW		4			
Fainting	Q ·	F	(N/A)	ŚW	PW		•	•		
Hyperventilation	O	F	N/A	SW	PW			·		
Problems with contacts	0	F	NIA	S₩	₽W					
Headache	О	F	MA.	SW	PW					
Fatigue/drowsiness	0	F	N/A	SW	PW					
Temperature too hot	O	F	(NVA)	SW	PW					
Temperature too cold	0	F	(N/A	SW	\mathbf{PW}					
Other (specify):	1.0		_					-		
			•				•	•		
Have you seen a doctor for any or a When do you experience relief from TIME OF DAY: Morning A	. ,	ns?	(A)	N DE MOSEV.	N/A	ar T	151 TP	**	ė.	
TIME OF DAT. MORNING A	TICHHOOH EACH	mng	DAYC	F WEEK:	S	M T	WT	F	S	
MONTH: J F M A M	J J A S	SON	I D SE	ASON:	Spring	Summe	Fall	Winte	i.	
Do symptoms disappear?	Y		N							
When			- 1	·						
Summer /	Fall			•						
	· · · · · · · · · · · · · · · · · · ·									
9. In your opinion, what is	the cause of	any poss	ible indoor	r air qual	ity prob	lems wit	hin this t	wildin	g?	
	ay frew	er	•	-				٠	•	•
Vollen in A	: p-1 -									
	•			-						
										
10. COMMENTS: Please	ake this oppo	ortunity (to commen	t on any	factors 3	ou cons	ider to b	e impo	rtant	
concerning the quality of yo	ur work envi	ronment			•					
·	/							· · · · · · · · · · · · · · · · · · ·		
Enjoy the work	Lenviorm	ent. "	iere			·				
 									-	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or rooms where you spend the mos	t time in the bu	ilding:		
Does any of your work activities produce Describe:	e dust or odor?	YES	NO	
Gender: Male Female Age: Under 25 (25-34) 35-44 45-54	55 and over			
Do you: Smoke	v			
Have fever/pollen allergies	Y Y Y Y Y ters) Y	=		
Have skin allergies/dermatitis Have a cold/flu	Y	N N		
Have sinus problems	Y	Z Z Z		
Have other allergies	. (Y)			
Wear contact lenses Operate video display terminals (compu	ters) Y	N N		
Operate photocopiers 10% of the time		N		
Use other office machines				*
Specify:				
Currently take any medications? Reason:	Y	(\overline{N})		
Office Characteristics:			,	· ·
Number of persons sharing san	ie room/work a	rea		•
Number of windows in room/word Do windows open?	ork area Y	G		
Do Wakatiya opem:	. Т	C		•
Rate adequacy of work space per perso				
Poor Average 1 2 3 4	Excellent 5			
<u> </u>	,			•
Rate room temperature: Poor Average	Excellent		•	
1 2 3 (4)	5			
And there are already in very and 9	W7	(AT	-	
Are there smokers in your area?	Y	(N)		
How long have you worked:				
3 yr In this room/area				

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".)

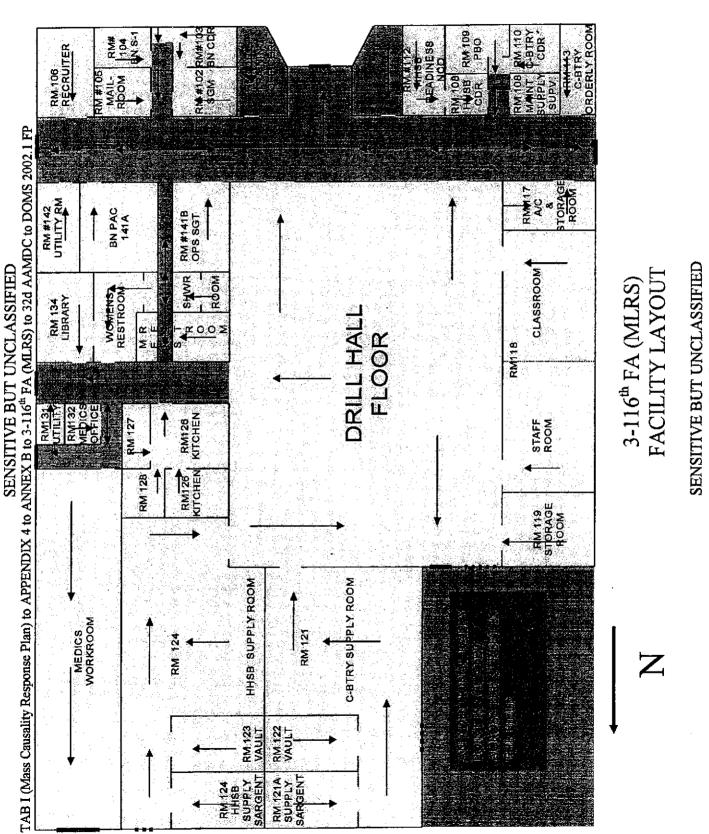
SYMPTOM:				٠			•
TO THE TAX A STATE OF THE TAX A							
Difficulty in concentrating	o	F	(N/A	SW.	PW -		
Aching joints	. O .	F	NA	SW	PW	•	
Muscle twitching	0	F	ONTA	sw	PW		
Back pain	0	· F	(N/A)	sw	PW		
Hearing problems Dizziness	0	F	CNA	SW	PW		
Dry, flaking skin	0	F	CNA	SW	PW		
Discolored skin	0	F ·F	₩a⁄	SW	PW		
Skin irritation	Ö	F		SW	PW		
Itching	. 0	F	NIA	SW SW	PW		
Hearthurn	ŏ	F	Seri A	SW	PW PW		
Nausca	ŏ	F		SW	PW		
Noticeable odors	ŏ	F	(A)(A)	SW	PW		
Sinus congestion	ŏ	F	NIA	SW	PW		
Sneezing	ŏ		N/A	SW	PW		
High stress levels	. 0		N/A	S₩	PW		
Chest tightness	0	F	(N/A)	SW	PW		
Eye irritation	0	F	NA	SW	PW		
Fainting	Ó	F	(N/A)	ŚW	PW		
Hyperventilation	O	F	AVA	SW	PW		
Problems with contacts	0		(N/A)	SW	PW		
Headache	O	Ë	N/A	SW	PW		•
Fatigue/drowsiness	0	F	(M)	SW	PW		
Temperature too hot	o	F	NA	SW	PW		
Temperature too cold	О	F	(N/A)	SW	PW		
Other (specify):							
							
Have you seen a doctor for any or all	of these symp	toms?	(Y)	N	N/A		
When do you experience relief from t	hese symptom	15?	$\overline{}$				
	. ·						
TIME OF DAY: (Morning After	emoon Eve	ning	DAYO	F WEEK:	SM	T W T	F (S)
MONTH: JEMAM	J J A :	S O N	D SEA	ASON:	Spring Sun	nmer Fall	Winter
Do symptoms disappear?	(Y)		N .				
When: A							•
TT N GL	1 +			*			
					···		
							
9. In your opinion, what is th	e cause of	any possi	ble indoor	air qual	ity problems	within this br	rildine?
NIA		=			•		
							 .
					·····		· · · · · · · · · · · · · · · · · · ·
					 -	·	·
10 001000000							
10. COMMENTS: Please tal	ce this oppo	ortunity to	comment	on any	factors you c	onsider to be	important
concerning the quality of your	work envir	conment.	/	•			r
		•	N/Δ	<i>1</i>			
			~ //	 -			
·		<u> </u>					·
				·			
	· ·		744				
							
1 20	-					-, ,	 .

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.

APPENDIX F

ARMORY PHOTOGRAPHS AND FLOOR PLAN





FOIA Requested Record #J-15-0085 (FL)
Released by National Guard Bureau
Page 861 of 1021



Sample #1 Entrance to Clinic (Indoor Range Entrance Area)



Sample #2 Left Side Wall by Bullet Trap



Sample #3 Right Side, Bullet Trap Wall



Sample #4 In Front of Bullet Trap



Sample #5 Middle of Range



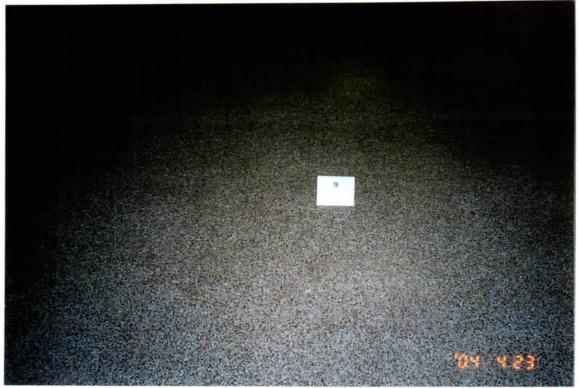
Sample #6 Back Wall (Behind Firing Line)



Sample #7 Kitchen, Top of Ice Maker



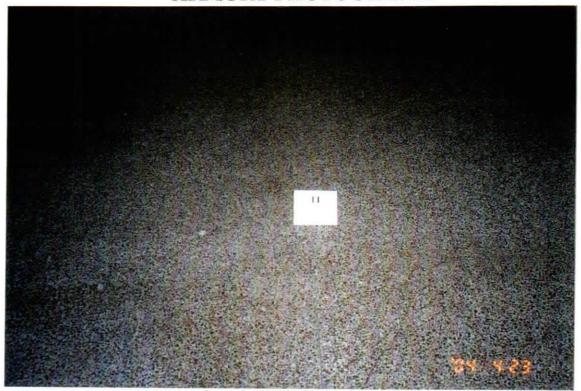
Sample #8 Kitchen, Top of Middle Cooler



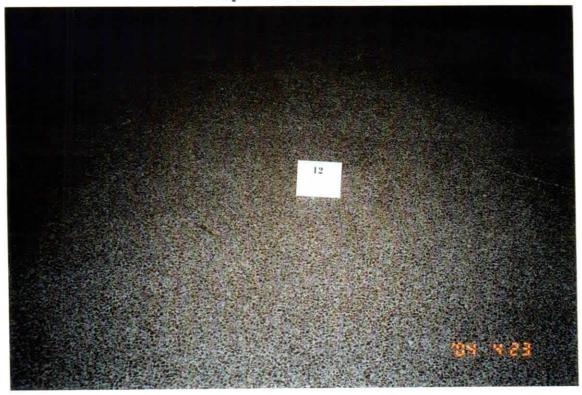
Sample #9 Drill Floor Southeast Corner



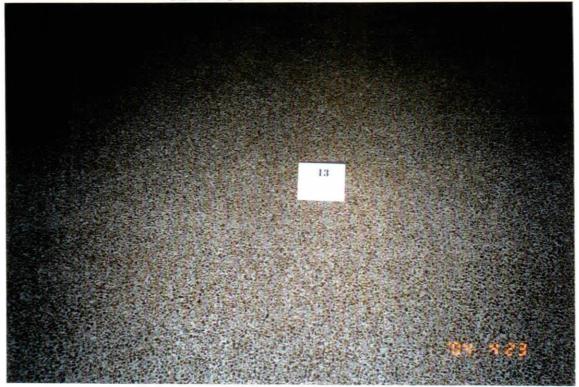
Sample #10 Drill Floor Northeast Corner



Sample #11 Drill Floor Center



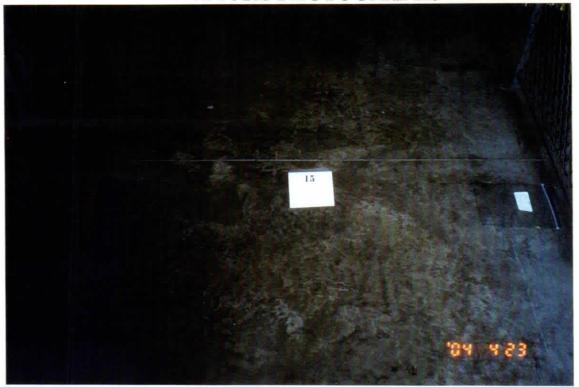
Sample #12 Drill Floor Northwest Corner



Sample #13 Drill Floor Southwest Corner



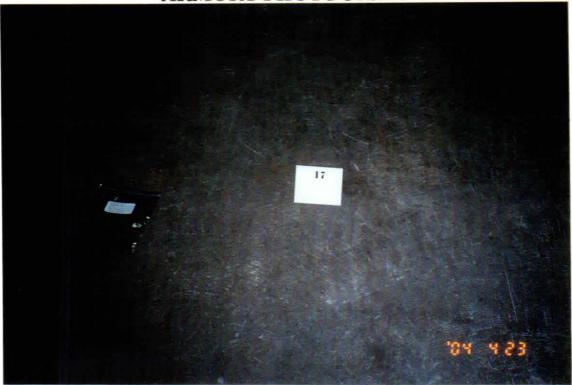
Sample #14 Room 124 Supply Inside Door



Sample #15 Room 124 Supply Center of Room



Sample #16 Room 124 Inside Arms Room Vault



Sample #17 Room 124 Arms Room Vault, Center of Floor



Sample #18 Room 121 Supply Room Inside Door



Sample #19 Room 121 Supply Room Center of Room



Sample #20 Room 121 Arms Vault, at Door



Photograph of Clinic Viewing from just behind firing line



Plant City Unit Occupying Armory

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

ARMORY UTILIZED BY CIVILIANS: YES NO

WHAT FUNCTIONS: Weddings/Receptions, Community

Events, Various Other - APPROXIMATELY 24 TIMES/YEAR

NOISE HAZARDOUS AREAS IN THE ARMORY?

POORLY ILLUMINATED AREAS IN THE ARMORY?

STANDING WATER OR LEAKAGE IN THE ARMORY?

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 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. 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.
- 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-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.



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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Site Description	
Scope of Work	
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Heating Ventilating and Air Conditioning (HVAC)	Page 4
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Ergonomics	Page 5
Personal Protection Equipment (PPE)	Page 5
Posters and Bulletin Posting	Page 5
Recommendations	Page 5

Appendices

- A. References.
- B. Laboratory Analytical Results.C. Lab Chain of Custody.D. Floor Layout and Photographs.

Survey Date: 23 APRIL 2003

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.

Торіс	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.
нvаслаQ	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

Report Date: 30 June 2003 Page 1

Survey Date: 23 APRIL 2003

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-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.

<u>Site Description</u>. 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 SFO Responsive 863) 678-4161/4165.

<u>Lead Wipe Samples:</u> 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.

<u>Asbestos Suspect Building Material</u> 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	

	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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 8 footcandles 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.

<u>Heating Ventilating and Air Conditioning (HVAC)</u> 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

Report Date: 30 June 2003

Survey Date: 23 APRIL 2003

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.

<u>Hazard Communication Standard</u> 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.

<u>Ergonomics</u> 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.

<u>Personal Protection Equipment (PPE)</u> 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.

<u>Posters and Bulletin Posting</u> 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.
- Consider providing ergonomics training and/awareness to all employees who spend the majority of their time working at a computer terminal.
- 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 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

3 Cooper St., Westmont, NJ 08108

BEST AVAILABLE COPY

Phone: (856) 858-4800

Fax: (856) 858-9551 Email:





Attn;

Fax:

Project:

fammer Science Inc 3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Plant City

Phone: 630-369-7956

EMSL Order:

Received:

Customer ID:

Customer PO:

200304251

04/28/03 11:10 AM

TS80

EMSL Project ID:

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

Client Sample D	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 in²	14.0 μg/ft²
PC002		0002	5/9/03	144 in²	<10.0 µg/ft²
PC003		0003	5/9/03	144 in²	38.0 µg/ft²
PC004		0004	5/9/03	144 in²	49.0 µg/ft²
PC005		0005	5/9/03	144 in²	21.0 µg/ft²
PC006		0006	5/9/03	144 in²	<10.0 μg/ft²

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

CREDITATIONS: AIHA Environmental Lead Laboratory Approval Program # 100194

Printed: 5/9/03 3:31:51 PM

THE REPORT:

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EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4800

Fax: (856) 858-4960

Email:

EMSL.com



Attn:

Fax:

Project:

Tammer Science Inc 3744 Lawrence Drive

Naperville, IL 60564

(630) 369-7957

Phone: 630-369-7956

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**

			Non-Asbestos			Asbestos	
Sample	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous	% Type
PC01A		Brown	Dissolved			100% Non-fibrous (other)	None Detected
040306875-0001		Non-Fibrous Homogeneous				. ,	
PC02A		White	Dissolved			100% Non-fibrous (other)	None Detected
040306875-0002		Non-Fibrous Homogeneous					
PC03A		White/Brown	Dissolved	4	5% Cellulose	20% Non-fibrous (other)	None Detected
040306875-0003		Fibrous Heterogeneous	Teased	3	5% Min. Wool		

Analyst(s)

Delores Beard (3)

M 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 bridge 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.

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

THIS IS THE LASEE AND TELLED REPORT. FOIA Requested Record #J-15-0085 (FL)

APPENDIX C

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-		3 11 T/ N	LYTICAL

Revised 7/1/99

CHAIN OF CUSTODY

203,4251

LEAD

EMSL Rep: Your Company Name: Street: Box #: City/State: Phone Results to: Name:	Non-Responsive 2744 Lawrence Do Naperville Zip:	DATE: EMSL-Bill to: Street: Box #: City/State: Fax Results to: Name:	Third party billing requires from third party Some	written authorization
Telephone #: Project Name/Number:	630 369 7956	Fax #: Purchase Order #:	630-369-7	457
MATRIX Lead Chips*	METHOD SW846-7420 or AOAC 5.009 (974.02)	INSTRUMENT Flame Atomic Absorption	0.01% ++	TAT
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) soit	
Lead in Air***	NIOSH 7082 or NIOSH 7300	Flame Atomic Absorption	5 ug/filter 3.0 ug/filter	
Lead in Wipe	SW846-7420 or SW846-6010	Flame Atomic Absorption (10 ug/wipe	6-10 days
TCLP Lead **	SW846-1311/7420 or SW846-6010	Flame Atomic Absorption	0.4 mg/l (ppm) 0.1 mg/l (ppm)	

Graphite Furnace Atomic

Graphite Furnace Atomic

Graphite Furnace Atomic

Gravimetric Reduction

Absorption

Absorption

Absorption

0.03 ug/filter

0.003 mg/l (ppm) water

0.3 mg/kg (ppm) soil

0.003 mg/l (ppm)

0.0001g

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

NIO\$H 7105

SW846-7421

EPA 239.2

NIOSH 0500-0600

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

Lead in Drinking Water (check

state Certification Requirements)

Lead in Air **

Lead Soil +

Total Dust

Lead Wastewater

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#
BTW 001		144 lu "	
BTW 002		(-	
BTW 003		1 3	
втисо4		4	
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Date: 4/26/03	Date:	4/21B	it is to a

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Page 1 of 3

2003 44257

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2002			3
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Date 4/26/03	Date	Hesponsiv
4 25 05	itional sheets if necessary.	71-1

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

A Sepurale report

Page 30 f 3

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040306875



EMSL Analytical, Inc. Revised 07/07/99

CHAIN OF CUSTODY

Asbestes

EMSL Rep: Your Company Street: Box #: City/State: Phone Results to Name: Telephone #: Project		Non-Respons	Sciencus. I vrence Dr. IL Zip: 605 ive	76A	EMSL-Bill to Street: Box #: City/State: Fax Results to Name: Fax #: Purchase Ore	o:	from this	Spon		Zip:	
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	N	IAIRIA		l	<u> </u>						
☐ Air	□ Floo	or Tile	□ Soil		3 hrs		Hours	07	Same Day 12 Plours*	1 day	
Bulk	☐ Dri	iking Water	□ Dust		☐ 48 Hours 2 days	☐ 72 3 day	Hours		96 Hours lays	☐ 120 Hom 5 Days	rs
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TEM AIR, 3 hours.			schedule. There is a tion form for this ser-	premiu	im charge for 3 hou hours (must arriv	er tat, place by 11:	ease call 1- 00 a.m Mo	800-22 n - Fri	0-3675 for pri .), Piesse Refe	re prior to sensi r to Price Quote	: tark
samples. You will b	e asked t	a sign and authoriza	Det to a local						1 WATER		
PCM - Air			TEM AL						Wastewate	ī	
NIOSH 74	UU			SH 7						Vater EPA 10 Wastewater	
Other:			☐ EPA	Leve	el II					Drinking Wa	
PLM - Buik EPA 600/I		6	□ -	Mou tfield	int (Qualitative		100 4		ASTM D :	VAC / WIP 5755-95 ive method	<u>E</u>
NY Stratifi	ied Poir			(NOI	B (Gravimetric) NY	198.4		Asbestos Silica		
Other:	enlk										
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EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Ashestes

	LOCATION	VOLUME (If Applicable)
SAMPLE NUMBER		N/A
BTWOIA		(
BTWOZA		
BTW03A		
BTW 04A		
BTWOSA		
BIWOGA		
LWOIA		
LW 02 A		-
LW03A		
LLOIA		
LL02A		
1103A		
PCOLA		
PCO2A		
PCO3A		
TMPOIA		1
TMPOZA		-
TMP03A		

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Page 2 of 2 2

APPENDIX D

SENSITIVE BUT UNCLASSIFIED



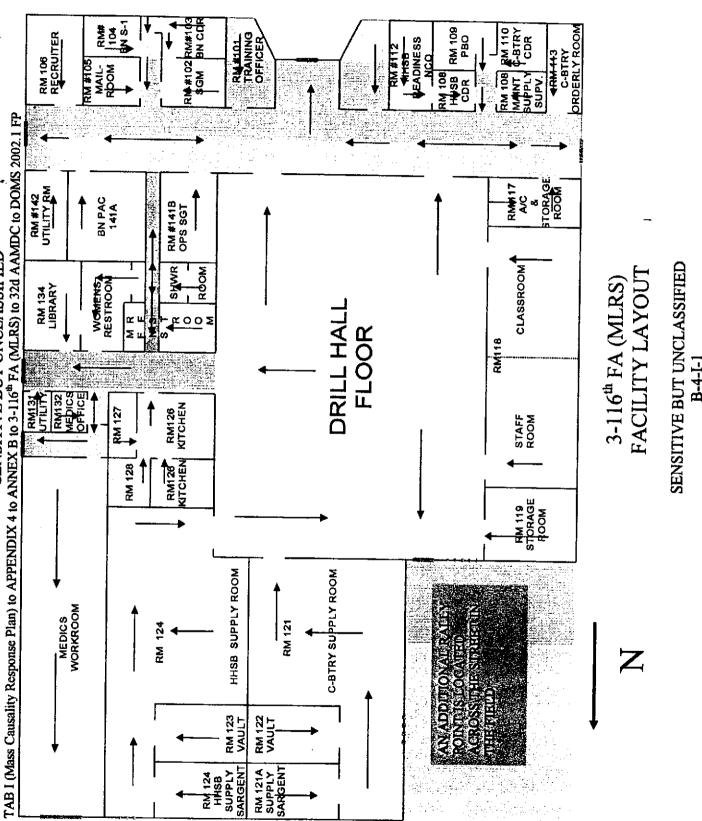




Photo 1: Plant City Armory Front Entrance



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.

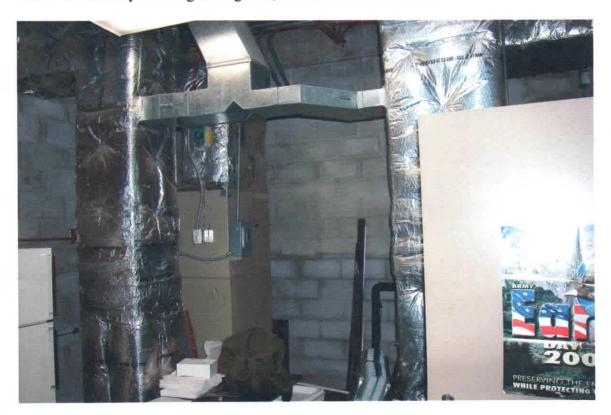


Photo 12: Air handling units showing the outside air connections.

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: SFO

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

- References.
- Report submitted 16 April 2004, Industrial Hygiene Survey, Wauchuła 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)

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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.
- Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



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

Non-Responsive

dba HINCHCO

9 April 2004

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- 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 Ouestionnaire.

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.

Page 2

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination reading 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-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.

Page 3

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>	READING	IN	FOOT-CANDLES
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 can point out all of these areas of concern.
- Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
- Consider increasing the illumination levels on the drill floor, recruiter's office, and the indoor firing range.

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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

Chain of Custody Record

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

Prairie Analytical Systems, Nooronneed

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CEMENT	on-Responsive Vachula Armory	Hincheo		La	b Order:	0403184
Lab ID:	0403184-001			Collection Date:	3/24/200	4 12:44:00 PM
Client Sample ID:	04-00W (blank)			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI:	s	υ	N7082 5.00	(N7082) µg/tt²	10	Analyst: MCL 4/3/2004 11:16:00 AM
Lab ID:	0403184-002		•	Collection Date:	3/24/200	4 12:55:00 PM
Client Sample ID:	04-01W			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	16.9	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 11:24:00 AM
Lab ID:	0403184-003			Collection Date:	3/24/200	4 12:57:00 PM
Client Sample ID:	04-02W			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI Lead	S	9.56	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 11:31:00 AM
Lab ID:	0403184-004		1	Collection Date:	3/24/200	4 1:00:00 PM
Client Sample ID:	04-03W			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSI:	S	14.3	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 11:39:00 AM
Lab ID:	0403184-005		(Collection Date:	3/24/200	4 1:05:00 PM
Client Sample ID:	04-04W			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	18.9	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 12:08:00 PM
Lab ID:	0403184-006			Collection Date:	3/24/200	4 1:07:00 PM
Client Sample ID:	04-05W			Matrix:	WIPE	
Analyses		Result	Limit Qual	Units	DF	Date Analyzed
METALS ANALYSIS	S	U	N7082 5.00	(N7082) µg/ft²	10	Analyst: MCL 4/3/2004 12:16:00 PM

Date: 09-Apr-04

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Date Analyzed

Date Analyzed

Prairie Analytical Systems, Inc.

Wachula Armory

Project:

Analyses

Analyses

CLIENT:	Non-Responsive	Hinchco	1	Lab Order:	0403184

Collection Date: 3/24/2004 1:20:00 PM 0403184-007 Lab ID:

Client Sample ID: 04-06W Matrix: WIPE Result

METALS ANALYSIS N7082 (N7082) Analyst: MCL

Limit Qual Units

μg/ft² 4/3/2004 12:24:00 PM 6.11 5.00 10 Lead

0403184-008 Collection Date: 3/24/2004 1:22:00 PM Lab ID:

Matrix: WIPE Client Sample ID: 04-07W

Limit Qual Units DF Result Analyses Date Analyzed

METALS ANALYSIS N7082 (N7082) Analyst: MCL μg/ft² 10 4/3/2004 12:31:00 PM Lead 5.00

0403184-009 Collection Date: 3/24/2004 1:45:00 PM Lab ID:

Matrix: WIPE Client Sample ID: 04-08W

Result Limit Qual Units DF Date Analyzed Analyses

N7082 (N7082) **METALS ANALYSIS** Analyst: MCL 10 4/3/2004 12:39:00 PM U 5.00 μg/ft² Lead

Collection Date: 3/24/2004 1:47:00 PM Lab ID: 0403184-010

Matrix: WIPE Client Sample ID: 04-09W Result

N7082 (N7082) METALS ANALYSIS Analyst: MCL

Limit Qual Units

Lead U 5.00 μg/ft² 10 4/3/2004 12:46:00 PM

Collection Date: 3/24/2004 1:49:00 PM 0403184-011 Lab ID:

Matrix: WIPE Client Sample ID: 04-10W

Limit Qual Units Result DF Analyses Date Analyzed

METALS ANALYSIS N7082 (N7082)Analyst: MCL μg/ft² Lead U 5.00 10 4/3/2004 12:54:00 PM

Lab ID: 0403184-012 Collection Date: 3/24/2004 1:51:00 PM

Matrix: WIPE Client Sample ID: 04-11W

Limit Qual Units Analyses Result DF Date Analyzed

METALS ANALYSIS N7082 (N7082)Analyst: MCL Lead 5.75 5.00 μg/ft² 10 4/3/2004 1:01:00 PM

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Prairie Analytical Systems, Inc.

Analyses

Date: 09-Apr-04

CLIENT: Hinchco Lab Order: 0403184 Project: Wachula Armory Collection Date: 3/24/2004 1:53:00 PM

Lab ID: 0403184-013

Matrix: WIPE Client Sample ID: 04-12W

Result Limit Qual Units DF Date Analyzed Analyses **METALS ANALYSIS** N7082 (N7082)Analyst: MCL IJ μg/ft² 4/3/2004 1:09:00 PM 5.00 10 Lead

Collection Date: 3/24/2004 1:58:00 PM Lab ID: 0403184-014

Matrix: WIPE Client Sample ID: 04-13W

Limit Qual Units DF Result Analyses Date Analyzed

(N7082)N7082 METALS ANALYSIS Analyst: MCL µg/ft² 10 4/3/2004 2:23:00 PM Lead U 5.00

Collection Date: 3/24/2004 2:00:00 PM Lab ID: 0403184-015

Client Sample ID: 04-14W Matrix: WIPE Result

N7082 (N7082)**METALS ANALYSIS** Analyst: MCL

Limit Qual Units

4/3/2004 2:30:00 PM 9.59 5.00 µg/ft² 10 Lead

Collection Date: 3/24/2004 2:05:00 PM Lab ID: 0403184-016

Matrix: WIPE Client Sample ID: 04-15W

Result Limit Qual Units DF Date Analyzed Analyses N7082 (N7082)**METALS ANALYSIS** Analyst: MCL

Lead 6.75 5.00 μg/ft² 10 4/3/2004 2:38:00 PM

Collection Date: 3/24/2004 2:07:00 PM Lab ID: 0403184-017

Client Sample ID: 04-16W Matrix: WIPE

Result Limit Qual Units DF Analyses Date Analyzed

METALS ANALYSIS N7082 (N7082)Analyst: MCL 4/3/2004 2:45:00 PM 12.8 5.00 μg/ft² 10 Lead

Date Analyzed

Prairie Analytical Systems, Inc.

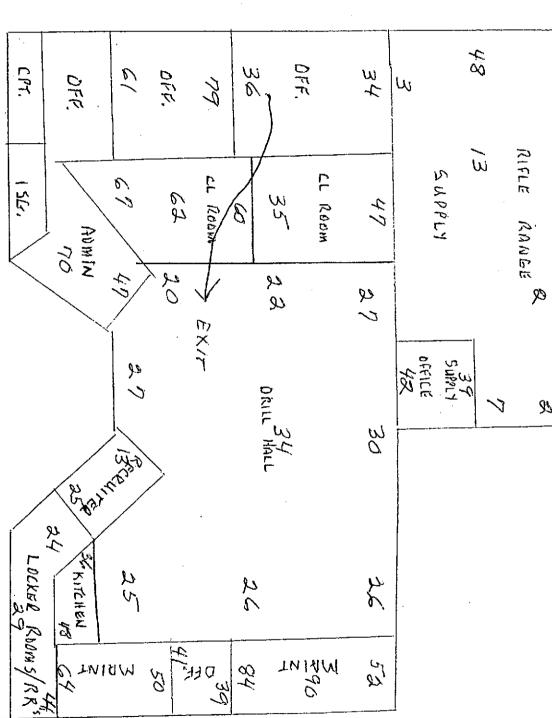
Qualifiers:

- 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

Foot-Candles 84 RIFLE W RANGE Ø SP MOTOR POOL



APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Area or roome whore rest and I di	
Area or rooms where you spend the most	it time in the building:
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Does any of your work activities produce	
Describe:	e dust or odor? (YES) NO
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Gender: Male Eemale	
Age: Under 25 25-34 35-44 45-54	55 and over
Do you:	
Smoke	Y W
Have fever/pollen allergies	$\langle \widehat{\mathbf{Y}} \rangle = \widetilde{\mathbf{N}}$
Have skin allergies/dermatitis	Y (V)
Have a cold/flu	Y and
Have sinus problems	Y N
Have other allergies	Y N Y N Y N Y N Y N Y N
Wear contact lenses	Y (N)
Operate video display terminals (comput	iters) N N
Operate photocopiers 10% of the time	Y N Y N Y N Y N N (ters) N
Use other office machines	N N
Specify:	
	·
Currently take any medications?	Y N
Reason:	
Office Characteristics:	
i Number of persons sharing sam	no voom hwo alle a a a
Number of windows in room/wo	uch area
Do windows open?	V N
	N N
Rate adequacy of work space per person	n•
Poor Average	Excellent
1 2 3	5
	.
Rate room temperature:	•
Poor Average	Excellent
1 2 3	5
	3
Are there smokers in your area?	Y N
,	•
How long have you worked:	
3 mis In this room/area	
Sycs In this building	·

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL JEHARD ARMORY WANCH WLA, FLORIDA

Pool

MOTOR

LOCKER ROOMS/RR'S DEF. MAINT MAINT ただらまな RECOUNTED. סגור אשרר SuPary DEFICE RIFLE RANGE RUMIN CL ROOM SUPPLY , 275, DFF. OFF. DFF. CPT.



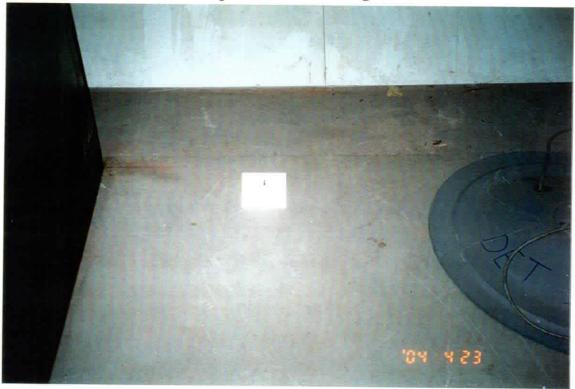
Sample #1 Indoor Firing Range Behind Plenum



Sample #2 Plenum Wall



Sample #3 Middle of Range Floor



Sample #4 In Front of Trap

Sample #5 On Front of Backstop

Photo Not Available

Sample #6 Kitchen, Top of Ice Maker

Photo Not Available

Sample #7 Kitchen Upper Shelf



Sample #8 Drill Floor Northeast Corner



Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Center



Sample #11 Drill Floor Southeast Corner



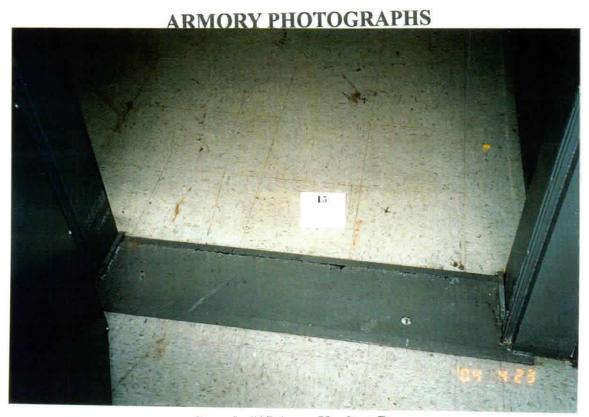
Sample #12 Drill Floor Southwest Corner



Sample #13 Supply Room, at Door



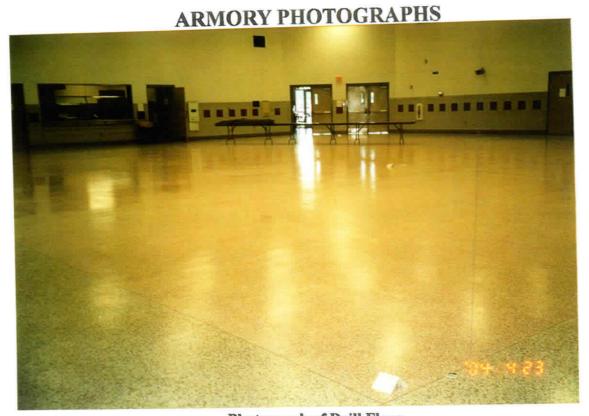
Sample #14 Supply Room, Middle Floor



Sample #15 Arms Vault at Door

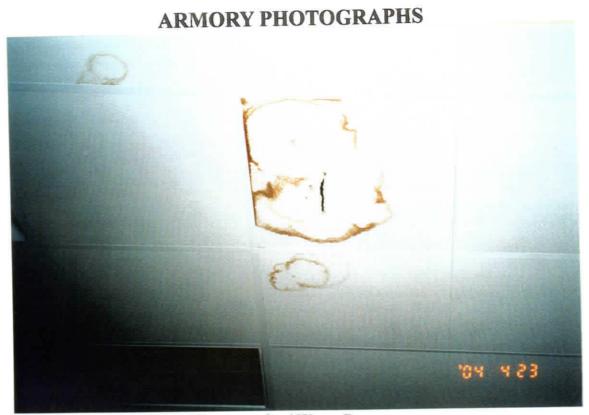


Sample #16 Arms Vault Middle of Floor





Photograph of Unit at Wachula



Photograph of Water Damage



Photograph of Water Damage

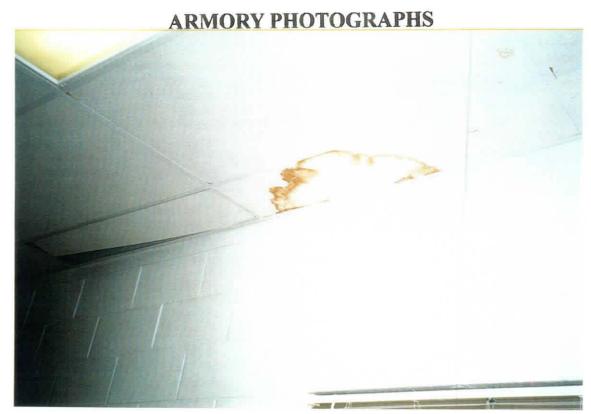
ARMORY PHOTOGRAPHS



Photograph of Water Damage



Photograph of Water Damage



Photograph of Water Damage



Photograph of Water Damage

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:

M-DAY:

20

UNIT(S) DRILLING AT THIS ARMORY: ORDET 3116 MLRS

ARMORY UTILIZED BY CIVILIANS:

YES

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-School 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.
- Recommendations.
- a. Provide employees' rubber/nit rile 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 Jus. 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: MAJNon-Responsive J. 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)

MAJNon-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. 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 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.



Certified Hazard Control Manager (CHCM)
President

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APPENDIX B:	Sample Placement Diagram, Chain of Custody Forms, Lab Sample Results & Sample Photographs	
APPENDIX C:	Occupant Health and Comfort Questionnaire, Facility Information Form, Health Hazard Information Module Photographs & References	

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

Associates, Incorporated, was responsible for this survey. Wauchula points of contacts (POCs) and coordinators were MSG Non-Hesponsive (shop foreman) and MAJ Non-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/ft²)
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.

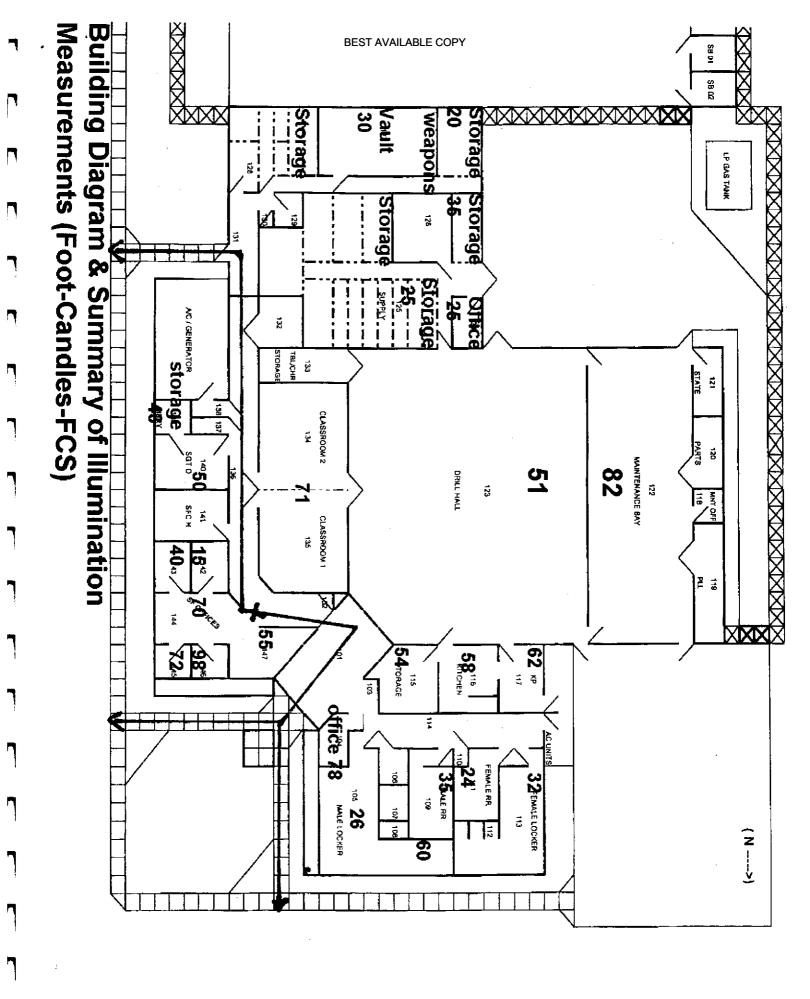


Table 8 DG 415-21 Igning Standards

DG 415-2 01 MARCH 2005

Table 8. Electrical Requirements

	PUNCTIONAL AREA	LICHTING	OUTLETS	NOTES
OH	to Ansa	<u> </u>	<u> </u>	
1	General Supervisor	70 FC, FL	1 duples per wall	i
2	Supervisor	70 FC, FL	1 duples per wai	
3	Production Controller	70 FC. FL	1 duples per wal	
4	Inspection and Library	70 FC FL	1 duples per 10 LF of wall	
6	Autometion Clark	70 FC, FL	1 Ouples per 10 LF of wall	
6	Common IT Space	70 FC, FL	1 duplex per 10 LF of wall	2
7	IT Support Activities	70 FC, FL	1 duples per 10 LF of wall	2
•	Classroom	70 FC, FL	1 duples per 10 LF of wall	 -
Per	nonnel Areas		Trochas bet 10 Et 01 M M	
1	TolerShower	40 FC, FL	I duplex GFC1 per 2 sinks	T
2	Locker Room	40 FC, FL	1 duples GFC1	 -
3	Bre at Area	30 FC FL	I Ouplex per 10 LF of wall	
4	Physical Fitness Area	50 FC, FL	I duplex per 12 LF of wall	2
Wa	k Areas		Trooper bar 12 Cr 0 Wat	
1	Tool Room	50 FC. FL	1 duples per 20 LF of wall	
2	Supply Room	30 FC FL	1 duples per 20 LF of wall	
3	Banery Room	30 FC, FL	explosion proof	
4	Comm. & Electronic Shop	70 FC, FL	I 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 duples per 2 LF of workbanch	2
7	Small Arms Test Room	70 FC, FL	1 Ouples per 2 LF of workbench	2
9	Yauk (Small Arms)	20 FC, FL	1 Duples	
_	Vaux (CBT Vehide Arms)	20 FC, FL	1 duplex	
10	Injector Test Room	70 FC, FL	1 duplex per 2 UF of workbench	2
13	Fuel and Ignition Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
12	Bil Storage/issue	20 FC, FL	1 Ouplex per 20 LF ol wali	
13	Machine Shop	50 FC, FL	1 Ouples per 10 LF ol erait	2
14	Carpenter Shop	50 FC, FL	t duplex per 10 LF bl wait	
15	Lumber Storage Shad	10 FC, FL	none	

Table 5 OG 415-2 Lighting Standards

DG 415-2 01 MARCH 2005

Table 8. Electrical Regutrements (Continued)

	FUNCTIONAL AREA	LIGHTING	CUTLETS	MOTES
18	Carryas Shop	50 FC, FL	1 duplex per 10 LF of wall	2
17	Maste Repair Shop	70 FC, FL	1 dupos per 10 LF of was	2
18	Vault (Missie)	20 FC, FL	1 gupte a	
19	Calibration Room	79 FC, FL	1 duplex per 2 LF of workbench	1
20	Calibration Storage	20 FC. FL	1 duplex per 20 LF of wait	
21	Glass Repair Room	50 FC, FL	I duplex per ID 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 duptex per 10 LF of well	2
24	Andlation Calibration Room	70 FC, FL	1 duplex per 2 LF of worldbench	
26	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	1
27	Controlled Waste Handling	30 FC, FL	1 duplex per 20 LF of wall	
28	Bully Equipment Storage	20 FC, FL	1 duplex per 20 LF of wall	1
29	Financial Materials Storage	20 FC, FL	3 duplest explosion proof	<u> </u>
30	Enclosed Units also Storage	20 FC, FL	1 duplex per 20 LF of wall	<u> </u>
Work	days .			<u> </u>
1	General Purpose Workbay	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 ouplex per 10 LF of wait	2
4	Wash Bay	50 FC, FL	N/A	2
5	Paint Stripping Bay	60 FC, FL	1 Ouplex per 10 LF of wait	2
6	Paint Preparation Bay	50 FC, FL	1 Ouplex per 10 LF of wall	2
7	Paint Booth	50 FC, FL	1 Cluptex per 10 LF of wall	2
8	Lubrication Bay	50 FC, FL	1 Ouplest per 10 LF of wall	2
9	Engine/Transmission Test Cell	50 FC, FL	1 Ouplex 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 Ouplex per 10 LF of wall	2

Lead Sample Locations (All Samples Collected From Floor) Drill Hall WAC-01 WAC-5 WAC-2 WAC-4

Vault
WACV-06 WACV-09

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Analytical Environmental Services, Inc.

April 28, 2011

Nichols Environmental Associates, Inc. 1108 East Dolphin Dr

Oak Island

NC

28465

TEL: (443) 807-0848 FAX: (910) 278-5183

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.



Project Manager

Analytical Environmental Services, Inc

Lab Order:

1104141

Ctient:

Nichols Environmental Associates, Inc.

Project:

Wachula Armory

Matrix:

Wipe

Date Received: 4/22/2011 9:55:00 AM

Date:

28-Apr-11

LEAD ON WIPES (N9100/7082)

N7082

Laboratory 1D	Client Sample 1D	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	МР
1104141-004A	WAC-04	BRL	ug. Total	20	Ţ		04/19/2011	04/25/2011	MP
1104141-005A	WAC-05	BRL	ug, Total	20	1		04/19/2011	04/25/2011	M₽
1104141-006A	WACV-06	24	ug, Totaf	20	1		04/19/2011	04/25/2011	MP
1104141-007A	WACV-()7	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

BR1. - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

Page 6 of 6

Dates Report

Date: 28-Apr-11

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	04/25/201
1104 41-002A	WAC-02	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/201
1104141-003A	WAC-03	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/201
1104141-004A	WAC-04	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/201
1104I41-005A	WAC-05	4/19/2011 2:15:00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/201
1104 41-006A	WACV-06	4/19/2011 2:15.00PM	Wipe	LEAD ON WIPES (N9100/7082)		04/25/2011	04/25/201
1104 41-007A	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

nickenviron@att.net Please Fax or Email Results ASAP Fax 910-278-5186 Principalities Interpretations Nichols Environmental Associates Harry 443-807-0848 MPLES HRCEIVED ATTER 19M OR SATURDA), THE CONFIDENCIAS HAS TEREFOONTHE NEXT HISINESS DAY, IF NO TATUS MARKED ON COX AFS WILL PHER FED AN STANDISHED TAT MPLES ARE DISPUSED OF 10 DAYS AFTER CONFIDERUN OF REPORT CALLS, OTHER ARKANGEMENTS, ARE MADE. A CERTAIN THE CONTRACT FRANCE FRANCE WITH PROPERTY AND A TOTAL AND A TAKE A TOTAL AND A TAKE A T 20% Presidential Parkway. Attanta CA 30440-1264 ANALYTICAL ENVIRONMENTAL SERVICES INC 7 ١ þ AND FIRM 1108 East Dolphin Drive : چ نہ Oak Island, NC 28465 IRF) IN KUND CRIME SECTION STANDARD 1 THE MAN CARRIED É DATE FUND We with the best freeze and the second 610 Plaza Dr., Suite 1530, sirr ১০৮ে৪৯ 450 Rodeo Drive,Wachula, FL GA 30349 Roter Sade Wachula Armory PORTER BILLO PAOIGE ID END REPORT TO * 1D9/OS CHAIN OF CESTODS PROJECT WHORMATHUY PRESERVATION (See under) WALVEST BLOCKSTED Capping types (b.) FEE College 1年1日日 万世子 TATE PROGRAMME and your results, place hortle to check on the status of 0006 THE I www.acsatianta.com Visit our website ŝ SEMESTER SECTION AND ADDRESS. Sume Day Haush (south req.) Yout Business Clay Bush Standard * Nusumous Devi orders, etc. thusiness Ever Kush umateural lime.Rosers そうしん シャン RECEIPT £ ... = Ė Ş No Fol Continues

Training Presolitate 110 thaters

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 reprepped/reanalyzed due to insufficient sample volume.

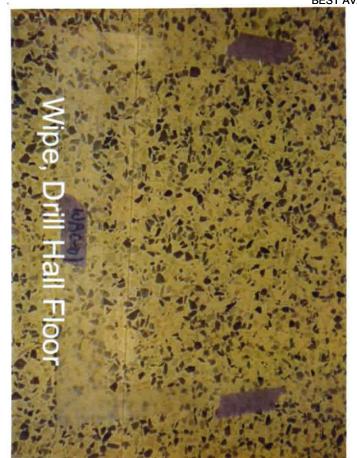
Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

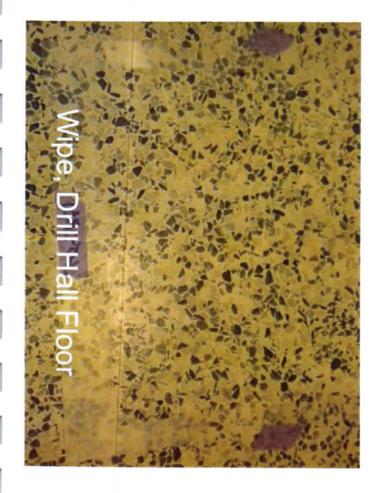
Client Nichals		Work Orde	r Number
Checklist completed b	1-22-	11	
Carrier name: FedExUPS Courier Client U	JS Mail Othe	er	
Shipping container/cooler in good condition?	Yes	No	Not Present
Custody seals intact on shipping container/cooler?	Yes	No	Not Present
Custody seals intact on sample bottles?	Yes _	No	Not Present
Container/Temp Blank temperature in compliance? (4°2±2)	• Yes	No	
Cooler ## Cooler #2 Cooler #3	Cooler #4 _	Coo	ler#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 su	bmitted 1	Yes	No _
Water - pH acceptable upon receipt?	Yes	No	Not Applicable
Adjusted?	Chec	ked by	
Sample Condition: Good Other(Explain)			
(For diffusive samples or AfHA lead) is a known blank include	ed? Yes	No)

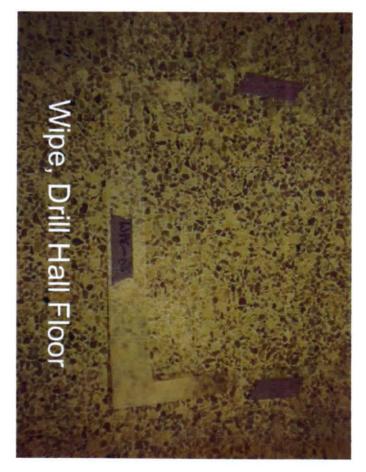
See Case Narrative for resolution of the Non-Conformance.

^{*} Samples do not have to comply with the given range for certain parameters.

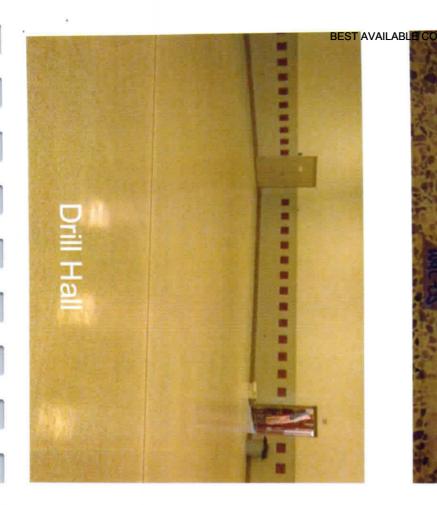


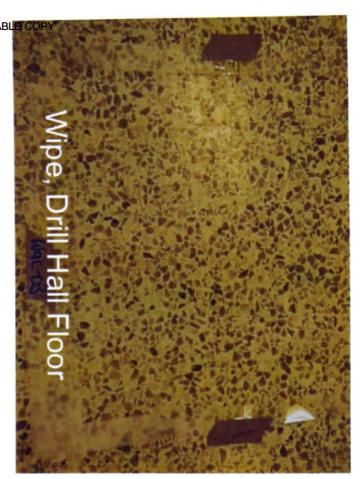




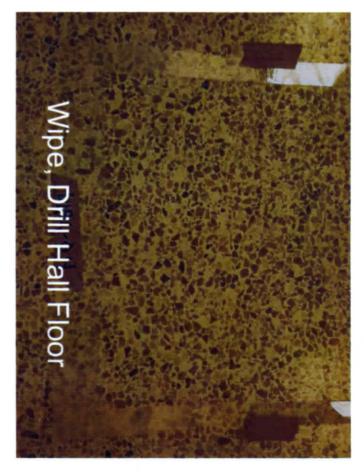


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 962 of 1021



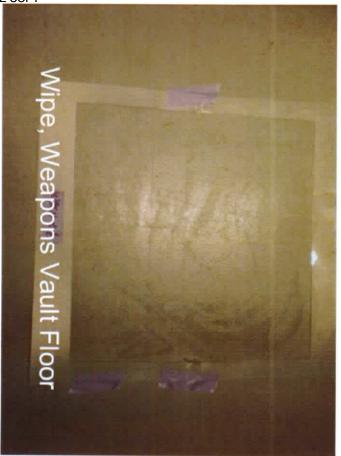






FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 963 of 1021









FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 964 of 1021

Facility Information Form

State:FLORIDA				2APR2011
Facility Company/Battalion:	Co.C 3 rd Battalion 20 th Special Forc	es Group		
Supervisor:MSG Non-			****	
FacilityAddress: 450		Drive	Wauc	hula, Flo.
33873				
Di		1	For#:863 773 02	.56
Phone#:863-773-0335			(*ax#1.003*) (3-02	,50
Work Schedule (Days of the Week	Time of Open and Close) M-F 0730	0-1700		
Work believing (Days of the week,	Time of open and oldsby in 1 5.55	, ,,,,,		
	General Information			
Number of Maintenance Bays:	1			
Number of Exhaust Extensions:	2			
Total Number of Personnel:	5			
Number of Maintenance	1			
Personnel:				
Number of Administrative	4			
Personnel:				
Approximate area of facility (ft²)	15,345			
ApproximateDate/ Construction	1994			
			-	
	Operations			
	Yes (if Yes, How Many Hours per	No		
	Day on Average)			ļ
Firing Range (active inactive?)	inactive			
Aerosol Can Painting	0	No		
Air Compressors (How many?)	0	No		
im compressor (From Inner) - /				
Battery Charging Room or	0	No		
Battery Storage Room				
Brake/Clutch Repair and/or	0	No]
Replacement				
Calibration of Equipment	0	No		
Grinding, buffing, polishing,	0	No		
sanding				
Hazardous Materials/POL	0	No		
Handling			<u></u> ,	
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	- 10.0	
Welding (List Types)	0	No		1

Please write below any special concerns that you would like to have addressed during the survey:

0

Welding (List Types)

Other Noise sources

No

8637730256

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE
Indoor Air Quality Survey (NO NAMES)
Date: 4/20/11
1. Location of Facility
Wavehola, FI, 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 hav fever/pollen allergies?
Have a cold/flu?
Have sinus problems? Have other allergies? Yes No Yes
Wear contact lenses? Operate video display terminals?
Take medication for asthma, allergies, sinus, lung or immune problems?
5. Do any of your work activities produce dust or odor? Yes No
Describe: INVENTORY, cleaning and maintenance of the
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 5
Please rate room temperature;
Poor Average Excellent 5
7. How many years or months have you worked: In this room/area?In this building?
8. List symptoms you have experienced in this building. More than one answer may apply (for example, headached may occur frequently, and improve on vacation.). When do these symptoms occur? いっこと
Have you seen a doctor for any or all of these symptoms? Yes No
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?

dust and wold

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE Indoor Air Quality Survey (NO NAMES)

п	2	to	ı
	q.	ve	

1.	Location of Facility
	wavehulay FL
	,

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

MFFICE

3,	Gender: Age:	Male Under 25	Female 25-34	35 -44	4 5- 5 4	55 and over
Há	noke?	r/pollen allergies?				L lYi

K No es 28 Have skin allergies/dermatitis? Yes Have a cold/flu? Yes Have sinus problems? Yes Have other allergies? Yes Wear contact lenses? Yes Nο Operate video display terminals? Yes Nο Take medication for asthma, allergies sinus lung or immune problems? Yes

Do any of your work activities produce dust or odor? Describe:

Office characteristics:

Number of persons sharing same room/work area ----- Number of windows in room/work area--0/2

Please rate adequacy of your workspace (i.e. desk space, size of work area)

Poor Average Excellent 2

Please rate room temperature:

Poor Average Excellent

How many years or months have you worked: In this room/area?2 In this building?

8. List symptoms you have experienced in this building. More than one answer may apply (for example, headaches may occur frequently, and improve on vecation.). When do these symptoms occur?

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

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?

Dust, or mold in the walls or ceiling.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)
Date: 4/20/11
1. Location of Facility
Navbula, FI.
2. Area or room where you spend the most time in the building:
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 a cold #1/2 Yes Yes
Have sinus problems?
Wear contact lenses?
Uperate video display terminals?
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 I 2 3 4 5
Please rate room temperature:
Poor Average Excellent 5
7. How many years or months have you worked: In this room/area? In this building?
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?
No Ne Have you seen a doctor for any or all of these symptoms? Yes (€)
<u> </u>
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?
dust and HVAC System

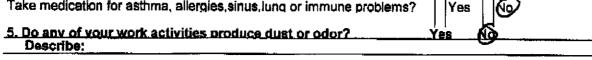
Thank you very much for your cooperation.

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE Indoor Air Quality Survey (NO NAMES)

1. Location of Facility Wanchula, FL

2.	Area or room	where you s	pend the most	time in the bu	uilding: عرب	oly, Valt
	Gender: Age:	\sim	Female 28-34	35-44	45-54	55 and over

4. Do you:
Smoke?
Have hav fever/pollen allergies?
Have skin allergies/dermatitis?
Have a cold/fiu?
Have sinus problems?
Have other allergies?
Wear contact lenses?
Operate video display terminais?
Take medication for asthma, allergies, sinus, lung or immune problems?
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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 I (2) 3 4 5

7. How many years or months have you worked: In this room/area? ___in this building? ___

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?

/acc of maintainer of A/c, dust and mold:

Yes Yes Yes Yes Yes Yes Yes

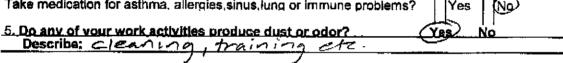
OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE Indoor Air Quality Survey (NO NAMES)

Location of Facility
 WAVCHVLA, FL. 33873

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 hav fever/pollen allergies?
Have skin allergies/dermatitis?
Have a cold/fju?
Have sinus problems?
Have other allergies?
Wear contact lenses?
Operate video display terminals?
Take medication for asthma, allergies, sinus, lung or immune problems?



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 5

Please rate room temperature:

Poor Average Excellent 5

7. How many years or months have you worked: In this room/area? In this building?

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?

Iack of disinfecting or cleaning.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

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	LOCATION/CODE AA OPERATION/CODE Drill Hall/Vault Lead Wipe Sampling														
SURVEY DATE: 04/19/11, Evaluator: Non-															
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1	HOT SURFACES	/ D	ISPOSAB	BLE										1	
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ULL FACE SHEILD	X/X	EARPLUGS	X/	fcOLD WEATHER CLOTI	HING 1/	Тн	ARD HATS		1,
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^{1.} Firing range converted to weapons vault & Storage..

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ACID		RLINE											/
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HOT SURFACES NBC AGENTS		ISPOSAE Jel Faci		RIFYING		 		- 					/
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(CANAL CAPS

FULL FACE SHEILD /	EARPLUGS /	COLD WEATHER CLOTH	ING /		RD HATS		1
CHEMICAL/SAFETY /	HELMETS /	COVERALLS	/	-M	PERMEABLE	BOOTS	1
AFETY/IMPACT / ÆLDING HELMET /	MUFFS / dUFF/EARPLUG COMBO /	FULL BODY SUIT HEAT REFELECTIVE VE	ST/SUIT /	54	EETY/CONG	NDUCTIVE SHOES	1/-
LEDING HILLING 1	MFF/EARPLUG W/TIME LIMIT /	SAFETY BELT/HARNESS	3113011 2	3/1	FETT/NGN-CO	NUUCTIVE SHUES	1,
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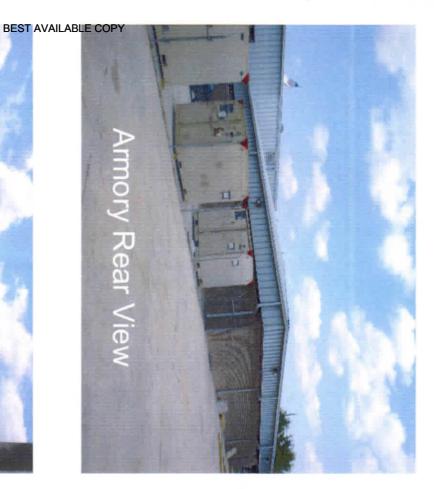
^{1.} The lighting is very good in offices and shop.

ARLOC 22000		2	Oth Sp	ATION: National ecial Forces G 33873	Guard Armory, roup, 450 Roo	Company C, leo Drive, W	3 rd Battalion, auchula,			
LOCATION/CODE			20		OPER	ATION/Auto	Maintenance/	SPC		
SURVEY DATE: 19/04/	/11 Eva	luator	Non-	СНС	М					
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TELEPHONE . (863)773-0335		UNI	T/ORG	ARNIZATION	RAC 3			HRS/I	UENCY (hrs/day DAY mes per year	
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OIL	1	1/2 FACE	AIR PUR	RIFYING						/
SOLVENTS SURGICAL GLOVES	-		AIR PUR							/
EYES/FACE HEMICAL SPLASH	R/U	CANAL	HEAF CAPS	RING I	R/U / JAPRONS	BODY	R/U 1	OLD WEAT	HEAD/FIT THER BOOTS/HATS	R/U

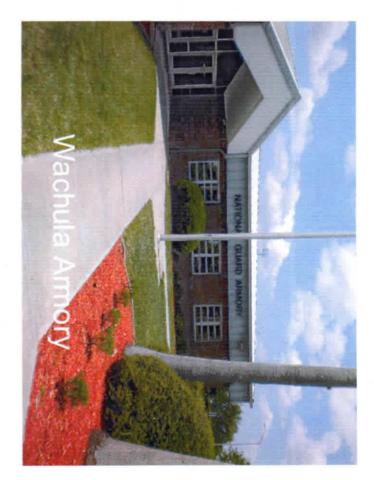
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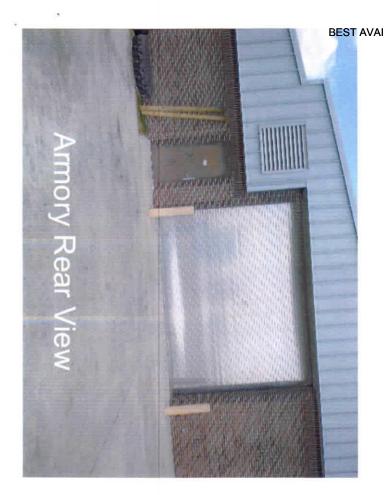


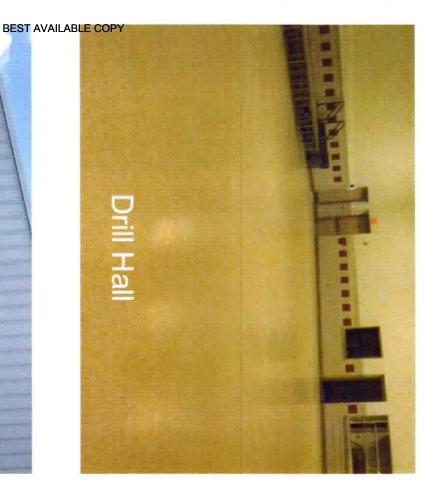


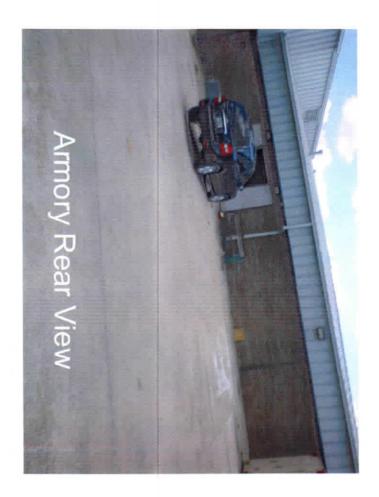


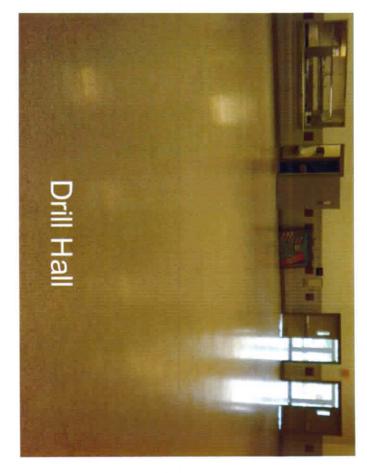


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 977 of 1021

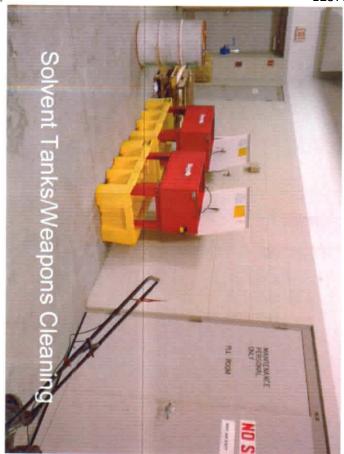






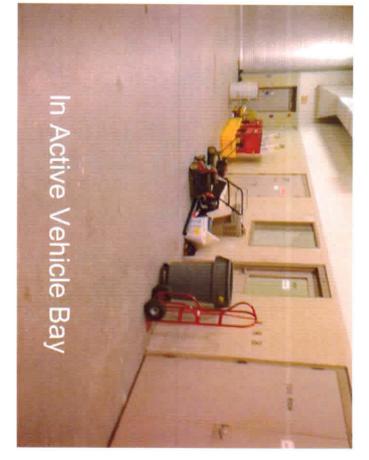


FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 978 of 1021









FOIA Requested Record #J-15-0085 (FL) Released by National Guard Bureau Page 979 of 1021

REFERENCES BEST AVAILABLE COPY

- 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.
- 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 Piring 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.
- Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- 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-Readiness NCO, 450 Rodeo Drive, Wauchula, Florida 33873.

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

References.

Non-Responsive 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.
- Non-Responsive Regional Industrial Hygienist, ARNG-IHS, 1-800-362-0262 OR COMMERCIAL (404) 559-4174.



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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- 1	Personal Protection Equipment	Page	5
	Recommendations		

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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 Ouestionnaire.

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 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.

Page 2

Samples were placed in a sealed plastic bag and sent for analysis to Prairie Analytical Laboratory (AIHA Accredited Laboratory). Illumination reading 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 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.

Page 3

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:

AREA	READING	IN	FOOT-CANDLES
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

- 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.
- Consider providing awareness training, on a state wide basis, for all employees who spend a great deal of time at a computer work station.
- 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

APPENDIX B

LABORATORY CHAIN OF CUSTODY

Chain of Custody Recor

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

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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 into@prairieanalytical.com

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Contact Ferson	
Sample Description Verbeitig Companies Companies (10 Characters Only) Code	

Special Instructions:

Type of Container 1 Size of Container

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O - Other (Specify)

3 M = Matrix Code

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APPENDIX C

LABORATORY ANALYTICAL RESULTS

Prairie Analytical Systems, Inc.

METALS ANALYSIS

Lead

Date: 09-Apr-04

Hinchco 0403184 CLIENT: Lab Order: Wachula Armory Project: Collection Date: 3/24/2004 12:44:00 PM Lab ID: 0403184-001 Matrix: WIPE Client Sample ID: 04-00W (blank) Limit Qual Units DF Date Analyzed Result Analyses Analyst: MCL N7082 (N7082) **METALS ANALYSIS** μg/ft² 4/3/2004 11:16:00 AM 10 U 5.00 Lead Collection Date: 3/24/2004 12:55:00 PM 0403184-002 Lab ID: Matrix: WIPE Client Sample ID: 04-01W Limit Qual Units DF Date Analyzed Result Analyses Analyst: MCL N7082 (N7082)METALS ANALYSIS 4/3/2004 11:24:00 AM 10 μg/ft² 16.9 5.00 Lead Collection Date: 3/24/2004 12:57:00 PM 0403184-003 Lab ID: Matrix: WIPE Client Sample ID: 04-02W DF Date Analyzed Limit Qual Units Result Analyses Analyst: MCL N7082 (N7082)METALS ANALYSIS µg/ft² 4/3/2004 11:31:00 AM 10 5.00 9.56 Lead Collection Date: 3/24/2004 1:00:00 PM 0403184-004 Lab ID: Matrix: WIPE 04-03W Client Sample ID: Date Analyzed Limit Qual Units DF Result Analyses (N7082) Analyst: MCL N7082 METALS ANALYSIS μg/ft² 4/3/2004 11:39:00 AM 10 14.3 5.00 Lead Collection Date: 3/24/2004 1:05:00 PM 0403184-005 Lab ID: Matrix: WIPE Client Sample ID: 04-04W DF Date Analyzed Limit Qual Units Result Analyses Analyst: MCL N7082 (N7082)METALS ANALYSIS 4/3/2004 12:08:00 PM μg/ft² 10 18.9 5.00 Lead Collection Date: 3/24/2004 1:07:00 PM 0403184-006 Lab ID: Matrix: WIPE Client Sample ID: 04-05W Date Analyzed Limit Qual Units DF Result Analyses



5.00

N7082

(N7082)

μg/ft²

10

Analyst: MCL

4/3/2004 12:16:00 PM

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Prairie Analytical Systems, Inc.

Date: 09-Apr-04

CLIENT: Project:

Wachula Armory

Hinchco

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

METALS ANALYSIS

Lead

N7082 6.11 5.00

(N7082) µg/ft²

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Analyst: MCL 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

Client Sample ID: 04-08W

Client Sample ID: 04-09W

Limit Qual Units

Matrix: WIPE DF

Date Analyzed

METALS ANALYSIS

Lead

Analyses

Result

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N7082

(N7082)

Analyst: MCL

Lab ID:

0403184-009

5.00 µg/ft²

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Analyses

Result Limit Qual Units

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Date Analyzed

METALS ANALYSIS Lead

0403184-010

N7082 5.00

(N7082) μg/ft²

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Collection Date: 3/24/2004 1:47:00 PM

DF

Analyst: MCL 4/3/2004 12:39:00 PM

Lab ID:

Matrix: WIPE

Date Analyzed

METALS ANALYSIS

Result

Result

U

Limit Qual Units

DF

Lead

Analyses

N7082 5.00

(N7082) μg/ft²

10

Analyst: MCL 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

Limit Qual Units

Matrix: WIPE

METALS ANALYSIS

N7082 5.00

DF

Date Analyzed

Lead

Analyses

(N7082)µg/ft²

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Analyst: MCL 4/3/2004 12:54:00 PM

Lab ID:

Analyses

Lead

0403184-012

(N7082)

Collection Date: 3/24/2004 1:51:00 PM

Client Sample ID: 04-11W

Result

U

Limit Qual Units

DF

Matrix: WIPE

Date Analyzed

METALS ANALYSIS

5.75

N7082

5.00

µg/ft²

10

Analyst: MCL 4/3/2004 1:01:00 PM

Page 2 of 4

Date: 09-Apr-04

DF

DF

DF

Date Analyzed

Date Analyzed

Date Analyzed

Prairie Analytical Systems, Inc.

Analyses

Analyses

Analyses

CLIENT: 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

METALS ANALYSIS N7082 (N7082) Analyst: MCL 5.00 μg/ft² 4/3/2004 1:09:00 PM Lead U 10

Limit Qual Units

Limit Qual Units

Limit Qual Units

Lab ID: 0403184-014 Collection Date: 3/24/2004 1:58:00 PM

Client Sample ID: 04-13W Matrix: WIPE Result

Result

N7082 (N7082) METALS ANALYSIS Analyst: MCL

4/3/2004 2:23:00 PM U 5.00 μg/ft² 10 Lead Lab ID: 0403184-015 Collection Date: 3/24/2004 2:00:00 PM

Matrix: WIPE Client Sample ID: 04-14W

Limit Qual Units DF Result Date Analyzed Analyses

METALS ANALYSIS N7082 (N7082) Analyst: MCL 10 4/3/2004 2:30:00 PM 9.59 5.00 μg/ft² Lead

Collection Date: 3/24/2004 2:05:00 PM Lab ID: 0403184-016

Matrix: WIPE Client Sample ID: 04-15W Result

(N7082) Analyst: MCL N7082 METALS ANALYSIS 4/3/2004 2:38:00 PM µg/ft² 10 5.00 Lead 6.75

Collection Date: 3/24/2004 2:07:00 PM Lab ID: 0403184-017

Matrix: WIPE Client Sample ID: 04-16W

DF Limit Qual Units Date Analyzed Analyses Result

Analyst: MCL **METALS ANALYSIS** N7082 (N7082)µg/ft³ 10 4/3/2004 2:45:00 PM Lead 12.8 5.00

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.
- \boldsymbol{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

Foot-Candles

WANCHULA, FLORIDA

MOTOR POOL

			- I
OFF.	79 36	78 x 84	
67 47 47 20	CL Room CL Room 2 2	RIFLE RANGE &	
20 Startage	EXIT DRILL BALL	SUBSILE TO SO	
TOCKES &	20	2	
SW S/RR.	DE DEF.	87,	

APPENDIX E

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

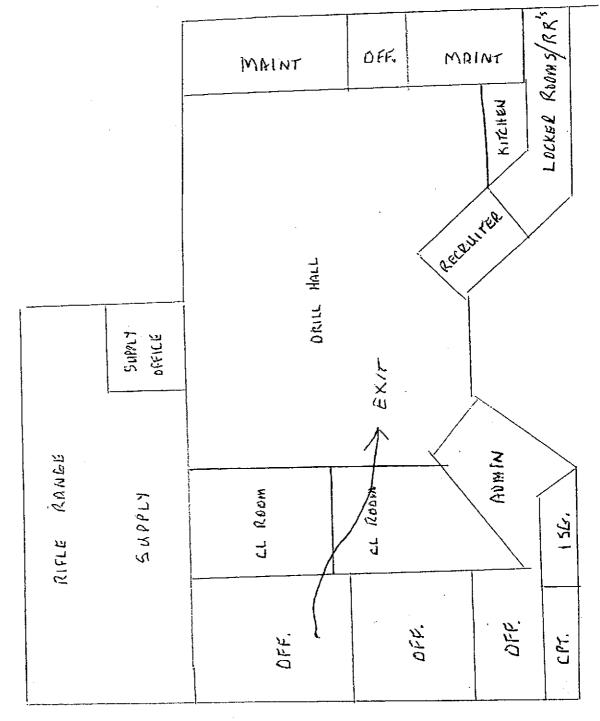
Area or rooms where you spend the most		lding:	 	
Does any of your work activities produce Describe:				Ten
	<u> </u>			
Gender: Male Remale	##			
Age: Under 25 25-34 35-44 45-54 Do you:	55 and over			
Smoke	v	(N)		
Have fever/pollen allergies	(v)	N		
Have skin allergies/dermatitis	Ÿ	(N)		
Have a cold/flu	Y	N)		
Have sinus problems	Y	$\widetilde{\mathbf{W}}$		
Have other allergies	(L)	Ň		•
Wear contact lenses	Y	W		
Operate video display terminals (compu	Y Y Y Y ters)	2 2 8 2 8 2 2 1		
Operate photocopiers 10% of the time	OŽ.			
Use other office machines	(N		
Specify:				· · · · · · · · · · · · · · · · · · ·
Currently take any medications? Reason:	Y	Th)		·
Office Characteristics:		rea	·	
Number of windows in room/w				
Do windows open?	(X)	N		
Date adagment of much				
Rate adequacy of work space per perso				
Poor Average 1 2 3 4	Excellent 5			
	3			•
Rate room temperature:	,			
	Excellent		•	
Poor Average	5	•		• • •
Poor Average 1 2 3 4	ခ			
-		(N)		
1 2 3 4 Are there smokers in your area?	Y			
1 2 3		N		٠.

APPENDIX F

ARMORY FLOOR PLAN AND PHOTOGRAPHS

NATIONAL JEHARD ARMORY WANCH ULA, FLORIDA

MOTOR POOL



ARMORY PHOTOGRAPHS



Sample #1 Indoor Firing Range Behind Plenum

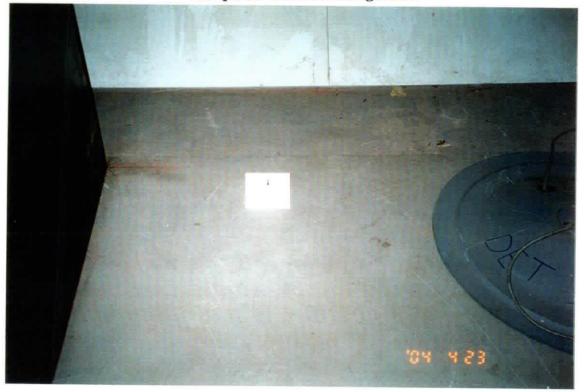


Sample #2 Plenum Wall

ARMORY PHOTOGRAPHS



Sample #3 Middle of Range Floor



Sample #4 In Front of Trap

Sample #5 On Front of Backstop

Photo Not Available

Sample #6 Kitchen, Top of Ice Maker

Photo Not Available

Sample #7 Kitchen Upper Shelf



Sample #8 Drill Floor Northeast Corner



Sample #9 Drill Floor Northwest Corner



Sample #10 Drill Floor Center



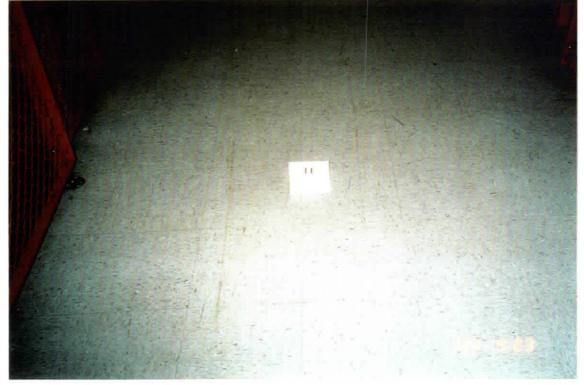
Sample #11 Drill Floor Southeast Corner



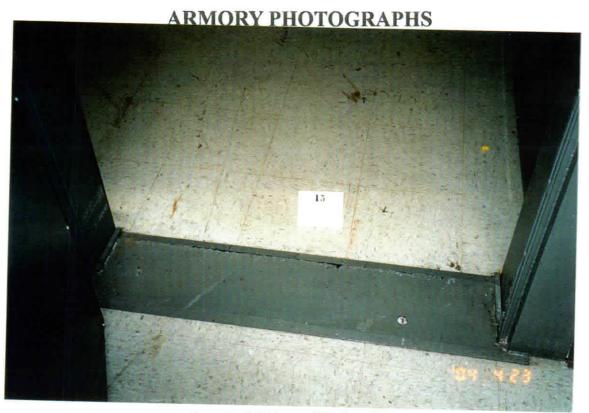
Sample #12 Drill Floor Southwest Corner



Sample #13 Supply Room, at Door



Sample #14 Supply Room, Middle Floor



Sample #15 Arms Vault at Door



Sample #16 Arms Vault Middle of Floor



Photograph of Drill Floor

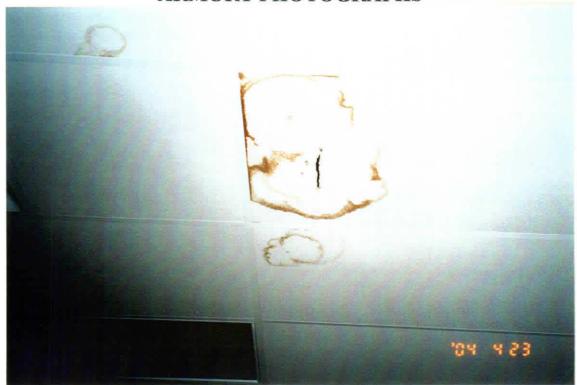


Photograph of Unit at Wachula

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".)

OVA EDITION E	-					•		•
SYMPTOM:								
Difficulty in concentrating	• 0	F	(N/A)	CITAT	*****			
Aching joints		F	N/A	SW SW	PW	•		
Muscle twitching	8	ØĎ.	N/A	SW	PW PW			
Back pain	ത്	F	N/A	SW	PW			
Hearing problems	Ϋ́Ó	F	N/A	SW	. PW			
Dizziness	ő	· F	(N/A)	SW	PW			
Dry, flaking skin	ଚ୍ଚତ୍ରପ୍ରଥିବ ୦ ୦ ଚ୍ଚତ	F	MA	SW	PW			
Discolored skin	Ö	F	(N/A)	sw	PW			-
Skin irritation	(D)	F	N/A	SW	PW			
Itching		F	(N/A)	SW	PW			
Heartburn	0	F	N/A)	SW	PW			
Nausca	0	F	N/A	SW	PW			
Noticeable odors	o@ ∂ ∘∘	F F F F	N/A	SW	PW		1	
Sinus congestion	@	F	N/A	SW	PW			
Succeing	(O)	<u>F</u>	N/A	SW	PW			
High stress levels	Ō	Œ	N/A	SW	PW			•
Chest tightness	Q	F	(N/A)	sw	PW			
Eye irritation	00	F	N/A	SW	PW	-	• '	
Fainting Hyperventilation	Ŏ	F	(AVA)	SW	PW			
Problems with contacts	. 0	F	` ∑ /A	SW	PW			
Headache) (A) (A)	F F	N/A	SW	PW			4
Fatigue/drowsiness	₩.	F	N/A	SW	P.W			
Temperature too hot	8	F F	N/A (N/A)	SW SW	PW PW			
Temperature too cold	ŏ	F	N/A	SW SW	PW			
Other (specify):	•	•	IVIA	24	LW			
Some CAL	LEF 50	<u> </u>	mum	4855	Sacra	67 wg 6	-	wai.
_ :		ence		٠٩٠٤	2000	time.	O DOLE !	N TW
	•							
Have you seen a doctor for any or all	of these symp	toms?	Y	\mathfrak{C}	N/A			
When January 1 Co. of		_			•			
When do you experience relief from t	nese sympton	os?	•				•	
TIME OF DAY: Morning After	moon Eve	ning	DAYO	F WEEK	: S M	TW	TF	
		and a	DATO	1 MEER	. برا د	. 1 AA	i r	·
MONTH: J F M A M	J J A	S O N	D SEA	ASON:	Spring	Summer	Fall Wi	nter
-			_					
Do symptoms disappear?	Y	•	(N)					
When:								> 6
	<u>uxix i M</u>		5273	ul ti	mor a	<u> 2, 4 he</u>	1091	<u> 00058</u>
Thus been T	11 11 12 12 12 12 12 12 12 12 12 12 12 1	410				 .		
9. In your opinion, what is th	e cause of	any nocei	hla indoor	oir and	lite mechle	ma within	د انسنا بانیاد	!0
	o cause or	any hossi	ore midger	an yua	nrà broom	HIS MITHER	mis omia	mgt
- NOT Sure								
- <u></u>				·	<u>.</u>	·		
10. COMMENTS: Please tal	e this opp	ortunity to	commen	t on any	factors ve	m consider	to be im	nortant
concerning the quality of your	work envi	conment.				,	w oo m	portant
· · · · · · · · · · · · · · · · · · ·	TOTAL CHITA	xommont.			•		,	
· · · · · · · · · · · · · · · · · · ·	<u> </u>							
· · · · · · · · · · · · · · · · · · ·								
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		·					· · ·	

THANK YOU VERY MUCH FOR YOUR COOPERATION WITH THIS SURVEY.



Photograph of Water Damage



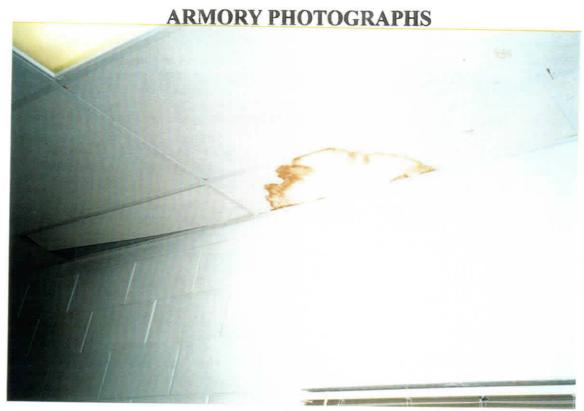
Photograph of Water Damage



Photograph of Water Damage



Photograph of Water Damage



Photograph of Water Damage



Photograph of Water Damage

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