



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

ARNG-CSG-P

15 July 2014

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: MAJ [REDACTED]
[REDACTED] 2900 North Broadway, Ada, Oklahoma 74280

SUBJECT: Industrial Hygiene Baseline Survey of the Ada Armory.

1. References.

- a. Report submitted 7 July 2014, Industrial Hygiene survey, LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] of the Occupational Safety and Health Office, an attempted Industrial Hygiene Survey was conducted at the Ada Armory.
- b. The survey was conducted by Ms. [REDACTED] of LAE Consulting.

3. Findings. All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS at **Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Mrs. **Non-Responsive** Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

LAE CONSULTING

1218 Scattered Pines Court, Severn, MD, 21144

Tel: (410) 551-2717

9 July 2014

MEMORANDUM FOR: Ada Armory, ATTN: Major **Non-Responsive** 2900 North Broadway,
Ada, Oklahoma 74280

SUBJECT: Industrial Hygiene Survey of Ada 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, 25 May 2007.
- c. AR 385-10, 14 June 2010, Army Safety Program.
- d. Department of the Army Pamphlet, 40- 503, 2 April 2013, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. IES Lighting Handbook, Application 10th Edition, Illumination Engineering Society of North America.
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI's), 2014, ACGIH, Cincinnati, Ohio.
- h. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

SUBJECT: Industrial Hygiene Survey of Ada Armory

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Ada Armory. The facility was visually examined and personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, Ms. **Non-Responsive** of LAE Consulting conducted an industrial hygiene survey at the Ada Armory on 25 June 2014.

4. Facility Description. The facility was renovated in 2013-2014. A new unit occupied the building March 2014. The building is one story structure housing offices, classrooms, two supply rooms, and gym and break room. The majority of the floors is stained and sealed concrete except in classrooms, distant learning center, the conference room and commanders offices.

5. Instrumentation. All instrumentation was operated according to manufacture's recommendations.

6. Findings.

a. Two supply rooms are located off the drill hall floor. A vaults store weapons. Activity in the vault was not observed. Weapons' cleaning had not been performed by this unit since occupying the building. Cleaning weapons within the building can release Lead dust into the building through the heating, ventilation and air conditioning system which can contaminate other areas within the building.

b. Illumination was surveyed throughout the Center. A copy of the illumination measurements can be found at the enclosure of the report. Lighting in administrative areas should be between 50-75 foot-candles (FC).

c. A drill hall is located at lower floor of the building. The drill hall serves as gather location for the National Guard units.

d. the Armory has a full kitchen (mess). There are no food service units. Food is consumed off premises during unit Drills. The kitchen was last used eight years ago.

SUBJECT: Industrial Hygiene Survey of Ada Armory

c. A locker room and gym now occupy the former indoor firing range. The locker room is the area which was firing line and entrance and the gym near at the mirrored wall was the backstop and pit. A technician who was part of the task of removing and cleaning the range stated the range was disassembled and cleaned around 1988. A contract remediation company set-up decontamination stations (change rooms) and provided Tyvek suits, respirators, and remediation equipment. National Guard soldiers of the Armory performed the remediation under the instruction of the contractor. The soldier stated that the sand was removed and disposed of through the remediation company. The floors were washed and the pit and a floor drain was filled with concrete. A small of sand was noticed along the wall near the sand and was not seen in other areas of the gym floor. The floor is covered with a heavy duty rubber carpet. There is no baseboard or coving along the wall. The sand was collected and analyzed for Lead. Lead was not detected in the sample. A copy of the Laboratory results can be found at the enclosure of the report. Fourteen Lead wipe samples and one blank was collected at various locations in the locker room, gym, drill hall, and kitchen. Lead wipe samples were obtained to observe if additional housekeeping measures need to be established. All Lead wipe surface samples are below the EPA standard of $40 \mu\text{g}/\text{ft}^2$ and below the National Guard standard $200 \mu\text{g}/\text{ft}^2$ for indoor firing range. The table below indicates sample numbers and locations.

Table 1

Sample #	Sample Location	Sample Results
Pb-Blank-Ada	BLANK	BRL
Pb-01-Ada	Down range at left wall 6 feet up	BRL
Pb-02-Ada	Down range at right wall 4 feet up	BRL
Pb-03-Ada	Top of TV	BRL
Pb-04-Ada	Floor outside gym 2 feet outside door	BRL
Pb-05-Ada	Floor 2 feet into locker room door	BRL
Pb-06-Ada	Center of drill hall floor	BRL
Pb-07-Ada	Within cage 27	BRL
Pb-08-Ada	Floor center in front of cage 48	BRL
Pb-09-Ada	Within cage 41	BRL
Pb-10-Ada	Floor 4 feet in front of fire room	BRL
Pb-11-Ada	Stage floor	BRL
Pb-12-Ada	Top of cabinet in the Kitchen	BRL
Pb-13-Ada	Center of drill hall floor	BRL
Pb-14-Ada	Floor in gym residual of sand near left wall by mirror	BRL

*BRL = below reporting limit

f. Water was noticed on the floor around a pipe of the fire suppression system. The area is located inside the fire suppression closet in the locker room. Water stains were noticed on the acoustic ceiling near entrance to the locker room. The construction contractor stated that the ceiling was installed during the renovation and not part of the original indoor firing range.

SUBJECT: Industrial Hygiene Survey of Ada Armory

7. Technical Assistance. For technical assistance, regarding information found in this report, please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, **Non-Responsive**

Non-Responsive

LAE Consulting

- 4 Encl
- 1. Illumination Survey
- 2. HHIM
- 3. Photos
- 4. Laboratory results

CF: State Occupational Health Office, ATTN: **Non-Responsive**

State Safety Office, ATTN: **Non-Responsive**

LAE Consulting
1218 Scattered Pine Court, Severn, Maryland 21144

Page 4

SUBJECT: Industrial Hygiene Survey of Ada Armory

8. Recommendations.

a. Do not clean weapons within the building. Weapons cleaning must be performed outdoors of the facility or at the range. Do not use tables that may be used for food consumption to clean weapons. Develop and implement a written policy for weapons cleaning procedures. Contact the state Occupational Health office and the state Environmental office for assistance in developing guidelines. Develop and implement written procedures for the handling of hazardous materials after unit Drills. (RAC 3)

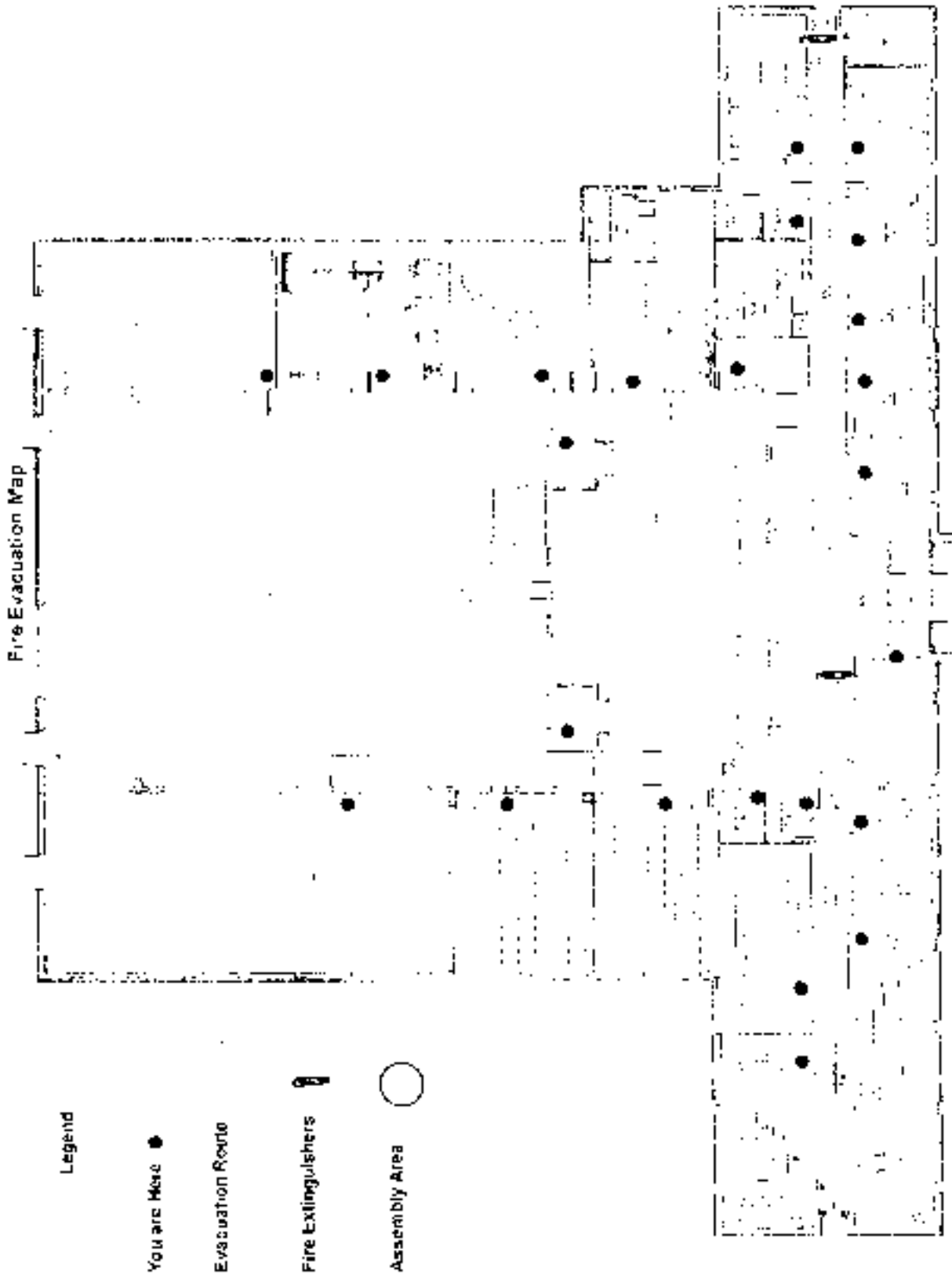
b. Purchase desk lamps for administrative areas below 50 foot-candles. If facility illumination becomes an issue contact the state Occupational health office for further evaluation. (RAC 4)

c. No recommendations.

d. No recommendations.

e. Recommend the regional Industrial Hygiene office perform Lead wipe sampling in 10 years. (RAC 4)

f. Contact the state Facility Engineers inspect and repair the source of the water leak. Monitor the ceiling tiles for water stains which maybe indicative to water intrusions from the roof. (RAC 4)



ADA Readiness Center

Non-Responsive



Ada Armory, Ada, Oklahoma
Lighting Survey

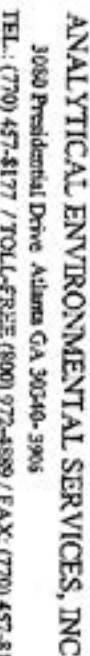
Location	Actual Foot-candles	Required Foot-candles
Room 115- Gym	22.4-36.0	20-30
Rm 114- Breakroom	19.7-61.0	10-15
Rm 110- Classroom	58.0-67.0	50-75
Rm 112- 1245 th Transp.		
1SG Non-Responsive	39.2	50-75
SSG	30.1	50-75
2LT	44.3	50-75
2LT	39.9	50-75
Rm 112B-Distant Learning	25.5-34.4	50-75
Rm 112C-S3/SPO	21.6-24.3	50-75
Rm 113		
SGT Non-Responsive	15.2-19.2	50-75
SGT	27.2	50-75
SSG	14.2	50-75
Recruiter	38.5	50-75
Rm 102	44.0/57.6	50-75
Non-Responsive	36.6	50-75
SGT Non-Responsive	16.8	50-75
CPT	46.1	50-75
Rm 103- Copier Room	64.9	50-75
Rm 108- Conference rm	37.9-46.5	50-75
Rm 106	43.1	50-75

* Bold indicates not within standards

Ada Armory, Ada, Oklahoma Lighting Survey

Location	Actual Foot-candles	Required Foot-candles
Room 115- Gym	22.4-36.0	20-30
Rm 114- Breakroom	19.7-61.0	10-15
Rm 110- Classroom	58.0-67.0	50-75
Rm 112- 1245 th Transp.		
1SG Non-Responsive	39.2	50-75
SSG [REDACTED]	30.1	50-75
2LT [REDACTED]	44.3	50-75
2LT [REDACTED]	39.9	50-75
Rm 112B-Distant Learning	25.5-34.4	50-75
Rm 112C-S3/SPO	21.6-24.3	50-75
Rm 113		
SGT Non-Responsive	15.2-19.2	50-75
SGT [REDACTED]	27.2	50-75
SSG [REDACTED]	14.2	50-75
Recruiter	38.5	50-75
Rm 102	44.0/57.6	50-75
Non-Responsive	36.6	50-75
SGT Non-Responsive	16.8	50-75
CPT [REDACTED]	46.1	50-75
Rm 103- Copier Room	64.9	50-75
Rm 108- Conference rm	37.9-46.5	50-75
Rm 106	43.1	50-75

* Bold indicates not within standards



TEL: (770) 457-8177 / TOLL-FREE: (800) 972-4889 / FAX: (770) 457-8188

LAE Consulting

ANALYSIS REQUESTED

Date: 26 June 14 Page 1 of 1

Work Order: 1426206

LABORATORY: LAE Consulting		FACILITY: [REDACTED]		ANALYSIS REQUESTED		Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.	
PROJECT #	[REDACTED]	DATE/TIME	[REDACTED]	DATE/TIME	[REDACTED]	REMARKS	
SAMPLE ID		DATE	TIME	DATE	TIME		
1	Probe-1	25 JUN14					
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
ANALYSIS REQUESTED		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SIGNATURE		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT NAME		DATE/TIME		DATE/TIME		REMARKS	
Ada Armory, Ada, OK		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME		REMARKS	
results in ppm		[REDACTED]		[REDACTED]		[REDACTED]	
SHIPMENT METHOD		DATE/TIME		DATE/TIME		REMARKS	
OUT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
IN / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
CLIENT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
GREYHOUND / OTHER		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT #		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME		REMARKS	
results in ppm		[REDACTED]		[REDACTED]		[REDACTED]	
SHIPMENT METHOD		DATE/TIME		DATE/TIME		REMARKS	
OUT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
IN / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
CLIENT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
GREYHOUND / OTHER		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT #		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME		REMARKS	
results in ppm		[REDACTED]		[REDACTED]		[REDACTED]	
SHIPMENT METHOD		DATE/TIME		DATE/TIME		REMARKS	
OUT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
IN / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
CLIENT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
GREYHOUND / OTHER		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT #		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME		REMARKS	
results in ppm		[REDACTED]		[REDACTED]		[REDACTED]	
SHIPMENT METHOD		DATE/TIME		DATE/TIME		REMARKS	
OUT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
IN / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
CLIENT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
GREYHOUND / OTHER		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT #		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME		REMARKS	
results in ppm		[REDACTED]		[REDACTED]		[REDACTED]	
SHIPMENT METHOD		DATE/TIME		DATE/TIME		REMARKS	
OUT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
IN / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
CLIENT / / VIA		[REDACTED]		[REDACTED]		[REDACTED]	
GREYHOUND / OTHER		[REDACTED]		[REDACTED]		[REDACTED]	
PROJECT #		DATE/TIME		DATE/TIME		REMARKS	
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
SPECIAL INSTRUCTIONS/COMMENTS:		DATE/TIME		DATE/TIME			

DO NOT LIST OR DESCRIBE ANY OTHER ARRANGEMENTS AND MAKE:
 MONOMER CLEGG: A = Air G = Glycerine S = Sodium SO = Soap SW = Sulfuric Water W = Water B = Benzaldehyde
 PRESERVATIVE CODES: H1 = Hydrochloric acid + 1% T = 10% only N = Nitric acid S-I = Sulfuric acid + 1% S-I-1 = Sodium Bisulfite/Metalsol + 1% O = Other (specify) M-A = None

Analytical Environmental Services, Inc.

Date: 8-Jul-11

Lab Order: 1406201
 Client: EAH Consulting
 Project: Ad. Anthony Adams, Co.
 Matrix: Paint
 Date Received: 5/21/2014 10:15:00 AM

TOTAL LEAD IN PAINT (N7082)

PAINT

Laboratory ID	Client Sample ID	Result	Units	Reporting Label	DF	Qual	Date Collected	Date Analyzed	Analyst
1406201-1	Paint-1	0.01	mg/l	0.00014	1		06/25/2014	07/08/2014	JS

Analytical Environmental Services, Inc

Date: 8-Jul-14

Lab Order: 1406062
 Client: LNF Consulting
 Project: ACA Library Ada, OK
 Matrix: Wipe
 Date Received: 6/16/2014 10:45 AM

LEAD ON WIPES (N7082)
 N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1406062-001A	Pb-01-Ada	BRL	ug/g	20	1		06/25/2014	07/07/2014	TA
1406062-002A	Pb-01-Ada	BRL	ug/g	20	1		06/25/2014	07/07/2014	TA
1406062-003A	Pb-02-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-004A	Pb-03-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-005A	Pb-04-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-006A	Pb-05-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-007A	Pb-06-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-008A	Pb-07-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-009A	Pb-08-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-010A	Pb-09-Ada	BRL	ug/g	20	1		06/25/2014	07/07/2014	TA
1406062-011A	Pb-10-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-012A	Pb-11-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-013A	Pb-12-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-014A	Pb-13-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA
1406062-015A	Pb-14-Ada	BRL	ug/g	20			06/25/2014	07/07/2014	TA

Qualifiers: N/A - Not Detected at the Reporting Limit
 - - - - - Sample Amount is the amount of Material Analyzed
 Additional Information: Additional Information:
 6/16/14

Ref: Laboratory Data

ARLOC 410000		INSTALLATION ADA OKLAHOMA ARMORY		BLDG/RM NO. 2900 NORTH BROADWAY ADA, OK 74280	
LOCATION/CODE MN			OPERATION/CODE ADMIN		
SURVEY DATE 25 JUNE 2014		EVALUATOR LAE CONSULTING/LISA A. EVANS			
MACOM/CODE NG		SUBMACOM/CODE		SUPERVISOR MAJ Non-Responsive	
TELEPHONE/DSN NO. 580.436.8406/05/03		UNIT/ORGANIZATION ADA OKLAHOMA ARMORY		RAC 4	FREQUENCY (hrs/day) +8 hrs
NO. CIV(S) 18	NO. MIL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER	

SECTION 2: FACILITY DATA

LAB HOODS	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS	OPEN SURFACE TANKS 0	VENTILATION UNITS

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIVE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	X/X	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
CHEMICAL SPLASH	X/X	CANAL CAPS	/	APRONS	X/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	X/X	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	X/X	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X/	MUFFS	X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	X/X	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	X/
		MUFF/EARPLUG W/TIME LIMIT	/	SAFETY RFLT/HARNES	/		/



View of Ada Armory, located in Ada Oklahoma



Exterior view of Ada Armory



Exterior view of Ada Armory



Exterior view of Ada Armory



Rear view of Ada Armory



View of Ada Armory motorpool



View of Ada Armory Drill Hall

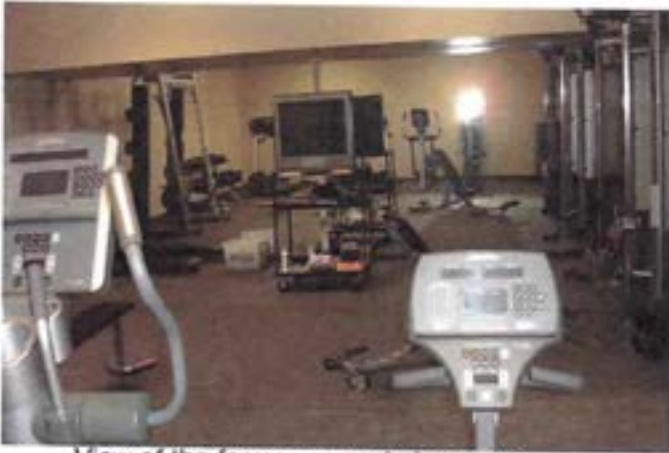




View of the Armory Drill Hall



View of the Armory Breakroom



View of the former range (mirror area was the backstop) converted into a gym



View of the gym



View of the side wall where a shadow of the location of the backstop can still be seen



View of the side wall where a shadow of the location of the backstop can still be seen



View of pain blistering in the drill hall



View of sand located in the drill hall



View of the Locker room which was the former range (firing lines was the near the back wall)



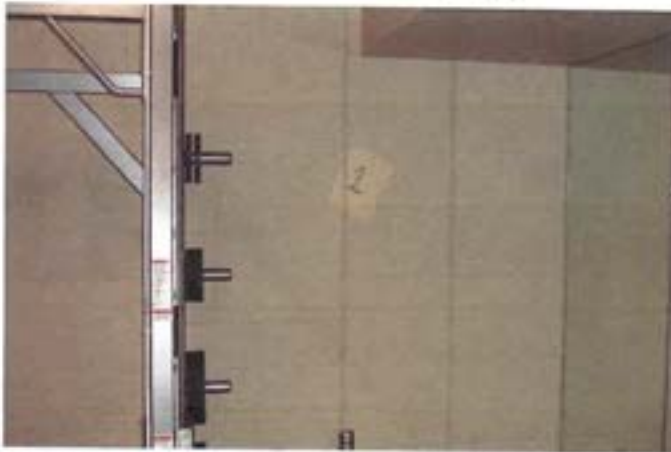
view of the locker room (down range view)



View of the room exhaust located within the fan cover



View of the wall supply air grill located in the locker room



View of Lead wipe sample 1, located on the left wall 6 feet up in the gym



View of Lead wipe sample 2, located on the right wall 4 feet up



View of Lead wipe sample 3, located on top of the TV in the gym





View of Lead wipe sample 4, located on the floor 2 feet outside room 115 (Gym)



View of Lead wipe sample 5, located on the floor 2 feet into room 116 (locker room)



View of Lead wipe sample 6, located on the floor in the center in front of cage 30



View of Lead wipe sample 7, located within cage 27 in the locker room



View of Lead wipe sample 8, located on the floor center in front of cage 48



View of Lead wipe sample 9, located within cage 41 in the locker room



View of Lead wipe sample 10, located on the floor 4 feet in front of fire room



View of Lead wipe sample 11, located on the floor 4 feet in front of fire room



View of Lead wipe sample 12, located on top of cabinet in the kitchen



View of Lead wipe sample 13, located on the center of Drill Hall floor



View of Lead wipe sample 14, located at the source of sand



View of the fire suppression room



View of possible water leak on the floor in the fire suppression room



View of water stain on the acoustic ceiling tile in the locker room



View of Classroom in the Armory



BEST AVAILABLE COPY



View of Transportation units orderly room



View of Transportation units orderly room



View of Distance Learning center



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

NGB-ARS-SEIH

4 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: ISG [Redacted]
Facility Supervisor, Chandler National Guard Armory, 800 West Thunderbird Road,
Chandler, Oklahoma 74834.

SUBJECT: Industrial Hygiene Baseline Survey of the Chandler National Guard Armory.

1. References.

- a. Report submitted 22 May 2013, Industrial Hygiene survey [Redacted]
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
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- j. IES Lighting Handbook, Application Volume, 1981, Illumination Engineering Society of North America.

2. General.

a. At the request of Mrs. [Redacted] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Chandler Armory.

b. The survey was conducted by Mr. [Redacted]

3. Findings. All HHIM field survey forms and 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 the few recommendations made by Mr. [REDACTED] in the attached 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 deficiencies, coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact M. [REDACTED] Non-Responsive Regional Industrial Hygienist, ARNG-IHS, [REDACTED] Non-Responsive OR COMMERCIAL [REDACTED] Non-Responsive

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. [REDACTED]
[REDACTED] Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Oklahoma Army National Guard Safety and Occupational Health Office, ATTN: MAJ [REDACTED]
[REDACTED] Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

CHANDLER ARMORY
800 WEST THUNDERBIRD ROAD
CHANDLER, OK 73834



29 APRIL 2013

MEMORANDUM FOR: 1SG [REDACTED] POC: Chandler Armory; located at 800 West Thunderbird Road
Chandler, OK 74834

SUBJECT: Industrial Hygiene Survey of the National Guard Armory; located at 800 West Thunderbird
Road Chandler, OK 74834

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. NG Pam 420-15, 3 Facilities Engineering November 2006
- e. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- f. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- g. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- h. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- j. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- k. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Page 2

SUBJECT: Industrial Hygiene Survey of the Chandler National Guard Armory; located at 800 West Thunderbird Road Chandler, OK 74834

2. Purpose. The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Chandler National Guard Armory. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, **Non-Responsive** was contracted to conduct the baseline industrial hygiene survey at the National Guard Armory in Chandler, OK. ISG **Non-Responsive** was the POC at the armory.

4. Facility Description. The armory is a one story building which has the following; administrative offices, classrooms, supply areas, a kitchen, weapon vault(s), a drill hall, latrines, conference rooms and an indoor firing range (which has been converted).

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. There were a few ceiling tiles that appeared damaged and stained.



- b) 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 71.7 (DF) and the average humidity was 35.8. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 559.7 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
Weapons Vault HHB	565/68/30/0	Rm 118	706/73/33/0
Weapons Vault G700	451/69/30/0	Rm 112	568/71/34/1
Supply	474/73/36/0	Rm 119	629/70/34/0
Office/ IFR Converted	615/73/35/1	Rooms 101- 111 Avg	562/72/37/0
Gym/ IFR Converted	598/73/40/2	Female Latrine	472/71/40/1
Storage/ IFR Converted	631/72/35/1	Drill Hall	529/72/37/0
Break room	714/70/37/1	Locker Room	469/73/41/0
Male Latrine	409/73/43/0	Rm 114	427/73/35/0
Conference Room	633/75/34/0	Mechanical Room	623/70/34/1

Page 4

- c) Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot candles. Levels were as follows.

Office/Areas/Equipment	Illumination Foot Candles (f/c) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
Weapons Vault HHB	41 50/ 0/ 0	Yes
Weapons Vault G700	21 32/ 0/ 0	Yes
Supply	12/ 47/ 0/ 0	Yes
Office/ IFR Converted	12/ 55/ 0/ 0	Yes
Gym/ IFR Converted	12/ 68/ 0/ 0	No
Storage/ IFR Converted	3/ 17/ 0/ 0	Yes
Break room	4 /76/ 0/ 0	Yes
Male Latrine	6 /40 /0 /0	Yes
Conference Room	6/ 66/ 0/ 0	Yes
Rm 118	3 / 72 / 0/ 0	Yes
Rm 112	4/ 70/ 1/ 0	Yes
Rm 119	2/ 42/ 0/ 0	Yes

Rooms 101- 110 Avg	2/ 38/ 1/ 0	Yes
Female Latrine	6/48/ 0/ 0	Yes
Drill Hall	18 /32 / 6/ 1	Yes
Locker Room	9/ 29/ 0/ 0	Yes
Rm 114	7 / 100/ 1/ 0	Yes
Mechanical Room	1/ 13 / 0/ 0	Yes

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 51 dBA.

Office/Areas/Equipment	Noise dBA	Exceeds Noise 85 dBA Std
Weapons Vault HHB	50	No
Weapons Vault G700	50	No
Supply	50	No
Office/ IFR Converted	50	No
Gym/ IFR Converted	54	No
Storage/ IFR Converted	50	No
Break room	50	No
Male Latrine	50	No
Conference Room	50	No
Rm 118	60	No
Rm 112	50	No
Rm 119	58	No
Rooms 101- 110 Avg	50	No
Female Latrine	50	No
Drill Hall	50	No
Locker Room	50	No
Rm 114	50	No
Mechanical Room	50	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AES Inc. Results of the samples are listed below

Sample Site	Result/Units ug.	Reporting Limits
Vault Floor HHB	80	20
Vault left Wall HHB	BRL	20
Vault Door to HHB	BRL	20
Blank	BRL	20

Supply Floor	BRL	20
Vault Floor G700	BRL	20
Right Wall Vault G700	BRL	20
Vault Door In G700	BRL	20
Floor Outside Vault G700	BRL	20
Vault Door Outside	58	20
IFR Right Wall Office	BRL	20
IFR Left Wall Office	BRL	20
IFR Storage Vent	BRL	20
Drill Hall Floor Center	BRL	20
IFR Gym	21	20
Drill Hall Floor Bay Door	BRL	20

BRL: Not detected at the reporting limit

- f. Asbestos: Insulation around pipes appeared in good condition at the time of the survey. No samples taken.
- g. The flammable cabinet was orderly and the MSDS was accessible.



- h. The converted IFR floor was starting to chip and samples were taken. POC states they were told to not put any supplies or storage items in this area of the IFR.
8. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, **Non-Responsive**

9. Attachments

1. Recommendations
2. Photos
3. Lab Results

Based on interviews with the POC and other personnel as well as observations by [REDACTED] IH Surveying Inc. staff and IAQ measurements, it appears the Chandler Armory was neat and orderly at the time of the survey. The only recommendations are listed below.

- Determine where leaks are coming from, either from the roof, AC duct work or overhead piping. Then replace broken and stained ceiling tiles. Clean all vents annually or as needed. RAC 3
- Numerous areas tested for lead levels came up above the reporting limit for the lab but not over the ARNG standard of 200ug. All areas that showed levels above the 20ug. Can be cleaned and by using normal floor detergent and water. No health risk is present at this time. RAC 4



Weapons vault HHB 1/60th



Vent in converted IFR



Weapons Vault G 700



Office area



Readiness area



New Insulation covering pipes



Remodeled latrines



Storage area



Remodeled latrines



Classroom



Drill Hall



Conference Room



GOV Parking

ANALYTICAL ENVIRONMENTAL SERVICES, INC.



May 02, 2013

Non-Responsive

National Guard Bureau Region-South III
510 Plaza Drive, Suite 1530
College Park GA 30349

TEL: **Non-Responsive**
FAX: **Non-Responsive**

RE: Chandler Armory

Dear **Non-Responsive**

Order No: 1304066

Analytical Environmental Services, Inc. received 16 samples on 4/26/2013 2:50:00 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 07/01/12-06/30/13.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

Non-Responsive

Project Manager

ADDRESS				ANALYSIS REQUESTED						Visit our website www.besantlamb.com to check on the status of your results, place bottle orders, etc.		No. of Containers			
National Guard Bureau Southeast Regional Industrial Hygiene Office 510 Plaza Dr Suite 1530 College Park GA 30349				LEAD											
PHONE:				FAX:				SIGNATURE:				REMARKS			
SAMPLE ID				DATE				TIME				PRESERVATION (See code)			
#				DATE				TIME				PRESERVATION (See code)			
1	001 CHA 0423			4/23									VACUUM FLOOR		
2	002 CHA 0423												VACUUM LEFT HAND		
3	003 CHA 0423												VACUUM RIGHT HAND		
4	004 CHA 0423												BLOCK		
5	005 CHA 0423												SUPPLY PLANK		
6	006 CHA 0423 G700												VACUUM FLOOR		
7	007 CHA 0423 A700												RT WALL VACUUM		
8	008 CHA 0423 G700												VACUUM RIGHT HAND		
9	009 CHA 0423 G700												FLOOR OUTSIDE DOOR		
10	010 CHA 0423 G700												VACUUM DOWN EYE		
11	011 CHA 0423 G700												IFR RT WALL OFFICE		
12	012 CHA 0423												IFR LT WALL OFFICE		
13	013 CHA 0423												IFR STAIRCASE VEST		
14	014 CHA 0423												HALL HALL FIC		
RECEIVED BY: [Redacted]				DATE/TIME: 4/23/13				PROJECT NAME: Chandler Academy				RECEIPT			
RECEIVED BY: [Redacted]				DATE/TIME: 4/23/13				PROJECT #				Total # of Containers			
RECEIVED BY: [Redacted]				DATE/TIME: 4/23/13				SITE ADDRESS: 880 WEST THUNDERBOLTS RD CHANDLER, AZ 84834				Turnaround Time Request: Standard 5 Business Days 2 Business Day Rush Next Business Day Rush Same Day Rush (with req) Other			
OFFICIAL INSTRUCTIONS/COMMENTS: Please email results to [Redacted]				SHIPMENT METHOD: OUT / / VIA: IN / / VIA: COURIER / / OTHER: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> GROUND <input type="checkbox"/>				INVOCES TO: OF DIFFERENT FROM ABOVE				STATS PROGRAM (if any) Small Y/N; Fast Y/N			
DATA PACKAGE: <input type="checkbox"/> CD <input type="checkbox"/> DVD <input type="checkbox"/> IV				QUOTE #				PC#							

SAMPLES RECEIVED AFTER 4PM ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY; IF NO FAT IS MARKED ON CONTAINERS WILL BE PROCESSED WITH STANDARD FAT.

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

— SAMPLES RECEIVED AFTER MON OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF NO TAT IS MARKED ON COCALS WILL PROCEED WITH STANDARD TAT.

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

MAATLX 00018 A = Air QW = Groundwater SW = Surface Water W = Water (Waste) WW = Wastewater ZW = Drinking Water O = Other (specify)
 01 = Soda ash SO = Soda ash N = Nitric acid + ice 3M(1) = Sodium Methylmethanol + 100 Q = Other (specify) NA = None
 H4 = Hydrochloric acid + ice 1 = Ice only N = Nitric acid H4 = Sulfuric acid + ice 3M(1) = Sodium Methylmethanol + 100 Q = Other (specify) NA = None

Analytical Environmental Services, Inc.

Date: 2 May-13

Lab Order: 13040366
 Client: National Guard Bureau Region-South III
 Project: Chandler Armory
 Matrix: Wipe
 Date Received: 4/26/2013 2:50:00 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analysis
13040366-001A	001 CHA 0423	ND	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-002A	002 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-003A	003 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-004A	004 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-005A	005 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-006A	006 CHA 0423 1,700	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-007A	007 CHA 0423 1,700	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-008A	008 CHA 0423 6,700	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-009A	009 CHA 0423 4,700	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-010A	010 CHA 0423 1,700	ND	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-011A	011 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-012A	012 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-013A	013 CHA 0423	ND	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-014A	014 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-015A	015 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA
13040366-016A	016 CHA 0423	BRU	ug, Total	20	1		04/23/2013	04/30/2013	TA

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client National Guard Bureau SoutheastWork Order Number 1304066Checklist completed by Non-Responsive 4/26/13
Signature DateCarrier 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? ^{4/26/13} (4°C ± 2)° Yes ☒ No ☒ 4/26/13Cooler #1 Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or ALPHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

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

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



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

ARNG-CSG-P

13 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SFC [REDACTED]
2500 West Blue Starr Drive, Claremore, Oklahoma 70417.

SUBJECT: Industrial Hygiene Baseline Survey of the Claremore Armory.

1. References.

- a. Report submitted 10 May 2013, Industrial Hygiene survey, [REDACTED] IH Surveying.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Claremore Armory.
- b. The survey was conducted by Mr. [REDACTED] of [REDACTED] IH Surveying.

3. Findings. . All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, **Non-Responsive** OR COMMERCIAL **Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. **Non-Responsive**
Non-Responsive Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Non-Responsive

Claremore Armory, Claremore Oklahoma
19APRIL2012



28 APRIL 2013

MEMORANDUM FOR: SFC [REDACTED] POC: Claremore Armory; located at 2500 West Blue Starr Drive
Claremore, OK 70417

SUBJECT: Industrial Hygiene Survey of the Claremore National Guard Armory; located at 2500 West
Blue Starr Drive Claremore, OK 70417

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- h. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- i. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- j. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Non-Responsive

SUBJECT: Industrial Hygiene Survey of the Claremore National Guard Armory; located at 2500 West Blue Starr Drive Claremore, OK 704172.

2. Purpose: The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Claremore National Guard Armory. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, [Non-Responsive] was contracted to conduct the baseline industrial hygiene survey at the National Guard Armory in Claremore, OK. SFC [Non-Responsive] was the POC at the armory.

4. Facility Description. The armory is a one story building which has the following; administrative offices, classrooms, supply areas, a kitchen, the drill hall, latrines, conference rooms, indoor firing range (which has been converted). The armory appeared to have been recently renovated.

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. All ceiling tiles looked in new condition at the time of the survey, except for one.



- b. 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 70.9 (DF) and the average humidity was 32. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 507 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
RM 101	522/70/32/0	RM 114	472/73/33/0
RM 102	562/73/33/0	RM 115	515/72/33/0
RM 103	547/70/33/0	RM 116	487/70/35/0
CLASSROOM	481/66/33/.1	RM 117	523/70/41/0
RM 105	460/70/35/0	RM 118	529/72/34/ 0
RM 107	487/72/33/0	RM 119	481/73/33/0
RM 108	455/68/33/0	VAULT	626/66/33/0
RM 109	528/70/33/.1	LATRINES	460/72/34/0
RM 110	570/71/34/0	DRILL HALL	497/70/32/0
RM 111	534/73/33/0		

Recommendations: None at this time

- c. Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot-candles. Levels were as follows:

Office/Areas/Equipment	Illumination Foot Candles (ftc) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
RM 101	6/ 100/ 2/ 1	Yes
RM 102	6/ 34/ 0/ 0	Yes
RM 103	6/ 62 /0/ 1	Yes
CLASSROOM	12/ 68/ 0/ 2	Yes
RM 105	6/ 100/ 4/ 0	Yes
RM 107	6/ 60/ 0/ 0	Yes
RM 108	2/ 57/ 2/ 0	Yes
RM 109	2/ 59/ 2/ 0	Yes
RM 110 ELECTRICAL	1/ 22/ 0/ 0	Yes
RM 111	13/32/0/3	Yes
RM 114	5/ 42/ 0/ 1	Yes
RM 115	2/ 48/ 0/ 0	Yes

Non-Responsive

RM 116	2/ 46/ 0/ 0	Yes
RM 117	2/46/ 0/ 0	Yes
RM 118	2/ 48/0/ 0	Yes
RM 119	2/ 46/ 0/ 0	Yes
VAULT	1/40 / 0/ 0	Yes
LATRINES AVG	4/ 36/ 0/ 1	Yes
DRILL HALL	24/38/0/6	Yes

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 50 dBa.

Office/Areas/Equipment	Noise dBa	Exceeds Noise 85 dBa Std
RM 101	49	No
RM 102	50	No
RM 103	50	No
CLASSROOM	48	No
RM 105	50	No
RM 107	50	No
RM 108	50	No
RM 109	50	No
RM 110 ELECTRICAL	52	No
RM 111	50	No
RM 114	50	No
RM 115	50	No
RM 116	50	No
RM 117	50	No
RM 118	52	No
RM 119	50	No
VAULT	50	No
LATRINES AVG	50	No
DRILL HALL	48	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AES Inc. Results of the samples are listed below.

<i>Sample Site</i>	<i>Result/Units ug.</i>	<i>Reporting Limits</i>
VAULT FLOOR	BRL	20
FRONT WALL VAULT	BRL	20
VAULT DOOR IN	BRL	20
RT WALL VAULT	BRL	20
OLD IFR/RM 115	BRL	20

Non-Responsive

OLD IFR/RM 116	BRL	20
BLANK	BRL	20
OLD IFR/RM 117	BRL	20
OLD IFR/RM 118	BRL	20
OLD IFR/RM 119	BRL	20
DRILL HALL FLOOR CTR	BRL	20
DRILL HALL FLOOR BY SUPPLY	BRL	20
DRILL HALL FLOOR BAY DOOR	BRL	20

BRL: Not detected at the reporting limit

Findings: all samples came back below reporting limits

- f. Asbestos: All insulation was in good shape, no fraying or crumbling found at the time of the survey. No samples taken.
- g. The flammable cabinet was maintained. The MSDS binder was easily accessible if needed.



Non-Responsive



Storage/electrical equipment

7. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, **Non-Responsive**

8. Attachments

1. Recommendations
2. Photos
3. Lab Results

Non-Responsive

Based on interviews with the POC and other personnel as well as observations by **Non-Responsive** IH Surveying Inc. staff and IAQ measurements, it appears the Claremore Armory is need of the following recommendations:

- Recommendation: Evaluate tile of the next few months and if stain increases in size, find the cause of the leak and replace the tile **RAC 3**
- Recommendation: For levels not meeting the illumination standard. Lights that are out or broken should be fixed. In other areas supplemental lighting could be used. **RAC 3**

Non-Responsive



Claremore Drill Hall



Classroom



Latrine



Office Space



Custodial closet/door blocked

Non-Responsive



Office space



Break room



Supply/Storage area/old IFR



Supply/Storage area/old IFR



Gym

Non-Responsive



Supply/Storage area/old IFR



Supply Area



Supply/Storage area/old IFR



Weapons Vault

Analytical Environmental Services, Inc.

Date: 5/7/2013

**LEAD ON WIPES (N9100/7082)
N7082**

CLIENT: National Guard Bureau Region South III
Project: Clarence Army
Delivery Order:
PO No:

Lab Order: 1304Q80
Date Received: 4/26/2013 2:50 PM
Matrix: Wipe

Laboratory ID	Client Sample ID	Results	Units	Report Limit	DF	Date Collected	Date Analyzed	Analyst
1304Q80-001A	001CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-002A	002CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-003A	003CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-004A	004CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-005A	005CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-006A	006CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-007A	007CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-008A	008CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-009A	009CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-010A	010CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-011A	011CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-012A	012CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA
1304Q80-013A	013CLA 0419	BRL	ug. Total	20	1	4/19/2013	5/1/2013	TAA

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

Results are blank corrected where applicable

Page 1 of 1



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

ARNG-CSG-P

October 8, 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: MAJ [REDACTED]
[REDACTED] Executive Officer, Durant Readiness Center, 99 Waldron Road, Durant,
Oklahoma 74701.

SUBJECT: Industrial Hygiene Baseline Survey of the Durant Readiness Center.

1. References.

- a. Report submitted 8 October 2013, Industrial Hygiene survey, Pinnacle III, [REDACTED]
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Durant Readiness Center.

b. The survey was conducted by Mr. [REDACTED]

3. Findings. All HHIM field survey forms and 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 by Mr. [REDACTED] in the attached 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 deficiencies, coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact M. [REDACTED] Regional Industrial Hygienist, ARNG-JHS, [REDACTED] OR [REDACTED]

Non-Responsive
COMMERCIAL

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. [REDACTED]
[REDACTED] Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City,
OK 73179.

Oklahoma Army National Guard Safety and Occupational Health Office, ATTN: MAJ [REDACTED]
[REDACTED] Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011,
Oklahoma City, OK 73179.

Oklahoma Army National Guard CSMS/SMMO, ATTN: LTC [REDACTED] 3745 Thunderbird
Street, Norman, OK 73069

BEST AVAILABLE COPY
Initial Baseline Industrial Hygiene Survey
7 August, 2013
OK Army National Guard
Durant Readiness Center
99 Waldron Rd.
Durant, OK 74701



Prepared For:
Dept of the Army and Air Force
National Guard Bureau
Regional Industrial Hygiene Office
Region South
510 Plaza Drive, Suite 1530
College Park, Georgia 30349
By
Non-Responsive
DBA: Pinnacle IH

BEST AVAILABLE COPY
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EXECUTIVE SUMMARY:

An Initial Baseline Industrial Hygiene Survey was conducted at the National Guard Readiness Center in Durant, OK on 7 August, 2013, as part of the Arkansas Army National Guard Occupational Health Program, to identify potential health hazards in the workplace. The survey consisted of conducting lead wipe samples from the weapons vault and general areas of the facility, illumination survey, noise evaluation, review of the MSDS inventory, interviews with personnel assigned to this facility on a daily basis, and a walkthrough of the building, to evaluate the general condition as it relates to indoor air quality.

TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Lead Dust sampling in Weapons Vaults	Low levels of lead in dust were detected in three of the samples in the HHT weapons vaults. See Table 1.	Recommend using a wet method to clean the HHT weapons vault floor, to prevent the buildup of lead. See Recommendations Pg. 9
MSDS Inventory	The MSDS inventory was in the process of being updated at the time of the survey.	Recommend to complete the MSDS inventory updates ASAP and post them on the Flammables cabinet and in the MSDS binder. See Recommendations Pg. 9

7 August, 2013

MEMORANDUM FOR: MAJ [Non-Responsive] Executive Officer, 180 BN, SFC [Non-Responsive]
SUBJECT: Industrial Hygiene Survey for the Durant, OK Readiness Center.

INTRODUCTION

At the request of Mr. [Non-Responsive] with the National Guard Bureau South Region Industrial Hygiene Office, a Baseline Industrial Hygiene Survey was performed by [Non-Responsive] at the Durant, OK Readiness Center on 7 August, 2013. The purpose of this survey was to evaluate any Health Hazards that may be present at the facility. The POC for this survey was SFC [Non-Responsive]

The Readiness Center was reportedly built around 1962, and was remodeled about 15 months ago. It contains several offices, cubicle area, a classroom, conference room, meeting area, break room, storage rooms, cage areas, drill hall, supply rooms for two units, gym, and two large latrine/locker rooms. A mezzanine was added to the drill hall, and is used to store lockers primarily. There was an old IFR in this armory, and it was part of the remodeling project. The floors are sealed, but not painted or tiled. The walls are painted, and no drop ceiling. The IFR was divided up into 4 separate cage areas, for section equipment only. No personnel work in what was the former IFR. Outside there is a fenced-in Motor Pool area and a large number of Conex storage units. Reportedly, most Conex units contain section equipment, and one of them contains POL. Nearby there is a decommissioned FMS shop that is presently being used by A-Troop until approximately January 2014. At that time, the HHT unit is expected to use the building for storage only.

Two units are assigned to this facility. They are the HHT 1-180 CAV, and TRP A 1-180 CAV. A-Troop is here temporarily, while their armory is being remodeled. There are 15 full time troops here, and no contractors or civilians. Between the two units, there are a total of approximately 150 Mday troops assigned. Personnel reported that the only time young children are in the drill hall is for the Family Day drill weekend in December. It was stated that Camp Gruber typically provides the food for drill weekends.

METHODOLOGY

The following instruments and testing methods were used during this survey:

- Extech Light Meter, Model 407026, S/N Q638144
 - Calibrated 18 July, 2013
 - Illumination readings were taken from all work areas, approximately four feet from the floor, and compared to IES (Illuminating Engineering Society) and ANSI RP7-1991 recommendations.
- Quest Sound Level Meter (SLM), model 2200, S/N KOL070046.
 - Calibration Certificate 281229KOL070046.
 - SLM was set to Slow on the A-scale. Range setting was 60-120dba.
- Ghost Wipes (To test for the presence of Lead in dust)
 - Unscented "baby wipes" were used to sample one square foot areas in the weapons vaults and supply rooms, and maintenance bays. The samples were sealed, and sent to an AIHA accredited laboratory for analysis.
- The survey of the facility included photographs of the building and areas of interest, a walkthrough of the facility, and informal discussions with the POCs.

SURVEY FINDINGS

BUILDING CONDITION

The building is reported as structurally sound, with no roof leaks or chronic issues. In 2005 the roof was replaced. All areas were neat and clean at the time of the survey. There were no mold issues reported or observed during the survey, and no reports of standing water around the building foundation. Lighting and ventilation was excellent overall. There were no visible signs of moisture damage to ceiling tiles, walls, or floors. Latrines and locker rooms were neat and clean. Conference rooms were neat and clean. The grounds outside appeared to be maintained well, with no standing water or evidence of mold or mildew around the building. The building structure appeared to be in good repair.

DECOMMISSIONED FMS SHOP

A walk-thru of the entire decommissioned FMS shop was performed. The maintenance bays are used for storage, and there are a few offices and a latrine that are all in serviceable condition. There is a working vehicle wash bay that was in use during the survey. Reportedly, only water is used in this wash bay. An examination of the oil and water separator appeared to only contain dirty water.

MOTOR POOL

There is a Motor Pool area in the back of the facility. All vehicle maintenance is performed at either Camp Gruber or Fort Chaffee.

PERSONNEL

There are 15 full time military personnel assigned to this readiness center. Through interviews with the readiness officer, there were no reports of excessive noise, eye strain, muscle strain, repetitive motion issues, back strain, or ergonomic issues. Employees work a 10-hour day. It was also stated that there are no concerns with water or air quality, and that employees are generally in good spirits, with no chronic sicknesses or other health issues affecting the staff. PT is conducted daily in the drill hall. It was reported that personnel are not asked to perform heavy lifting.

MSDS

SFC [REDACTED] is responsible for the MSDS inventory for the entire armory. The supply sergeant for the HHT is SFC [REDACTED] and for the A Troop the supply sergeant is SSG [REDACTED]. The hazardous products are stored in the Flammables cabinet located in the drill hall. MSDS info is posted in the drill hall and on the Safety bulletin board. SFC [REDACTED] was in the process of updating the MSDS inventory at the time of the survey.

LEAD WIPE SURVEY

SFC [REDACTED] estimated that weapons are cleaned at this readiness center up to six times per year, in the drill hall and section cage areas. Samples for lead in dust were taken from the drill hall, converted IFR, supply rooms, and the HHT weapons vault. The weapons vault for the A Troop was not accessible at the time of the survey. There were several samples taken from the HHT weapons vault that tested positive for lead in dust, but all were well below the NGB limit of 200 micrograms per square foot. One other sample from the converted IFR tested positive for lead in dust, but was also well below the NGB limit. See Table 1.

CONVERTED IFR

The former Indoor Firing Range at this facility was part of an extensive remodel project that was finished about 15 months ago. The floors are sealed, but not painted or tiled. The walls are painted, and no drop ceiling. The IFR was divided up into 4 separate cage areas, for section equipment only. No personnel work in what was the former IFR. Lead wipe samples were taken throughout this area. One sample tested positive for lead in dust, but was well below the NGB limit of 200 micrograms for a storage area such as this. See Table 1.

ILLUMINATION SURVEY

When this readiness center was remodeled 15 months ago the lighting was upgraded as well, reportedly. The light fixtures are relatively new, and are now on motion sensors. The walkthrough inspection revealed no bad bulbs or faulty ballasts. Results of the survey showed light measurements meeting or exceeding IES (Illuminating Engineering Society) and ANSI RP7-1991 guidelines throughout all areas of the facility occupied by NG personnel. Refer to Table 2 for survey results.

DRILL HALL

Monthly Mday drills are held in the drill hall, with approx 150 troops in attendance. No civic or public activities are held in the drill hall during the year, reportedly. The drill hall appeared to be clean, and in good condition. PT for the full-time troops is held regularly in the drill hall. There were large stand-alone fans for cooling, and several heaters mounted near the ceiling. Personnel reported that no vehicle maintenance is performed in the drill hall, and that vehicles are not left running in the drill hall for any length of time. Lighting was upgraded when the building was remodeled, and exceeded IES guidelines for illumination levels. A new mezzanine was added during the remodel project, and contains cages and lockers for troops. The drill hall was sampled for lead in dust, with no samples testing positive.

SUPPLY ROOMS

There is a supply room for each of the two units in this facility. The supply room for A-Troop was not accessible at the time of the survey. The HHT supply room was neat and clean, with lighting exceeding IES recommendations. No flammable or hazardous materials were observed in the supply room. Lead in dust sampling was performed in the supply room and weapons vault. Three samples in the vault tested positive for lead in dust, but were well below NGB limits. See Table 1.

NOISE

Personnel did not report any loud, persistent noises that caused them concern. The loudest noise seemed to be coming from the a/c registers, due to the low ceilings in the facility. A noise level meter showed the noise levels near some registers to be in the high 60dba range, which is still in the safe range.

HVAC SYSTEM

The HVAC system seemed to be in very good condition. There were no odors detected, and temperatures inside the building were very comfortable. There were no complaints about the HVAC system, and no chronic health conditions related to indoor air quality were reported. A contract company handles the maintenance of the HVAC system, including changing the monthly filters.

TABLE 1 (LEAD WIPE TEST RESULTS)

SAMPLE LOCATION	Surveyor's Field No	RESULT $\mu\text{g}/\text{ft}^2$
Weapons Vault - HHT 1-180 CAV	JPR253	25
Weapons Vault - HHT 1-180 CAV	JPR254	52
Weapons Vault - HHT 1-180 CAV	JPR255	24
Weapons Vault - HHT 1-180 CAV	JPR256	BRL
Weapons Vault - HHT 1-180 CAV (Blank)	JPR257	BRL
Supply Rm - HHT 1-180 CAV	JPR258	BRL
Supply Rm - HHT 1-180 CAV	JPR259	BRL
Supply Rm - HHT 1-180 CAV	JPR260	BRL
Supply Rm - HHT 1-180 CAV	JPR261	BRL
Armory Drill Hall	JPR262	BRL
Armory Drill Hall	JPR263	BRL
Armory Drill Hall	JPR264	BRL
Armory Drill Hall	JPR265	BRL
Armory Drill Hall (Blank)	JPR266	BRL
Converted IFR (Storage)	JPR267	BRL
Converted IFR (Storage)	JPR268	BRL
Converted IFR (Storage)	JPR269	BRL
Converted IFR (Storage)	JPR270	BRL
Converted IFR (Storage)	JPR271	BRL
Mens Latrine	JPR272	BRL
Womens Latrine	JPR273	BRL
Locker Room	JPR274	23
Storage Closet	JPR275	BRL

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

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

TABLE 2 (ILLUMINATION TEST RESULTS)

LOCATION	LIGHT READING (foot candles)	IES Recommendation (foot candles)
Room 114 Mens Latrine	60 Avg	5-10
Room 134 Womens Latrine	50 Avg	5-10
Rm 119 Main Entrance Foyer and Hallway	50+ Avg	10-20
Hallway near Readiness Office	50+ Avg	10-20
Hallway near Break Room	50+ Avg	10-20
Room 122 Work area / meeting area	55 Avg	20-70
Break Room	90 Avg	20-50
Room 104 Squadron XO Office	55 Avg	50-100
Room 103 Squadron Commander	55 Avg	50-100
Room 109 Gym	60 Avg	20-30
Room 121 Commander Office	65 Avg	50-100
Room 122 SIPA (Not Accessible)	n/a	n/a
Room 123 Network Equip Closet	50 Avg	10-20
**Room Command Sgt Maj *Might have bad ballast*	35 Avg	50-100
Room 126 Conference Room	60 Avg	30-100
Room 124 Large Cube area for S1 and S4 shops	60 Avg	50-100
Room 133 Recruiters Office	50 Avg	50-100
Room 128 Large Cube Area	60 Avg	50-100
Room 130 Mechanical Room	55 Avg	20-50
HHT Weapons Vault	50 Avg	20-50
Room 139 HHT Supply Room	75 Avg	20-50
Drill Hall	40 Avg	10-20
Drill Hall Mezzanine	65 Avg	10-20
Room 121 Classroom	100 Avg	20-100
Room 121 Classroom	60 Avg	50-100
Room 120A and 120B Classroom	70 Avg	30-70
Room 108 SGT [REDACTED] Office	85 Avg	50-100
Room 136 Electrical Room	65 Avg	20-50
Readiness Office	90 Avg	50-100
Room 118a Cage Area	17 Avg	10-20
Room 118b Cage Area	20 Avg	10-20
Room 118c Cage Area	18 Avg	10-20
Room 118d Cage Area	20 Avg	10-20
Room 116 Medical Readiness NCO Office	50 Avg	50-100
Room 114 Medical Supply Storage	40 Avg	20-50
Decommissioned FMS Office	80 Avg	50-100
Decommissioned FMS Bay	30 Avg	10-20
Decommissioned FMS Latrine	30 Avg	5-10
Decommissioned FMS Office of Bay	65 Avg	50-100

*Deficient Areas. Please note comments describing faults.

RECOMMENDATIONS

- Use the report to help in correcting all deficiencies noted.
- Recommend to clean the floors and gun racks in the HHT weapons vault, using the wet method described in NG PAM 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges. (RAC 2)
- Continue to ensure that weapon maintenance and cleaning is performed at Camp Gruber or Ft. Chaffee. Practice good personal hygiene by washing hands after handling weapons and ammunition. (RAC3)
- Correct discrepancies that may be discovered in the update of the MSDS inventory. Ensure to perform semi-annual inventories and updates of all MSDS's on all chemicals in the facility. Ensure all hazardous chemicals are stored in appropriate locations. Establish an inventory roll up sheet to manage the chemical inventory, and update the MSDS when new materials arrive and old ones are replaced. Ensure that troops have knowledge of the location of the MSDS books, and are enrolled in annual Hazard Communication training. (RAC3)

REFERENCES

- Guide to Occupational Exposure 2000, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- American National Standards Institute (ANSI). /Illuminating Engineering Society (IES), Industrial Lighting 1991.
- Title 29, Code of Federal Regulations (CFR). 1999, revision, Part 1910. Occupational Safety and Health Standards
- AR 40-5, Preventative Medicine, 15 October 1990.
- AR 385-10, The Army Safety Program, 23 May 1988.
- NG PAM 420-15 , Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges
- AR 385-16, National Guard Pamphlet, Safety Guidelines for Converting Indoor Firing Ranges to Other uses.
- TB MED 503, The Army Industrial Hygiene Program, February 1985.
- Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- Title 29 CFR, Part 1910. 1200, The Hazard Communication Standard.
- DG 415-1, Design Guide for Armories

Non-Responsive



APPENDIX A Lab Test Results

Analytical Environmental Services, Inc

Date: 26-Aug-13

Lab Order:	1308B37	LEAD ON WIPES (N°082) N°082
Client:	Pinnacle IH	
Project:	Durant OK Armory	
Matrix:	Wipe	
Date Received:	8/13/2013 5:00:00 PM	

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1308B37-001A	JPR253-VAULT	25	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-002A	JPR254-VAULT	32	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-003A	JPR255-VAULT	24	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-004A	JPR256-VAULT	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-005A	JPR257-VAULT BLANK	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-006A	JPR258-SUPPLY RM	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-007A	JPR259-SUPPLY RM	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-008A	JPR260-SUPPLY RM	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-009A	JPR261-SUPPLY RM	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-010A	JPR262-DRILL HALL	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-011A	JPR263-DRILL HALL	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-012A	JPR264-DRILL HALL	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-013A	JPR265-DRILL HALL	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-014A	JPR266-DRILL HALL BLANK	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-015A	JPR267-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-016A	JPR268-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-017A	JPR269-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-018A	JPR270-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-019A	JPR271-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-020A	JPR272-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-021A	JPR273-IFR	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-022A	JPR274-IFR	23	µg ft ²	20	1		08/07/2013	08/20/2013	TA
1308B37-023A	JPR275-IFR (BLANK)	BPL	µg ft ²	20	1		08/07/2013	08/20/2013	TA

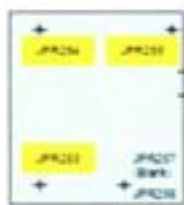
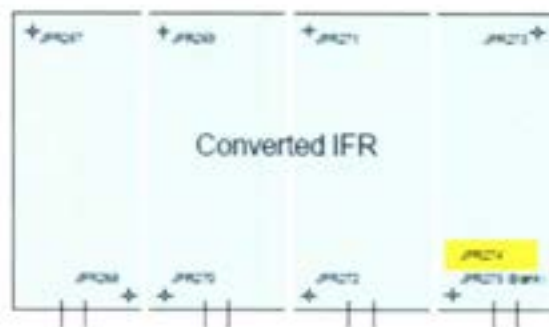
Qualifiers: BPL - Not Detected at the Reporting Limit
B - Analyte Detected at the Instrument Method Blank
Results are blank corrected where applicable

DF - Degrees of Freedom

Page 4 of 5

APPENDIX B
Drawing of Sampled Areas
Highlighted samples indicated Lead in Dust

Durant, OK Readiness Center



HHT Vault



APPENDIX C

Photographs of Areas Sampled for Lead in Dust

JPR262 Drill Hall



JPR265 Drill Hall



JPR273 Remodeled IFR



JPR274 Remodeled IFR



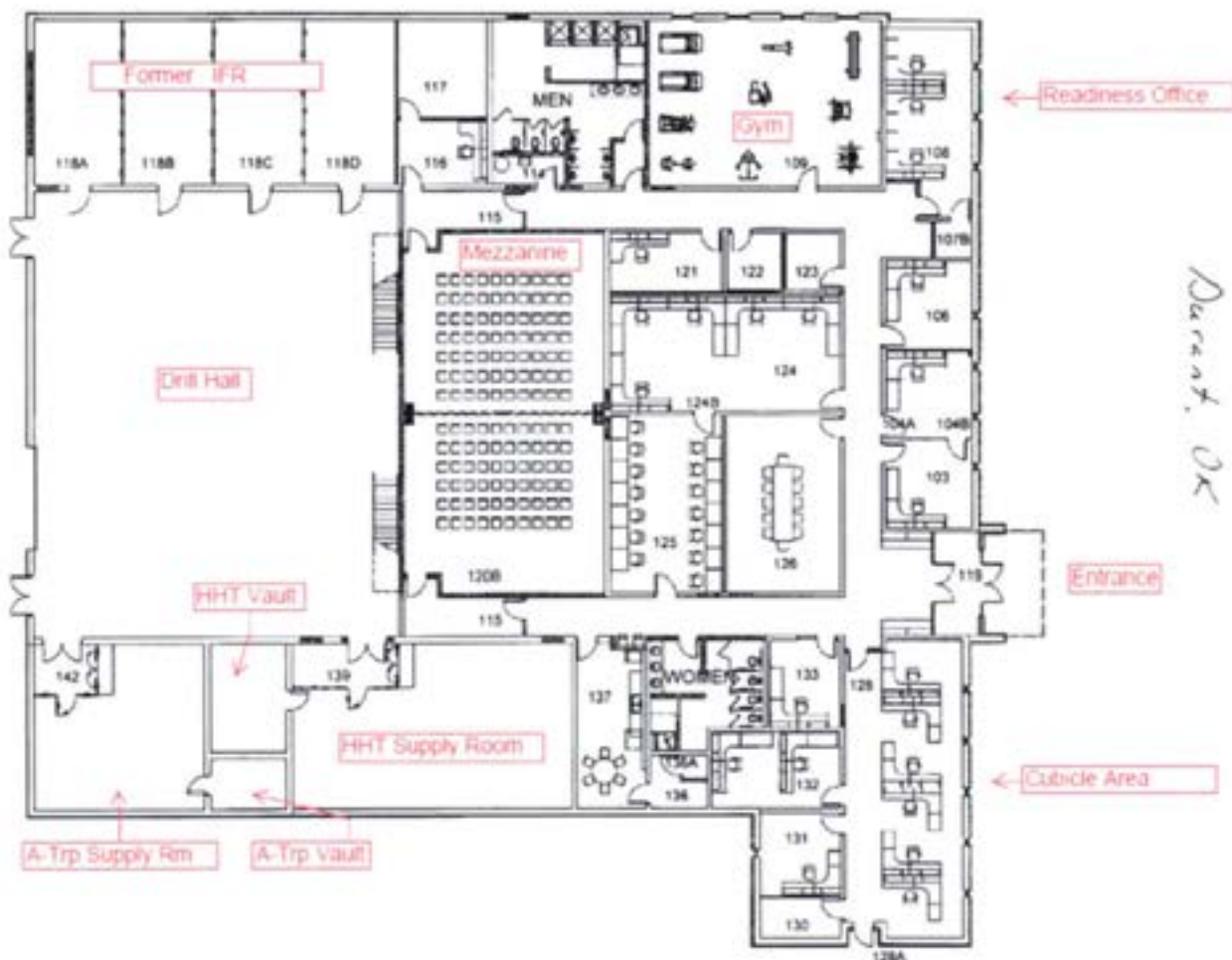
JPR254 Weapons Vault



JPR255 Weapons Vault



APPENDIX D DRAWING OF FACILITY



7 August, 2013

APPENDIX E PHOTOS OF FACILITY

Bldg Front



Bldg Rear View



Motor Pool



Decommissioned FMS



Decommissioned FMS



Conexes



7 August, 2013

Flammable Cabinet and MSDS Binder



Drill Hall with Mezzanine



Remodeled IFR



Mechanical Room



Latrine



Gym



7 August, 2013

APPENDIX F
HHIM FORMS

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

*SEE PRIVACY ACT STATEMENT ON REVERSE.

(For use of this form, see HHIM User's Instructions.)

SECTION 1. DEMOGRAPHIC DATA

1. APLC 40000 2. INSTALLATION OK Army NG 3. BLDG/RM NUMBER Armory Supply Rm
 4. LOCATION/CODE Supply Arm 5A 5. OPERATION/CODE Weapons W/H 6. DESCRIPTION
Working with hazardous chemicals - Heavy lifting in and around cages,
risk of falling objects - Working with weapons and ammo.
 7. MACOM/CODE Matheson NG 8. SUPERVISOR Non-Responsive
 9. TELEPHONE/AUTOVON NUMBER Non-Responsive 10. RAC 3 11. FREQUENCY (line per day) 10
 12. NO CIV(S) 2 13. NO MIL 3 14. NO CONTRACTOR(S) 2 15. NO LOC(S) 1 16. NO OTHER 2

SECTION 2. IH STAFFING DATA

1. LAB HOODS _____ 2. VAPOR DEGREASERS _____ 3. MAINTENANCE BAYS _____ 4. SPRAY BOOTHS _____
 5. OPEN SURFACE TANKS _____ 6. VENTILATION UNITS _____

SECTION 3. SURVEY DATA

1. SURVEY DATE 7 August, 2013 2. EVALUATOR (INITIALS) Non-Responsive

1. CONTROLS PRESENT	2. EVALUATION	3. UNIT CODE	4. CONTROLS REQUIRED	5. STATUS
Lighting Office	6.5 Avg	FC	50-100	Adequate
Lighting Storage	2.5 Avg	FC	20-50	Adequate
Lighting Hallway	5.0 Avg	FC	10-20	Adequate

A. PERSONAL PROTECTIVE EQUIPMENT (H=REQUIRED; A=AVAILABLE)

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	R/A
DISPOSABLE			1
1/2 FACE AIR PURIFYING			1
1/2 FACE AIR PURIFYING			1
FULL FACE AIR PURIFYING			1
POWERED AIR PURIFYING			1
AIRLINE			1
SELF-CONTAINED			1
ABRASIVE BLASTING HOOD			1

2. GLOVES	R/A	3. EYES/FACE	R/A	4. HEARING	R/A	5. BODY	R/A	6. HEAD/FOOT	R/A
ACID	1	CHEMICAL/SPASH	1	MUFFS	1	APRONS	1	HARD HATS	1
ION	1	SAFETY/IMPACT	1	EARPLUGS	1	COVERALLS	1	IMPERMEABLE BOOTS	1
SOLVENTS	1	CHEMICAL/SAFETY	1	CANAL CAPS	1	FULL BODY SUIT	1	SAFETY CONDUCT SHOES	1
HOT SURFACES	1	FULL FACE SHIELD	1	HELMETS	1	SAFETY BELT/HARNES	1	SAFETY/NONCONDUCTIVE SHOES	1
COLD SURFACES	1	WELDING HELMET	1			HEAT REFLECT VEST/SUIT	1		
FLAMMABLES	1								

SECTION 4. HAZARD INVENTORY DATA

1. CAS CODE	2. HAZARD DESCRIPTION	3. PAG or EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES/NO)
2439-92-1	Lead Particulates	3	No
PD-LEPTING	Heavy Lifting	3	No
PD-FALLING	Falling Objects	3	No

7 August, 2013

SECTION 5. SAMPLING DATA

A. HAZARD	B. SAMPLE TYPE	C. RESULTS	D.
Lead In Dust	Pipe	See Report	

SECTION 6. PERSONNEL DATA

A. LAST NAME	B. FIRST NAME	C. MIDDLE NAME	D. SOCIAL SECURITY NUMBER
Non-Responsive			

SECTION 7. COMMENTS (Add blank sheet of paper if necessary)

- ① SGT **Non-Responsive** are Supply Room owners
- ② SGT **Non-Responsive** MSNS Inventory
- ③ No complaints regarding air quality, lighting, or ventilation

PRIVACY ACT STATEMENT

Title 5 U.S. Code, Section 552; Executive Order 9397 authorizes the use of your Social Security Number as a identification of this information is to identify and monitor data relating each DA civilian employee exposed to a hazardous workplace; this information is to provide histories of exposure for any given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in the inability to provide you with certain services.

Signature

Non-Responsive

7 August 2013

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

*SEE PRIVACY ACT STATEMENT ON REVERSE.
(For use of this form, see T112M User's Instructions.)

SECTION 1. DEMOGRAPHIC DATA

1. ARLOC 40000 2. INSTALLATION OK Army NG 3. BLDG/RM NUMBER Primary Orderly Rm
 4. LOCATION/CODE Admin - AP 5. OPERATION/CODE Admin - ADG 6. DESCRIPTION
General Admin Functions, such as computer work, filing,
printing, and copying
 7. MACOM/CODE Nat Guard NG 8. OTHER MACOM/CODE Other: XX 9. SUPERVISOR MAT **Non-Responsive**
 10. TELEPHONE/AUTOVON NUMBER **Non-Responsive** 11. RAC 3 12. FREQUENCY (Hrs Per Day) 10
 13. NO CIVIL 2 14. NO MIL 14 15. NO CONTRACTOR(S) 2 16. NO LOC(S) 1 17. NO OTHER 2

SECTION 2. IH STAFFING DATA

1. LAB HOODS _____ 2. VAPOR DEGREASERS _____ 3. MAINTENANCE BAYS _____ 4. SPRAY BOOTHS _____
 5. OPEN SURFACE TANKS _____ 6. VENTILATION UNITS _____

SECTION 3. SURVEY DATA

1. SURVEY DATE 7 Aug 2013 2. EVALUATOR (INITIALS) **Non-Responsive**

1. CONTROLS PRESENT	2. EVALUATION	3. UNIT CODE	4. CONTROLS REQUIRED	5. STATUS
Lighting Office	65 Avg	FC	50-100	Adequate
Lighting Storage	25 Avg	FC	20-50	Adequate
Lighting Hallway	50 Avg	FC	10-20	Adequate

6. PERSONAL PROTECTIVE EQUIPMENT (N=NEEDED; A=AVAILABLE)

1. RESPIRATOR

MANUFACTURER

NIOSH TC NO

R/A

DISPOSABLE

N FACE AIR PURIFYING

V FACE AIR PURIFYING

FULL FACE AIR PURIFYING

POWERED AIR PURIFYING

AIRLINE

SELF-CONTAINED

ABRASIVE BLASTING HOOD

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

SECTION 4. HAZARD INVENTORY DATA

1. CAS CODE	2. HAZARD DESCRIPTION	3. PAC or EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
P0-VDT	Erg/Hard Strain - Computer Work Sur. Ent. periods	3	No
P0-STRESS	Daily PT	3	No
7439-92-1	Lead Particulates	3	No

EHA Form 271, 1 MAR 88 (TEST)

(HSHB-MO-IF)

Previous editions of this form are obsolete.

7 August, 2013

APPENDIX G

PERSONNEL ROSTER

Durant, OK

NAME	LAST 4
Non-Responsive	



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

NGB-ARS-SEIH

4 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SFC [Redacted]
Facility Supervisor, Edmund National Guard Armory, 600 South Bryant Ave, Edmund,
Oklahoma 73034.

SUBJECT: Industrial Hygiene Baseline Survey of the Edmund National Guard Armory.

1. References.

- a. Report submitted 22 May 2013, Industrial Hygiene survey, [Redacted]
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [Redacted] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Edmund Armory.
- b. The survey was conducted by Mr. [Redacted]

3. Findings. All HHIM field survey forms and 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 the few recommendations made by Mr. [REDACTED] in the attached 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 deficiencies, coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact M. [REDACTED] Non-Responsive Regional Industrial Hygienist, ARNG-IHS, [REDACTED] Non-Responsive OR COMMERCIAL Non-Responsive

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CE: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. [REDACTED]
[REDACTED] Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Oklahoma Army National Guard Safety and Occupational Health Office, ATTN: MAJ [REDACTED]
[REDACTED] Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Non-Responsive

EDMUND ARMORY
600 SOUTH BRYANT ST EDMUND, OKLAHOMA 73034



Page 1

23 APRIL 2013

MEMORANDUM FOR: SFC [Redacted] POC: Edmund Armory; located at 600 South Bryant Ave
Edmund, OK 73034

SUBJECT: Industrial Hygiene Survey of the National Guard Armory; located at 600 South Bryant Ave
Edmund, OK 73034

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. NG Pam 420-15, 3 Facilities Engineering November 2006
- e. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- f. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- g. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- h. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- j. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- k. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Non-Responsive

SUBJECT: Industrial Hygiene Survey of the Edmund National Guard Armory; located at 600 South Bryant Ave Edmund, OK 73034

2. Purpose. The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Edmund National Guard Armory. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, **Non-Responsive** was contracted to conduct the baseline industrial hygiene survey at the National Guard Armory in Edmund, OK. SFC **Non-Responsive** was the POC at the armory.

4. Facility Description. The armory is a two story building which has the following; administrative offices, classrooms, supply areas, a kitchen, weapon vault(s), a drill hall, latrines, conference rooms and an indoor firing range (which has been converted). Very few offices on the bottom floor are being occupied.

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. Numerous ceiling tiles appeared damaged and stained.



Non-Responsive



- b. 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 69.3 (DF) and the average humidity was 33.6. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 576 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
Vault C Co. 179th	532/66/33/0	Det 1 HHC	607/73/33/1
Supply area	612/73/32/0	Conference room	539/71/35/0
Vault Portable A Co. 179th	530/73/32/1	A Co. Readiness	521/73/32/0
IFR/Supply	621/64/33/2	A Co. Supply	535/72/37/0
Supply C Co.	537/73/33/2	A Co. Readiness NCO	587/73/38/2
Vault (2) A Co. 179th	601/74/35/0	Latrines avg	612/72/37/0
Drill Hall	623/63/33/2	Locker Room	548/74/36/0
Admin	598/74/34/0	Platoon Rooms avg	603/64/33/1
CMDR Office	511/73/34/1	Custodial room	628/73/41/1
Det 1 HHC Scout Rm	567/73/35/0	Medical Supply Rm	549/73/35/0
Recruiters Office Avg	612/73/36/1	Meeting room	534/72/33/0

Non-Responsive

- c. Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot-candles. Levels were as follows:

Office/Areas/Equipment	Illumination Foot Candles (ftc) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
Vault C Co. 179th	2/ 20/ 0/ 1	Yes
Supply area	6/ 34/ 0/ 0	Yes
Vault Portable A Co. 179th	2/ 6 /0/ 2 Was informed lights on order	No
IFR/Supply	5/ 15/ 0/ 0	No
Supply C Co.	4/26/ 0/ 0	No
Vault (2) A Co. 179th	2/ 53/ 2/ 0	Yes
Drill Hall	18/31/4/6	Yes
C Co. Readiness	2/80 /1 /0	Yes
Admin	4/ 63/ 1/ 0	Yes
CMDR Office	4/ 70/ 0/ 1	Yes
Det 1 HHC Scout Rm	12/ 46/ 0/ 0	Yes
Det 1 HHC	3/ 65/ 3/ 0	Yes
Conference room	3/ 48/6/ 0	Yes
A Co. Readiness	3/41/ 3/ 0	Yes
A Co. Supply	4/76/ 0/ 0	Yes
A Co. Readiness NCO	2/ 26/ 5/ 0	Yes
Latrines avg	2/ 32/ 0/ 1	Yes
Locker Room	12/36 / 0/ 0	Yes
Platoon Rooms avg	2/ 42/ 0/ 0	Yes
Custodial room	3/ 35/ 0 /0	Yes
Medical Supply Rm	12/40/0/1	Yes
Recruiters Office Avg	2/36/0/0	Yes
Meeting room	1/9/ 0 /0	No

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 50 dBA.

Office/Areas/Equipment	Noise dBA	Exceeds Noise 85 dBA Std
Vault C Co. 179th	50	No
Supply area	52	No
Vault Portable A Co. 179th	50	No

IFR/Supply	50	No
Supply C Co.	48	No
Vault (2) A Co. 179th	52	No
Drill Hall	50	No
C Co. Readiness	56	No
Admin	58	No
CMDR Office	46	No
Det 1 HHC Scout Rm	56	No
Det 1 HHC	50	No
Conference room	56	No
A Co. Readiness	50	No
A Co. Supply	50	No
A Co. Readiness NCO	48	No
Latrines avg	50	No
Locker Room	50	No
Platoon Rooms avg	50	No
Custodial room	58	No
Medical Supply Rm	50	No
Recruiters Office Avg	55	No
Meeting room	50	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AES Inc. Results of the samples are listed below.

<i>Sample Site</i>	<i>Result/Units ug.</i>	<i>Reporting Limits</i>
A Co. Vault Floor	38	20
A Co. Vault rt Wall	BRL	20
A Co. Vault Door in	BRL	20
A Co. Vault Door out	BRL	20
IFR Floor	BRL	20
BLANK	BRL	20
IFR Front Wall	BRL	20
IFR Bay door	BRL	20
IFR Left Wall	BRL	20
C Co. Vault Floor	27	20
C Co. Vault Rt wall	38	20
C Co. Vault Door	BRL	20
C Co. Supply Floor	41	20
A Co. Vault Floor (2)	40	20
A Co. Vault Rt Wall (2)	BRL	20
A C o. Shelves in Vault (2)	BRL	20

Non-Responsive

A Co. Vault Door (2)	58	20
A Co. Supply Floor (2)	25	20
Drill Hall floor Ctr	BRL	20

BRL: Not detected at the reporting limit

- f. Asbestos: Insulation around pipes appeared in good condition at the time of the survey. However there was an area cordoned off by the Adjunct ant Generals office due to asbestos.
- g. The flammable cabinet were blocked and binders not accessible.



8. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office **Non-Responsive**

9. Attachments

1. Recommendations
2. Photos
3. Lab Results

Non-Responsive

Based on interviews with the POC and other personnel as well as observations by [REDACTED] IH Surveying Inc. staff and IAQ measurements, it appears the Edmund Armory is need of the following recommendations:

- Determine where leaks are coming from, either from the roof, AC duct work or overhead piping. Then replace broken and stained ceiling tiles. Clean all vents annually or as needed. RAC 3
- For levels not meeting the illumination standard. Lights that are out or broken should be fixed. In other areas supplemental lighting could be used. RAC 3
- Housekeeping needs to be addressed. The status of cleanliness for the platoon rooms, the locker room and some offices are perfect breeding grounds for insects and rodents. RAC 3
- Numerous areas tested for lead levels came up above the reporting limit for the lab but not over the ARNG standard of 200ug. All areas that showed levels above the 20ug. Can be cleaned and by using normal floor detergent and water. No health risk is present at this time. RAC 4
- Replace missing shower drain covers to prevent injury to personnel. RAC 4

Non-Responsive



A Co. 179th Weapons Vault/Portable



A Co. 179th Supply Area/Old IFR



C Co. 179th Weapons Vault



A Co. 179th Supply Area/Old IFR



C Co. 179th Weapons Vault

Non-Responsive



Downstairs room sealed due to Asbestos



Insulation/no fraying or crumbling



Edmund Drill Hall



Drain cover missing/Could be a hazard



Gym



Basement/leak along wall

Non-Responsive



Leak into light fixture



Classroom



Tiles taken up/never replaced



Eyewash station/appeared to be out of order/no tag



Office



Non-Responsive



Office



Supply



Vehicle parking

ANALYTICAL ENVIRONMENTAL SERVICES, INC.



May 03, 2013

Non-Responsive

National Guard Bureau Region-South IH
510 Plaza Drive, Suite 1530
College Park GA 30349

TEL: **Non-Responsive**
FAX: **Non-Responsive**

RE: Edmund Armory

Dear **Non-Responsive**

Order No: 1304077

Analytical Environmental Services, Inc. received 19 samples on 4/26/2013 2:50:00 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 07/01/12-06/30/13.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics,
Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental
Microbiology (Fungal) effective until 09/01/13.

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

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

Non-Responsive

Project Manager



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

CHAIN OF CUSTODY

Work Order: 1304077

Date: 5/23/13 Page 1 of 2

ANALYSTS REQUESTED				ANALYSIS REQUESTED				PRESERVATION (See notes)				REMARKS			
LEAD															
1 001 ED 0423 AC0179				4/23/13				4/23/13				VAULT Floor			
2 002 ED 0423 AC0179												RT Wall Floor			
3 003 ED 0423 AC0179												VAULT Door (IN)			
4 004 ED 0423 AC0179												VAULT Door (OUT)			
5 005 ED 0423												EPR Floor			
6 006 ED 0423												Blank			
7 007 ED 0423												EPR FLOOR 5 WHI			
8 008 ED 0423												EPR Bay Door			
9 009 ED 0423												EPR LEFT WALL			
10 010 ED 0423 C 60 179												VAULT Floor			
11 011 ED 0423 C 60 179												RT Wall VAULT			
12 012 ED 0423 C 60 179												VAULT Door (IN)			
13 013 ED 0423 C 60 179												Supply Floor			
14 014 ED 0423 AC0179				4/23/13								VAULT Floor			
RECEIVED BY				DATE/TIME				PATIENT				PROJECT NAME			
				4/23/13				4/23/13 14:00				Edmond Amory			
SPECIAL INSTRUCTIONS/COMMENTS:				Please email results to								PROJECT #			
												SITE ADDRESS: 600 SOUTH BRYANT AVE			
												Edmond, OK 73034			
												SEND REPORT TO: NCE			
												INVOICE TO:			
												(IF DIFFERENT FROM ABOVE)			
												QUOTE #			
												FOR			
												STATE PROJECT # (if any)			
												Small Y/N			
												Fax Y/N			
												DATA PACKAGE			

SAMPLES RECEIVED AFTER 5PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC ASS WILL PROCEED WITH STANDARD TAT.

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

ANALYST CODES: A = Air, GW = Groundwater, SE = Sediment, SW = Surface Water, W = Water (Biosolids), WH = Wastewater, DW = Drinking Water, O = Other (Specify)
PRESERVATION CODES: Btl = Hydrochloric acid + ice, 1 = Ice only, N = Nitric acid, S+I = Sulfuric acid + ice, SMH = Sodium Bisulfate/Methanol + ice, O = Other (Specify) NA = None

Client: National Guard Bureau Region South II

Project: Edmond Armory

Lab ID: 1304077

Case Narrative

Sample information on the Chain of Custody did not match that on the sample bottle labels for samples [1304077-001, 1304077-002, 1304077-003, 1304077-003, 1304077-014, 1304077-015, 1304077-016, 1304077-017, 1304077-018]. Samples were entered into the system using the information provided on the Chain of Custody, per client request.

Analytical Environmental Services, Inc.

Date: 3-May-11

Lab Order: 1304077
 Client: National Guard Bureau Region-South II
 Project: Edinburg Ammunition
 Matrix: Wipe
 Date Received: 4/26/2013 2:52:40 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DB	Qual	Date Collected	Date Analyzed	Analyst
1304077-005A	001 ED 0423 AL 0179	38	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-006A	002 ED 0423 AL 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-007A	003 ED 0423 AL 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-008A	004 ED 0423 AL 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-009A	005 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-009A	006 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-009A	007 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-009A	008 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-009A	009 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-010A	010 ED 0423 CL 0179	21	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-011A	011 ED 0423 CL 0179	38	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-012A	012 ED 0423 CL 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-013A	013 ED 0423 CL 0179	41	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-014A	014 ED 0423 AC 0179	40	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-015A	015 ED 0423 AC 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-016A	016 ED 0423 AC 0179	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-017A	017 ED 0423 AC 0179	58	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-018A	018 ED 0423 AC 0179	25	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304077-019A	019 ED 0423	BRU	ug. Total	20	1		04/23/2013	05/01/2013	TA

Qual. Rev. DBL See Department for Reporting Issues
 If ... See the Laboratory for the Laboratory Method Manual
 See the Laboratory Manual for the Laboratory Method

DBL See Department for Reporting Issues

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client National Guard Bureau SoutheastWork Order Number 1304079Checklist completed by Non-Responsive Signature 4/26/13 DateCarrier name: FedEx ☐ UPS ☐ Courier ☐ Client ☐ US Mail ☒ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C ± 2)* Yes ☒ No ☒ LE 4/29/13Cooler #1 Ambul Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☐ No ☒Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

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

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



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

ARNG-CSG-P

7 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: **Non-Responsive**
1400 Airport Road, Holdenville Oklahoma 74848.

SUBJECT: Industrial Hygiene Baseline Survey of the Holdenville Armory.

1. References.

- a. Report submitted 7 May 2013, Industrial Hygiene survey, LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. **Non-Responsive** of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Holdenville Armory.
- b. The survey was conducted by Ms. **Non-Responsive** of LAE Consulting.

3. Findings. . All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS **Non-Responsive** OR COMMERCIAL **Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. **Non-Responsive** Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

1 May 2013

MEMORANDUM FOR: Holdenville Oklahoma Armory, ATTN: Non-Responsive 1400 Airport Road, Holdenville, Oklahoma 74848

SUBJECT: Industrial Hygiene Survey of Holdenville National Guard Armory, Holdenville, Oklahoma

I. 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 2005, Illumination Engineering Society of North America.
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI's), 2007, ACGIH, Cincinnati, Ohio.
- h. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1998, Hearing Conservation.
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- j. NG Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges, 3 November 2006.
- k. Title 40, Code of Federal Regulations (CFR) Part 745, Lead, Identification of Dangerous Levels of Lead: Final rule.
- l. TG-18, Installation Pest Management Program Guide, Armed Forces Pest Management Board

SUBJECT: Industrial Hygiene Survey of Holdenville National Guard Armory, Holdenville, Oklahoma

2. Background. At the request of ~~Non-Responsive~~ of the National Guard Bureau Region South Industrial Hygiene Office ~~Non-Responsive~~ of LAE Consulting conducted an industrial hygiene survey at the Holdenville National Guard Armory, Holdenville, Oklahoma on 9 April 2013. The purpose of the survey was to conduct a baseline survey of the Armory. The building was visually examined and employees were interviewed for data related to the building and the operations performed. The illumination was measured and lead wipe samples were taken in various areas of the Armory.

3. Facility Description. The facility is one story structure which houses the 1/160th Field Artillery Battalion. 91 guardsmen are assigned to the armory. A readiness NCO, Administrative NCO, and a Supply technician work full time in the Armory 10 hrs for 4 days a week. The facility was remodeled in October 12. The unit returned from Kuwait in April 2012.

4. Findings.

a. The carpet in the classroom was wet along the wall adjacent to the women's shower. The slope of the shower floor is allowing the water to intrude under the wall into the classroom. The bathroom was part of the facility remodel. The grouting in the bathroom was poorly applied.

b. Mold and water stains were observed on ceiling tiles in the classroom. The roof of the facility had been repaired.

c. Illumination was surveyed throughout the building. Motion sensor lighting was installed during the renovation. The areas listed below are below the standards required in reference f. The findings are as followed in Foot-candles (FC):

Table 1

AREA/LOCATION	MEASURED FC	REQUIRED FC
Room 100, at computer	29.8	50
Room 102, left workstation	23-30.3	50
Room 103, workstation	15.7-52.3	50
Room 104, computer	35.0	50
Room 106, Classroom II	28-64	50
Supply Storage	0.6-29.7	20-30
Room 108 Classroom I	4.9-46.8	50
Breakroom	2.0-26.3	30
Room 112, at computer	29.2	50

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

Page 2

SUBJECT: Industrial Hygiene Survey of Holdenville National Guard Armory, Holdenville, Oklahoma

d. A deactivated indoor firing range is currently being used as a locker room and gym. All associated range equipment has been removed. The ventilation system and ducting has been removed. The date of the range cleaning is unknown. Eighteen Lead wipe samples and one blank were taken in various locations throughout the range and the Armory. Sample locations and results are in the table 2 below. A copy of the laboratory report can be found in the enclosure of this report.

Table 2

Sample #	Location	Results
1	Left rear former backstop wall	BRL
2	Floor at former backstop center, locker 150	34 ug/ft ²
3	Right wall at former backstop area, 5 feet up between locker 42-43	BRL
4	Floor right side 1 foot from wall, locker 105-128	36 ug/ft ²
5	Right wall end of wall locker 119, 5 feet up	BRL
6	Floor, right side end of treadmill	75 ug/ft ²
7	Left wall 6 feet up, between locker 05-06	BRL
8	Top of wall, locker 26	90 ug/ft ²
9	Former Observation wall, (chest press) 6 feet up	BRL
10	Ceiling near former backstop (former exhaust area)	BRL
11	Floor, 1 foot outside entrance to deactivated range	77 ug/ft ²
12	Floor, Center of Drill Hall	96 ug/ft ²
13	Floor, 1 foot inside the supply room	73 ug/ft ²
14	Top of grey file cabinet in the Drill Hall	86 ug/ft ²
15	Shelf in kitchen under 3 compartment sink	30 ug/ft ²
16	Classroom 1, top of bookcase near hallway	BRL
17	Room 101, top of first desk credenza	BRL
18	Room 112, top of file cabinet in Read press NCO office	BRL
Blank	Blank	BRL

*BRL indicates below reporting limit.

e. Paint is flaking from the Armory ceiling and littering the floor. The ceiling appears to be a plastic material coated with paint. Moisture may have caused paint to blister and flake. An employee stated that the falling chipped paint resembles falling snow when the garage doors are opened. A bulk paint chip sample was obtained and analyzed for Lead in Paint. The results indicated that the paint in the ceiling does not contain Lead. A copy of the laboratory report can be found in the enclosure of the report.

SUBJECT: Industrial Hygiene Survey of Holdenville National Guard Armory, Holdenville, Oklahoma

f. Mice have infested the Armory. Droppings were observed in a closet storing the Heating, ventilation, and cooling systems and in the supply room. Dead mice were observed on old glue boards. Mouse burrowing is occurring in an exterior wall in the Supply room. The facility does not have an integrated pest management (IPM) program. Contract pest control is now performed on an as needed basis. IPM programs monitor and identify pests; establish prevention methods; establish control measures when and if prevention does not eliminate the pest. Scorpions and crickets are also a concern with the Armory. Employees stated that lots of scorpions are in the hallways ~~as~~ they arrive to work in the morning. Crickets are also a seasonal issue at the Armory.

g. Soil erosion was observed around some of the splash guards at the downspouts. Deep ruts are along the foundations and in the grass which maybe allowing water intrusion under the foundation.

h. The Drill Hall is used to store equipment from recent move and deployment. A HUMMV and LTMV are stored in the drill hall because of inclement weather. The flammable cabinet storing Spray paints, Oil, lubricants, and transmission fluids are stored in flammable cabinets located on the Drill floor.

i. Supply room is located off the Drill Hall. The supply room has a weapons vault. The Armory does not have an Armor technician and weapons are sent to the Norman Oklahoma Combined Support Maintenance Shop. An old dehumidifier is in the room but was not on.

13-0085 (J-15-0085)
12/28/2014
13-0085 (J-15-0085)

Page 1

SUBJECT: Industrial Hygiene Survey of Holdenville National Guard Armory, Holdenville, Oklahoma

5. Technical Assistance. For technical assistance, regarding information found in this report, please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office at **Non-Responsive**

Non-Responsive

LAE Consulting

4 Encl

1. Building Diagram
2. HHIM
3. Facility Photos
4. Laboratory Results

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

Page 5

SUBJECT: Industrial Hygiene Survey of Cullman National Guard Armory, Cullman, Alabama ✓

6. Recommendations.

a. Recommend the Oklahoma Facility Engineer office inspect and repair the tile flooring in the bathroom. Immediately dry the carpet with fans when water has infiltrated into the classroom. Monitor the carpeting for mold and mildew growth. (RAC 4)

b. Replace all stained and molded ceiling tiles. (RAC 4)

c. Consider purchasing supplemental lighting such as desk lamps and a floor lamp. (RAC 3)

d. Recommend the state Safety and Occupational Health office review the Lead wipes sample results of this facility to determine if further sampling and/or decontamination is needed. (RAC 3)

e. Recommend the Oklahoma Facility Engineer office replace the ceiling. (RAC 4)

f. Establish and implement an Integrated Pest Management (IPM) Program for the control of rodents, scorpions, crickets, and other pest. Hire/contract a certified pest control company. Ensure the company performs IPM. Require that the pest control company makes twice weekly visits until rodent population is eliminated and/or controlled. Contact the state environmental office and the Oklahoma facility engineers and the state Safety office for assistance with the IPM program. (RAC 3)

g. Recommend the Facility Engineer office inspect and repair soil erosion issues around the building's foundation.

h. Ensure that vehicles are not started and idling in the drill hall. Ensure vehicle maintenance not performed in the drill hall. If paint and Oil and lubricants are not needed, turn-in the items as waste. (RAC 4)

i. Replace the dehumidifier in the vault. Continue to discourage weapons repair and maintenance within the vault and supply room. (RAC 3)

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Week Order

1304E62

TEL: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

Date: 12/01/12 Page 1 of 2

1218 Scattered Pine St
Severn, MD 21144

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No # of Conspirators

SAMPLED

714-05

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PRESERVATION (See 10040)

PUSHNUTS

BEST AVAILABLE COPY

2 of 7

PROJECT INFORMATION

RECEIPT

Total # of Containers

20

PROJECT NAME:

Holdenville, OK Aramco

CONCLUSIONS

57711 APODISE:
Holdenville, OK

SEND REPORT TO:

INVOICE TO: N6 Bueroou TH office

THE DISTRICT COURT ABOVE: FITTING: ETHEL KORNBERG
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DATA PACKAGE: I II III IV

SPECIAL INSTRUCTION COMMANDS

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12" x 12"

Residuals US1972

SAMPLES RECEIVED AFTER 1PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY. IF NO SAMPLES ARE DISPOSED OF 10 DAYS AFTER COMPLETION OF RETROFIT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SG = Sediment SO = Soil SW = Surface Water W = Water (liquid) DW = Drinking Water (liquid) O = Other (specify)
PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice I = Ice only N = Nitric acid S+1 = Sulfuric acid + ice S+2+1 = Sodium Bisulfate/Methanesulfonate + ice O = Other (specify)

White Copy • Original: Yellow Copy • Client

FOIA Requested Record #J-15-0085 (OK)
Released by National Guard Bureau
Page 110 of 216

Analytical Environmental Services, Inc.

Date: 22 April 13

Lab Order: 13041103
 Client: LAF Consulting
 Project: Holdenville, OK Armory
 Matrix: Wipe
 Date Received: 4/15/2013 10:00:00 AM

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	U1	U2	Date Collected	Date Analyzed	Analyst
1304110301A	25-BLANK-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110302A	PH-1-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110303A	PS-2-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110304A	25-13-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110305A	PH-4-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110306A	25-12-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110307A	25-16-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110308A	PH-12-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110309A	PH-8-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110310A	PH-29-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110311A	PH-36-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110312A	PH-15-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110313A	PS-2-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110314A	PH-15-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110315A	PH-14-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110316A	PH-12-11	NA	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110317A	PH-16-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110318A	PH-17-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA
1304110319A	PH-15-11	BLK	ug/g	25	1	1	04/16/2013	04/18/2013	EA

Signature: [Signature] Title: [Title] Date: [Date]

Signature: [Signature] Title: [Title] Date: [Date]

Signature: [Signature] Title: [Title] Date: [Date]

Analytical Environmental Services, Inc

Date: 07-06-2013

Lab Order:	1044260	TOTAL LEAD IN PAINT (N7082) PAINT
Client:	LAH Consulting	
Project:	Holdenville OK Armory	
Matrix:	PAINT	
Date Received:	4.15.2013 10:00 AM	

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DP	Qual	Date Collected	Date Analyzed	Analyst
ANAL0000000	1044260	100%	wt%	1000000	1		04/16/2013	06/05/2013	JA

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

(For use of this form, see HHIM User's Guide)

ARLOC 40000		INSTALLATION HOLDENVILLE OKLAHOMA ARMORY		BLDG/RM NO. 1400 AIRPORT ROAD HOLDENVILLE, OK 74348	
LOCATION/CODE AA			OPERATION/CODE ADO		
SURVEY DATE 9 APR 13			EVALUATOR LAE CONSULTING		
MACOM/CODE NG		SUBMACOM/CODE XX		SUPERVISOR SFC [REDACTED]	
TELEPHONE/DSN NO. 405.379.3172		UNIT/ORGANIZATION HOLDENVILLE ARMORY		RAC 3	FREQUENCY (hrs/day) +8 hrs
NO. CIV(S)	NO. MIL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER 2	

SECTION 2: FACILITY DATA

LAB HOODS 0	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS 0	OPEN SURFACE TANKS 0	VENTILATION UNITS 0

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIVE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1 1/2 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF-CONTAINED			/

EYESPACE	R/U	HEARING	R/U	BODY	R/U	HEAD/IT	R/U
CHEMICAL SPLASH	X/	CANAL CAPS	/	APRONS	X/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	/	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	X/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X/	MUFFS	X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	X/
		MUFF/EARPLUG VOLUME LIMIT	/	SAFETY REL THARNESS	/		/

SECTION 4: HAZARD INVENTORY DATA

[illegible]

SECTION 5. PERSONNEL DATA

[illegible]

SECTION 6: COMMENTS

2 No comments

See attached sheet

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

(For use of this form, see HHIM User's Guide)

ARLOC 40000		INSTALLATION HOLDENVILLE OKLAHOMA ARMORY		BLDG/RM NO. 1400 AIRPORT ROAD HOLDENVILLE, OK 74848	
LOCATION/CODE SA			OPERATION/CODE SAH		
SURVEY DATE 9 APR 2013		EVALUATOR LAE CONSULTING			
MACOM/CODE NC		SUBMACOM/CODE		SUPERVISOR SFC [REDACTED]	
TELEPHONE/DSN NO. 405.379.3172		UNIT/ORGANIZATION HOLDENVILLE ARMORY		RAC 4	FREQUENCY (hrs/day) +8 hrs
NO. CIV(S)	NO. MIL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER 2	

SECTION 2: FACILITY DATA

LAB HOODS 0	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS 0	OPEN SURFACE TANKS 0	VENTILATION UNITS 0

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
LIGHTING	8.3-18.5	FC	50-100	UNACOMM

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
INIC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
CHEMICAL SPLASH	X/	CANAL CAPS	/	APRONS	X/	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	/	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL SAFETY	X/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X/	MUFFS	X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	X/
		MUFF/EARPLUG WITH TIME LIMIT	/	SAFETY BELT/HARNESSES	/		/

SECTION 5: PERSONNEL DATA

SECTION 6: COMMENTS

See attached sheet



View of Holdenville Armory, Holdenville, Oklahoma



View of male latrine shower floor where water pools in the corner



View of male latrine shower floor where water pools in the corner



View of water infiltration (wet carpet) onto carpet in the main classroom water is from the shower located along the opposite wall



Mold and water stained ceiling tiles located in the main conference room



Mold and water stained ceiling tiles located in the main conference room



View of water infiltration under the sill in the office.



View of exterior



View of soil erosion at the buildings foundation



View of soil erosion



View of mouse droppings in HVAC area



View of dead mouse in HVAC area



View of dead mouse in storage area



View of rodent droppings on air conditioning unit in HVAC room



HVAC area 2 of the Amnary





View of the Supply room



View of the Supply room



View of the Classroom (main)



View of the Armory Drill Hall



View of the Armory Drill Hall



View of the Armory Drill Hall



View of one of three flammable cabinets located on the the Drill Hall



View of the Flammable cabinet storing containers of Spray Paint



View of the breakroom/kitchen



View of the Air Conditioner and Heating system located adjacent to the Kitchen



View of the hot water heater located in the HVAC room



View of heavily peeling painted plastic ceiling of the drill hall.



View of heavily peeling painted plastic ceiling of the drill hall.



View of the gym located at the entrance of the deactivated indoor Firing range (DIFR)



View of the Lockers



View of the DIFR from the gym



View of Lead wipe sample 1, located left rear wall backstop



View of Lead wipe sample 2, located on left rear backstop center locker 150



View of Lead wipe sample 3, located at right wall backstop area 5 ft up between locker 42/43



View of lead wipe sample 4, located on the floor right side center 1 ft from locker 128/105



View of Lead wipe sample 5, located on the right wall end of wall locker 119 5 feet up



View of Lead wipe sample 6, located on the floor right side of treadmill



View of Lead wipe sample 7, located on the right wall end of wall locker 119 5 feet up



View of Lead wipe sample 8, located on top of wall locker 26



View of Lead wipe sample 9, located on the former Observation wall above chest 6 feet up wall



Lead wipe sample 10, located on the ceiling in the DIFR where the wharf system may have been



View of Lead wipe sample 11, located on the floor 1 foot outside the DIFR



View of Lead wipe sample 12, located at the center of the Drill Hall floor



View of Lead wipe sample 13, located on the floor 1 ft outside the Supply room



View of Lead wipe sample 14, located on top of file cabinet on the Drill Hall



View of Lead wipe sample 15



View of Lead wipe sample 16, located in the classroom on top of bookcase near hallway



View of Lead wipe sample 17, located in room 101 on top of cabinet on first desk



View of Lead wipe sample 18, located in room 112 on file cabinet in the Readiness NCO office



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

ARNG-CSG-P

7 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SSG [REDACTED]
[REDACTED] 16201 144th Street, Lexington, Oklahoma 73051.

SUBJECT: Industrial Hygiene Baseline Survey of the Lexington Oklahoma Armory.

1. References.

- a. Report submitted 7 May 2013, Industrial Hygiene survey, LAE Consulting.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] Non-Responsive of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Lexington Armory.
- b. The survey was conducted by Ms. [REDACTED] Non-Responsive of LAE Consulting.

3. Findings. . All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, **Non-Responsive** OR **COMMERCIAL Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CE: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. **Non-Responsive**
Non-Responsive Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Oklahoma Army National Guard CSMS/SMMO, ATTN: LTC **Non-Responsive** 3745 Thunderbird Street, Norman, OK 73069

5 May 2013

MEMORANDUM FOR: Lexington Oklahoma Armory, ATTN: SSG [REDACTED] 16201 144th Street, Lexington, Oklahoma 73051

SUBJECT: Industrial Hygiene Survey of Lexington National Guard Armory, Lexington, Oklahoma

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 2005, Illumination Engineering Society of North America.
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI's), 2007, ACGIH, Cincinnati, Ohio.
- h. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1998, Hearing Conservation.
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- j. NG Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges, 3 November 2006.
- k. Title 40, Code of Federal Regulations (CFR) Part 745, Lead, Identification of Dangerous Levels of Lead: Final rule.
- l. TG-18, Installation Pest Management Program Guide, Armed Forces Pest Management Board

SUBJECT: Industrial Hygiene Survey of Lexington National Guard Armory, Lexington, Oklahoma

2. Background. At the request of [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, Ms. [Non-Responsive] of LAE Consulting conducted an industrial hygiene survey at the Lexington National Guard Armory, Lexington, Oklahoma on 11 April 2013. The purpose of the survey was to conduct a baseline survey of the Armory. The building was visually examined and employees were interviewed for data related to the building and the operations performed. The illumination was measured and lead wipe samples were taken in various areas of the Armory.

3. Facility Description. The facility is one story structure which houses three aviation units. A readiness NCO, Administrative NCOs, and a Supply technicians work full time in the Armory 10 hrs for 4 days a week. The facility has 3 supply rooms with vaults, office, drill hall and break room. The facility is slated to be remodeled in 2014. The new facility will be a two story Reserve Center. Building plans are located within the enclosure of this report. Supply rooms were not surveyed because supply technicians were not available.

4. Findings.

a. Mice have infested the Armory. Droppings were observed in office drawers and cabinets. A dead mouse was observed in the kitchen. Significant gaps under the exit could be allowing entrance for mice and other pest. The facility is does not have an integrated pest management (IPM) program. Contract pest control is now performed on an as needed basis. IPM programs monitor and identify pests; establish prevention methods; establish control measures when and if prevention does not eliminate the pest. Scorpions are also a concern with the Armory. Employees stated that lots of scorpions are in the hallways ^{where} they arrive to work in the morning.

b. A black substance, possibly a product of burning was noticed on Styrofoam ceiling tiles in an office. The Styrofoam ceiling tiles are in many of the offices and the hallway. Styrofoam is a good insulation product but, is not fire retardant.

c. Illumination was surveyed throughout the building. The areas listed below are below the standards required in reference f. The findings are as followed in Foot-candles (FC):

Table 1

AREA/LOCATION	MEASURED FC	REQUIRED FC
245 th Cdr's office	42.5	50
ATC Cdr office	20.6	50
Administrative office	22.2-45.0	50
Dining Facility	0-15.9	50
Weight room/locker room	28-64	50

SUBJECT: Industrial Hygiene Survey of Lexington National Guard Armory, Lexington, Oklahoma

d. Employee concerned about water intrusion under window ledge in her office. Water seeps in during heavy rains. Inspection on the outside of the building showed mold growth on the concrete window ledge.

e. A deactivated indoor firing range is currently being used as a locker room and gym. All associated range equipment has been removed. The ventilation system and ducting has been removed. The date of the range cleaning is unknown. Eighteen Lead wipe samples and one blank were taken in various locations throughout the range and the Armory. Sample locations and results are in the table 2 below. A copy of the laboratory report can be found in the enclosure of this report.

Table 2

Sample #	Location	Results
1	Left side, Former backstop wall, 4 feet up	BRL
2	Right side backstop (former) top of stereo	BRL
3	Right side wall (squat press) 6 feet up wall	BRL
4	Left wall 6 feet up, (leg press)	BRL
5	Floor between hammer strength & 50 lb dumbbell	BRL
6	Wall, right side 6 feet up above wall locker 239	BRL
7	Floor between wall locker 13 & 87	29 ug/ft ²
8	Top of wall locker 17	35 ug/ft ²
9	Floor front of wall locker 46 & 47	BRL
10	Left wall 6 feet up	BRL
11	Left wall 4 feet up near wall locker 216	BRL
12	Floor center wall locker 211 & 228	27ug/ft ²
13	Top of wall locker 199	43 ug/ft ²
14	Right wall 7 feet up at wall locker 187	BRL
15	Floor between wall locker 124 & 161	21 ug/ft ²
16	Top of wall locker 107	79 ug/ft ²
17	Top of wall locker 235	BRL
18	Drill Hall floor 3 feet outside D. Indoor Firing Range	BRL
19	Floor, Drill Hall, Right side near outlet	BRL
20	Floor, Center of the Drill Hall	BRL
21	Top of Soda Machine	86 ug/ft ²
22	Floor, 3 feet in front of supply room	BRL
23	Floor in SSC [redacted] office; front of desk	BRL
24	Top of serving line in the kitchen	BRL
Blank	Blank	BRL

*BRL indicates below reporting limits

SUBJECT: Industrial Hygiene Survey of Lexington National Guard Armory, Lexington, Oklahoma

5. Technical Assistance. For technical assistance, regarding information found in this report, please contact **Non-Responsive** of the Southeast Regional Industrial Hygiene Office at **Non-Responsive**

Non-Responsive

LAE Consulting

4 Encl

1. Building Diagram
2. HHIM
3. Facility Photos
4. Laboratory Results

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

Page 4

SUBJECT: Industrial Hygiene Survey of Lexington National Guard Armory, Lexington, Oklahoma

6. Recommendations.

a. Establish and implement an Integrated Pest Management (IPM) Program for the control of rodents, scorpions, crickets, and other pest. Hire/contract a certified pest control company. Ensure the company performs IPM. Require that the pest control company makes twice weekly visits until rodent population is eliminated and/or controlled. Contact the state environmental office and the Oklahoma facility engineers and the state Safety office for assistance with the IPM program. (RAC 3)

b. Inform the fire department that the ceiling tiles in the facility are made of Styrofoam. Consult and discuss with the fire department fire measures that must be implemented when large quantities of Styrofoam are present in a building. Recommend the state Facility Engineers remove all Styrofoam ceiling tiles and replace with a fire and/or flame retardant tile. (RAC 3)

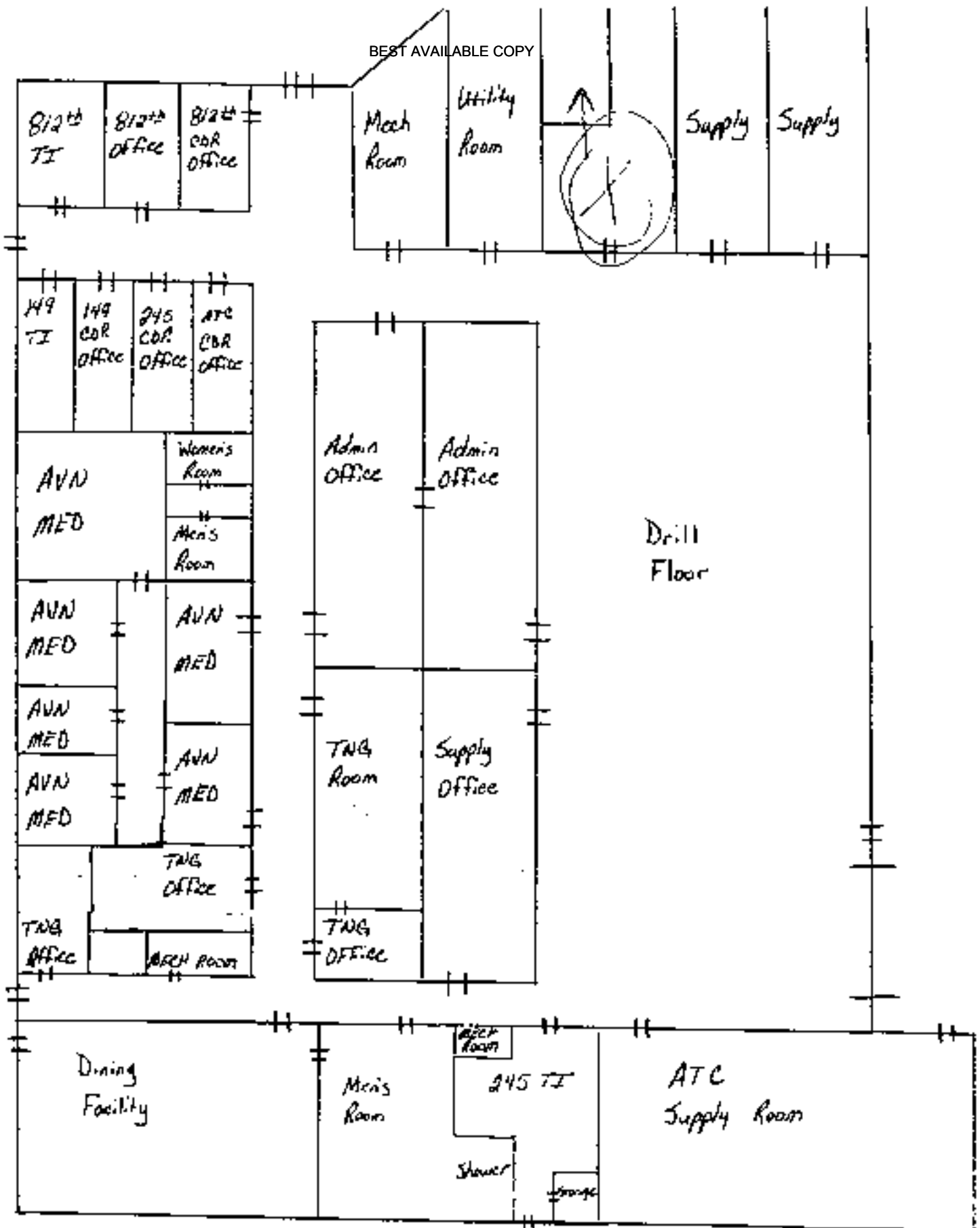
c. Consider purchasing supplemental lighting such as desk lamps and a floor lamp. (RAC 3)

d. Recommend the state Facility Engineer office inspect and repair the window in the office. Continue to clean up water to reduce mold growth. (RAC 3)

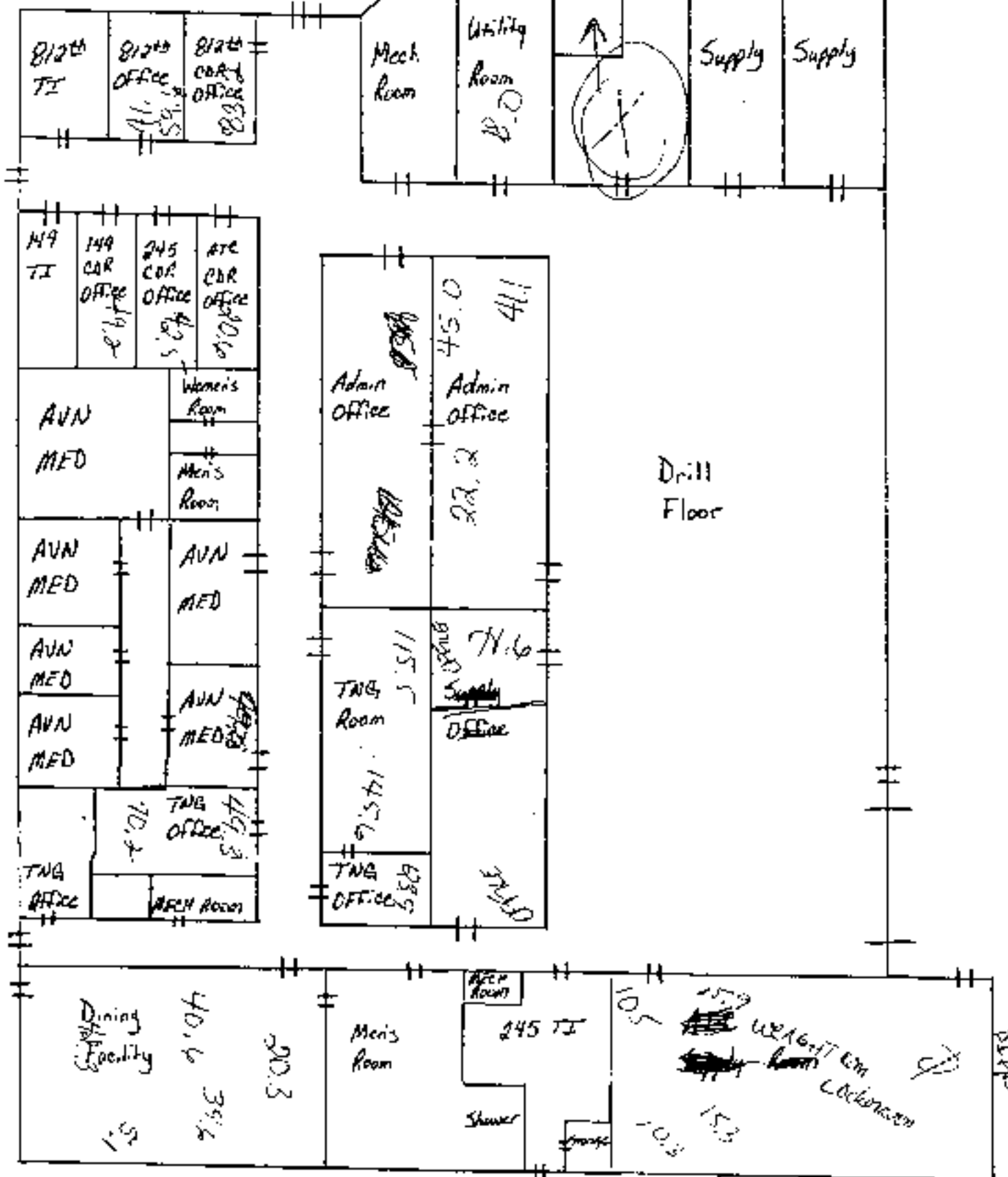
e. Recommend the state Safety and Occupational Health office review the Lead wipes sample results of this facility to determine if further sampling and/or decontamination is needed. (RAC 3)

1-11-2010
12-01-2010
1-11-2010

Page 5



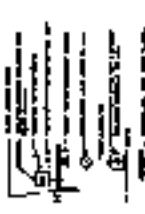
Lexington, Ok, Armory
Fire Exits



Lexington, Ok Army
Fire Exits

Lighting Survey

FLOOR PLAN LEGEND



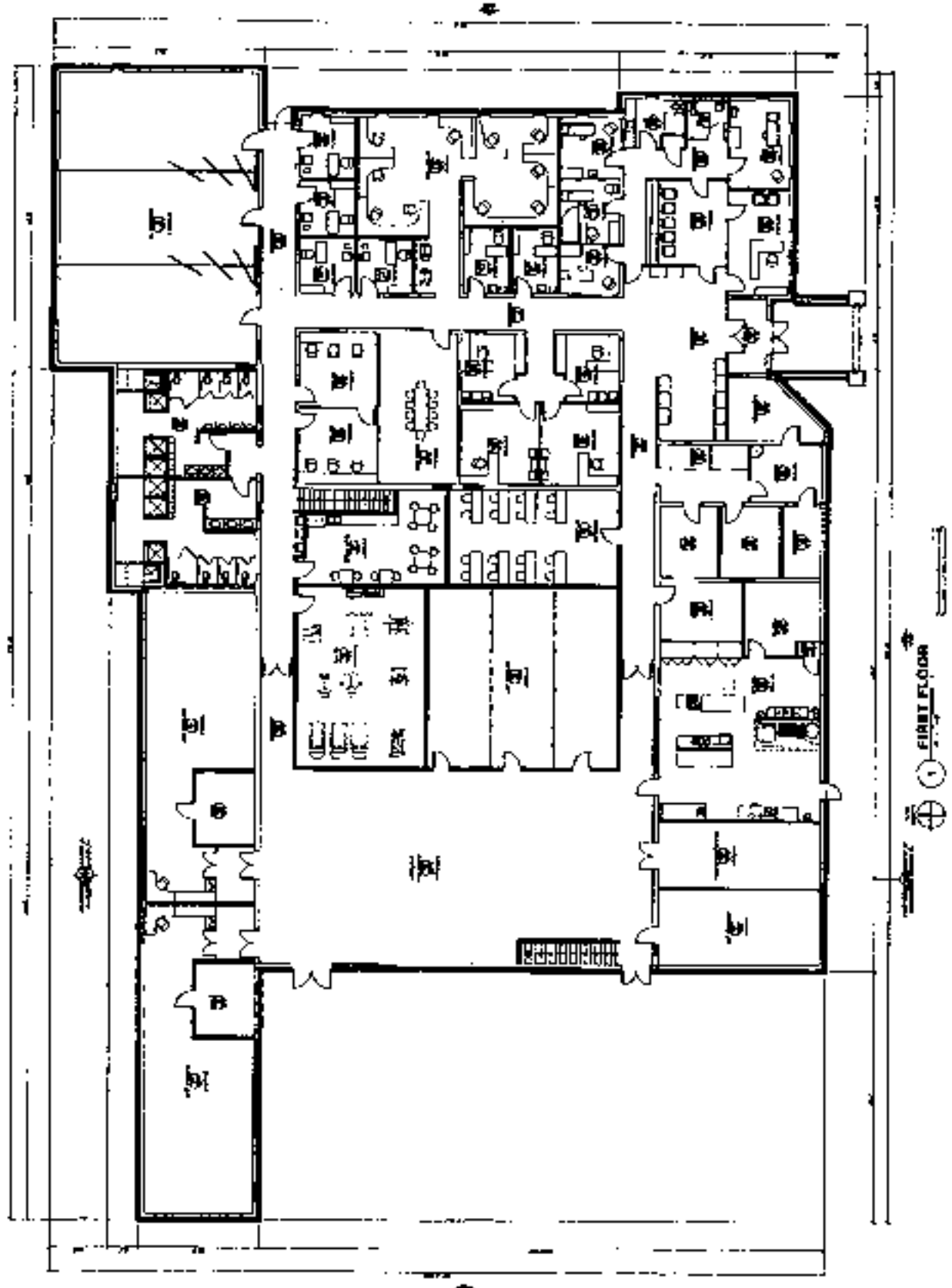
FLOOR PLAN NOTES

1. ALL ROOMS SHALL BE FINISHED TO THE FINISHES SHOWN ON THE FINISH SCHEDULE.
2. ALL ROOMS SHALL BE FINISHED TO THE FINISHES SHOWN ON THE FINISH SCHEDULE.
3. ALL ROOMS SHALL BE FINISHED TO THE FINISHES SHOWN ON THE FINISH SCHEDULE.
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10. ALL ROOMS SHALL BE FINISHED TO THE FINISHES SHOWN ON THE FINISH SCHEDULE.

**Leighton Reserve
 Center
 Rehabilitation**

FIRST FLOOR PLAN

A101





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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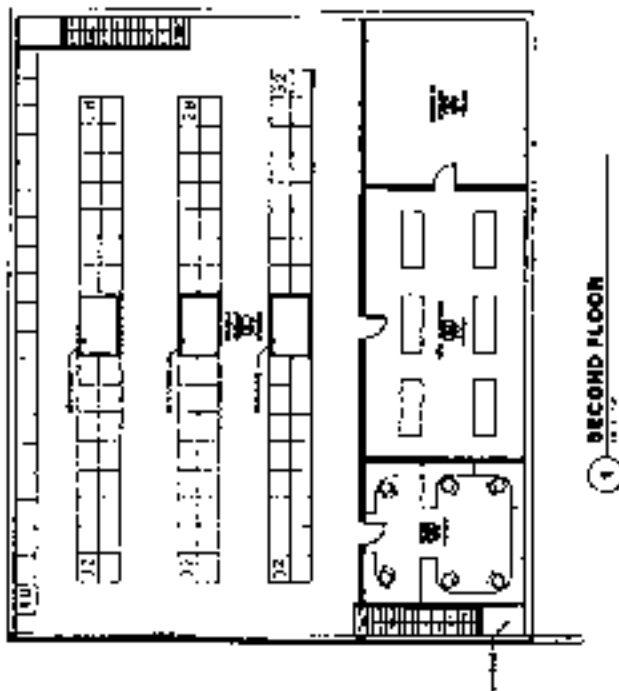
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**Washington Reserve
Center
Resubmittal**

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A102





Work Order

Date: 6/24/13 Page 1 of 2

Visit our website

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to check on the status of
your results, place bottle

No. of Containers

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FOIA Requested Record #J-15-0085 (OK)
Released by National Guard Bureau
Page 137 of 216

PROJECT INFORMATION

Abstract

Total # of Containers

分

Maximum Time Required

West Business One Rush

100

Other _____

ADDITIONAL INFORMATION

Part 1

1997

1

Journal of Management Education

! Full Copy - C

White - Copy - Original; Yellow Copy - Client

MAATRIK CODES:		A - Air		GW - Groundwater		SL - Sediment		SD - Soil		SW - Surface Water		W - Water (Rivers)		DW - Drinking Water (Bottle)		O - Other (Specify)	
PRESERVATIVE CODES:		H=Hydrochloric acid + Ice		I=Ice only		N=Nitric acid		S=Sulfuric acid + Ice		SS=4+1 - Sodium Bisulfite/Methanol + Ice						O=Other (Specify)	

N/A = None

^c White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc.

Date: 19-Apr-13

Lab Order: 150412-1
 Client: UAF Consulting
 Project: Lexington, Ok, Armory
 Matrix: Wipe
 Date Received: 4/15/2013 10:00:00 AM

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
150412-0001A	PB-31-ASK-1	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0002A	PB-31-1	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0003A	PB-31-2	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0004A	PB-31-3	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0005A	PB-31-4	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0006A	PB-31-5	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0007A	PB-31-6	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0008A	PB-31-7	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0009A	PB-31-8	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0010A	PB-31-9	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0011A	PB-31-10	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0012A	PB-31-11	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0013A	PB-31-12	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0014A	PB-31-13	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0015A	PB-31-14	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0016A	PB-31-15	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0017A	PB-31-16	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0018A	PB-31-17	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0019A	PB-31-18	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0020A	PB-31-19	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0021A	PB-31-20	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0022A	PB-31-21	20	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0023A	PB-31-22	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0024A	PB-31-23	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA
150412-0025A	PB-31-24	BLD	µg/dft	20	1		04/11/2013	04/17/2013	LA

150412-0026A PB-31-25 BLD µg/dft 20 1 04/11/2013 04/17/2013 LA

150412-0027A PB-31-26 BLD µg/dft 20 1 04/11/2013 04/17/2013 LA

150412-0028A PB-31-27 BLD µg/dft 20 1 04/11/2013 04/17/2013 LA

4 of 7

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

(For use of this form, see HHIM User's Guide)

ARLOC 40000		INSTALLATION LEXINGTON OKLAHOMA ARMORY		BLDG/RM NO. 15201 144 TH STREET LEXINGTON, OK 73051	
LOCATION/CODE AA			OPERATION/CODE ADD		
SURVEY DATE 11 APR 13		EVALUATOR LAE CONSULTING			
MACOM/CODE NG		SUBMACOM/CODE XX		SUPERVISOR SSG [REDACTED]	
TELEPHONE/DSN NO. 405 620 6220		UNIT/ORGANIZATION LEXINGTON ARMORY		RAC 3	FREQUENCY (hrs/day) +8 hrs
NO. CIV(S)	NO. MIL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER	

SECTION 2: FACILITY DATA

LAB HOODS 0	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS 0	OPEN SURFACE TANKS 0	VENTILATION UNITS 0

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/	AIR LINE			/
COLD SURFACES	/	ABRASIVE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
HAZARDOUS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FC	R/U
CHEMICAL SPLASH	X	CANAL CAPS	/	APRONS	X	COLD WEATHER BOOTS/HATS	/
FULL FACE SHIELD	/	EARPLUGS	X	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL SAFETY	X	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	X	MUFFS	X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	X
		MUFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNES	/		/

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

(For use of this form, see HHIM User's Guide)

ARLOC 40000		INSTALLATION LEXINGTON OKLAHOMA ARMORY		BLDG/RM NO. 16201 144 TH STREET LEXINGTON, OK 73051	
LOCATION/CODE SA			OPERATION/CODE SAH		
SURVEY DATE 11 APR 2013		EVALUATOR LAE CONSULTING			
MACOM/CODE NG		SUBMACOM/CODE		SUPERVISOR SSG [REDACTED]	
TELEPHONE/DSN NO. 435.820 6220		UNIT/ORGANIZATION LEXINGTON ARMORY		RAC 4	FREQUENCY (hrs/day) +8 hrs
NO. CIV(S)	NO. MIL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER 2	

SECTION 2: FACILITY DATA

LAB HOODS 0	VAPOR DEGREASERS 0	SPRAY BOOTHS 0
MAINTENANCE BAYS 0	OPEN SURFACE TANKS 0	VENTILATION UNITS 0

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS
LIGHTING	8.3-18.6	FC	50-100	UNACOMM

PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)

GLOVES		RESPIRATOR		NIOSH TC NO.		MANUFACTURER		R/U	
ACID	/	AIR LINE							/
COLD SURFACES	/	ABRASIVE BLASTING HOOD							/
HOT SURFACES	/	DISPOSABLE							/
HAZ AGENTS	/	FULL FACE AIR PURIFYING							/
OIL	/	1/2 FACE AIR PURIFYING							/
SOLVENTS	/	3/4 FACE AIR PURIFYING							/
SURGICAL GLOVES	/	SELF CONTAINED							/

EYESPACE		HEARING		BODY		HEAD/FIT		R/U	
CHEMICAL SPLASH	X/	CANAL CAPS	/	APRONS	X/	COLD WEATHER BOOTS/HATS	/		/
FULL FACE SHIELD	/	EARPLUGS	X/	COLD WEATHER CLOTHING	/	HARD HATS	/		/
CHEMICAL/SAFETY	X/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/		/
SAFETY/IMPACT	X/	MUFFS	X/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/		/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NON-CONDUCTIVE SHOES	X/		/
		MUFF/EARPLUG W-TIME LIMIT	/	SAFETY BELT/HARNES	/				/

SECTION 4: HAZARD INVENTORY DATA				
CAS CODE	HAZARD DESCRIPTION	HAC	EPC	
7439-92-1	Lead, inorganic, dust & fumes	3		
SECTION 5: PERSONNEL DATA				
LAST NAME	FIRST NAME	MI	SE	SSN
			X	
SECTION 6: COMMENTS				
No comments				
See attached sheet				



View of Lexington Oklahoma Armory



View of Lexington Oklahoma Armory



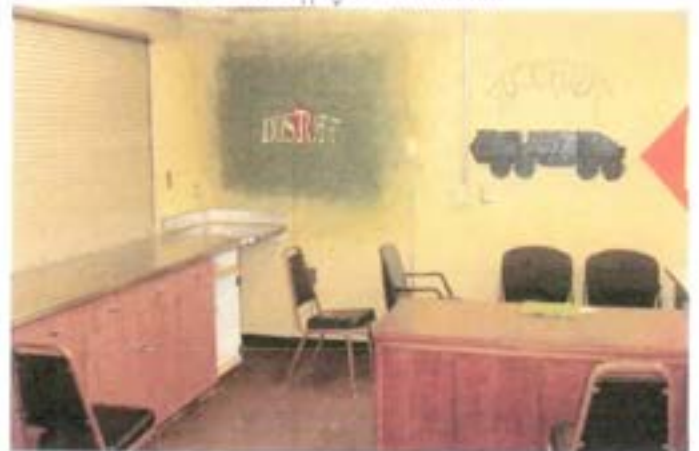
View of Lexington Oklahoma Armory



View of mouse dropping in a file cabinet drawer



View of dead mouse in the kitchen



View of kitchen converted into leaders office



View of Classroom/breakroom





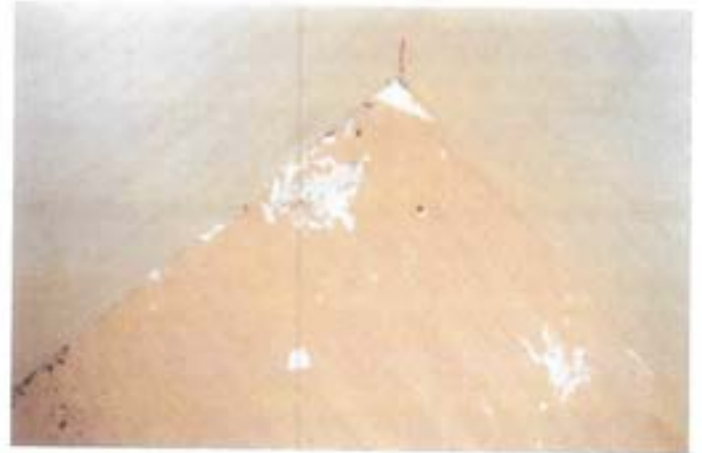
View of Air handlers located in hall closet



View of office with mice activity in the desk



View of food trash in garbage can under desk with mice activity



View of gnawed paper in mice droppings in the desk drawer



View mouse droppings within the desk



View of black substance (possible product from burning) located on the styrofoam ceiling tile in an office



View of vegetation growing under door into the Armory



View of loose brick at entrance under window



View of mold growth around concrete under window



View of the Armory Drill Hall



View of the Armory Drill Hall



View of the Armory Drill Hall



View of the Armory Drill Hall



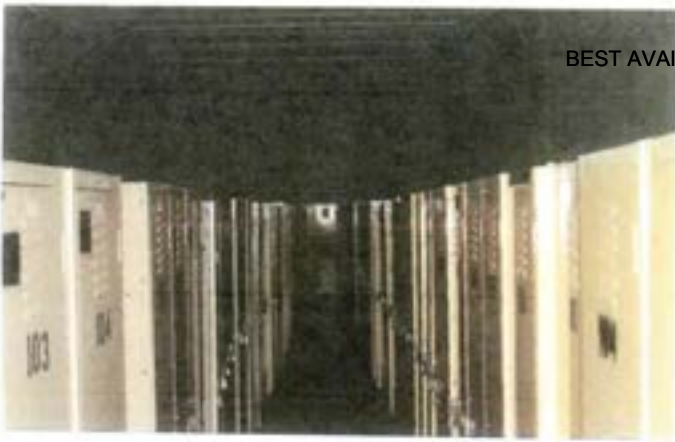
View of the Armory Drill Hall



View of the Armory Drill Hall (larger door is entrance to deactivated Indoor Firing Range)



View of the deactivated Indoor Firing Range (Range)



View of the DIFR, uprange



View of the DIFR down range



View of gym in the DIFR



View of the gym in the DIFR



View of the gym in the DIFR



View of unlabeled spray bottle located in the gym



View of Lead wipe sample 1, located in the DIFR on left side of backstop wall 4 feet up



View of Lead wipe sample 2, located on top of stereo in DIFR



View of Lead wipe sample 3, located on right side wall at squat press 6 feet up



View of Lead wipe sample 4, located left wall 6 feet at leg press



View of Lead wipe sample 5, located on the floor between hammer strength and 50lb dumbbell



View of Lead wipe sample 6, located on the right side wall near locker 239 6 feet up wall



View of Lead wipe sample 7, located on the floor between locker 13 & 87



View of Lead wipe sample 8, located on top of wall locker 17



View of Lead wipe sample 9, located on the floor in front of lockers 46 & 47



View of Lead wipe sample 10, located on the left wall 6 feet up



View of Lead wipe sample 11 and 12 located, Floor center locker at wall locker 228 and on the wall 4 feet up left side in front of locker 210



View of Lead wipe sample 13, located on top of wall locker 199



View of Lead wipe sample 14, located on the right wall 7 feet up at locker 187



View of Lead wipe sample 15, located on the floor between wall locker 124 and 161



View of Lead wipe sample 16, located on top of wall locker 107



View of Lead wipe sample 17, located on top of wall locker 235



View of Lead wipe sample 18, located on the floor 3 feet outside the Drill Hall entrance



View of Lead wipe sample 19, located on the right side of the Drill Hall near outlet



View of Lead wipe sample 20, located at the center of the Drill Hall floor



View of Lead wipe sample 21, located on top of the soda vending machine in the Drill Hall



View of Lead wipe sample 22, located 3 feet outside the supply room door



View of Lead wipe sample 23, located on the floor in the SSG Bonner's office



View of Lead wipe sample 24, located on top of serving ledge in the kitchen



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

NGB-ARS-SEIH

4 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SFC [REDACTED]
Facility Supervisor, Midwest City National Guard Armory, 2550 North Air Depot Blvd,
Oklahoma City, Oklahoma 73141.

SUBJECT: Industrial Hygiene Baseline Survey of the Midwest City National Guard
Armory.

1. References.

- a. Report submitted 22 May 2013, Industrial Hygiene survey, [REDACTED]
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Midwest City Armory.
- b. The survey was conducted by Mr. [REDACTED]

3. Findings. All HHIM field survey forms and 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 the few recommendations made by Mr. [REDACTED] in the attached 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 deficiencies, coordinate with the Occupational Safety and Health Office for technical guidance.

5. If additional information is needed about the contractors report, please contact M. [REDACTED] Non-Responsive Regional Industrial Hygienist, ARNG-IHS, [REDACTED] Non-Responsive OR COMMERCIAL [REDACTED] Non-Responsive

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. [REDACTED]
[REDACTED] Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Oklahoma Army National Guard Safety and Occupational Health Office, ATTN: MAJ [REDACTED]
[REDACTED] Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MIDWEST CITY ARMORY
2550 N AIR DEPOT BLVD
OKLAHOMA CITY, OK 73141



23 APRIL 2013

MEMORANDUM FOR: SFC [REDACTED] POC: Midwest City Armory; located at 2550 North Air Depot Blvd Oklahoma City, OK 73141

SUBJECT: Industrial Hygiene Survey of the National Guard Armory; located at 2550 North Air Depot Blvd Oklahoma City, OK 73141

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. NG Pam 420-15, 3 Facilities Engineering November 2006
- e. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- f. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- g. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- h. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- i. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- j. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- k. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Page 2

SUBJECT: Industrial Hygiene Survey of the Midwest City National Guard Armory; located at 2550 North Air Depot Blvd Oklahoma City, OK 73141

2. Purpose. The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Midwest City National Guard Armory. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, [Non-Responsive] was contracted to conduct the baseline industrial hygiene survey at the National Guard Armory in Midwest City, OK. SFC [Non-Responsive] was the POC at the armory.

4. Facility Description. The armory is a one story building which has the following; administrative offices, classrooms, supply areas, a kitchen, weapon vault(s), a drill hall, latrines, conference rooms and an indoor firing range (which has been converted). The tenants were in the process of moving in and restructuring office and storage areas at the time of the survey.

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. Numerous ceiling tiles appeared damaged and stained. Frames bent or broken





Ceiling tiles damaged and stained

- b. 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 70.2 (DF) and the average humidity was 36.2. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 520 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
Vault C 700	358/66/33/0	Male Latrine	499/73/33/.1
Vault C 700 (2)	368/73/36/0	C Co Orderly room	568/71/34/.0
Vault Med Det	315/73/36/.0	CMDR	543/70/34/0
IFR/Supply	561/65/35/0	Admin	562/72/37/.0
Supply C 700	514/73/35/0	Readiness	497/71/31/.1
Drill Hall	630/72/35/0	ISG Office	529/72/37/.0
C700 Storage	587/63/37/.2	Classroom	567/72/36/.0
Conference room	548/71/36/.0	Female Latrine	472/70/33/.1
Break room	603/68/34/.1	Med Det readiness	455/73/41/.1
Offices (6) avg	628/73/41/.1	OP NCOIC Office	528/70/35/0
Med Det Cmdr.	549/73/35/0	S3 Training office	539/72/33/0
Med Det Supply area	501/70/34/0	Classroom	564/70/33/.1

- c. Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot-candles. Levels were as follows:

Office/Areas/Equipment	Illumination Foot Candles (ftc) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
Vault C 700	11/22/4/0	Yes
Vault C 700 (2)	11/28/0/0	Yes
Vault Med Det	11/28/0/0	Yes
IFR/Supply	8/40/0/0	Yes
Supply C 700	7/13/0/2	No
Drill Hall	63/20/0/10	Yes
C700 Storage	6/20/0/0	Yes
Conference room	7/70/0/0	Yes
Break room	4/38/0/0	Yes
Offices (6) avg	2/38/0/0	Yes
Med Det Cmdr.	1/40/0/0	Yes
Med Det Supply area	2/42/0/0	Yes
Male Latrine	10/66/0/0	Yes
C Co Orderly room	6/34/0/0	Yes
CMDR	6/52/5/0	Yes
Admin	1/30/5/0	Yes
Readiness	4/40/5/1	Yes
ISG Office	6/70/5/0	Yes
Classroom	12/27/10/1	Yes
Female Latrine	4/28/0/0	Yes
Med Det readiness	4/25/0/0	Yes
OP NCOIC Office	3/28/5/0	Yes
S3 Training office	3/30/5/0	Yes
Classroom	6/32/0/0	Yes

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 52 dBA.

Office/Areas/Equipment	Noise dBA	Exceeds Noise 85 dBA Std
Vault C 700	52	No
Vault C 700 (2)	48	No
Vault Med Det	50	No
IFR/Supply	48	No
Supply C 700	50	No

Drill Hall	50	No
C700 Storage	50	No
Conference room	58	No
Break room	50	No
Offices (6) avg	55	No
Med Det Cmdr.	50	No
Med Det Supply area	50	No
Male Latrine	50	No
C Co Orderly room	50	No
CMDR	55	No
Admin	50	No
Readiness	50	No
ISG Office	50	No
Classroom	50	No
Female Latrine	48	No
Med Det readiness	50	No
OP NCOIC Office	55	No
S3 Training office	50	No
Classroom	50	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AIS Inc. Results of the samples are listed below.

<i>Sample Site</i>	<i>Result/Units ug.</i>	<i>Reporting Limits</i>
IFR Entrance Floor	30	20
IFR Left Wall	BRL	20
IFR Bay Door	BRL	20
IFR Front Floor (chip)	BRL	20
IFR Rt Wall	BRL	20
IFR Front Floor	79	20
BLANK	BRL	20
Vault Wall C 700	BRL	20
Vault Floor C 700	71	20
Vault Door In C 700	BRL	20
Vault Door Out C 700	BRL	20
Floor Outside vault	BRL	20
Vault far Wall C 7002	BRL	20
Flat Surfaces in Vault C 7002	BRL	20
Vault Floor C7002	BRL	20
Vault Door In C 7002	BRL	20
Floor outside Vault C 7002	BRL	20

Drill Hall Floor Ctr	BRL	20
Drill Hall Floor Bay Door	BRL	20
Vault Floor Med Det	29	20
Vault Door In Med Det	BRL	20
Front Wall Vault Med Det	BRL	20
Floor Outside Vault Med Det	32	20
Flat Surfaces in Vault Med Det	BRL	20

BRL: Not detected at the reporting limit

- f. Asbestos: Insulation around pipes appeared in good condition at the time of the survey. A sample was taken from the broken kitchen floor.
- g. The flammable cabinet was orderly but MSDS binder was not readily accessible at the time of the survey.



- h. The converted IFR floor was starting to chip and samples were taken. POC states they were told to not put any supplies or storage items in this area of the IFR.

8. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, **Non-Responsive**

9. Attachments

- 1. Recommendations
- 2. Photos
- 3. Lab Results

Based on interviews with the POC and other personnel as well as observations by Non-Responsive H
Surveying Inc. staff and IAQ measurements, it appears the Midwest City Armory is need of the
following recommendations:

- Numerous areas tested for lead levels came up above the reporting limit for the lab but not over the ARNG standard of 200ug. All areas that showed levels above the 20ug. Can be cleaned and by using normal floor detergent and water. No health risk is present at this time. RAC 4
- Determine where leaks are coming from, either from the roof, AC duct work or overhead piping. Then replace broken and stained ceiling tiles. Clean all vents annually or as needed. RAC 3
- Replace broken cinder blocks around windows, as well as broken windows. Falling piece of block or glass could be a potential hazard in the office areas. RAC 4
- For levels not meeting the illumination standard. Lights that are out or broken should be fixed. In other areas supplemental lighting could be used. RAC 3
- Housekeeping needs to be addressed. The units were in the process of obtaining new lockers and storage cabinets. RAC 4
- The kitchen needs to be addressed from the leaking roof, broken floor and wall tiles and mildew building up on the walls. RAC 3



Weapons Vault C 700



Weapons vault C 700



Weapons Vault Med Det



IFR/Converted to supply area



Paint chipping in converted IFR



Paint chipping in converted IFR



Water leaking from ceiling onto floor



Broken or missing ceiling tiles outside vault



Water leaking from ceiling onto floor



Water damaged floor in kitchen



POC states kitchen to be gutted



Broken cinder block above office window



Drill Hall



Broken window



Office area



Chipping paint from drill hall



Cardboard partition by x-ray



Broken latrine



Shower/Housekeeping needed



Water/rust stains on floors



Classroom



Unfinished hallway



Custodial closet



Med Det Readiness area



GOV parking area

ANALYTICAL ENVIRONMENTAL SERVICES, INC.



May 06, 2013

Non-Responsive

National Guard Bureau Region-South IH
510 Plaza Drive, Suite 1530
College Park GA 30349

TEL: Non-Responsive
FAX: Non-Responsive

RE: Midwest City Armory

Dear Non-Responsive

Order No: 1304087

Analytical Environmental Services, Inc. received 25 samples on 4/26/2013 2:50:00 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 07/01/12-06/30/13.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

Non-Responsive

Project Manager

[illegible]

CARDS RECEIVED AFTER 1PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY

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

	SW - Surface Water	W - Water (Shado)	WW - Wastewater	DW - Drinking Water	O - Other (specify)
10 - Ground					
11 - Other					
12 - Other					
13 - Other					
14 - Other					
15 - Other					
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100 - Other					

MATRIX CODES: A = Air
 QW = Urine/water SL = Salivary
 M = Mucin acid S4 = Sulfuric acid + I = Ice only
 HH = Hydrochloric acid + I
 SMI = Sodium Bisulfite/Methanol + I
 Q = Other (specify)

[illegible]

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

SAMPLES ARE DISPOSED OF 10 DAYS AFTER COMPLETION OF SUPPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air CW = Groundwater BE = Bedrock BU = Soil SW = Surface Water W = Water (Drain) WW = Wastewater DW = Drinking Water O = Other (specify)
 PRESERVE/VARIABLE CODES: H4F = Hydrofluoric acid + fct N = Nitric acid SF = Sulfuric acid + fct I = Ice only SMH = Sodium Bisulfate/Methane + fct O = Other (specify) NA = None

PASTURE VIKI: VIKI CATTLE
 1814 = 18 years old and + ice
 I = Ice only
 N = None and
 3H = 3 years old + ice
 5H+I = 5 years old + ice
 Q = Other (see M) NA = None

[illegible]

Client: National Guard Bureau Region-South IH

Project: Midwest City Ammunition

Lab ID: 1304087

Case Narrative

Sample Receiving Nonconformance

Sample information on the Chain of Custody did not match that on the sample issue labels for samples [1304087-01] to [1304087-025]. Samples were matched using the information provided on the Chain of Custody, per project history.

Analytical Environmental Services, Inc

Date: 4-May-13

Lab Order: 1304087
 Client: National Guard Bureau Region-South III
 Project: Midwest City Armory
 Matrix: Wipe
 Date Received: 4/26/2013 2:50:00 PM

LEAD ON WIPES (N91007082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1304087-001A	001 MC 0423	30	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-002A	002 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-003A	003 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-005A	005 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-006A	006 MC 0423	79	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-007A	007 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-008A	008 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-009A	009 MC 0423 C7002	31	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-010A	010 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-011A	011 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-012A	012 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-013A	013 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-014A	014 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-015A	015 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-016A	016 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-017A	017 MC 0423 C7002	BRL	ug. Total	20	1		04/23/2013	05/01/2013	TA
1304087-018A	018 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-019A	019 MC 0423	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-020A	020 MC 0423 MH-19-1B-1	29	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-021A	021 MC 0423 MH-19-1B-1	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-022A	022 MC 0423 MH-19-1B-1	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-023A	023 MC 0423 MH-19-1B-1	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-024A	024 MC 0423 MH-19-1B-1	32	ug. Total	20	1		04/23/2013	05/02/2013	TA
1304087-025A	025 MC 0423 MH-19-1B-1	BRL	ug. Total	20	1		04/23/2013	05/02/2013	TA

Lab Order: 1304087
 Client: National Guard Bureau Region-South III
 Project: Midwest City Armory
 Matrix: Paint
 Date Received: 4/26/2013 2:50:00 PM

TOTAL LEAD IN PAINT (N7082)

PAINT

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1304087-001A	004 MC 0423	BRL	ug. Total	0.00025	1		04/23/2013	05/01/2013	TA

1304087-001A BRL Not Reported in the Reporting Limit

BRL Reporting Limit

BRL Reporting Limit in the Reporting Limit

Results are based on the reporting limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client National Guard Bureau SoutheastWork Order Number 1304087Checklist completed by Non-Responsive 4/27/13
Signature DateCarrier name: FedEx ☐ UPS ☐ Courier ☐ Client ☐ US Mail ☒ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C-2) Yes ☒ No ☒ LE 429/13Cooler #1 Adjust Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☐ No ☒Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐
Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

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

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

COMPANY: National Guard Bureau Southeast Regional Industrial Hygiene Office		ADDRESS: 510 Plaza Dr Suite 1530 College Park GA 30349		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px;"> ASBESTOS </div>		Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.		No # of Containers	
PHONE: 		FAX: 		SIGNATURE: 		REMARKS: KIDREN FIRM			
SAMPLE ID: 02041C 0423		DATE: 7/23		TIME:		Grab: <input checked="" type="checkbox"/>		Composite: <input type="checkbox"/>	
DATE:		TIME:		Grab:		Composite:		Matrix (See codes):	
1		2		3		4		5	
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16		17		18		19		20	
21		22		23		24		25	
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531		532		533		534		535	
536		537		538		539		540	
541		542		543		544		545	
546		547		548		549		550	
551		552		553		554		555	
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566		567		568		569		570	
571									



Bulk Sample Summary Report

Client Name: National Guard Bureau Region-South IH

AES Job Number: 1304P36

Project Name: Midwest City Armory

Project Number:

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
020MC0423 Layer: 1	1304P36-001A	Kitchen Floor	3	ND	ND	ND	ND	ND	Floor Tile
020MC0423 Layer: 2	1304P36-001A	Kitchen Floor	5	ND	ND	ND	ND	ND	Black Mastic

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.

ND = None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/4-92-010), 1992 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-95/116), 1993.

These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume.

PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials; quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.

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Microanalyst:

Non-Responsive

QC Analyst:

Non-Responsive



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

ARNG-CSG-P

13 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SGM [REDACTED]
[REDACTED] 7250 West 41st Street, Sandy Springs, Oklahoma 74063.

SUBJECT: Industrial Hygiene Baseline Survey of the AFRC Sandy Springs Armory.

1. References.

- a. Report submitted 10 May 2013, Industrial Hygiene survey, [REDACTED] Non-Responsive IH Surveying.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [REDACTED] Non-Responsive of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the AFRC Sandy Springs Armory.
- b. The survey was conducted by Mr. [REDACTED] Non-Responsive of [REDACTED] Non-Responsive IH Surveying.

3. Findings. . All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, **Non-Responsive** OR COMMERCIAL **Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. **Non-Responsive**
Non-Responsive, Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Non-Responsive

SAND SPRINGS AFRC



Non-Responsive

25 APRIL 2013

MEMORANDUM FOR: SGM [Non-Responsive] POC: Sand Springs AFRC; located at 7250 West 41st Street
South Sand Springs, OK 74063

SUBJECT: Industrial Hygiene Survey of the Sand Springs AFRC; located at 7250 West 41st Street
South Sand Springs, OK 74063

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- h. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- i. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- j. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Non-Responsive

SUBJECT: Industrial Hygiene Survey of Sand Springs AFRC; located at 7250 West 41st Street South Sand Springs, OK 74063

2. Purpose. The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Sand Springs AFRC. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. Non-Responsive of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, Non-Responsive was contracted to conduct the baseline industrial hygiene survey at the Sand Springs AFRC in Sand Springs, OK. SGM [REDACTED] was the POC at the armory.

4. Facility Description. The armory is a two story building which has numerous; administrative offices, classrooms, supply areas, a kitchen, the drill hall, latrines, conference rooms and a gym. The hallways were broken down into sections and averaged out during IAQ/Illumination and Noise surveys.

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. At the time of the survey, numerous ceiling tiles appeared damaged and stained. The cause could be from a roof leak, condensation on AC/Heating duct work or an overhead pipe with a leak.



Non-Responsive



- b. 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 75 (DF) and the average humidity was 34. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 493 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
Drill Hall	461/66/33/0	Rm 1407- 1429 Avg	501/73/28/.1
M latrine Avg	496/73/27/0	Rm 1106 - 1125 Avg	553/72/28/.0
F Latrine Avg	489/73/28/.1	Rm 2401 - 2428 Avg	396/74/30/0
Vault A Co.	613/68/30/0	Rm 2106 - 2118 Avg	487/74/31/0
A Co Supply	592/70/33/.1	Rm 2200 - 2214 Avg	499/75/31/.2
Vault HHC	632/74/30/0	Rm 2301 - 2328 Avg	517/74/28/.1
HHC Supply	573/63/28/0	Rm 1202 - 1218 Avg	486/75/31/0
Vault F700	626/72/28/0	Kitchen	539/74/29/0
F700 Supply	596/74/21/0	Break room	493/71/29/0
USAR Vault	527/71/24/0	Gym	529/72/33/.1
Common area	543/78/34/.1	Common area	512/76/31/0

Non-Responsive

- c. Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot-candles. Levels were as follows:

Office/Areas/Equipment	Illumination Foot Candles (Ftc) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
Drill Hall	12/ 36/ 6/ 0	Yes
M latrine Avg	11/ 24/ 0/ 0	Yes
F Latrine Avg	11/ 24 /0/ 0	Yes
Vault A Co.	2/ 28/ 0/ 0	Yes
A Co Supply	6/ 28/ 0/ 0	Yes
Vault HHC	4/ 26/ 0/ 0	Yes
HHC Supply	10/ 32/ 0/ 0	Yes
Vault F700	4/ 26/ 0/ 1	Yes
F700 Supply	8/ 28/ 0/ 0	Yes
USAR Vault	12/ 52/ 0/ 0	Yes
Common area	27/ 35/ 0/ 0 wall of windows/high walls	Yes
Rm 1407- 1429 Avg	2/ 38/ 5/ 0	Yes
Rm 1106 - 1125 Avg	2/ 50/ 2/ 0	Yes
Rm 2401 - 2428 Avg	5/ 52/ 3/ 0	Yes
Rm 2106 - 2118 Avg	6/56/ 4/ 0	Yes
Rm 2200 - 2214 Avg	3/ 48/ 2/ 0	Yes
Rm 2301 - 2328 Avg	3/58/ 3/ 0	Yes
Rm 1202 - 1218 Avg	2/50 / 2/ 0	Yes
Kitchen	15/ 48/ 1/ 0	Yes
Break room	8/ 46/ 0/ 6	Yes
Gym	23/ 347 /0 wall of windows	Yes
Common area	28/43/0/0 wall of windows/high walls	Yes

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 50 dBA.

Office/Areas/Equipment	Noise dBA	Exceeds Noise 85 dBA Std
Drill Hall	50	No
M latrine Avg	50	No
F Latrine Avg	50	No
Vault A Co.	50	No
A Co Supply	52	No
Vault HHC	50	No
HHC Supply	55	No
Vault F700	48	No
F700 Supply	51	No

Non-Responsive

USAR Vault	50	No
Common area	48	No
Rm 1407- 1429 Avg	48	No
Rm 1106 - 1125 Avg	55	No
Rm 2401 - 2428 Avg	50	No
Rm 2106 - 2118 Avg	52	No
Rm 2200 - 2214 Avg	50	No
Rm 2301 - 2328 Avg	50	No
Rm 1202 - 1218 Avg	50	No
Kitchen	50	No
Break room	46	No
Gym	50	No
Common area	50	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AES Inc. Results of the samples are listed below.

<i>Sample Site</i>	<i>Result/Units ug.</i>	<i>Reporting Limits</i>
A Co. Vault Floor	50	20
A Co. Vault Wall Front	BRL	20
A Co. Vault Flat Surfaces	BRL	20
A Co. Vault Door In	BRL	20
BLANK	BRL	20
F700 Vault Floor	BRL	20
F700 Vault Wall Left	BRL	20
F700 Vault Door	BRL	20
F700 Vault Flat Surfaces	BRL	20
F700 Supply Floor	BRL	20
HHC Vault Floor	26	20
HHC Vault Wall Left	BRL	20
HHC Vault Door	BRL	20
HHC Supply Floor	BRL	20
HHC Vault Flat Surfaces	BRL	20
HHC Supply Counter	BRL	20
Drill Hall Floor Ctr	BRL	20
Drill Hall Floor by Kitchen	BRL	20
BLANK	BRL	20
Drill Hall Floor Entrance	BRL	20
USAR Vault Floor	30	20
USAR Vault Wall Left	BRL	20
USAR Vault Door	BRL	20
USAR Floor outside Vault	BRL	20
USAR Vault Flat Surfaces	BRL	20
Floor outside USAR Vault	BRL	20

BRL: Not detected at the reporting limit

Non-Responsive

Findings: There were three spots that showed traces of lead. All three happened to be on the vault floors.

- f. Asbestos: Insulation around pipes showed no fraying or crumbling at the time of the survey. No samples were taken during the survey.
- g. The flammable cabinets were maintained. The MSDS binders were easily accessible if needed.



7. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office, **Non-Responsive**

8. Attachments

- 1. Recommendations
- 2. Photos
- 3. Lab Results

Non-Responsive

Based on interviews with the POC and other personnel as well as observations by **Non-Responsive** H Surveying Inc. staff and IAQ measurements, it appears the Sand Springs AFRC is clean, orderly and in overall good condition. Below are some recommendations based on the findings during the survey.

- Three areas that were tested for lead levels, showed traces of lead. The three areas were A Co. (50ug), HHC (26ug), and USAR (30ug) vault floors. The reporting limit of 200ug. **RAC 4**
- Supplemental lighting can be used in the supply areas and common work area where high shelving and cubicle walls lower illumination standards. **RAC 3**
- Determine where leaks are coming from, either from the roof, AC duct work or overhead piping. Fix the source of the water damage and then replace broken and stained ceiling tiles. Clean all vents annually or as needed. **RAC 3**

Non-Responsive



ARNG Weapons Vault



USAR Weapons Vault



ARNG Weapons Vault



USAR Common Work area



ARNG Weapons Vault



USAR Office

Non-Responsive



Common work area second floor



ANG second floor storage area



Office Second Floor



Water damage second floor storage



Beam hit training area



ARNG office Space

Non-Responsive



Latrine



Classroom



Latrine



Classroom



ARNG Office space



Hallway off drill hall

Non-Responsive



Supply room HHC



Drill Hall



Supply room F700



Main foyer of Sand Springs AFRC



Supply room A Co



Old extinguishers stored on the floor

Non-Responsive



Damaged/Stained Ceiling tiles





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

May 06, 2013

Non-Responsive

National Guard Bureau Region-South IH
510 Plaza Drive, Suite 1530
College Park GA 30349

TEL: **Non-Responsive**
FAX: **Non-Responsive**

RE: Sand Springs AFRC

Dear **Non-Responsive**

Order No: 1304046

Analytical Environmental Services, Inc. received 26 samples on 4/29/2013 2:50:00 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 07/01/12-06/30/13.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

Non-Responsive

Project Manager

[illegible]

THE NEXT BUSINESS DAY: IF NO TAX IS MARKED ON COCAIES WILL PROCEED WITH STANDARD TAX.

ALWAYS BE SURE TO READ THE INSTRUCTIONS CAREFULLY.

[illegible]

83-0697 ACTIVATION OF THE
[H] = Hydrophobic acid; [H] = hydrophilic acid;
I = free fatty acids.
N = neutral; N = acidic; N = basic.
C = carbon; C = oxygen; C = nitrogen.

AFS TEL: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

DATE: 4/25/13 Page 2 of 2

COMPANY:				ADDRESS:				ANALYSIS REQUESTED				Visit our website www.acsatlanta.com to check on the status of your results, place bottle orders, etc.				No. of Containers			
National Guard Bureau Southeast Regional Industrial Hygiene Office				510 Plaza Dr Suite 1530 College Park GA 30349				LEAD											
PHONE: [REDACTED]				FAX: [REDACTED]				SIGNATURE: [REDACTED]											
SAMPLE ID				DATE				TIME				SAC				PRESERVATION (See codes)			
#				DATE				TIME				SAC				PRESERVATION (See codes)			
1 015 35 0425 HHC				4/25				---				---				NAUT FLOA SURF			
1 016 55 0425 HHC				---				---				---				SURF COUNT			
1 017 55 0425				---				---				---				PAUL HALL FIC			
1 018 55 0425				---				---				---				PAUL HALL FIC			
1 019 55 0425				---				---				---				BLANK			
1 020 55 0425				---				---				---				PAUL HALL FIC			
1 021 55 0425 USAR				---				---				---				NAUT FIC			
1 022 55 0425 USAR				---				---				---				NAUT MAIL FIC			
1 023 55 0425 USAR				---				---				---				NAUT DUCK			
10 024 55 0425 USAR				---				---				---				FLOA OUTSIDE			
11 025 55 0425 USAR				4/25				---				---				FLAT SURFAC			
12 026 55 0425				4/25				---				---				FLOA LEADING			
13																			
14																			

DATE/TIME				PROJECT INFORMATION			
DATE/TIME				PROJECT NAME			
4/25/13 2:50				Sand Springs AFR			
PROJECT #				SITE ADDRESS: 7450 WY1ST ST S			
				Sand Springs, OK			
SEND REPORT TO: HQ				INVOICE TO:			
				IF DIFFERENT FROM ABOVE			
QUOTE #				FO#			

RECEIVED BY				DATE/TIME			
1:				DATE/TIME			
[REDACTED]				4/25/13			
2:							
3:							

SPECIAL INSTRUCTIONS/COMMENTS:			
Please email results to [REDACTED]			

SHIPMENT METHOD			
OUT / / VIA			
IN / / VIA			
<input type="checkbox"/> CLIENT <input type="checkbox"/> AIR <input type="checkbox"/> GROUND <input type="checkbox"/> OTHER			

STATE PROGRAM (if any)			
Result Y/N			
<input checked="" type="checkbox"/> Turnaround Time Results <input type="checkbox"/> Standard 5 Business Days <input type="checkbox"/> 2 Business Day Rush <input type="checkbox"/> Next Business Day Rush <input type="checkbox"/> Same Day Rush (with req.) <input type="checkbox"/> Other			

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

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

ANALYTICAL CODES: A = Air CW = Groundwater SW = Sediment SO = Soil SW = Surface Water W = Waste (liquid) WH = Watermeter DW = Drinking Water O = Other (specify)

PRESERVATIVE CODES: HAF = Hydrofluoric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice SM+I = Sodium Ethylsulfonate + ice O = Other (specify) NA = None

Analytical Environmental Services, Inc

Date: 6 May 13

Lab Order: 1304Q46
 Client: National Guard Bureau Region-South OH
 Project: Sand Springs AFRC
 Matrix: Wipe
 Date Received: 4/29/2013 2:50:00 PM

LEAD ON WIPES (N9100/7082)

N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	Det	Qual	Date Collected	Date Analyzed	Analyst
1304Q46-001A	001 SS0425 AC00	ND	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-002A	002 SS0425 AC00	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-003A	003 SS0425 AC00	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-004A	004 SS0425 AC00	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-005A	005 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-006A	006 SS0425 F700	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-007A	007 SS0425 F700	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-008A	008 SS0425 F700	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-009A	009 SS0425 F700	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-010A	010 SS0425 F700	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-011A	011 SS0425 HHC	20	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-012A	012 SS0425 HHC	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-013A	013 SS0425 HHC	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-014A	014 SS0425 HHC	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-015A	015 SS0425 HHC	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-016A	016 SS0425 HHC	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-017A	017 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-018A	018 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-019A	019 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-020A	020 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-021A	021 SS0425 USAR	ND	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-022A	022 SS0425 USAR	ND	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-023A	023 SS0425 USAR	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-024A	024 SS0425 USAR	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-025A	025 SS0425 USAR	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA
1304Q46-026A	026 SS0425	NDL	ug, Total	20	1		04/25/2013	05/02/2013	TA

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client GA ArmyWork Order Number 1304R 46Checklist completed by [Redacted]

Signature

Date 4/30/13Carrier 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? PT 4/30/13 Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C ± 2) Yes ☒ No ☐Cooler #1 amb. but Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☐ No ☐Chain of custody agrees with sample labels? Yes ☐ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

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

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



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

ARNG-CSG-P

13 May 2013

MEMORANDUM FOR THE Oklahoma Army National Guard, ATTN: SFC [Redacted]
4220 North Mingo Expressway, Tulsa, Oklahoma 74116.

SUBJECT: Industrial Hygiene Baseline Survey of the Tulsa Armory.

1. References.

- a. Report submitted 10 May 2013, Industrial Hygiene survey, [Redacted] IH Surveying.
- b. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- c. AR 40-5, Preventive Medicine, 22 July 2005.
- d. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- e. AR 385-10, 29 February 2000, Army Safety Program.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 10 December 1998, Hearing Conservation.
- g. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000
- h. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- i. Industrial Ventilation, 25th, 2004, 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 Mrs. [Redacted] of the Occupational Safety and Health Office, an Industrial Hygiene Survey was conducted at the Tulsa Armory.
- b. The survey was conducted by Mr. [Redacted] of [Redacted] IH Surveying.

3. Findings. . All HHIM field survey forms and 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. Make corrections to all findings and recommendations made in the 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.

5. If additional information is needed about the contractors report, please contact M. **Non-Responsive** Regional Industrial Hygienist, ARNG-IHS, **Non-Responsive** OR **COMMERCIAL Non-Responsive**

Non-Responsive

Regional Industrial Hygienist

1 Encl.

CF: Oklahoma Army National Guard Occupational Health Office, ATTN: Mrs. **Non-Responsive**
Non-Responsive Occupational Health Nurse, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

MAJ **Non-Responsive** Safety and Occupational Health Manager, 5290 Air Guard Drive, Bldg 1011, Oklahoma City, OK 73179.

Non-Responsive

TULSA ARMORY, TULSA OKLAHOMA
30APRIL2013



Non-Responsive

19 APRIL 2013

MEMORANDUM FOR: SFC [REDACTED] POC: Tulsa Armory; located at 4220 North Mingo Expressway
Tulsa, OK 74116

SUBJECT: Industrial Hygiene Survey of the Tulsa National Guard Armory; located at 4220 North
Mingo Expressway Tulsa, OK 74116

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 25 May 2007.
- c. AR 385-10, 29 February 2000, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. The IES Lighting Handbook, Tenth Edition; Illuminating Engineering Society / 2011
- g. Threshold Limit Values (TLV's) For Chemical Substances and Physical Agents, And Biological Exposure Indices (BEI's), 2009, ACGIH, Cincinnati Ohio
- h. Industrial Ventilation, 25th Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio
- i. AR 11-34 Army Respiratory Protection Program, 15 February 1990
- j. DA Pam 40-501, Hearing Conservation Program, 10 December 1998

Non-Responsive

SUBJECT: Industrial Hygiene Survey of the Tulsa National Guard Armory; located at 4220 North Wingo Valley Expressway Tulsa, Oklahoma 74116

2. Purpose. The purpose of this visit was to conduct a baseline Industrial Hygiene survey of the Tulsa National Guard Armory. The baseline survey included indoor air quality, noise, illumination, lead and asbestos surveys and sampling when necessary. The facility was visually examined and the various shop personnel were interviewed for historical information related to the building and the operations performed.

3. Background. At the request of Mr. [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office in College Park, GA, [Non-Responsive] was contracted to conduct the baseline industrial hygiene survey at the National Guard Armory in Tulsa, OK. SFC [Non-Responsive] was the POC at the armory.

4. Facility Description. The armory is a two story building which has the following; administrative offices, classrooms, supply areas, a kitchen, the drill hall, latrines, conference rooms, indoor firing range (which has been converted). Very few offices on the second floor are being used.

5. Instrumentation. All instrumentation was operated according to manufacturer's recommendations. All instruments have been calibrated properly and within the last 8 months.

6. Findings.

- a. Numerous ceiling tiles appeared damaged and stained. A number of the intake and exhaust covers were covered with soot.

Ducts covered from soot



Non-Responsive

Ceiling tiles damaged and stained



- b. 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 were no obvious roof leaks at the time of the survey. Throughout the building the average temperature was 74 (DF) and the average humidity was 39.6. Many factors such as personal activity may affect personal comfort. Acceptable relative humidity levels can range from 30 to 70% year round. Elevated humidity could promote growth of mold, bacteria and dust mites which can aggravate allergies and asthma. Carbon dioxide levels were very low and are a measure as to whether adequate volumes of fresh outdoor air are being introduced to indoor air. Outdoor levels of Carbon dioxide are 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 532 parts per million. The ventilation system is in good working condition and maintains a comfortable working environment, although it appeared to be in need of servicing as mentioned earlier. At the time of the survey there was no record of a maintenance record program of the HVAC system.

Office/Areas	IAQ CO2 ppm /Temp/HM/CO	Office/Areas	IAQ CO2 ppm /Temp/HM/CO
Drill Hall	532/66/59/0	Rm 105	507/73/43/.3
M latrine Avg	612/73/57/0	Rm 106	539/74/45.5
F Latrine Avg	530/73/55/.1	Rm 108	521/73/42/0
IFR/SUPPLY	521/64/53/.2	Rm 114	535/72/47/.3
Rm 121	537/73/53/.2	Rm 109	597/73/48/.2
Rm 128	601/74/55/0	Rm 110	612/74/47/.4
Weapons Vault	583/63/50/0	Rm 113	548/75/72/.6
Supply Area	596/68/53/.3	Rms 201-224 Avg	539/73/73/0
Kitchen	498/74/53/0	Pantry	503/64/53/.5
Rm 131	511/73/41/.3	Gym	528/73/45/.5

- c. Illumination was surveyed throughout the building. A small number of lights were burned out or not working. All readings are in foot-candles. Levels were as follows:

Non-Responsive

Office/Areas/Equipment	Illumination Foot Candles (ftc) # Lights/Ftc/Windows/# of lights out	Meets: IES Lighting Handbook
Drill Hall	11/ 62/ 18/ 0 2 Bay doors	Yes
M latrine Avg	6/ 34/ 0/ 0	Yes
F Latrine Avg	7/ 42 /0/ 0	Yes
IFR/SUPPLY	2/ 18/ 0/ 0	No
Rm 121	2/ 11/ 2/ 0	No
Rm 128	2/ 53/ 2/ 0	Yes
Rm126	4/ 26/ 0/ 6	Yes
Weapons Vault	6/ 106/ 0/ 0	Yes
Supply Area	6/ 78/ 0/ 0	Yes
Kitchen	12/ 32/ 0/ 2	Yes
Rm 131	12/ 46/ 0/ 0	Yes
Rm 105	2/ 16/ 5/ 0	No
Rm 106	2/ 23/ 2/ 0	Yes
Rm 108	5/ 87/ 3/ 0	Yes
Rm 114	3/80/ 1/ 0	Yes
Rm 109	2/ 26/ 5/ 0	Yes
Rm 110	2/ 86/ 5/ 1	Yes
Rm 113	6/12 / 0/ 0	No
Rms 201-224 Avg	3/ 36/ 3/ 1	Yes
Pantry/Office	2/ 42/ 0/ 0	Yes
Gym	16/ 34/ 0 /0	Yes

- d. Sound level measurements were performed in all work areas of the facility. There is no significant reading, which would put personnel in harm's way. The Average reading for the facility is 50 dBa.

Office/Areas/Equipment	Noise dBa	Exceeds Noise 85 dBa Std
Drill Hall	50	No
M latrine Avg	44	No
F Latrine Avg	50	No
IFR/SUPPLY	50	No
Rm 121	48	No
Rm 128	52	No
Rm126	50	No
Weapons Vault	45	No
Supply Area	51	No
Kitchen	51	No
Rm 131	48	No
Rm 105	40	No
Rm 106	45	No

Non-Responsive

Rm 108	50	No
Rm 114	46	No
Rm 109	48	No
Rm 110	50	No
Rm 113	50	No
Rms 201-224 Avg	56	No
Pantry/Office	40	No
Gym	58	No

- e. Weapons Vault: The weapons vault was tested for lead levels, lead swipe samples were taken and sent to AES Inc. Results of the samples are listed below.

<i>Sample Site</i>	<i>Result/Units ug.</i>	<i>Reporting Limits</i>
VAULT FLOOR	263	20
RT WALL VAULT	BRL	20
VAULT SHELVES	24	20
VAULT DOOR IN	BRL	20
VAULT DOOR OUT	50	20
FLOOR OUTSIDE VAULT	150	20
DESK IN SUPPLY	27	20
BLANK	BRL	20
IFR ENTRANCE FLOOR	BRL	20
IFR RT WALL	BRL	20
IFR FAR WALL	26	20
IFR FLOOR CTR	BRL	20
IFR CHAIRS	BRL	20
DRILL HALL FLOOR CTR	BRL	20
DRILL HALL FLR BY SUPPLY	BRL	20
DRILL HALL FLR BY BAY DOOR	BRL	20

BRL: Not detected at the reporting limit

Non-Responsive

- f. Asbestos: Insulation around pipes was fraying in some areas. Samples were taken. All samples came back none detected (ND). All lab results are located in the attachments.



- g. The flammable cabinet was maintained. The MSDS binder was easily accessible if needed.



7. Technical Assistance. For technical assistance, regarding information found in this report, please contact Mr. **Non-Responsive** of the Southeast Regional Industrial Hygiene Office **Non-Responsive**

8. Attachments

1. Recommendations
2. Photos
3. Lab Results

Non-Responsive

Based on interviews with the POC and other personnel as well as observations by [REDACTED] IH Surveying Inc. staff and IAQ measurements, it appears the Tulsa Armory is need of the following recommendations:

- Determine where leaks are coming from, either from the roof, AC duct work or overhead piping. Then replace broken and stained ceiling tiles. Clean all vents annually or as needed. **RAC 3**
- The floor inside (263ug) the vault exceeded the recommended level of 200 ug. This area and all other areas around the vault should be cleaned and retested.
RAC 3
- For levels not meeting the illumination standard. Lights that are out or broken should be fixed. In other areas supplemental lighting could be used. **RAC 3**
- General housekeeping needs to be conducted throughout the armory and drill hall. The buildup of old boxes, papers, broken and stained ceiling tiles, provide a habitat for future pest. **RAC 3**

Non-Responsive



Damaged Ceiling Tiles



Damaged Ceiling Tiles



Office second floor



Exhaust/Intakes covered in soot



Damaged Ceiling Tiles



Star classroom

Non-Responsive



Gym



Supply area



Latrine



Drill Hall



Kitchen

Non-Responsive



Supply area/ Old Indoor Firing Range



Supply area/ Old Indoor Firing Range



Supply area/ Old Indoor Firing Range



Eye Wash system works



Supply area/ Old Indoor Firing Range



Supply Area

Non-Responsive



Supply Area



Conference room



Downstairs Hallway



Upstairs platoon room



Exhaust/Intakes covered in soot



Old broken ceiling tiles

Non-Responsive



Upstairs offices

ANALYTICAL ENVIRONMENTAL SERVICES, INC.



May 06, 2013

Non-Responsive

National Guard Bureau Region-South IH
510 Plaza Drive, Suite 1530
College Park GA 30349

TEL: Non-Responsive
FAX: [REDACTED]

RE: Tulsa Armory

Dear Non-Responsive

Order No: 1304081

Analytical Environmental Services, Inc. received 16 samples on 4/26/2013 2:50:00 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 07/01/12-06/30/13.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

Non-Responsive

Project Manager

BEST AVAILABLE COPY

[illegible]

BEST AVAILABLE COPY

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

Released by National Guard Bureau

Page 210 of 216

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704
Tel: (770) 457-8177 / Toll-Free: (800) 972-4889 / FAX: (770) 457-8188

Date: 4/19/17 Page 2 of 3

[illegible][illegible]

Client: National Guard Bureau Region-South
Project: Tulsa Army
Lab ID: 1304081

Case Narrative**Sample Receiving Nonconformance**

Sample information on the Chain of Custody (COC) did not match that on the sample bottle labels for samples [1304081-001; 1304081-002; 1304081-003; 1304081-004; 1304081-005; 1304081-006; 1304081-007; 1304081-008; 1304081-009; 1304081-010; 1304081-011; 1304081-012; 1304081-013; 1304081-014]. Samples were matched according to information found on the Chain of Custody, per project history.

Date: 6 May 19

Lab Order: 1340181
Client: National Guard Bureau - Region-South TH
Project: Iufsa Annexary
Matrix: Wipe
Date Received: 1/24/2013 2:50:00 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	Det	Qual	Date Collected	Date Analyzed	Analyst
13040801-001A	001-11-1	26.1	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-002A	002-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-003A	003-11-1	24	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-004A	004-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-005A	005-11-1	29	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-006A	006-11-1	15.0	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-007A	007-11-0	27	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-008A	008-11-0	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-009A	009-11-0	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-010A	010-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-011A	011-11-1	26	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-012A	012-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-013A	013-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-014A	014-11-1	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-015A	015-11-1-0419	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA
13040801-016A	016-11-1-0419	BRU	ug/L total	20	1		04-19-2013	05-01-2013	FA

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client National Guard Bureau SoutheastWork Order Number 1304081**Non-Responsive**Checklist completed by [Redacted] Date 4/26/13Carrier name: FedEx ☐ UPS ☐ Courier ☐ Client ☐ US Mail ☒ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? (4°C±2)* Yes ☒ No ☒ LE 4/29/13Cooler #1 Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☐ No ☒Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

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

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



Bulk Sample Summary Report

Lab Code 102082-0

2-May-13

Client Name:	National Guard Bureau Region-South III	AES Job Number:	1304P35	Project Name:	Tulsa Armory
Project Number:					

Client ID	AES ID	Location	Asbestos Mineral Percentage				Comments
			CH	AM	CR	AN	

0177UL0419	1304P35-	Rm 218	ND	ND	ND	ND	ND	
Layer: 1	001A							
0177UL0419	1304P35-	Rm 218	ND	ND	ND	ND	ND	Paint included as binder
Layer: 2	001A							
0181UL0419	1304P35-	Boiler Rm	ND	ND	ND	ND	ND	
Layer: 1	002A							
0181UL0419	1304P35-	Boiler Rm	ND	ND	ND	ND	ND	
Layer: 2	002A							
0181UL0419	1304P35-	Boiler Rm	ND	ND	ND	ND	ND	
Layer: 3	002A							
0191UL0419	1304P35-	Rm 208	ND	ND	ND	ND	ND	
Layer: 1	003A							

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=terrestite, AN=anthophyllite
For comments on the samples, see the individual analysis sheets.
ND - None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis. Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA 600/R-93/116L, 1993).
These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume. PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials; quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.
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Microanalyst:

Non-Responsive

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QC Analyst:

Non-Responsive