

Photo 1: Irving Armory Front Entrance.



Photo 2: Irving Armory South Side.

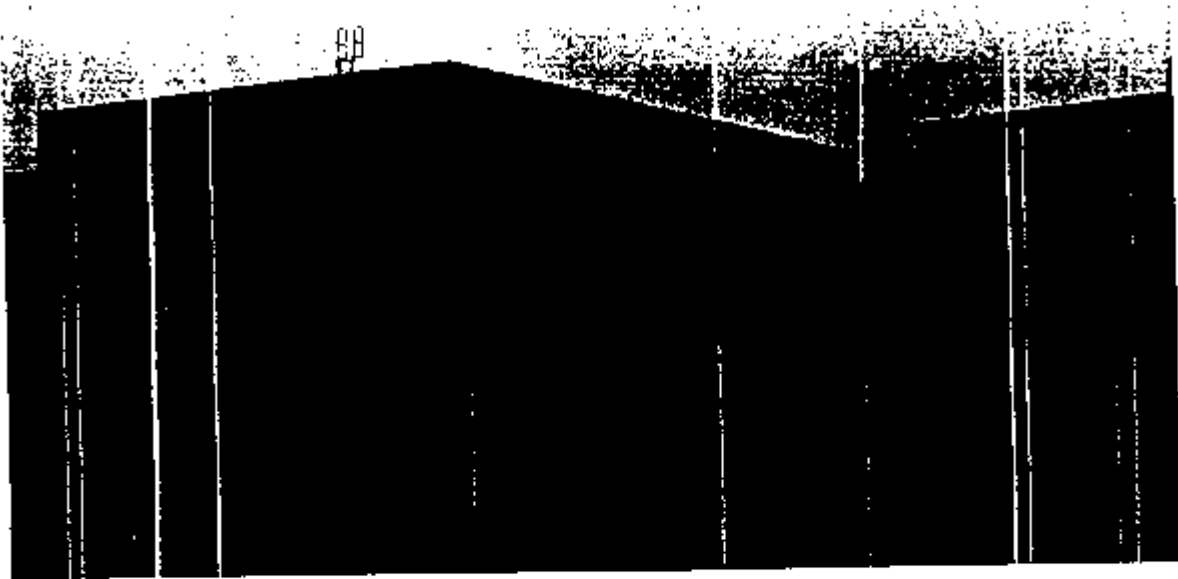


Photo 3: Armory North Side.

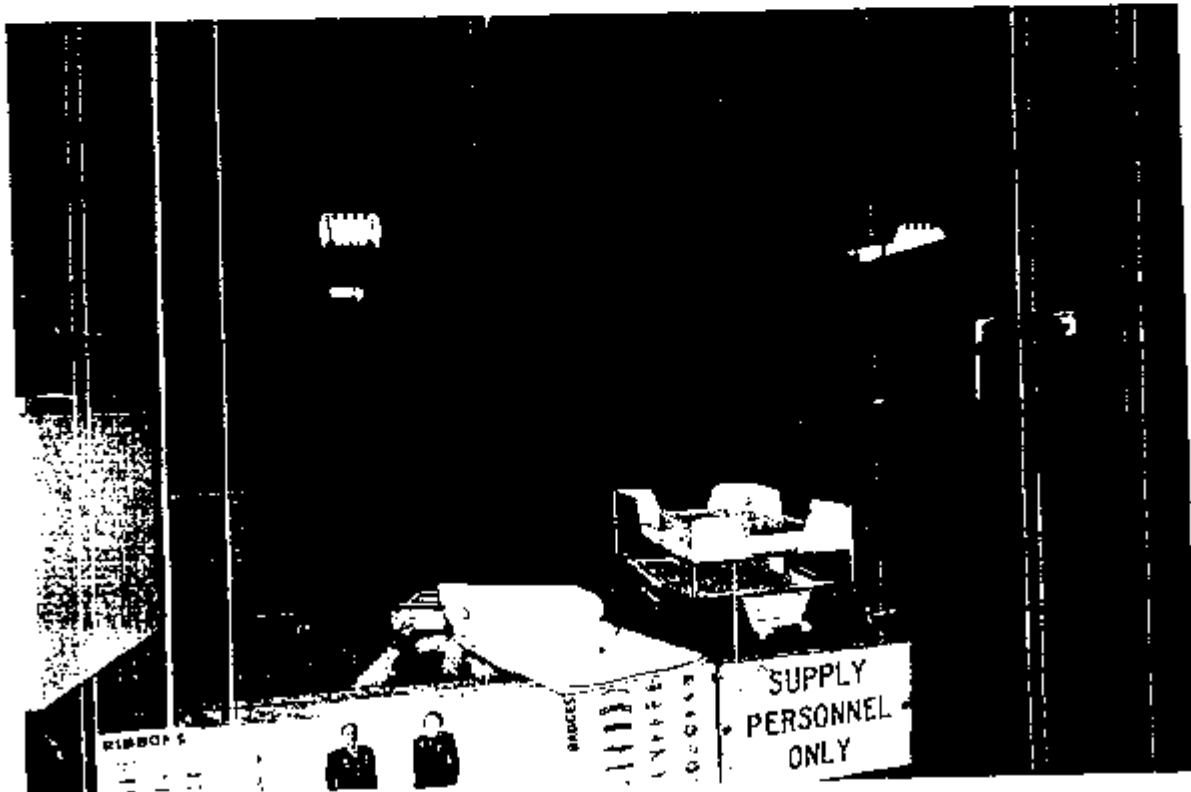


Photo 4: Inside the converted firing range.

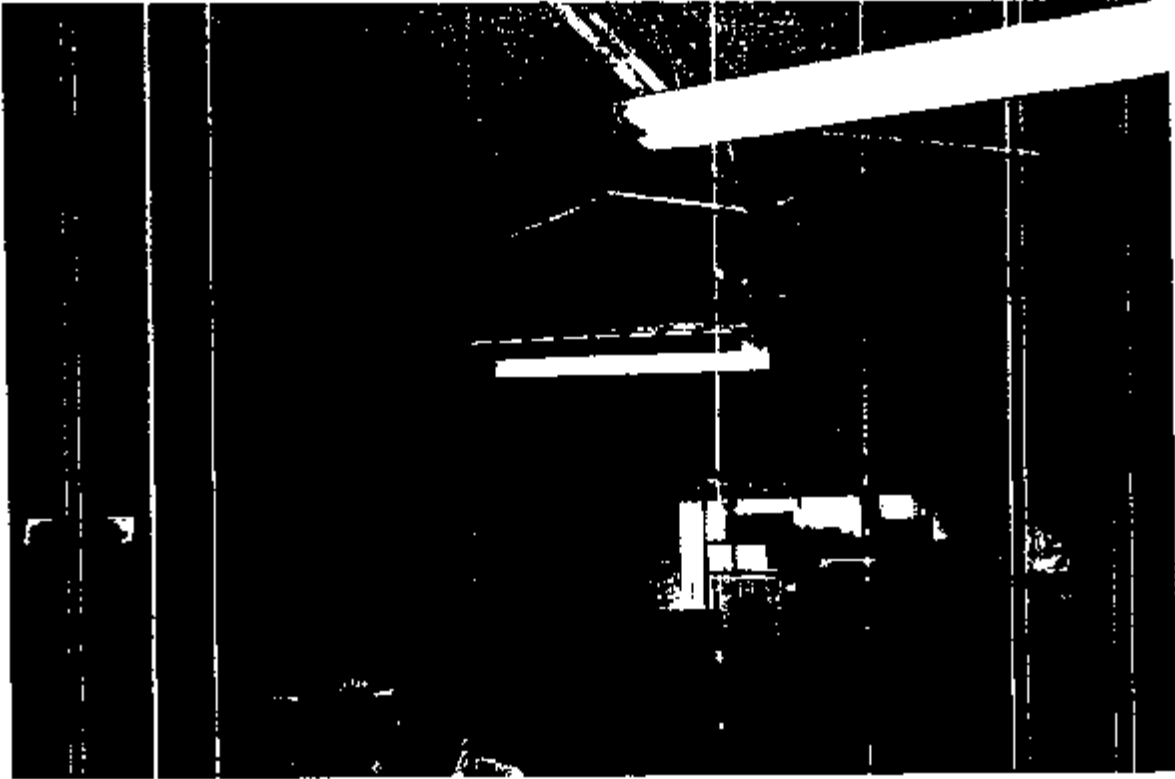


Photo 5: Another side of the converted indoor firing range.

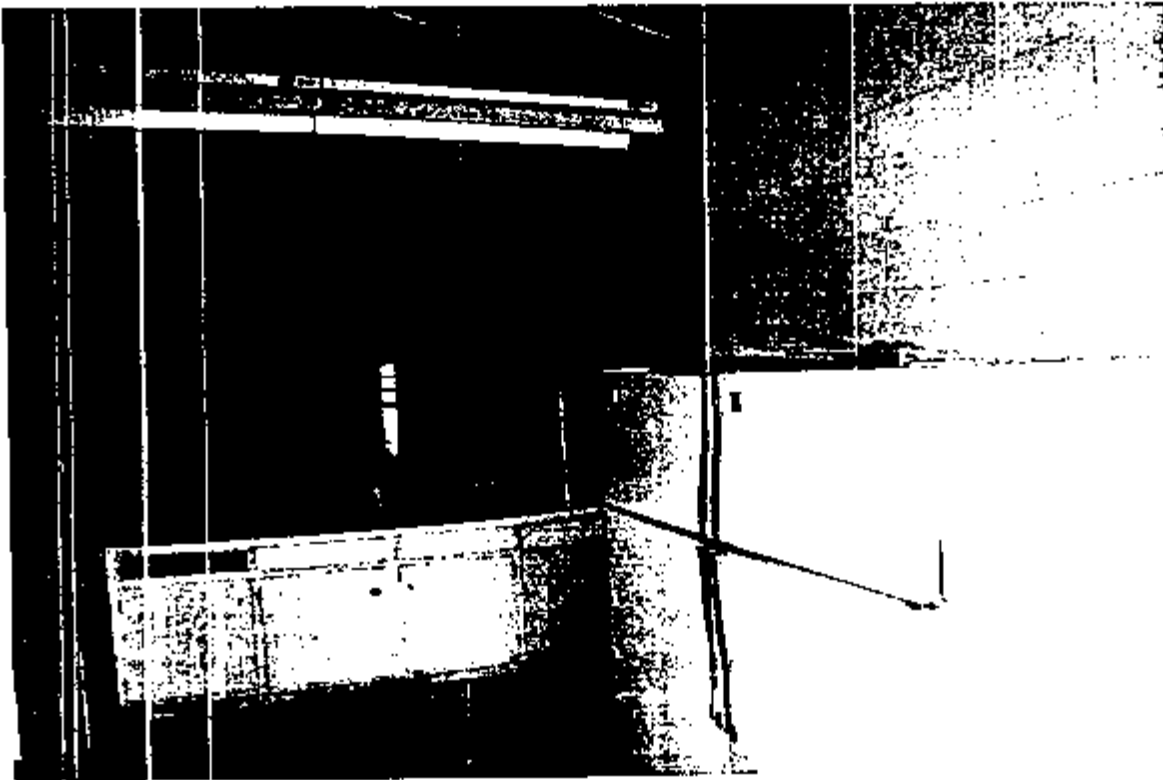


Photo 6: A more Kitchen.

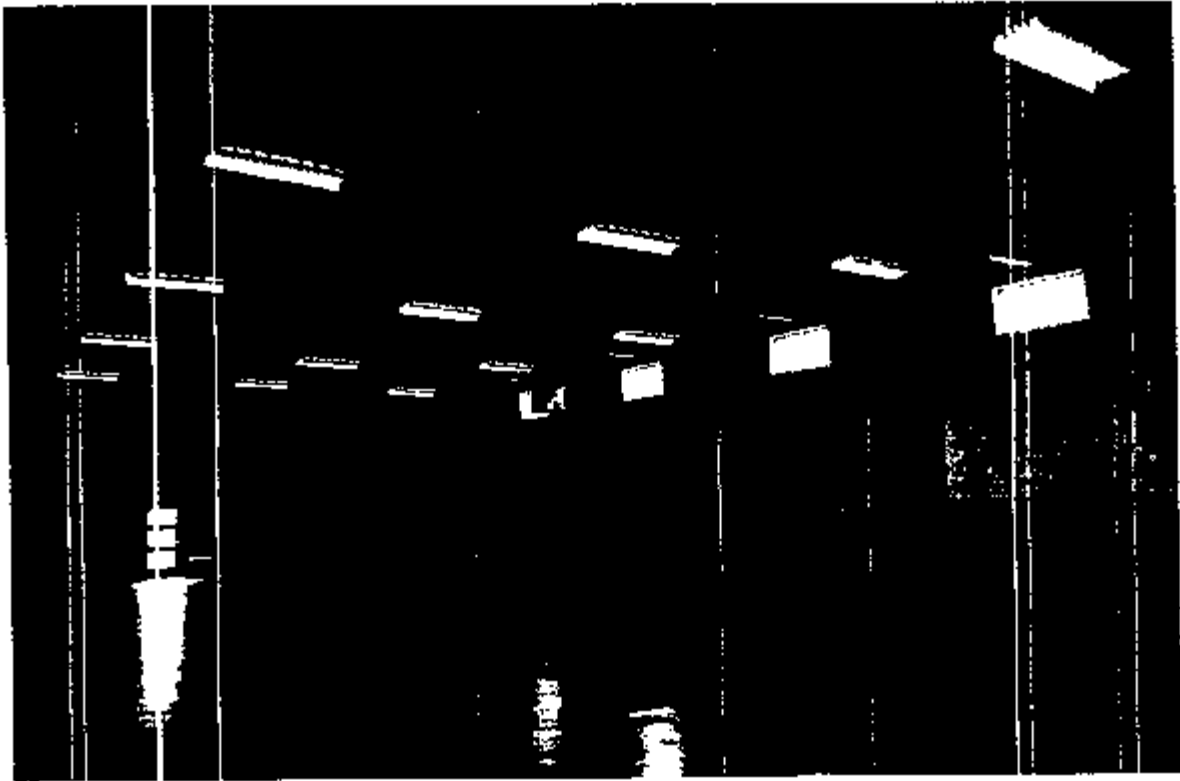


Photo 7: A more drill or assembly hall..

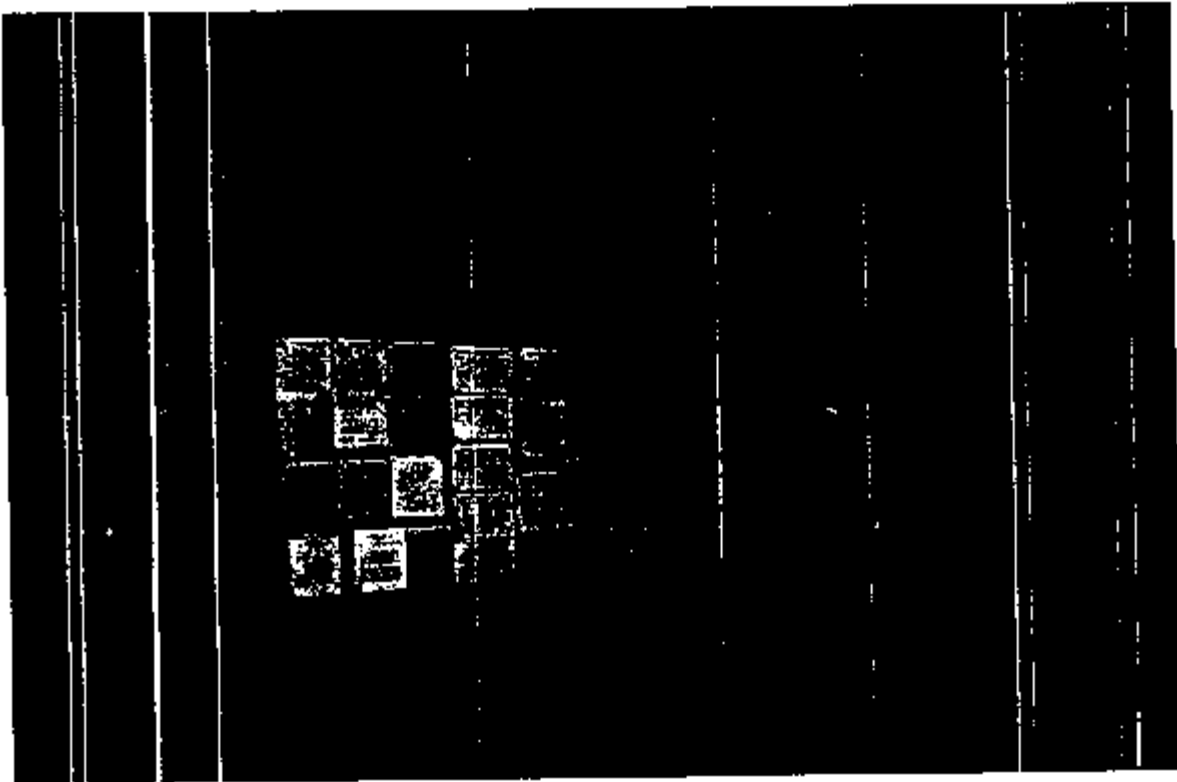


Photo 8: The bulletin board in the drill hall where a wipe sample was collected.

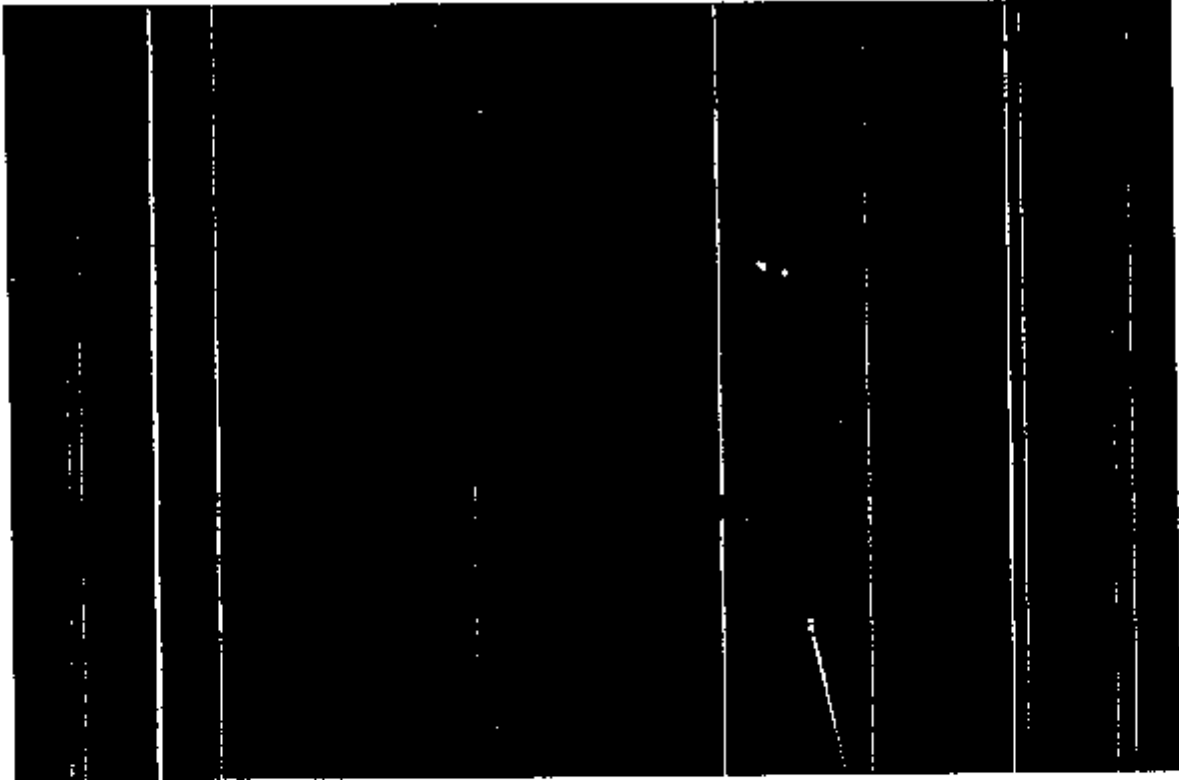


Photo 9: Insulated pipe in the drill hall.



Photo 10: Another photo of the drill hall.

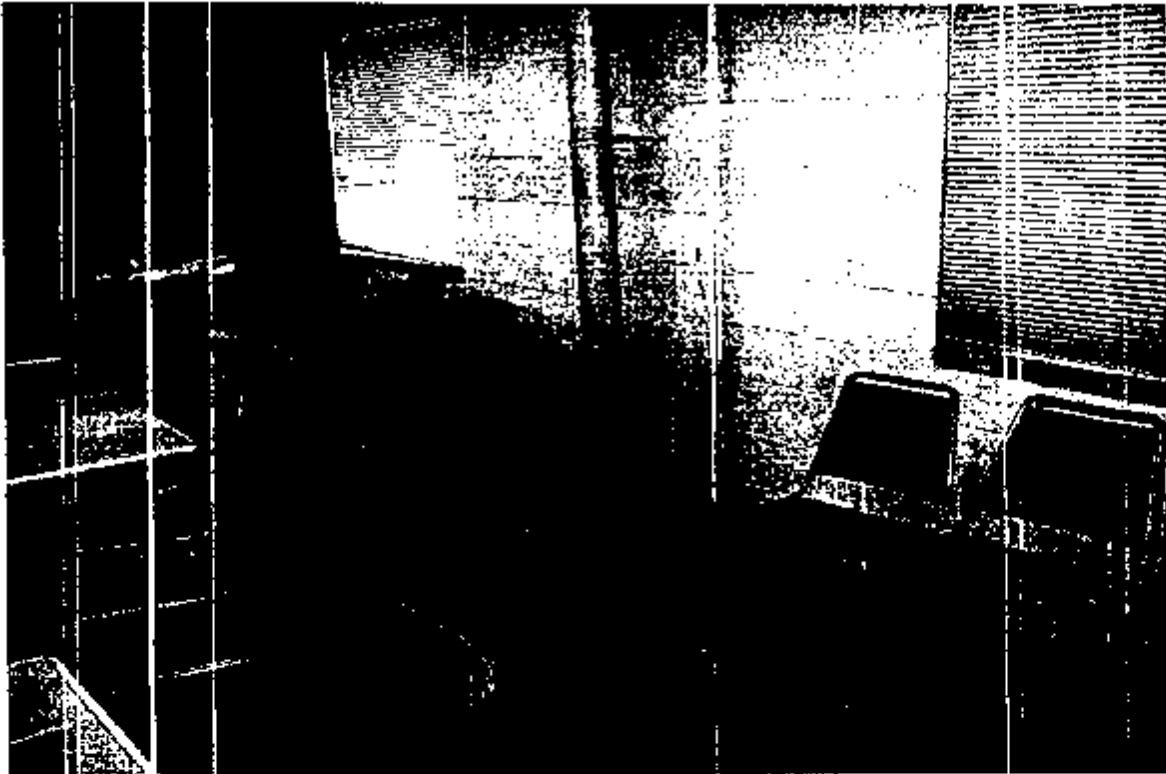


Photo 11: Photo of the individual heating unit found in the training room.

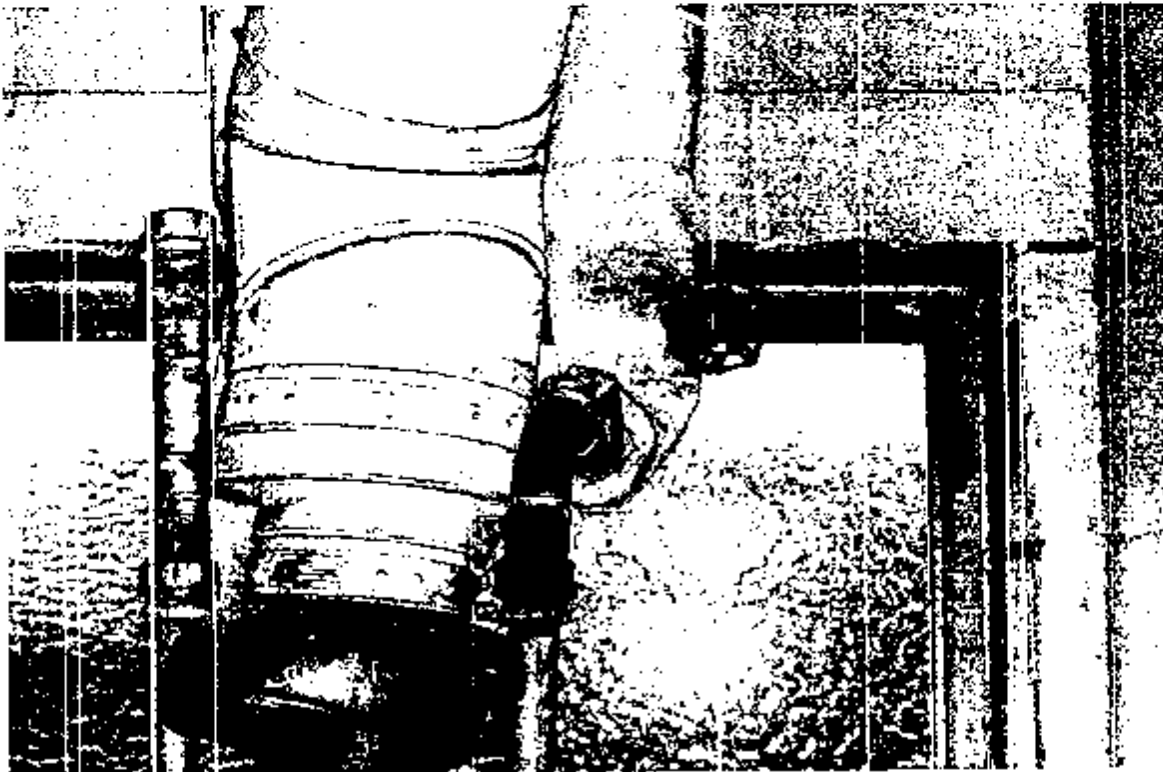


Photo 12: Thermal pipe insulation found on the hot water system.

APPENDIX E

Indoor Firing Range Cleaning Guidance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



DEPARTMENT OF THE ARMY AND THE AIR FORCE
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NGB-ARS-IHSE (40-5f)

04 September 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Co C 111th ENG BN
Irving Armory 1007 O'Connor Road Irving, Texas 75061

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Building 10,
Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Co C 111th ENG BN Irving Armory 1007 O'Connor Road Irving, Texas
75061

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2009, a follow-up industrial hygiene survey was performed at the Irving Armory located at 1007 O'Connor Road Irving, Texas 75061. The purpose of the survey was to evaluate potential health hazards present in the building

- a. The Point of Contact during the survey was **Non-Responsive**
- b. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 25 August 2009.

3. General.

- Irving*
- a. **Site Description.** The armory building is a one-story structure that was constructed in 1960. The facility houses several administrative office areas, a kitchen, a mess hall, training or classrooms, a drill hall and a supply room. Approximately 95 members drill at this facility on drill weekends along with one AGR full time employee. A copy of the floor layout and photos are included in Appendix A.
 - b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
 - c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to the laboratory for analysis. Area illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor.

4. Findings.

All findings below except illumination were that of 2003 survey. No remediation or changes were noted during current survey 2009.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected in 2003 from various areas. Due to no remediation or renovations since last survey date; no samples were taken during current survey.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard. The contaminated areas as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18.

- b. **Asbestos Suspect Building Material:** During 2003 survey two types of building materials were identified as potentially containing asbestos. The identified types included 2x4 feet ceiling tiles and thermal pipe insulation from. Four bulk samples were collected randomly from the identified materials. Due to non-renovation no areas were identified or sampled during the current 2009 survey. The table below lists the samples collected from prior survey and the results:

Sample Number	Sample Location	% Asbestos Type
IRV01A	Pipe thermal insulation (Joint Compound)	None.
IRV02A	Pipe thermal insulation straight run	None.
IRV03A	2x4 Ceiling tiles	None.
IRV04A	Pipe thermal insulation (Joint Compound)	3% Chrysotile

- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.

- d. **Illumination Survey** Lighting levels throughout the Armory ranged between 02 to 57 foot-candles. Specific readings were as follows:

Area	Reading in Foot-candles
Drill or Assembly Hall	09 – 14
Classrooms	27 – 51
Kitchen	43 – 57
Administrative Office Areas	05 – 39
Supply Room Area	02 – 44

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

- e. **Heating Ventilating and Air Conditioning (HVAC)** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of individual gas heated units and window air conditioners. No outside makeup air to the occupied space is available. At the time of current survey drill hall exhaust fans 3 and 4 switches were swapped. Fan 3 is in-op and the switch for fan 4 is in-op. Complaints of indoor air quality issues were documented or communicated with the POC.

Recommendations:

- a. Evidence of Lead contaminated surfaces and Asbestos containing materials was found as listed in the current and prior report. Monitor undisturbed areas and contact your local facilities commission for cleaning of friable / damaged areas. DO NOT DISTURB or HAVE SOLDIERS ATTEMPT TO REPAIR THE DAMAGED AREAS. (RAC 3)
- b. Clean and decontaminate lead contaminated surfaces per NG PAM 385-18. (RAC 2)
- c. To prevent lead dust cross-contamination, practice good housekeeping by washing hands after vehicle maintenance, handling and cleaning weapons and after leaving supply areas. (RAC 2)
- d. Replace bulbs, repair and or replace broken light fixtures to improve luminescence in areas with low light readings add additional exterior lighting per POC request. POC has submitted a work order for electrical work. Contact facilities to repair drill hall exhaust fan and on/off switches. A licensed electrical contractor is recommended to make repairs and correct electrical issues. (RAC 2)
- e. During current survey evidence of needed roof repair was noted. To reduce further damage and maintain overall indoor air quality, document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement if needed. (RAC 3)
- f. Contact facilities to install HVAC in all occupied areas to include bathroom and supply rooms . (RAC 3)

6. If additional information is needed about this report, please contact Louis Scott, SGT, IHT, Texas Army

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.





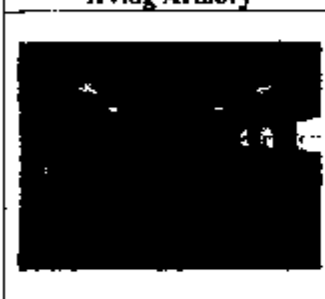
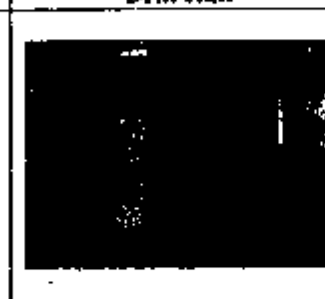


State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

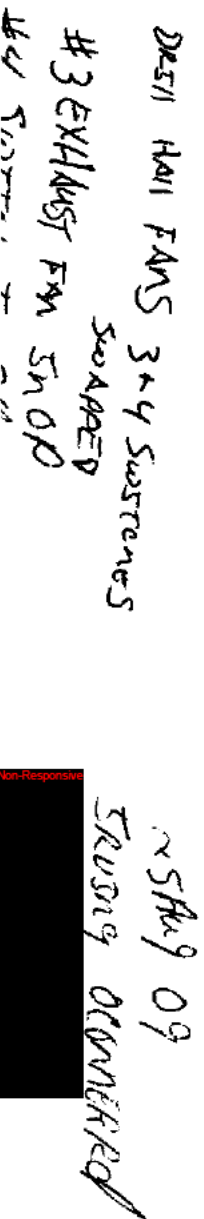
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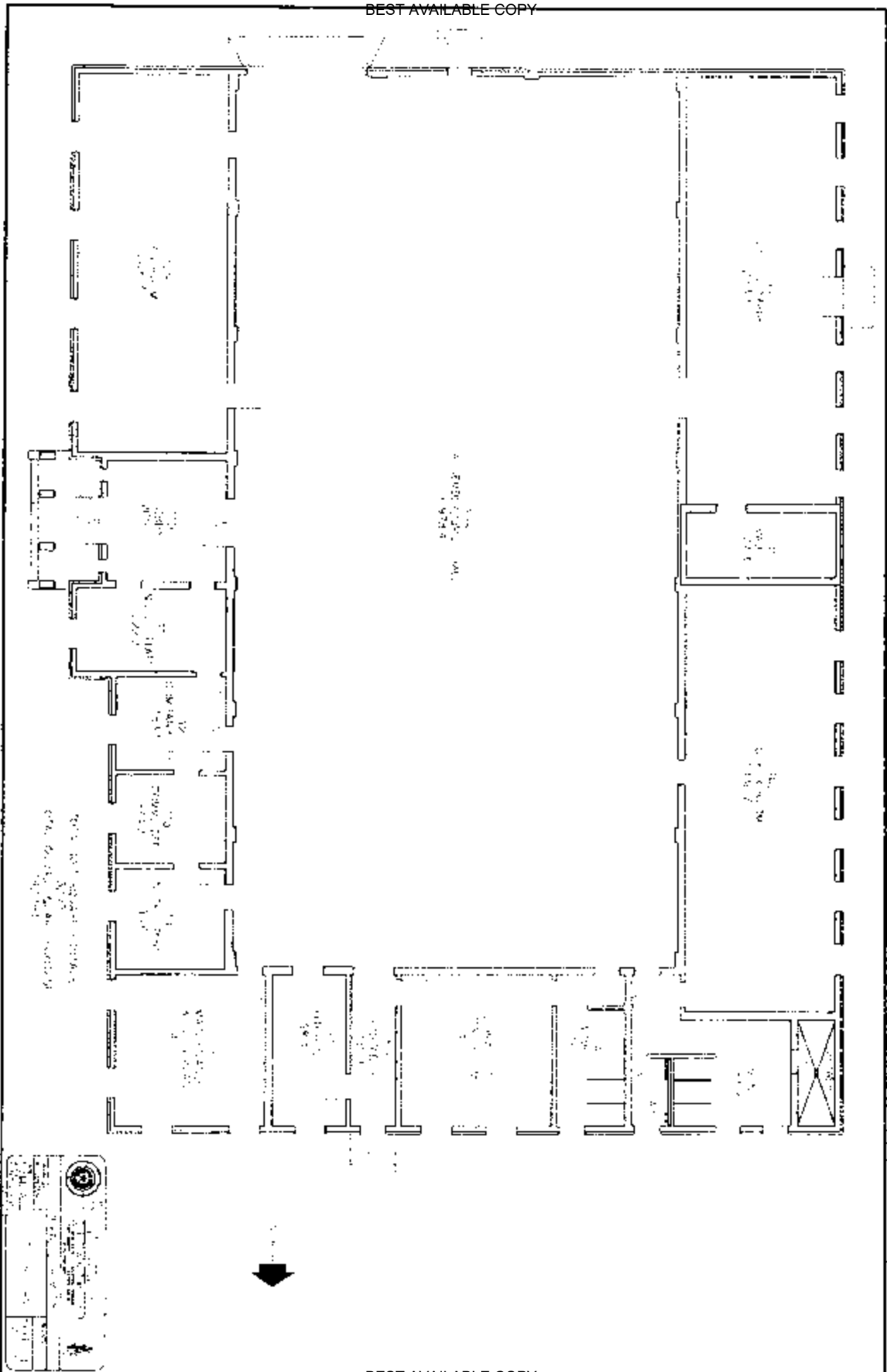
Appendix A:
Photographs and Floor Layout.

Irving Armory

			
Irving Armory	Drill Hall	Admin Area	Class Room
			
Supply Room	Entrance to Storage Area	Storage Area	Kitchen

NO AC HOAC
WINDOWN UNITS ONLY





**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service. Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

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

b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.i, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.

c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.

d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office. P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager. P. O. BOX 5218. Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Kaufman Armory
2125 S. Houston
Kaufman, Texas

Prepared for:

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

By
Non-Responsive

June 25, 2004

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Kaufman Armory

Survey Date: 14 April 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Kaufman Armory on 13 April 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
Armory Lead Wipe Samples	<10 to 47 microgram per square foot.	No action.
Asbestos Bulk Samples	Floor tile and mastic contained 2 to 8% chrysotile	Update the facility asbestos management plan.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 60 footcandles	No action.
HVAC/IAQ	No issues observed or documented.	No action.

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Kaufman Armory in Kaufman, Texas on 14 April 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Kaufman Armory in Kaufman, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 14 April 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses Company A and the first of the 112 AR. The building is a one-story structure and consists of an administrative office area, a kitchen, a classroom, a drill hall, and a supply room. No indoor firing range was found at this armory. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Twelve wipe samples were collected from various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
BSP01	Top of refrigerator in kitchen.	<10.0
BSP02	Top of serving line between kitchen and drill hall	<10.0
BSP03	Supply diffuser in administrative office	<10.0
BSP04	Return air grill in the administrator office	<10.0
BSP05	Top of a cabinet in the administrative office	<10.0
BSP06	Drill hall floor by supply room	47.0
BSP07	Drill hall floor diagonally opposite the floor sample by supply	<10.0
BSP08	Drill hall floor in center.	<10.0
BSP09	Top of the soda machine in the drill hall	<10.0
BSP10	Top of a surface in the classroom	<10.0
BSP11	Top of a random surface in the armory	<10.0
BSP12	Field Blank	<10.0

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

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
KA A01B	2x4 foot ceiling tile in drill hall and exercise room	None.
KA A02B	12x12 inch floor tile.	2% Chrysotile.
KA A02B	12x12 inch floor tile mastic.	8% Chrysotile.
KA A03B	Baseboard	None.

The facility asbestos management plan should be updated to include the floor tiles. The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 60 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	20 - 50
Supply Room.	10 - 20
Drill Hall.	40 - 60
Classroom.	30 - 50
Kitchen.	15 - 25

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of a forced air furnace unit. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

Update the facility asbestos management plan to include the tile mastic.

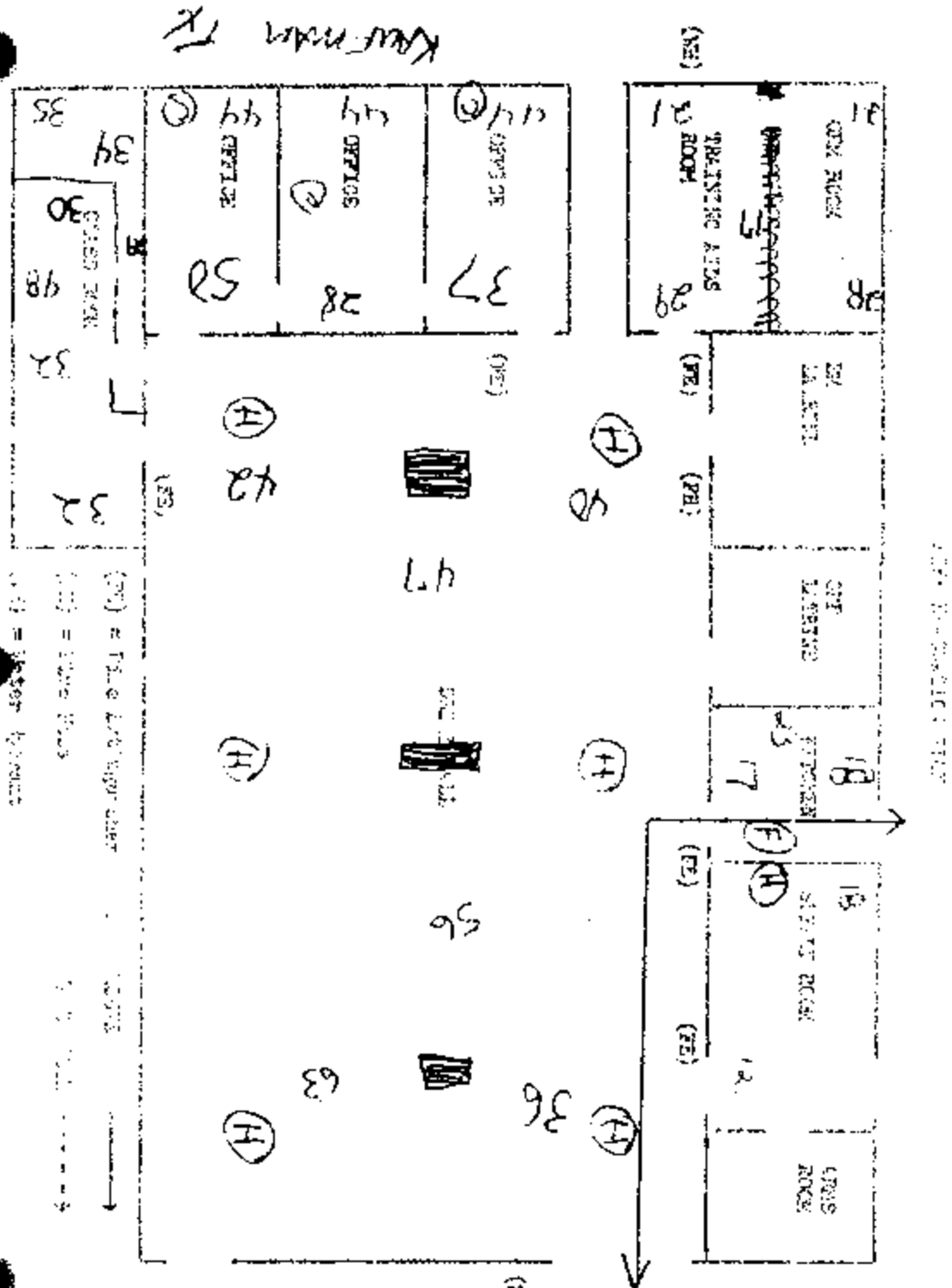
Kaufman Armory

Survey Date: 14 April 2004

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A



BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4500 Fax: (856) 858-4551 Email: skuffman@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 1:44 PM

Fax:

EMSL Order: 200404881

Project:

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
KA-01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/6/04	144 in ²	<10.0 µg/ft ²
KA-02	0002	5/6/04	144 in ²	<10.0 µg/ft ²
KA-03	0003	5/6/04	144 in ²	<10.0 µg/ft ²
KA-04	0004	5/6/04	144 in ²	<10.0 µg/ft ²
KA-05	0005	5/6/04	144 in ²	<10.0 µg/ft ²
KA-06	0006	5/6/04	144 in ²	47.0 µg/ft ²
KA-07	0007	5/6/04	144 in ²	<10.0 µg/ft ²
KA-08	0008	5/6/04	144 in ²	<10.0 µg/ft ²
KA-09	0009	5/6/04	144 in ²	<10.0 µg/ft ²
KA-10	0010	5/6/04	144 in ²	<10.0 µg/ft ²
KA-11	0011	5/6/04	144 in ²	<10.0 µg/ft ²
KA-12	0012	5/6/04	144 in ²	<10.0 µg/ft ²

Non-Responsive

The GC data associated with the sample results included in this report meet the recovery and precision requirements established by the EPA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-RELAP: 04852, AHA Environmental Lead Laboratory Approval Program: 100194

Printed: 5/10/04 5:56:28 PM

EMSL Analytical, Inc.

107 Madison Ave., Westmont, NJ 08108

Phone: (856) 556-4300 Fax: (856) 556-4360 Email: sales@EMSL.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 12:25 PM

Fax:

EMSL Order: 040407149

Project:

EMSL Proj:

Analysis Date: 4/29/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
KA-A01B 040407149-0001		White/Brown Fibrous Heterogeneous	Dissolved Teased	10% Cellulose 45% Min. Wool	45% Non-fibrous (other)	None Detected
KA-A02B-FT 040407149-0002		Brown Non-Fibrous Homogeneous	Dissolved		98% Non-fibrous (other)	2% Chrysotile
KA-A02B-Mas 040407149-0004		Black Non-Fibrous Homogeneous	Dissolved		92% Non-fibrous (other)	8% Chrysotile
KA-A03B 040407149-0003		White/Brown Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected

Non-Responsive**Non-Responsive**

Or other approved signature

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL, Westmont (NELAP #10104B-G), NY ELAP 10872

APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O. #: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: Same as mail to
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville, IL Zip: 60564 City/State: _____ Zip: _____

Phone Results to: (Name) _____

Fax Results to: (Name) _____

Non-Responsive

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	
Lead Chip *	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air ***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7500 Mod.	ICP	3.0 ug/filter	
Lead in Wipe * Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest	Flame Atomic Absorption	10 ug/wipe	
	<input type="checkbox"/> -non ASTM or SW846-6010B	ICP	5.0 ug/wipe	
TCAP Lead ***	SW846-1311 / 7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
STLC Lead (transfer) *	CA Title 22 68081.12 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	
Lead Soil -			0.3 mg/kg (ppm) soil	
Lead in Drinking Water (check state Certification Requirements)	BPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

T/T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days

* ** *** **** * - # Please Refer to Price Quote

* If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume, L Area, in ²	
K-A-01	Kaufmann, TX	44	67131-1
K-A-02			

Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

See 1 Chain, Nov 2001, or STLC.doc

CHAIN OF CUSTODY

LEAD

2004 APR 22 PM 1:44

SECRET

Non-Responsive

Date: 4/19/04

Date: _____

Date: 4/24/24

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

By the individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tommy Sciences Inc

EMSL-Bill to:

Same as mail to

Street:

Street:

Box #:

Box #:

City/State:

Nashville, TN Zip: 60304

City/State:

Zip:

Phone Results to:

Fax Results to:

Name:

Telephone #:

Project:

Trace/Number:

Purchase Order #:

Non-Responsive**Non-Responsive**

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

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-220-3573 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Grav metric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC/ WIPE <input type="checkbox"/> ASTM D5755-95 <small>quantitative method</small>
TEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	XRD <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica	
OTHER <input type="checkbox"/>		

SAMPLES ACCEPTED
FOR ANALYSIS BY
EMSL ANALYTICAL INC.

SAMPLE NUMBER	LOCATION	VOLUME (if Applicable)
<u>KA-A91B</u>		

Client Sample # (s)

Relinquished:

Received:

Samples #: 3Time: Am

Time:

Non-Responsive

APPENDIX D

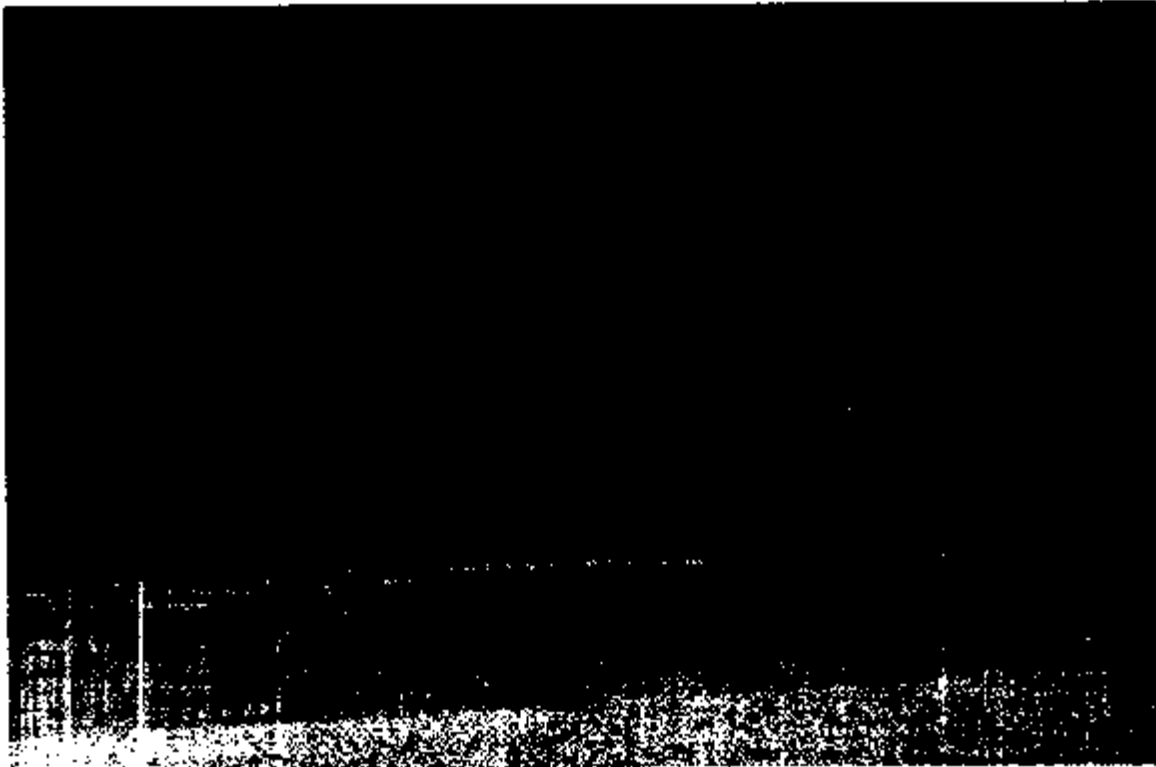


Photo #1: Armory front entrance.



Photo #2: North side of the armory.



Photo #3: North east corner of the armory.

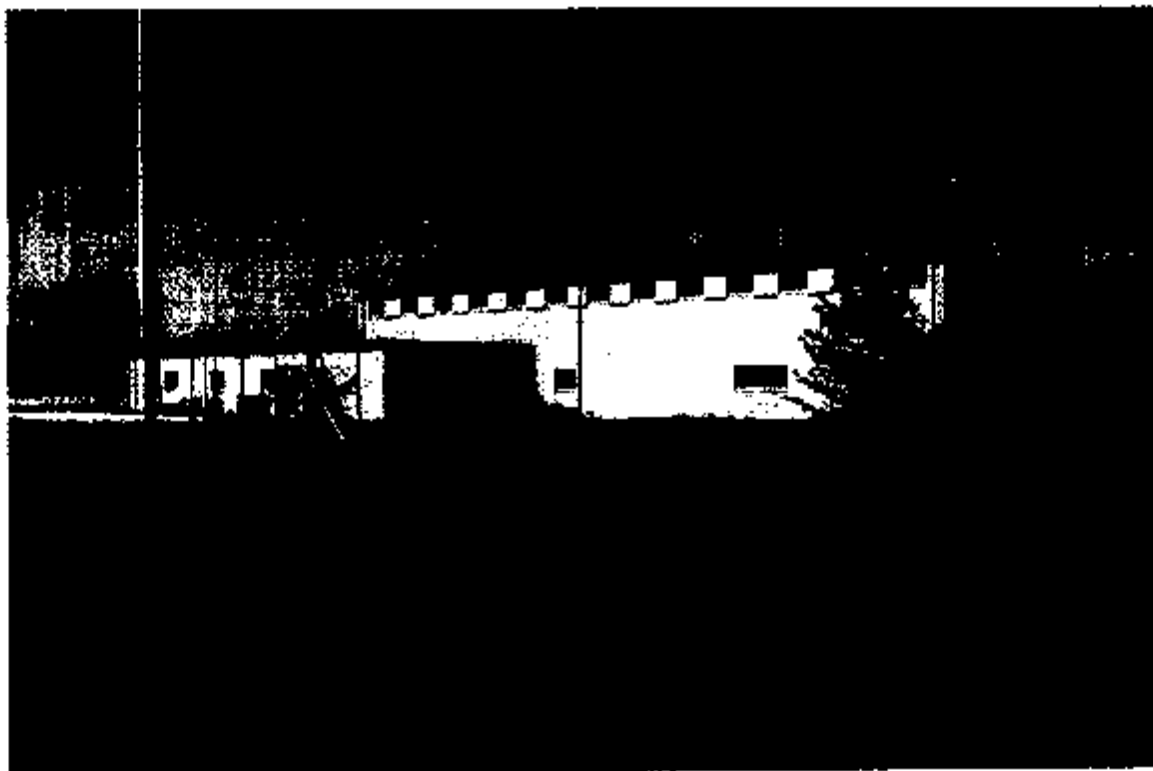


Photo #4: South side of the armory.



Photo #5: Drill hall facing west.



Photo #6: Drill hall facing east.



Photo#7: Armory's kitchen showing the stove.

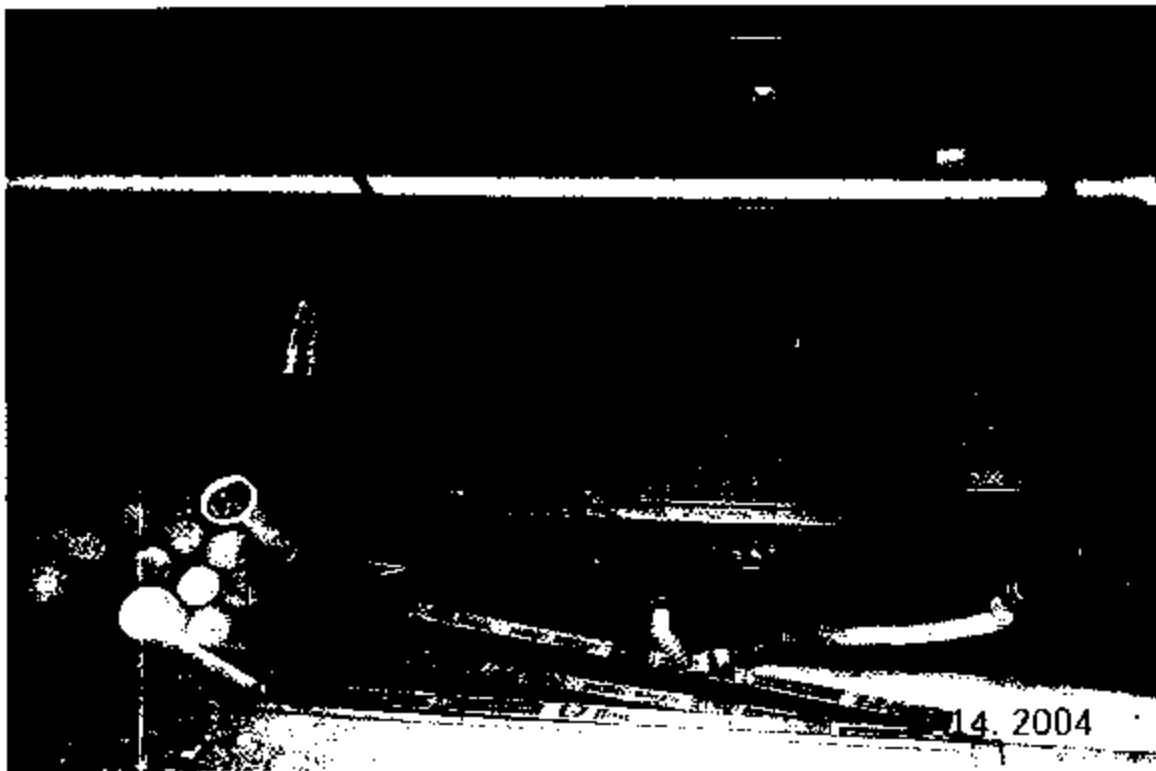


Photo #8: The Armory's forced air furnace

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

February 10, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of October 2003, Industrial Hygiene Survey, **Non-Responsive** Technical Solutions Fayetteville, GA.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

b. The survey was conducted by **Non-Responsive** Technical Solutions, Fayetteville, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.I., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
- 5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

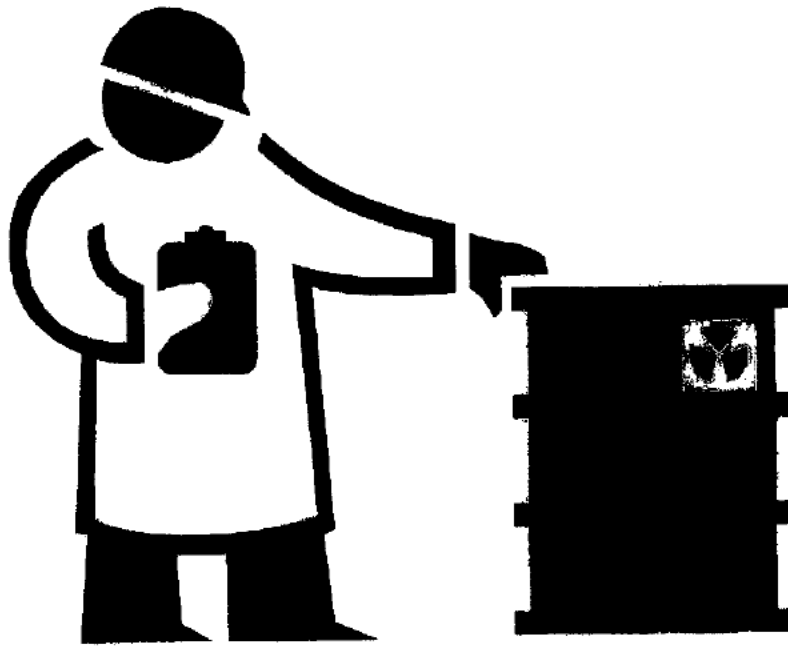
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
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Army National Guard Industrial Hygiene Survey



Kerrville Armory

411 Meadowview
Kerrville, TX 78028-5608

Non-Responsive

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5 November 2003

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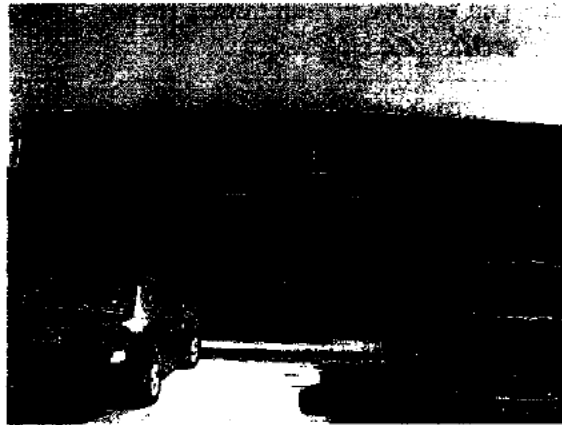
MEMORANDUM FOR: Texas Army National Guard, ATTN: [Redacted] Commander, Det. 1
Company A 249 SPT, 411 Meadowview, Kerrville, TX 78028-5608

SUBJECT: Industrial Hygiene Survey of Kerrville Armory Army National Guard, Kerrville, Texas

BACKGROUND

At the request of [Redacted] National Guard Bureau Regional
Industrial Hygiene South Office, Atlanta, GA, an initial baseline industrial hygiene survey was
performed at the following Army National Guard Armory facility on 15 October 2003:

**Kerrville Armory
411 Meadowview
Kerrville, TX 78028-5608**



This facility houses the following units:

1	Det. 1 Company A 249 SPT	[Redacted]
2		[Redacted]

The facility was built in 1954

The baseline industrial hygiene survey includes:

- Lead wipe dust surveys
- Illuminations surveys
- Ventilation surveys
- Noise surveys, if necessary

A field survey form is completed on all industrial operations at the facility, and the data contained in this report.

An initial baseline industrial hygiene survey was conducted at the Kerrville Armory, Kerrville, Texas, on 15 October 2003 as part of the Texas Army National Guard Occupational Health Program to identify potential hazards in the workplace. The survey consisted of collecting lead wipe samples, bulk asbestos samples (as needed), conducting noise and illumination survey, as well as evaluating the condition of the building, including the Heating Ventilation and Air Conditioning (HVAC) System as it relates to indoor air quality. A review of several industrial hygiene programs, such as hazard communication, radiation protection, ergonomics, and personal protective equipment was also performed.

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

Building condition / Indoor Air Quality	<ol style="list-style-type: none"> 1. There were no obvious signs of occupational hazards or concerns. 2. The facility is maintained very well. 	Continue to follow good hygiene and housekeeping practices.
Lead Wipe Samples	Below Reportable Levels (BRL) to 363 µg/ft ²	Continue to follow good hygiene and housekeeping practices.
Asbestos Bulk Samples	No issues	No action
Illumination Survey	22.5 to 159.4 foot-candles	Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
Noise Survey	No issues	No action
Hazards Communication	Chemical list available and updated. MSDS are updated for chemicals used. MSDS maintained online.	<p>Continue to update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.</p> <p>Personnel responsible for these items should receive annual training in HAZCOM requirements</p>

Ergonomics	Ergonomics concerns in Administrative and Supply Areas BEST AVAILABLE COPY	Complete ergonomics survey on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action

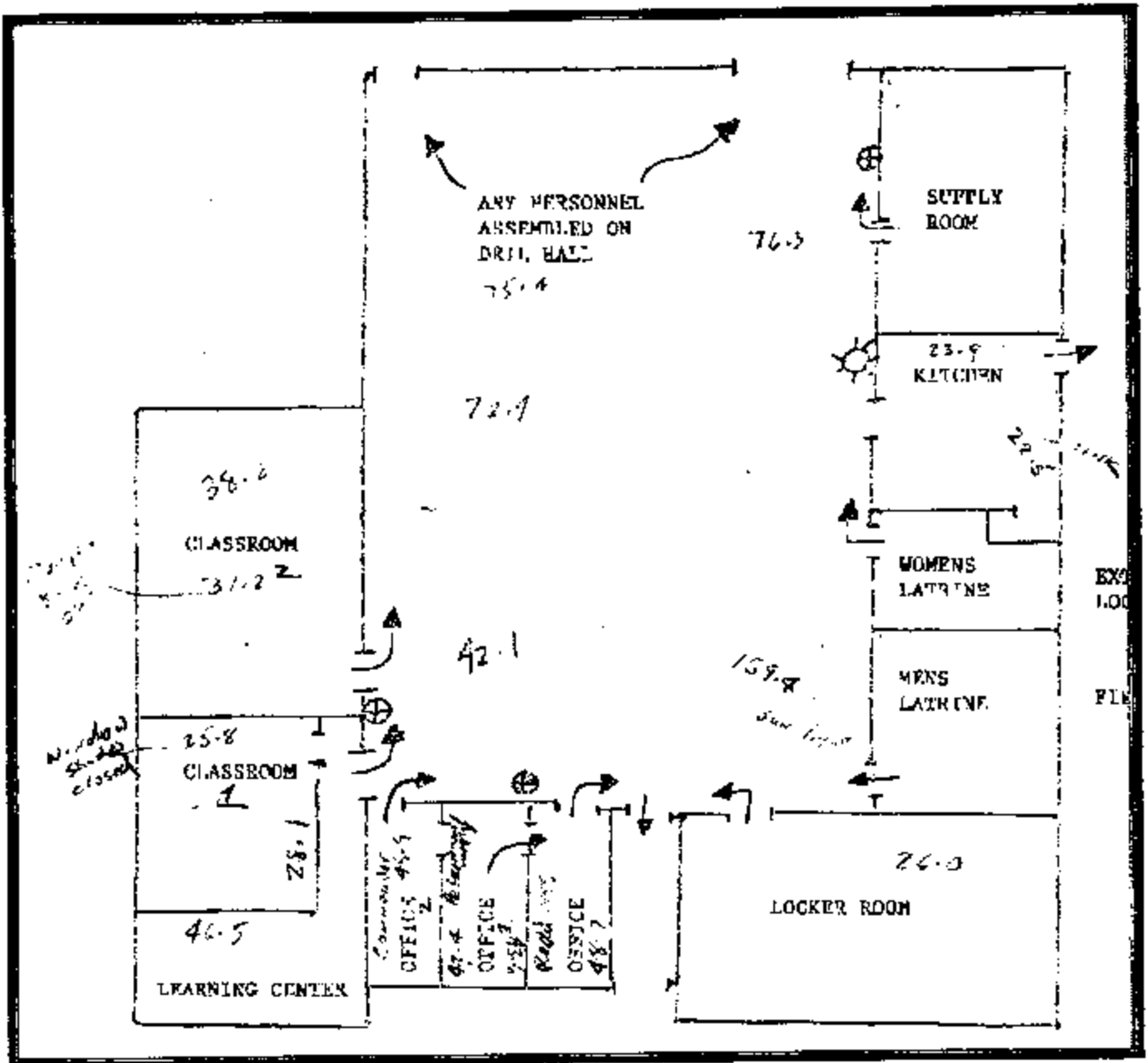
TECHNICAL ASSISTANCE

Non-Responsive

The following survey instrumentation was provided by or for the contractor, and was used to obtain lead wipe dust, illumination, ventilation, and noise sample measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

Instrument	Serial Number	Date Acquired
Extech Light Meter	Q009472	Purchased New June 2003
Bruel & Kjaer Sound Level Meter	1942768	September 7, 2002
Bruel & Kjaer 4231 Acoustic calibrator	1944552	September 3, 2002
Alnor Velometer	53281	October 1, 2002
Ghost Wipe Lead Dust Wipes		

FACILITY DIAGRAM:



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PERSONNEL DATA:

This facility houses the following full-time personnel:

Last Name	First Name	MI	Sex	SSN (Last 4 digits)	Rank	Unit
-----------	------------	----	-----	---------------------	------	------

Non-Responsive

BUILDING CONDITION:

Walk-through Observations

Item	Location	Description	Remarks
1		There were no obvious signs of occupational hazards or concerns. The facility is maintained very well.	
2			
3			
4			
5			
6			

Paint Chips Lead Sample Results:

Location	Sample ID	Result (ppb)	Remarks

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ADMINISTRATIVE OFFICES:

Light Reading Results:

There are several administrative offices in the facility. Administrative personnel are required to use computer systems, file, read, write and perform other administrative tasks as necessary. Computer use occurs throughout the day.

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the administrative areas are as follows:

Location	Foot-candles	Notes
Readiness NCO	48.7	
Retention / Supply Administration Office	43.0	
Commander's Office	45.9	
Learning Center	46.5	
Classroom 1	26.9	Readings taken with window shades closed
Classroom 2	37.7	There are a few bulbs out in this room
Locker Room	26.0	

Ventilation Sample Results:

Location	CFM	Notes
Readiness NCO Office	800	12 X 12

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Location	Sample No.	Lead Concentration (µg/ft²)	Notes

KITCHEN / MESS HALL

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The kitchen is currently not used for cooking, however, the surfaces are used to prepare sandwiches and other light meals.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the kitchen / mess hall area are as follows:

Kitchen Counter	23.9		
Kitchen Sink area	22.5		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

1-Kerrville	Blank (Administrative Offices, Kitchen, Drill Hall and HVAC)	BRL	Below Reporting Levels
2-Kerrville	Kitchen Counter	BRL	
3-Kerrville	Kitchen Sink area	BRL	

DRILL HALL

Personnel officially use the drill hall 2 days per month. It is not rented out for community events. Weapons cleaning take place by units during drill weekends.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the drill hall area are as follows:

Outside Supply office	76.3		
Back wall	75.4		
By classroom	42.1		
By entrance	159.4		Excellent sunlight

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

4-Kerrville	Drill Hall outside Supply Office	BRL	Below Reporting Levels
5-Kerrville	Drill Hall vehicle area by back door	BRL	

Noise Sample Results:

Noise levels in the drill hall area were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

HVAC SYSTEM

Since there is no IFR in this facility, an HVAC lead wipe sample was not taken.

SUPPLY ROOM(s) and VAULT(s)

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This facility has one supply room, with several storage areas. The supply Sgt uses the computer between 8-10 hours per day. The Readiness NCO maintains an inventory of all chemicals. A Material Safety Data Sheet book is maintained online. Heavy lifting is performed with the aid of hand jacks, lifts, and other personnel.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the Supply Room / Vault areas are as follows:

Supply Desk	27.6		
Vault	9.8		All bulbs on – Bulbs are old.

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floor is considered dangerous.

6-Kerrville	Blank (Supply and Vault)	BRL	Below Reporting Levels
7-Kerrville	Supply Desk	BRL	
8-Kerrville	Vault Rack	149	
9-Kerrville	Vault Shelf	363	

INDOOR FIRING RANGE

This facility has never had an indoor firing range.

MOTOR POOL

The motor pool is an outdoor area used to park vehicles and perform light maintenance. There are fuelers in the fleet and fire extinguishers are strategically placed, however, the inspection tags for the fire extinguishers are worn off due to exposure to the outside elements.

- a. Continue a maintenance schedule for ensuring that filters in the HVAC system are properly changed, any leaks or standing water are identified, repaired, and prevented, and supply and exhaust grilles are appropriately cleaned. Failure to do so may lead to indoor air quality issues. The plan should include monitoring, inspecting and cleaning HVAC components such as outside air intakes, outside air dampers, air filters, drain pans, heating and cooling coils, the interior of air handling units, fan motors and belts, air humidification, controls and cooling towers. Consult manufacturers' instructions for appropriate maintenance schedules.
- b. If indoor air quality issues develop, non-porous (e.g., metals, glass, and hard plastics) and semi-porous (e.g., wood, and concrete) materials that are structurally sound and are visibly moldy can be cleaned and reused. Cleaning should be done using a detergent solution. Porous materials such as ceiling tiles and insulation, and wallboards with more than a small area of contamination should be removed and discarded. Porous materials (e.g., wallboard, and fabrics) that can be cleaned, can be reused, but should be discarded if possible. A professional restoration consultant should be contacted when restoring porous materials with more than a small area of fungal contamination. All materials to be reused should be dry and visibly free from mold. Routine inspections should be conducted to confirm the effectiveness of remediation work.
- c. Any initial water infiltration should be stopped and cleaned immediately. An immediate response (within 24 to 48 hours) and thorough clean up, drying, and/or removal of water damaged materials will prevent or limit mold growth. If the source of water is elevated humidity, relative humidity should be maintained at levels below 60% to inhibit mold growth. Emphasis should be on ensuring proper repairs of the building infrastructure, so that water damage and moisture buildup does not recur.
- d. Contaminated materials that cannot be cleaned should be removed from the building in a sealed plastic bag. There are no special requirements for the disposal of moldy materials.
- e. Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
- f. An ergonomics survey should be completed for all supply and administrative personnel as a preventative measure to address and document any ergonomic concerns or problems. An emphasis on maintaining neutral postures and proper lifting techniques should be covered.
- g. ~~Continued maintenance of the building infrastructure is essential to ensure a safe and healthy work environment. This includes regular inspections and maintenance of all building systems, including HVAC, electrical, plumbing, and fire safety. A comprehensive maintenance schedule should be developed and followed to ensure that all building systems are in good working order and that any problems are identified and corrected as soon as possible.~~
- h. ~~Regular maintenance of the building infrastructure is essential to ensure a safe and healthy work environment. This includes regular inspections and maintenance of all building systems, including HVAC, electrical, plumbing, and fire safety. A comprehensive maintenance schedule should be developed and followed to ensure that all building systems are in good working order and that any problems are identified and corrected as soon as possible.~~
- j. Fire extinguishers should be visually inspected on a monthly basis and recorded on service tag.
- k. Perform noise survey on maintenance equipment. Ensure that all noise hazardous machinery and noise hazardous areas are appropriately marked.
- l. Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.
- m. Portable eyewashes, if available, should be maintained on a regular basis to ensure removal of opportunistic pathogens.



Photo # 1

Kitchen Sink area where lead wipe samples were taken

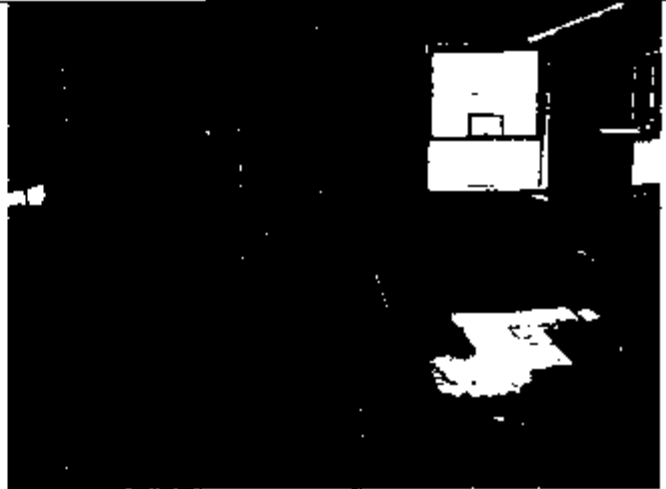


Photo # 2

Kitchen counter area where lead wipe samples were taken

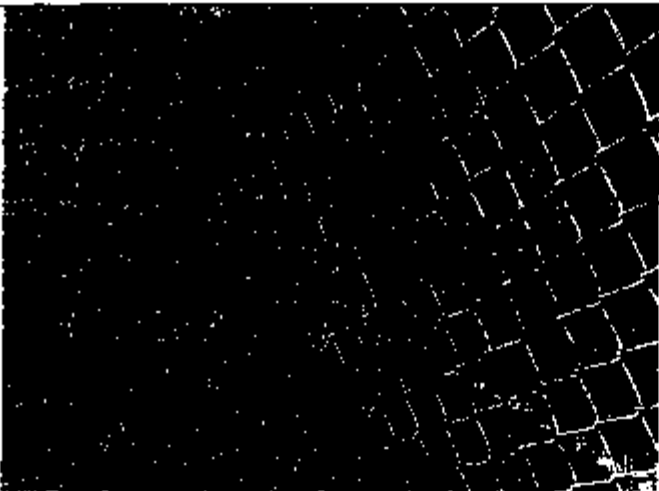


Photo # 3

This is the fire extinguisher for the fueler. Its inspection tag is worn off.



Photo # 4

Description

Analytical Environmental Servs, Inc.

Date: 10/24/2003

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: Technical Solutions International
 Project: Kerrville Armory
 Project No: Kerrville Armor
 PO No:

Lab Order: 0310641
 Date Received: 10/20/2003 12:5
 Matrix: Wipe
 Analyst: BSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0310641-001A	1-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-002A	2-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-003A	3-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-004A	4-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-005A	5-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-006A	6-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-007A	7-KERRVILLE	BRL	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-008A	8-KERRVILLE	149	µg. Total	2.83	1	10/15/2003	10/21/2003
0310641-009A	9-KERRVILLE	363	µg. Total	2.83	1	10/15/2003	10/21/2003

Qualifiers: MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 2 of 2

Chemicals on hand as 15 Sep 03

Chemical	Quantity	Container	Remarks
HTH Chlorinator	18@ 5lbs	Bottle	Milvan
Unstabilized Chlorinating granules	Approx 20 lbs	Plastic 100 lbs container	In last conex
Sodium Hexametaphosphate	21@ 2lbs	Bottle	Milvan Cabinet
Coagulant, Water Trmt	6@ 2.35lbs	Bottle	Milvan Cabinet
PH Wide Range Indicator	10@ 16oz	Bottle	Milvan Cabinet
PH Indicator Solution	18@ 1pt	Bottle	Milvan Cabinet
Coagulant Water Trmt Polyelectrolyte Cationic	11	Bottles	Milvan Cabinet
Coagulant Liquid	10@ 2.5lbs	Bottle	Milvan Cabinet
Citric Acid Anhydrous, Technical	29@ 3/4 lbs	Bottles	Milvan Cabinet
Wetting Solution	1@ 2lb	Bottle	Milvan Cabinet
N-Amyl Acetate	2@ 1pt	Bottles	Milvan Cabinet
Orthotolidin Solution	1@ 4oz	Bottle	Milvan Cabinet

Maintenance Section

Brake Fluid	1/4 Gal		Milvan
Penetration Oil	2@ 1pt		Milvan
Anti-Freeze	5gal	Not full	Milvan
Gear Lube	5gal	Not full	Milvan
Grease, Auto	35 lbs	Not full	Milvan
Motor Oil 15W/40	1.5 gal	Not full	Milvan
Hydraulic Fluid	2@ 1 gal		

[REDACTED]

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**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

December 17, 2003

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report Survey dated October 2003, Industrial Hygiene Survey
Environmental Management Solutions

Non-Responsive

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.
- b. The survey was conducted by Non-Responsive Environmental Management Solutions, Dallas, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

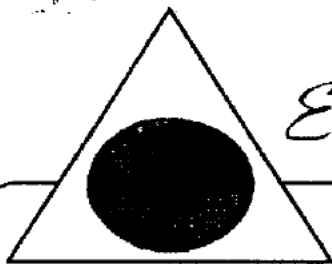
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as



Enviro-Management, Inc.

INDUSTRIAL HYGIENE SERVICE

MEMORANDUM FOR: Company C 144th Infantry. Attn: Commander, Kilgore National Guard Armory. 1807 Stone Road, Kilgore, Texas 75662.

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. National Guard Pamphlet (NG PAM) AR 385-16, Safety Guidelines for Converting Indoor Firing Ranges to Other Uses.
- h. National Institute for Occupational Health and Safety (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- i. Industrial ventilation, 22nd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- j. 29 CFR 1926.58, The OSHA Asbestos Standard.
- k. Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing.

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene Survey of the Kilgore National Guard Armory. The survey consisted of a walk through inspection of all operations and administrative areas in the Kilgore Armory. An interview was conducted with SSG Kevin Artinger to gather background and historical information relative to the various operations at the Kilgore Armory. A diagram of the building is found in Appendix A. Photographs of the facility are located in Appendix B. Appendix C contains the health hazard inventory module (HHIM). Appendix D includes an excerpt from NG PAM 385-16, Guidelines for converting indoor firing ranges to other uses and Appendix E includes laboratory results.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an industrial hygiene survey was conducted at the Kilgore National Guard Armory in Kilgore, Texas on October 8, 2003 by **Non-Responsive** Industrial Hygienist.

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

4. **Facility Description.** This facility houses Company C of the 144th Infantry. Two full time employees work in the Kilgore Armory. The armory is utilized by supply and administrative personnel during the week (Monday through Friday) and is utilized for Guard drill on the weekends. The physical structure is a one story yellow brick building. The building was constructed in early 1957. A list of the operations and administrative areas are detailed in Table I.

TABLE I
Operations and Administrative Areas

Orderly Room Supply Room/Vault Recruiter's office kitchen Class Rooms (2) Weight Room	Administrative offices Orderly Room
--	--

5. **Health Hazard Inventory Module (HHIM) & Risk Assessment Codes** - The results of the walk through survey were entered into a health hazard inventory module (HHIM) industrial hygiene form. The form details the hazards found in the particular operation, the controls that are present, and types of personal protective equipment (PPE) used. Health hazard risk assessment codes (RAC's) were assigned to the operations. Risk assessment codes were determined using the RAC table in the Department of Defense (DOD) Instruction 6055.1 and are reproduced in Appendix C.
6. **Findings.**
- A. **Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room** - An initial walk through of the facility revealed that an inactive firing range was not located on the premises. A vehicle maintenance operation was present. An inactive boiler room was not present.
- B. **Suspect Asbestos Containing Materials**
(1) There was no suspect asbestos containing building material identified in this facility. This is consistent with the building having been renovated in 1995.

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

- C. Supply Room – The employee in charge of this operation is **Non-Responsive** works in this area during the week and on drill weekends. The employee is responsible for ordering, distributing and storing military supplies and equipment. An ULLS and a RCAS computer system are also utilized in this operation. **Non-Responsive** uses the computer approximately five hours per day. Illumination measurements taken in the office area ranged from 32-59 foot candles (FC) of illumination. The ANSI Standard recommends a minimum of 50 FC of illumination for general office work. The employee had no ergonomic concerns or complaints. A flammable cabinet was not present in the supply area.
- D. Vault – The vault is used to store military weapons, radiac meters and night vision goggles. Entry into the vault is limited to **Non-Responsive** on weekdays and on drill weekends. Weapons repair is not performed inside the vault nor is it meant for continuous occupancy. There is only one means of entry and egress and no independent ventilation is present in the vault. The vault was not labeled for the radioactive hazard.
- E. Illumination survey - An illumination survey was conducted in four areas at this facility. The illumination levels in two of the areas surveyed were not within the American National Standards Institute (ANSI) recommended minimum illumination levels with the exception of the Supply Storage Room.

The illumination levels in the survey can be seen in table II.

TABLE II
Illumination Survey

Location	Illumination Level (ftc)	ANSI Minimum Requirements (ftc)	DG 412-2 Minimum Requirements (ftc)
Non-Responsive	57	50 – 100	50
Supply Room Office, Non-Responsive	59	50 – 100	50
Supply Room Office, Non-Responsive	32	50-100	50-100
Supply Room Storage	5-14	10	10

Notes: ANSI office illumination depending on the task is 50 ftc for general desk work and 90 ftc for reading poor quality print.

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

- F. Drill Floor – The drill floor is used on guard weekends by drill personnel. The floor was composed of concrete and the ceiling is composed of a compressed seaweed type material (Tectum) that is approximately 30-35 feet in height. Interviews revealed that vehicles are occasionally driven onto the drill hall floor and weapons are also cleaned in the area. As required, lead wipe samples were collected from the drill floor and the laboratory results reveal the following: All samples were below the 200 micrograms/sq.ft. guideline as required by NG PAM (AR) 385-16.
- G. Kitchen – The kitchen is adjacent to the drill floor and is fully functional. The kitchen is not used.
- H. Vehicle Maintenance Operation – The Vehicle Maintenance Operation is used intermittently during the week by OMS employees and by drill personnel on the weekends. There were three maintenance bays and a local exhaust ventilation system with three exhaust branches. A non-functional battery shop was present with an eye wash/deluge shower present. The eye lavage/deluge shower was not accessible due to stored items. A welding and a parts washer operation were not present. Pneumatic tools are not used in the maintenance operation. Lighting ranged between 95 -101 foot candles (FC) of illumination in the three bays. However, lighting levels underneath trucks ranged from (10-53) FC. Droplights were reportedly used to augment the lighting. A flammable cabinet was present in the facility. An interview revealed that material safety data sheets (MSDS) and a hazardous materials inventory list (HMIL) were present.
- I. Ventilation - Face velocity measurements were performed using a TSI velocity meter. Three face velocity readings were obtained and an average face velocity was calculated. Volumetric airflow values were calculated by multiplying the average face velocity by the effective area of the trunk line opening.

<u>Hose No. / Position</u>	<u>Velocity (average)</u>	<u>Diameter</u>	<u>Flow (cfm)</u>
1	985	6in./0.196 ft. ²	193
2	825	6in./0.196 ft. ²	162
3	590	6in./0.196 ft. ²	116

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

Recommendations

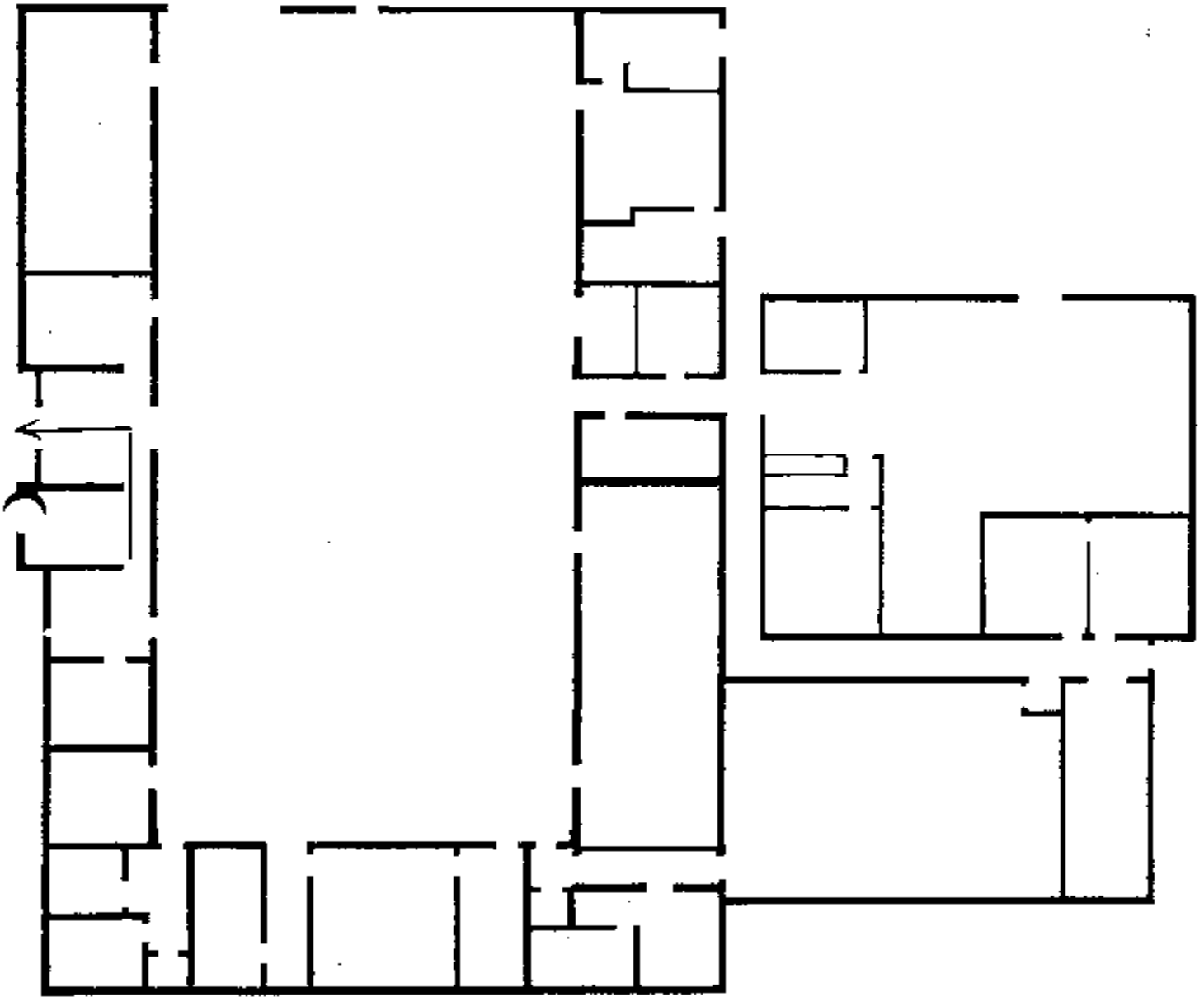
1. Lighting should be upgraded in all areas where indicated as deficient.
2. It is recommended that a new exhaust system to be installed which is capable of providing at least 1400 to 2200 CFM at the terminal end of each exhaust duct. This is due to the large cubic inch displacement diesel engines which are serviced in this maintenance facility. Consideration should be given to the fact that many of the serviced engines are turbo charged when selecting branch/duct construction materials. Reduction/elimination of sharp 90 degree angles in the exhaust branch ducts will also greatly increase its overall effectiveness. Continue to open bay doors and use local exhaust ventilation hoses while the vehicles are running inside the motor pool. Consideration should be given to making the exhaust branches maneuverable and light weight, in order to make exhaust branches more functional for workers.

SUBJECT: Industrial Hygiene Survey for the Kilgore National Guard Armory, Kilgore, Texas.

Kilgore National Guard Armory
Lead Wipe Sample Analysis
Appendix E

Sample No.	Location	Type Analysis	Micrograms /cubic ft ug/m3
K-01	Drill Fl., Near overhead door	Lead	<10.0
K-02	Drill Fl. Center of Floor	Lead	<10.0
K-03	Drill Fl., @ serving station	Lead	<10.0
K-04	Kitchen, at entrance	Lead	12.0
K-05	Blank	Lead	<10.0
K-06	Orderly Room, Supply Vent	Lead	16.0

APPENDIX A



APPENDIX B

APPENDIX C

Room Number

Room Number

Neon Multibel

FILE

R	0	A	D
---	---	---	---

27

h.

1

100

Comments required (20 char max per line)

[illegible]

NIOSH TC# or foreign equiv. [10 ch]

[illegible]

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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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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Head and Feet $\frac{e^* R U}{e^* R U}$

	hard hats	/
--	-----------	---

salely shoes (conductive)	
salely shoes (nonconductive)	

Other	✓
Other	✓
Other	✓

Other			
Other			

ACO ADM DSA DSN LAB LCK
RAD FCB ERI BUS CON LOG

—

FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 964 of 1757

[illegible]

Personnel data provided by the facility is attached to this form

Remember to comment on problems, recommendations, and needed control items

1 Operation described is: other

23. OTHER OPERATIONS: 192.4422

HHIMS INDUSTRIAL HYGIENE SURVEY FORM

ARLOC Installation

48000
 Location Operation NBC
 Survey Date 03/20/08
 Year Month Day
 MACOM NIG
 Sub-MACOM XX
 RAC 4
 Building Number KILGORE
 ARMOY
 Room Number NBC
 Room

Supervisor ☒ Mr. ☐ Ms.
 Supervisor or Point of Contact Telephone Number
 DSN Commercial ☒ Frequency (hrs/day) 001
 No. CIVS ☒ No. MIL 01 Contractors ☒ No. LOCs ☒

Lab Hoods Vapor Degreasers Spray Booths Open Surface Tanks Ventilation Units
 Controls present (if >6, continue in comments) [25] Evaluation [25 char max per line]

Unit Code Controls Required [25 char max per line]

Gloves
 acid cold surfaces hot surfaces NBC agents oil solvents surgical gloves leather/cotton
 e* R U
 Respirator
 abrasive blasting hood disposable full face air purifying 1/2 face air purifying powered air purifying 1/4 face air purifying self-contained
 e* R U
 Manufacturer's Description [10 char max] NIOSH TC# or foreign equiv. [10 char max]

Eyes and Face
 chemical splash full face shield chem/safety impact safety impact welding helmet sunglasses laser eye protection
 e* R U
 Hearing
 canal caps (>85-108dBA steady) earplugs helmets with muffs muffs alone (108-118) muffle/earplug comb muffs and earplugs (118 or >) with time limit
 e* R U
 Body
 aprons cold weather clothing coveralls full body suit heat reflective vests/suit safety belt/harness special purpose clothing
 e* R U
 Head and Feet
 cold weather boots/shoes hard hats impermeable boots safety shoes (conductive) safety shoes (nonconductive)
 e* R U

Reminders: ergonomics - dermalitis - physical agents - flammable storage
 EYE (permanent) - EYE (portable) - SHW - GMV - LEV

MEDDAC (F1 MEADE) FORM 609-R
 1 MAY 95

ACO ADM DSA, DSN LAB 1CK
 RAD ECB EPL RUIS SPR WEL

Post to NBBFOIA Reading Room
May 2018

Other Unique Identifier

BEST AVAILABLE COPY

Only use

1. Operation described is: NBC

FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 967 of 1757

Room Number:

VEHICLE
MAINTENANCE
(TX)

1	0	2	1	3	1	0	N	5	15	0	A	D
K	E	L	G	0	12	E	T	E	X	M	S	
3	5	6	6	2								

NO. LOCs	1
----------	---

Controls Required (25 char max per line)

[illegible]

	(max)	NIOSH TC# or foreign equiv. [10 char max]

	e	R.	U.
Head and Feet			
cold weather boots/shat			
hard hats			
impermeable boots			
safety shoes (conductive)			
safety shoes (nonconductive)	X	X	
oil/wet			
other			
other			

[illegible]

ACO ADM DSA DSN LAB LCK
RAD ECB EOL RUE SDD WHT

AND LOD EPL RHR SFR WEL

Posted to NGE FOIA Reading Room
May 2018

☐ Personnel data provided by the facility is attached to this form

Remember to comment on problems, recommendations, and needed control items

Additional operations: MAM, LOA, DHP, BKR, CHG, DRV, TRR, HAW, CLE,
This maintenance facility is used by drill personnel on the weekends.
It is also used by GMS personnel intermittently to maintain
armory vehicles.

ARLOC

Installation

HHIMS INDUSTRIAL HYGIENE SURVEY FORM

Building Number

Room Number

480000

Location Operation

SA SAH

Survey Date

Year Month Day

MACOM

Sub-MACOM

RAC

Unit/Organization

KILGORE AR

1807

STOME

KILGORE

STOME

Supervisor

Mr. ☒ Ms. ☐

Supervisor or Point of Contact Telephone Number

DSN

Commercial ☒

Frequency (hrs/day)

No. CIVS

No. MIL

Contractors

No. LOCs

Lab Hoods

Vapor Degreasers

Spray Booths

Open Surface Tanks

Ventilation Units

Controls present (if >6, continue in comments)(25)

Evaluation (25 char max per line)

Unit Code

Controls Required (25 char max per line)

LIGHTS

Office

Storage AREA

F T C

50-100 ANSI

10 ANSI

Gloves

BEST AVAILABLE COPY

Respirator

Manufacturer's Description (10 char max)

NIOSH TC# or foreign equiv. (10 char max)

acid
cold surfaces
hot surfaces
NBC agents
oil
solvents
surgical gloves
leather/cottonairline
abrasive blasting hood
disposable
full face air purifying
1/2 face air purifying
powered air purifying
1/4 face air purifying
self-contained

Eyes and Face

Hearing

Body

Head and Feet

chemical splash
full face shield
chem/safety impact
safety impact
welding helmet
sunglasses
welding goggles/glasses
laser eye protection
othercanal caps
(>85-108dBA steady) earplugs
headsets w/muffs
muffs alone
(108-118) muff/earplug comb
muffs and earplugs
(118 or >) with time limit
otheraprons
cold weather clothing
coveralls
full body suit
heat reflective vest/suit
safety belt/harness
special purpose clothing
othercold weather boots/shoes
hard hats
impermeable boots
safety shoes (conductive)
safety shoes (nonconductive)
other
other
other
other

e* = evaluator's recommendation

or agreement

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

MEDDAC FORM 609-R

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

Hazard Description

Trifluoro

PAC	EPC	CAS Code	PAC	EPC
1	2	130781	3	A
2	3	130781	4	
3	4	130781	5	
4	5	130781	6	
5	6	130781	7	
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9	10	130781	11	
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89	90	130781	91	
90	91	130781	92	
91	92	130781	93	
92	93	130781	94	
93	94	130781	95	
94	95	130781	96	
95	96	130781	97	
96	97	130781	98	
97	98	130781	99	
98	99	130781	100	

Social Security Number or

Other Unique Identifier

Last Name

First Name

MI

Sex

Category

☐ Personnel data provided by the facility is attached to this form

Comments

Remember to comment on problems, recommendations, and needed control items

2. Operation described is: *SALT*

Other operations: MAN, LOA

WEAPONS ARE STORED AND LOCKED IN THIS VAULT.

This operation is meant for continuous occupation.

5 NVG's and Radiac meters are stored in this operation.

(Continued on next sheet)

☐ This operation was explained to the evaluators.

☐ There is a noise data sheet

☐ There is a ventilation data sheet

Personnel data provided by the facility is attached to this form

CONTINUED

other operations: OFF, N/A, N/A

¹ Stojanović and all of her colleagues see more links now.

There is a noise data sheet

☐ There is a vandalism data sheet

APPENDIX D

Kern - FYI

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
Washington, DC 20310-2500
31 January 1994

NG PAM (AR) 385-15
ANGPAM 91-101

Safety

GUIDELINES FOR CONVERTING INDOOR FIRING RANGES TO OTHER USES

Summary. This is a new pamphlet. This guidance prescribes policy, responsibilities, and procedures on how to convert lead-contaminated indoor firing ranges to other uses.

Applicability. This guidance applies to all persons responsible for the operation of Army National Guard (ARNG) and Air National Guard (ANG) indoor firing ranges. As no regulation/guidance can foresee all situations that might arise, the following is written in a broad scope and is intended to be interpreted as to the INTENT of the law by health professionals.

Supplementation. Supplementation of this guidance is prohibited without prior approval from Chief, National Guard Bureau (NGB-AVN-SI).

Impact on New Manning System. This guidance does not contain information that affects the New Manning System.

Interim changes. Interim changes are not official unless they are authenticated by the Chief, Administrative Services. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

Suggested Improvements. The proponent of this publication is the National Guard Bureau. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Chief, National Guard Bureau, Attn: NGB-AVN-SI, 111 South George Mason Drive, Arlington, VA 22204-1382.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12-09-E.

CONTENTS (Listed by paragraph numbers)

	Para
Purpose	1
References	2
Explanation of Abbreviations and Terms	3
Policy and procedures	4
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Background	6
Wipe Sample Media	7
Wipe Sampling Protocol	8
Range Cleaning Instructions	9
Cleaning Stored Contaminated Equipment	10
Contaminated Sand and Lead Waste	11
Medical Surveillance	12
Worker Education	13
Personal Protective Equipment	14
Point of Contact	15
Appendices	
A. Sampling Strategy for Collection of Wipe Samples	
B. Interpretation of Sample Results (Prior to Cleaning)	
C. Interpretation of Sample Results (After Cleaning)	
D. OSHA Instruction CPL 2-2.20B	
E. Where to Purchase Sample Media and Containers	
F. AEHA Form 8-R (Bulk Sample Data)	
G. Instructions to Complete AEHA Form 8-R	
H. Examples of Computation of Lead Level from Wipe Sample Results	
I. Supporting Laboratories and Areas Served	

Glossary

- 1. Purpose**
This pamphlet establishes policy and procedures for converting indoor firing ranges to other uses.
- 2. References**
Related publications are listed below.
 - a. DOD 6055.1 (Department of Defense Occupational Safety and Health (OSH) Program).
 - b. AR 11-34 (The Army Respiratory Protection Program).
 - c. AR 40-5 (Preventive Medicine).
 - d. NGR (AR) 385-15 (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARNG Indoor Firing Ranges).
 - e. TB MED 402 (Occupational and Environmental Health Respiratory Protection Program).
 - f. USAEHA TO 141 (Industrial Hygiene Air Sampling and Bulk Sampling Instructions).
 - g. Title 29, Code of Federal Regulations (CFR) revision, Part 1910 (Occupational Safety and Health Standards).

31 January 1994

NG Pam (AR) 383.16/ANGPAM 91-101

APPENDIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO CLEANING)

B-1 200 micrograms/sq ft or LESS

If all sample results are 200 micrograms/sq ft or less, the range can be converted and/or used for any purpose.

B-2 BETWEEN 201 and 200,000 micrograms/sq ft

Range must be decontaminated. Continue with cleaning instructions listed in paragraph 15. Sample results will be used to establish a baseline. The baseline sample results will be used to ensure the 75 percent reduction is achieved.

B-3 OVER 200,000 micrograms/sq ft

Your sample media may not be capable of collecting additional lead dust and results that are above 200,000 micrograms/sq ft should be considered suspect. Larger concentrations of lead dust may exist on surfaces tested other than results indicate. If the initial sampling results are above 200,000 micrograms/sq ft, the range should be cleaned by either HEPA vacuuming and/or wet wiping to establish a baseline. After the cleaning procedure is completed, resampling should occur until sample results are under the 200,000 micrograms/sq ft limit.

B-4 High sample results may exist due to personnel walking or moving equipment/vehicles over the range surfaces causing the lead dust to be "ground" into the substratum. For example, a maintenance activity may have oversprayed paint or spilled solvents onto the surface which would bond with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

below the 75 percent reduction, a more thorough cleaning of the range is required along with resampling until criteria are met.

- PLEASE NOTE, that if your original wipe sample results were, i.e., 175,000 ug/sq ft then you would have to reduce the lead level below 13,125 ug/sq ft. This would meet the 75 percent reduction criteria, however, this is an enormous amount of lead dust and care should be taken to ensure a heavy coat of paint seals the lead dust. It is unknown at this time whether or not the remaining amount of lead dust will allow the latex paint to adhere to the substratum. If the paint peels, falls to the floor and is crushed over a period of time, it will create another respirable lead hazard. If this happens, contact your Regional Industrial Hygiene Office for guidance. Periodically monitor the converted range for signs of peeling paint. Paint chips can be analyzed for lead content. **DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRING RANGE.**

APPENDIX C INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING)

C-1 200 micrograms/sq ft or LESS

If all sample results are less than 200 micrograms/sq ft, the range can be converted and/or used for any purpose after a coat of lead-free latex paint is applied. The paint color must contrast the color of the present substratum.

C-2 ABOVE 200 micrograms/sq ft

As a minimum, a 75 percent reduction should occur from your initial sample results or the samples should be under the 200 micrograms/sq ft level. If all sample results meet this criteria, a contrasting color of lead-free latex paint must be applied before the area is utilized for other purposes. The room can only be used as a storage area. Storage of kitchen equipment and food is prohibited. The room cannot be used for a child care or nursery area. If sample results are not

APPENDIX E

Rx Date/Time

OCT-23-2003(THU)

18:12

BEST AVAILABLE

Non-Responsive

P.005

10/23/2003 18:15 3919375701

EMSL ANALYTICAL

PAGE 05/12

EMSL Analytical, Inc.

10708 Baltimore Avenue, Beltsville, MD 20705

Phone: (301) 937-6700 Fax: (301) 937-6701 Email: beltsville@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: USA609
Customer PO: 1448-03W
Received: 10/22/03 4:58 PM

Fax:

EMSL Order: 190305716

Project: KJGore

EMSL Project ID:

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

Client Sample Description	Lab ID	Analysis	Area Sampled	Lead Concentration
K-01 Onu floor center of floor	0001	10/23/2003	144 in ²	<10.0 µg/m ²
K-02 Onu floor near roll-up door	0002	10/23/2003	144 in ²	<10.0 µg/m ²
K-03 Onu floor - end to w/m hallway	0003	10/23/2003	144 in ²	<10.0 µg/m ²
K-04 Kitchen floor @ entrance	0004	10/23/2003	144 in ²	12.0 µg/m ²
K-05 Blank	0005	10/23/2003	n/a	<10.0 µg/wipe
K-06 Orderly rm, supply grill	0006	10/23/2003	144 in ²	10.0 µg/m ²

Non-Responsive

Reporting limit is 10 µg/m². The GC/MS method used with the sample results included in this report met the recovery and precision requirements established by the EPA, unless specifically indicated otherwise in the contract order.

ACCREDITATIONS: AIA Environmental Lead Laboratory Accreditation Program #162801

Printed: 10/23/2003 8:07:40 PM

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program. 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, Brenham Armory, and Bryan Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Killeen Armory
3101 W. S. Young Street
Killeen, Texas

Prepared for:

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

By

Non-Responsive

July 9, 2004

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Killeen Armory

Survey Date: 04 June 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Killeen Armory on 4 June 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	14 to 20,000 microgram per square foot.	Do not use the firing range space until it is cleaned and decontaminated properly.
Armory Lead Wipe Samples	<10 to 130 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 90 footcandles	No action.
HVAC/IAQ	No issues found.	No action.

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Killeen Armory in Killeen, Texas on 4 June 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Killeen Armory in Killeen, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 4 June 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses Det 1 Co B 249 Spt. The building, which was built 1982, is a two story structure and consists of an administrative office area, a kitchen, an orderly room, a drill hall, supply rooms, storage rooms, and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

Killeen Armory

Survey Date: 04 June 2004

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
KIL 01	Top of serving line in kitchen	<10.0
KIL 02	Top of microwave oven in kitchen.	<10.0
KIL 03	Supply diffuser in Sgt. Tyler's office.	17.0
KIL 04	Return air grill in Sgt. Tyler's office area.	130.0
KIL 05	Top of filing cabinet in the administrative office of the 249 th .	<10.0
KIL 06	Drill hall floor by supply room. 103	<10.0
KIL 07	Drill hall floor in center.	<10.0
KIL 08	Drill hall floor diagonally opposite from supply room 103.	14.0
KIL 09	Top of the soda machine in the drill hall.	53.0
KIL 10	Top of boxes stored in IFR by the bullet trap	220.0
KIL 11	IFR back wall (facing wall) upper left.	140.0
KIL 12	IFR back wall (facing wall) middle.	14.0
KIL 13	IFR back wall (facing wall) lower right.	19.0
KIL 14	IFR right wall (facing range) upper right (facing wall).	100.0
KIL 15	IFR right wall (facing range) middle (facing wall).	130.0
KIL 16	IFR right wall (facing range) lower left (facing wall).	450.0
KIL 17	IFR left wall (facing range) upper right (facing wall).	2,500.0
KIL 18	IFR left wall (facing range) middle (facing wall).	210.0
KIL 19	IFR left wall (facing range) lower left (facing wall).	17.0
KIL 20	IFR top of heater cover by firing line right facing range	14,000.0
KIL 21	IFR ceiling middle of the range.	770.0
KIL 22	IFR bullet deflector left side (facing range) by bullet stop.	23.0
KIL 23	IFR floor to the left facing the range by firing line.	530.0
KIL 24	IFR floor middle of range.	1,300.0
KIL 25	IFR floor to the right of the bullet trap.	3,000.0
KIL 26	IFR bullet Stop upper right facing stop.	11,000.0
KIL 27	IFR bullet Stop middle.	20,000.0
KIL 28	IFR bullet Stop lower left facing stop.	9,700.0
KIL 29	IFR Top of a storage metal box in midrange	68.0
KIL 30	IFR Top of tool boxes stored by firing line	63.0

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

indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-15.

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 2x4 feet ceiling tiles, cement floors, cinder block walls, and corrugated steel deck throughout the armory. Bulk samples were not collected.

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified. However, readings were collected in some areas to document the levels. As expected, noise levels were well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA, as indicated in the table below.

Area	Reading in decibels dBA
Administrative Offices.	40 - 45
Supply Rooms.	35 - 40
Drill Hall.	50 - 60

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 90 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	30 - 70
Supply Rooms.	10 - 15
Drill Hall.	50 - 90
Kitchen.	30 - 40

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

Killeen Armory

Survey Date: 04 June 2004

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of five forced air furnaces with cooling capabilities. The units have no outside makeup air capabilities. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A



BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4900 Fax: (856) 858-0951 Email: skaffman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:17 PM

Fax:

EMSL Order: 200406797

Project: Killen

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
KIL 01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NELAP accreditation program	0001	6/21/04	n/a	<10.0 µg/wipe
KIL 02	0002	6/21/04	n/a	<10.0 µg/wipe
KIL 03	0003	6/21/04	n/a	17.0 µg/wipe
KIL 04	0004	6/21/04	n/a	130.0 µg/wipe
KIL 05	0005	6/21/04	n/a	<10.0 µg/wipe
KIL 06	0006	6/21/04	n/a	<10.0 µg/wipe
KIL 07	0007	6/21/04	n/a	<10.0 µg/wipe
KIL 08	0008	6/21/04	n/a	14.0 µg/wipe
KIL 09	0009	6/21/04	n/a	53.0 µg/wipe
KIL 10	0010	6/21/04	n/a	220.0 µg/wipe
KIL 11	0011	6/21/04	n/a	140.0 µg/wipe
KIL 12	0012	6/21/04	n/a	14.0 µg/wipe
KIL 13	0013	6/21/04	n/a	19.0 µg/wipe
KIL 14	0014	6/21/04	n/a	100.0 µg/wipe
KIL 15	0015	6/21/04	n/a	130.0 µg/wipe
KIL 16	0016	6/21/04	n/a	450.0 µg/wipe
KIL 17	0017	6/21/04	n/a	2500.0 µg/wipe
KIL 18	0018	6/21/04	n/a	210.0 µg/wipe
KIL 19	0019	6/21/04	n/a	17.0 µg/wipe
KIL 20	0020	6/21/04	n/a	14000.0 µg/wipe
KIL 21	0021	6/21/04	n/a	770.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comments section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04853, AHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:47:02 PM

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

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

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:17 PM

Fax:

EMSL Order: 200406797

Project: Killeen

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Analyzed</i>	<i>Area Sampled</i>	<i>Lead Concentration</i>
KIL 22	0022	6/21/04	n/a	23.0 µg/wipe
KIL 23	0023	6/21/04	n/a	530.0 µg/wipe
KIL 24	0024	6/21/04	n/a	1300.0 µg/wipe
KIL 25	0025	6/21/04	n/a	3000.0 µg/wipe
KIL 26	0026	6/21/04	n/a	11000.0 µg/wipe
KIL 27	0027	6/21/04	n/a	20000.0 µg/wipe
KIL 28	0028	6/21/04	n/a	9700.0 µg/wipe
KIL 29	0029	6/21/04	n/a	66.0 µg/wipe
KIL 30	0030	6/21/04	n/a	63.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04853, AHA Environmental Lead Laboratory Approval Program: 160194

Date Printed: 6/21/04 4:47:09 PM

Page 9 of 9

APPENDIX C

260466797

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences, Inc. EMSL Bill to: Same as mail to
 Street: _____
 Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: Non-Responsive Zip: _____

Phone Results to: (Name) **Non-Responsive**
 Fax Results to: (Name) **Non-Responsive**

MAT RIX	METHOD	INSTRUMENT	RL (Reporting Limit)	TSI
Lead Chips*	SW846-7420, 3050B Mod. / AQAC (974.02)	Flame Atomic Absorption	0.01% +-	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead on Wipe* List Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest.	Flame Atomic Absorption	10 ug/wipe	Reaction
	<input type="checkbox"/> -non ASTM or SW846-6010B	ICP	3.0 ug/wipe	
ICP Lead**	SW846-1311, 7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)	
STLC Lead Confirmation	CA Title 22 6621.126 / SW846-7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	2008-11-17
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	2008-11-17
Lead Soil +				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	2008-11-17
Total Lead	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	2008-11-17

T / I (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** +- # Please Refer to Price Quote
 + If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume, L Area, in ²	EAB #
KIL 01 - KIL 30	Killeen		06797-1-30

Retained by: (Person) **Non-Responsive**

Received at EMSL By: _____

Received at EMSL By: _____

Note: Please

The individual signing and relinquishing their samples to the receiving

Date: 6/5/04
 Date: 6/7/04
 Date: _____
 sary.
 ion reported on this chain of custody.

Lead Chain Nov 2001 v STLC.doc

APPENDIX D



Photo #1: Armory front entrance.



Photo #2: North side of the armory showing settling damage in the parking lot.



Photo #3: West side of the armory.



Photo #4: South side of the armory.



Photo #5: Drill hall facing east.



Photo #6: Drill hall facing west.



Photo #7: Indoor firing range facing the bullet trap.



Photo #8: Indoor firing range facing the firing line.



Photo #9: IFR observation deck.



Photo#10: Armory's kitchen.



Photo #11: Mechanical room.



Photo #12: Sidewalk separation on the west side of the armory due to ground settling.



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DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

10 October 2007

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: LaMarque Armory
Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568.

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006
Gulf Freeway, LaMarque, Texas 77568

1. References.

a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996
rev.

b. AR 40-5, Preventive Medicine, 22 July 2005.

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

d. AR 385-10, 29 February 2000, Army Safety Program.

f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.

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

h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial
Hygienist, Cincinnati, Ohio.

i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.

k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a
follow-up industrial hygiene survey was performed at the LaMarque located at 3006 Gulf
Freeway, LaMarque, Texas 77568. The purpose of the survey was to perform a follow-up
industrial hygiene survey to evaluate potential health hazards present in the building.

b. The Point of Contact during the survey was **Non-Responsive**

c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard
conducted the sampling on 7 September 2007.

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568

3. General.

- a. **Site Description.** The LaMarque Armory ; a one story brick over cinder block structure with Central HVAC was built in 1970 and renovated in 1986. The facility houses several training rooms and classrooms, administrative office areas, indoor range and a supply room with storage and vault. Two full time employees work at the Armory supporting 30-50 M-Day Soldiers. The armory has residential use Central HVAC with interior units mounted inside mechanical closets. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey. A copy of the floor layout and photos are included in Appendix A..
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 18 October 2003. All elevated results were self contained in the empty locked indoor range. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. No areas were sampled, tested or noted during current survey.
 1. The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.
- b. **Asbestos Suspect Building Material:** One sample of building materials was identified as potentially containing asbestos. The identified type included 12x12 inch Floor Tile. A bulk sample was collected randomly from the identified material. The table below lists the sample collected and the results:

10 October 2007

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568

Sample #	Description	% Asbestos Type
LMQ 971	12x12 inch Floor Tile	None Detected

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

- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Evaluated Lighting levels within the Armory ranged between 7 foot-candles to 82 foot-candles.

LaMarque Armory	Reading in Foot-candles
Classrooms	36-66
Office Areas	27-82
Hallways and Lobby	7-59
Latrines	26-39
Drill Hall	48-71
Indoor Range	10-35
Supply Areas	10-48
Kitchen	39-80

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units mounted inside mechanical closets and local ceiling mounted heating units in latrines and supply areas. The system is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include repairing cracks and painting of drill hall walls and

NGB-ARS-IHSE (40-5f)

10 October 2007

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568

ventilating supply areas. A copy of the floor layout and photos are included in Appendix A..

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found as listed in the 2003 report. Continue to clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving supply areas. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces inside Indoor Range per NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

NGB-ARS-IHSE (40-51)

10 October 2007

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006
Gulf Freeway, LaMarque, Texas 77568

Appendix A:
Laboratory Analytical Results.



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report

Client Name: National Guard Bureau Region-South IH
 Project Name: Aromory w/IFR (Follow-up)
 Project Number: LMQ97

NVLAS

Lab ID# 102082-0

AES Job Number: 0709842

Wednesday, September 19, 2007

Page 1 of 1

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
LMQ 971	0709842-001A	12x12 Floor Tile	ND	ND	ND	ND	ND	ND	
Layer: 1									

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

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 the conclusive asbestos content.

It is certified by the signatures below that the laboratory identified is accredited by the National Institute of Standards and Technology for Polarized Light Microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Quality Assurance Program, Laboratory ID 102082-0. All percentages given are by visually estimated volume. All analyses are performed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116, July 1993." This report must not be reproduced except in full without the approval of Analytical Environmental Service, Inc. These test results apply only to the samples actually tested.

Microanalyst:

Non-Responsive

NGB-ARS-IHSE (40-5f)

10 October 2007

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006
Gulf Freeway, LaMarque, Texas 77568

Appendix B:
Lab Chain of Custody

BULK SAMPLE DATA

For use of this form see USARPA TG 141; the proponent is HSHB-10.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IN OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

LAMARQUE, TX

Project Number

LMQ97

Non-Responsive

Date Collected

7 Sep 07

Date Shipped

10 SEP 07

Description of Operation

ARMORY W/ IFR (Follow-up)

Location (Bldg/Area)

ARMORY CLASSROOM

Associated Complaints (be specific)

Associated Air Samples

☐ Yes

☒ No

If yes, list sample numbers

Label Information

Trade Name

NSN

Manufacturer

Address

MSDS Attached

☐ Yes

☐ No

Analysis Desired

ASBESTOS - PLM

Lab Use Only

Sample No.

Constituents

Results

Remarks

LMQ971

12X12 FLOOR TILE

Comments to Lab:

Lab Use Only

Analyst/Inspector

Reviewed By (Inspector)

Date Received

Date Reported

Procedures Performed

Comments:

NGB-ARS-IHSE (40-50)

10 October 2007

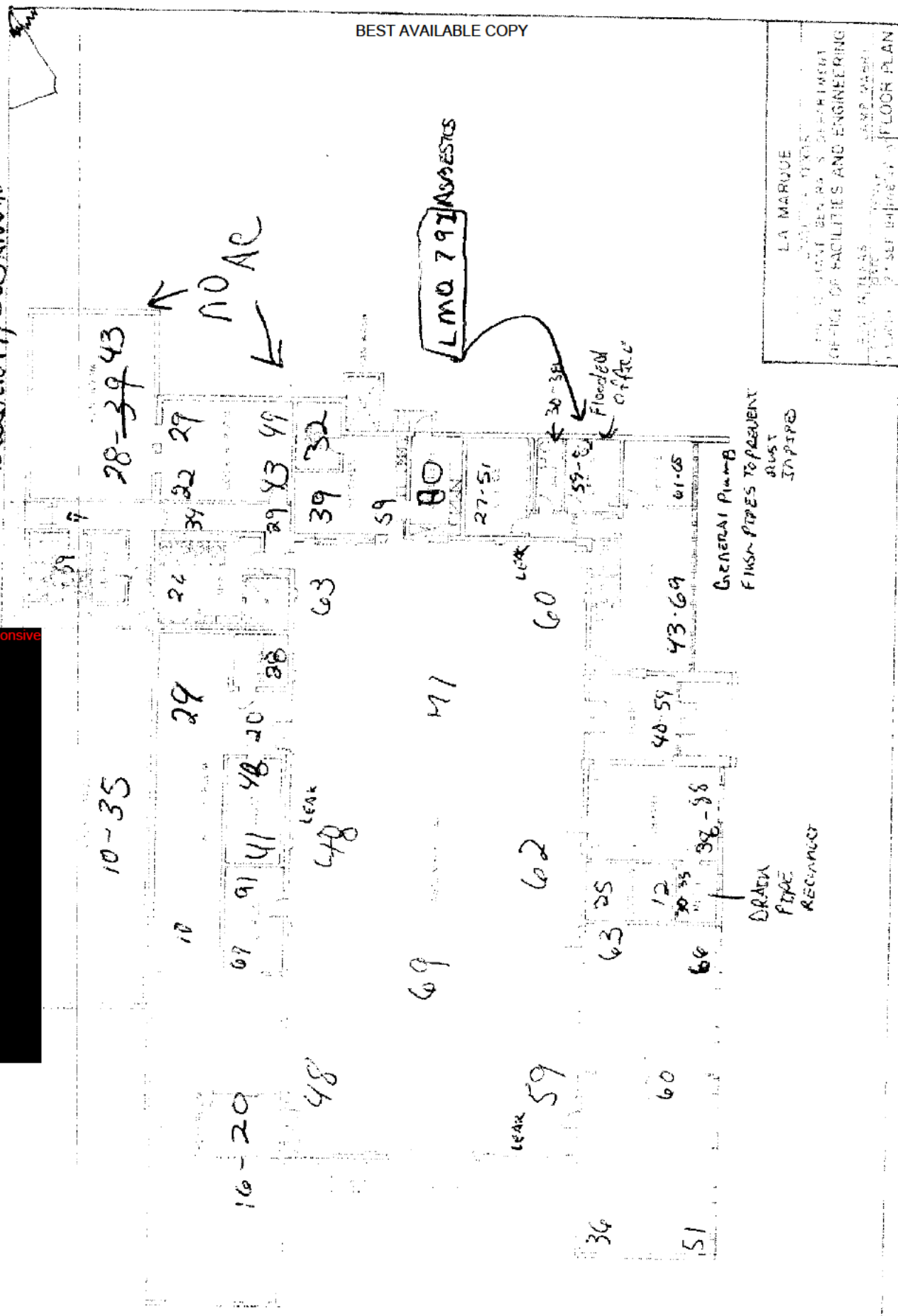
SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568

Appendix C

Photographs and Floor Layout.











Non-Responsive

Sgt. Swirell, Susan



SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536th SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568

LaMarque Armory

			
LaMarque Armory	Drill Hall	Admin Area	Kitchen
			
Kitchen	Locked Indoor Range	Supply Room	Supply Room w/ Rope Ladder
			
FAN in Converted Supply Area/Locker Room	Classroom		

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

June 25, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 15, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Laredo Armory
5119 E. Corredor Road
Laredo, Texas

Prepared for:

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

By
Non-Responsive

June 14, 2004

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Laredo Armory

Survey Date: 23 March 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Laredo Armory on 23 March 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 160 microgram per square foot.	No action.
Armory Lead Wipe Samples	<10 to 72 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	2 to 250 footcandles	Replace burnt out light bulbs.
HVAC/IAQ	Water leaks, visible mold growth, and wooden return plenum under the furnace.	Repair all water leaks and replace all water damaged building materials such as ceiling tiles.

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Laredo Armory in Laredo, Texas on 23 March 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Laredo Armory in Laredo, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 23 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory, which was constructed in 1993, houses the 141 Inf. Co. B and the 449 Chemical Company. The building is a two-story structure and consists of administrative office areas, a kitchen, a drill hall, two supply rooms, and an indoor firing range. Five full time employees work at this armory. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
LAR01	IFR bullet Stop lower right	<10.0
LAR02	IFR bullet Stop middle	14.0
LAR03	IFR bullet Stop upper left	13.0
LAR04	IFR floor to the left of the bullet trap	160.0
LAR05	IFR floor middle of range	<10.0
LAR06	IFR floor to the right of the observation area	<10.0
LAR07	IFR left wall (facing trap) lower left facing wall	<10.0
LAR08	IFR left wall (facing trap) upper right facing wall	<10.0
LAR09	IFR left wall (facing trap) middle	<10.0
LAR10	IFR right wall (facing trap) lower right facing wall	<10.0
LAR11	IFR right wall (facing trap) middle	<10.0
LAR12	IFR right wall (facing trap) upper left	<10.0
LAR13	IFR ceiling (facing trap) left by deck	<10.0
LAR14	IFR ceiling (facing trap) middle top of tile	<10.0
LAR15	IFR ceiling (facing trap) right by trap	<10.0
LAR16	IFR back wall (facing wall) upper left	<10.0
LAR17	IFR back wall (facing wall) lower right	<10.0
LAR18	IFR back wall (facing wall) middle	<10.0
LAR19	IFR top of storage shelf by trap	18.0
LAR20	IFR top of desk by deck	<10.0
LAR21	IFR top of storage shelf midway where sugar and coffee maker are stored	<10.0
LAR22	Top of dishwasher in kitchen.	<10.0
LAR23	Top of serving line between kitchen and drill hall	<10.0
LAR24	Top of the soda machine in the drill hall	72.0
LAR25	Supply diffuser in the WCO office area	32.0
LAR26	Return air grill in the workroom	<10.0
LAR27	Supply diffuser in the 141 Inf. Regiment office.	11.0
LAR28	Top of storage closet in the 141 Inf. Regiment office.	<10.0
LAR29	Top of a book case in B Co. NCO Office Area	<10.0
LAR30	Field Blank	<10.0

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

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. Bulk samples were not collected because the Armory was built in 1993 and the presence of asbestos containing material is less likely.

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 2 foot-candles to 250 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	25 - 250
Supply Rooms.	25 - 45
Drill Hall.	20 - 40
Kitchen.	2 - 66

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of several gas fired forced air units located in mechanical closets. The system is capable to deliver outside makeup air to the occupied space. The common return air plenum for each unit and it is located under the unit. Plywood was used to construct this return plenum. Water stains was observed on the wooden common plenum. The presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor

Laredo Armory

Survey Date: 23 March 2004

air. All condensate water should be isolated from the wood on the return air plenum. Consideration should be given to replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

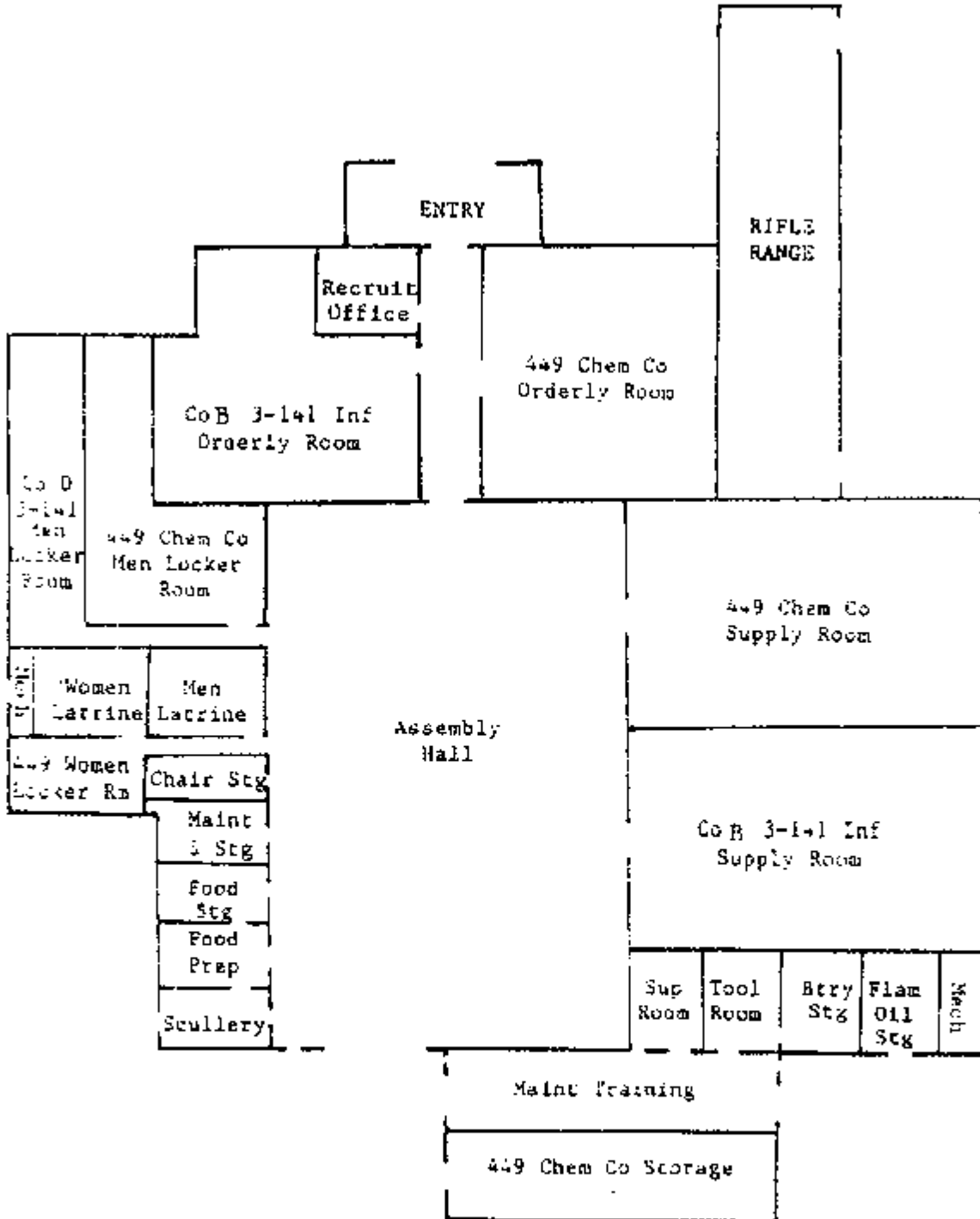
Recommendations:

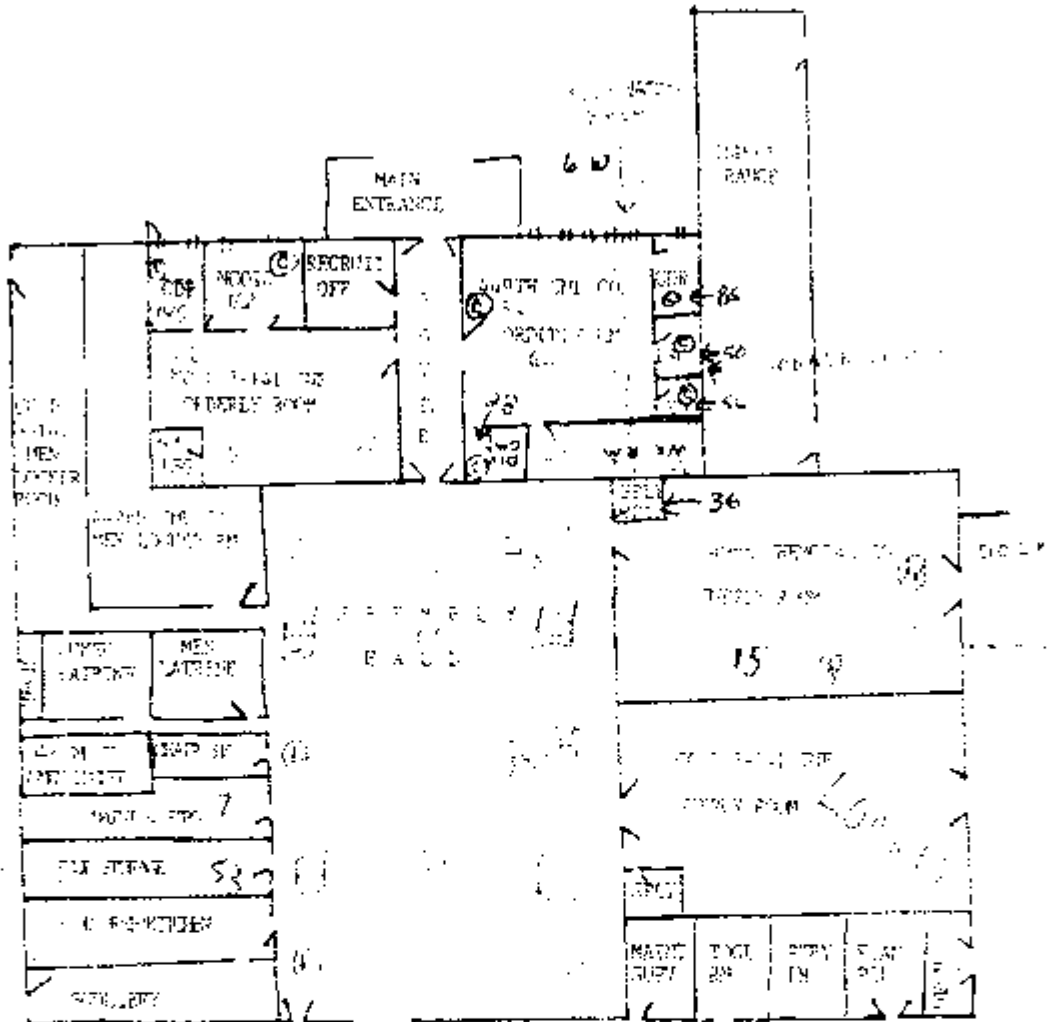
1. Repair all water leaks, replace all water damaged building material, such as the ceiling tiles, and clean materials that cannot be replaced such as floor tiles.
2. Consider replacing the wooden common plenum with a metal construction plenum.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A





APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4900 Fax: (856) 858-6651 Email: skauflman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 03/30/04 10:14 AM

Fax:

EMSL Order: 200403272

Project: Laredo, TX

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
LAR 01	0001	4/14/04	n/a	<10.0 µg/wipe
Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program				
LAR 02	0002	4/14/04	n/a	14.0 µg/wipe
LAR 03	0003	4/14/04	n/a	13.0 µg/wipe
LAR 04	0004	4/14/04	n/a	160.0 µg/wipe
LAR 05	0005	4/14/04	n/a	<10.0 µg/wipe
LAR 06	0006	4/14/04	n/a	<10.0 µg/wipe
LAR 07	0007	4/14/04	n/a	<10.0 µg/wipe
LAR 08	0008	4/14/04	n/a	<10.0 µg/wipe
LAR 09	0009	4/14/04	n/a	<10.0 µg/wipe
LAR 10	0010	4/14/04	n/a	<10.0 µg/wipe
LAR 11	0011	4/14/04	n/a	<10.0 µg/wipe
LAR 12	0012	4/14/04	n/a	<10.0 µg/wipe
LAR 13	0013	4/14/04	n/a	<10.0 µg/wipe
LAR 14	0014	4/14/04	n/a	<10.0 µg/wipe
LAR 15	0015	4/14/04	n/a	<10.0 µg/wipe
LAR 16	0016	4/14/04	n/a	<10.0 µg/wipe
LAR 17	0017	4/14/04	n/a	<10.0 µg/wipe
LAR 18	0018	4/14/04	n/a	<10.0 µg/wipe
LAR 19	0019	4/14/04	n/a	18.0 µg/wipe
LAR 20	0020	4/14/04	n/a	<10.0 µg/wipe
LAR 21	0021	4/14/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the A11A, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

ACCREDITATIONS: NJ-NELAP: 04853, A11A Environmental Lead Laboratory Approval Program: 100154

Date Printed: 4/14/04 9:17:20 AM

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (656) 858-4700 Fax: (656) 858-9581 Email: skaufman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 03/30/04 10:14 AM

Fax:

EMSL Order: 200403272

Project: Larado, TX

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Analyzed</i>	<i>Area Sampled</i>	<i>Lead Concentration</i>
LAR 22	0022	4/14/04	n/a	<10.0 µg/wipe
LAR 23	0023	4/14/04	n/a	<10.0 µg/wipe
LAR 24	0024	4/14/04	n/a	72.0 µg/wipe
LAR 25	0025	4/14/04	n/a	32.0 µg/wipe
LAR 26	0026	4/14/04	n/a	<10.0 µg/wipe
LAR 27	0027	4/14/04	n/a	11.0 µg/wipe
LAR 28	0028	4/14/04	n/a	<10.0 µg/wipe
LAR 29	0029	4/14/04	n/a	<10.0 µg/wipe
LAR 30	0030	4/14/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

ACCREDITATIONS: NJ-NELAP: 04693, AHA Environmental Lead Laboratory Approval Program: 103194

Date Printed: 4/14/04 9:17:28 AM

Page 2 of 2

APPENDIX C

26670272

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: 3/26/04 EMSL Representative: _____ Project Name No.: _____ P.O. #: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: _____
 Street: 3749 Lawrence Drive Street: Same
 Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: (Name) _____
 Fax Results to: (Name) _____

Non-Responsive

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	LAB
Lead in Tap*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% —	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest	Flame Atomic Absorption	10 ug/wipe	1204
	<input type="checkbox"/> -non ASTM or SW846-6010B	ICP	3.0 ug/wipe	
ICP Lead**	SW846-1311 / 7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
STLC Lead (California)	CA Title 22 (6050.125) SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil -				
Lead in Drinking Water (check state certification requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

T/T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** + - - - - Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume: L Area: in ²	LAB #
LAR01	Laredo, TX		01272 1
LAR02	S	N/A	03272 2
LAR03			

Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

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

(3) The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 v STLC.doc

LEAD

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
LAR 04	Laredo, TX		67271 4
LAR 05			5
LAR 06			4
07			3
08			2
09			1
10			10
11			11
12			12
13			13
14			14
15			15
16			16
17			17
18			18
19			19
20			20
21			21
22			22
23			23
24			24
25			25
26			26
27			27
28			28
29			29
30			30

© Relinquished By: (Person).

Received at EMSL By:

Received at EMSL By:

Date: 3/26/04

Date: 7/30/04

Date: _____

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

(3) The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

APPENDIX D



Photo #1: Armory front entrance.



Photo #2: Southwest side of the armory.



Photo #3: South side of the armory.



Photo #4: North west side of the armory.



Photo #5: Outside wall of the firing range showing mold growth.



Photo #6: Drill hall facing east



Photo#7: Drill hall facing west south west and showing the second floor.



Photo #8: Armory's kitchen showing the sinks and ice maker.



Photo #9: Armory's kitchen showing the serving line.



Photo #10: Armory's Indoor Firing Range.



Photo #11: Indoor firing range facing observation deck.



Photo #12: Storage shelves in the indoor firing range.



Photo #13: Administrative office area showing the repaired gap in the floor.



Photo #14: Water damaged ceiling tiles in the administrative area.

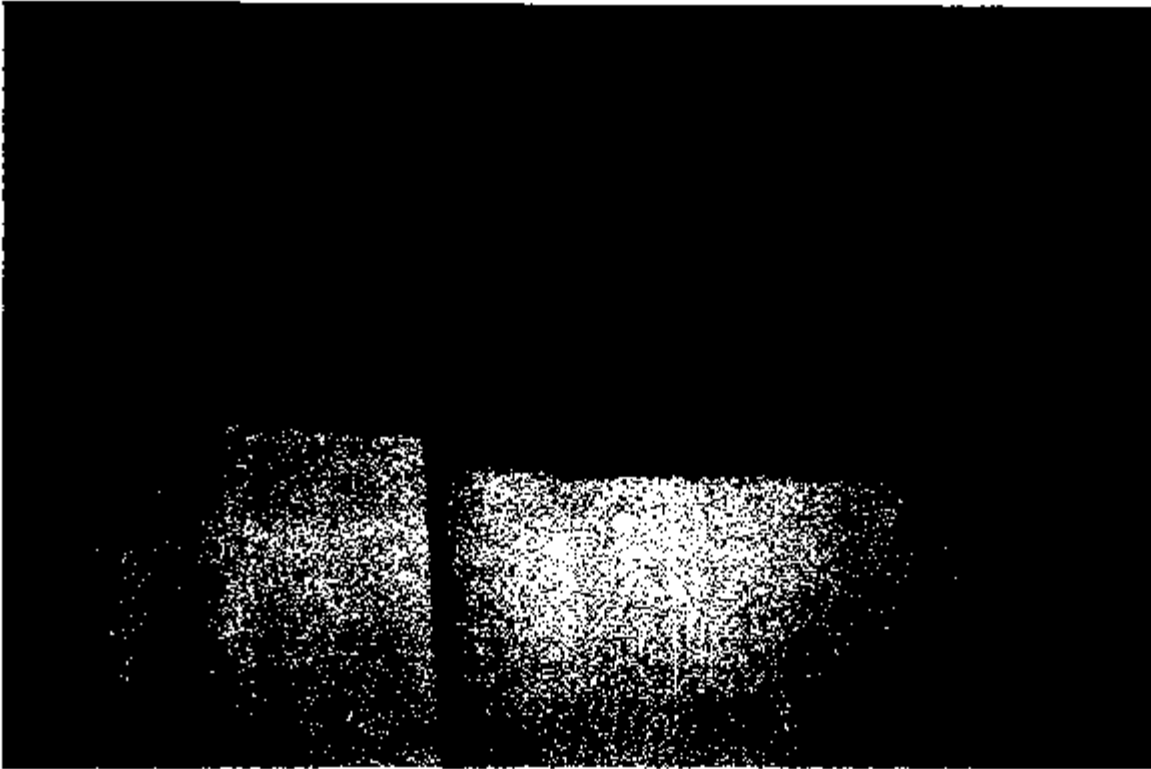


Photo #15: Water damaged ceiling tiles in the administrative area.



Photo #16: Water damaged ceiling tiles in the administrative area.



Photo #17: Water damaged wood return air plenum in the mechanical closet.

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

December 17, 2003

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1996, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report Survey dated October 2003, Industrial Hygiene Survey, **Non-Responsive**
Non-Responsive Environmental Management Solutions

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.
- b. The survey was conducted by **Non-Responsive** Environmental Management Solutions, Dallas, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

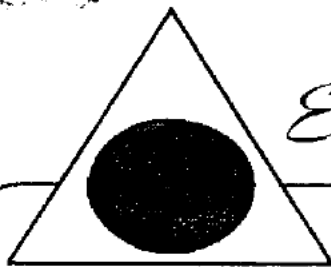
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as



Enviro-Management, Inc.

INDUSTRIAL HYGIENE SERVICE

MEMORANDUM FOR: Company B, 5-112 AR. Attn: Commander, Longview National Guard Armory. 307 American Legion Boulevard, Longview, Texas 75601.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview, Texas.

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. National Guard Pamphlet (NG PAM) AR 385-16, Safety Guidelines for Converting Indoor Firing Ranges to Other Uses.
- h. National Institute for Occupational Health and Safety (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- i. Industrial ventilation, 22nd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- j. 29 CFR 1926.58, The OSHA Asbestos Standard.
- k. Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing.

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene Survey of the Longview National Guard Armory. The survey consisted of a walk through inspection of all operations and administrative areas in the Longview Armory. An interview was conducted with SSG Jack Harris to gather background and historical information relative to the various operations at the Longview Armory. A diagram of the building is found in Appendix A. Photographs of the facility are located in Appendix B. Appendix C contains the health hazard inventory module (HHIM). Appendix D includes an excerpt from NG PAM 385-16, Guidelines for converting indoor firing ranges to other uses and Appendix E includes laboratory results.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an industrial hygiene survey was conducted at the Longview National Guard Armory in Longview, Texas on October 8, 2003 by **Non-Responsive** Industrial Hygienist.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview, Texas.

4. **Facility Description.** This facility houses Company B, 5-112 AR. Four full time employees work in the Longview Armory. The armory is utilized by supply, administrative and recruiting personnel during the week (Monday through Friday) and is utilized for Guard drill on the weekends. The physical structure is a one story red and yellow brick building. The building was constructed in early 1959. A list of the operations and administrative areas are detailed in Table I.

TABLE I
Operations and Administrative Areas

Orderly Room	Men's Locker room
Supply Room/Vault	Women's Locker room
Recruiter's office	
Kitchen/food storage	
Class Rooms	
Library	

5. **Health Hazard Inventory Module (HHIM) & Risk Assessment Codes** - The results of the walk through survey were entered into a health hazard inventory module (HHIM) industrial hygiene form. The form details the hazards found in the particular operation, the controls that are present, and types of personal protective equipment (PPE) used. Health hazard risk assessment codes (RAC's) were assigned to the operations. Risk assessment codes were determined using the RAC table in the Department of Defense (DOD) Instruction 6055.1 and are reproduced in Appendix C.
6. **Findings.**
- A. **Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room** - An initial walk through of the facility revealed that there was no inactive firing range located on the premises. A vehicle maintenance operation was not present and an inactive boiler room was not present.
- B. **Suspect Asbestos Containing Materials**
(1) There was no suspect asbestos containing material identified in this facility. The vinyl floor tiles and the ceiling tiles had been recently replaced.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview, Texas.

- C. Supply Room – The employee in charge of this operation is SSG Jack Harris. SSG Harris works in this area during the week and on drill weekends. The employee is responsible for ordering, distributing and storing military supplies and equipment. An ULLS and a RCAS computer system are also utilized in this operation. SSG Harris uses the computer approximately five hours per day. Illumination measurements taken in the office area ranged from 59-62 foot candles (FC) of illumination. The ANSI Standard recommends a minimum of 50 FC of illumination for general office work. The employee had no ergonomic concerns or complaints. A flammable cabinet was not present in the supply area.
- D. Vault – The vault is used to store military weapons. Entry into the vault is limited to SSG Harris on weekdays and on drill weekends. Weapons repair is not performed inside the vault nor is it meant for continuous occupancy. There is only one means of entry and egress and no independent ventilation is present in the vault.
- E. Illumination survey - An illumination survey was conducted in four areas at this facility. The illumination levels in two of the areas surveyed were not within the American National Standards Institute (ANSI) recommended minimum illumination levels.

The illumination levels in the survey can be seen in table II.

TABLE II
Illumination Survey

Location	Illumination Level (ftc)	ANSI Minimum Requirements (ftc)	DG 412-2 Minimum Requirements (ftc)
Supply room office	62	50 - 100	50
O.C. Currie's Office	57	50 - 100	50
SFC Ben Gerganus	37	50-100	50-100
Supply room storage	5-14	10	10

Notes: ANSI office illumination depending on the task is 50 ftc for general desk work and 90 ftc for reading poor quality print.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview Texas.

- F. Drill Floor – The drill floor is used on guard weekends by drill personnel. The floor was composed of concrete and the ceiling is composed of a compressed seaweed type material (Tectum) that is approximately 30-35 feet in height. Interviews revealed that vehicles were occasionally driven onto the drill hall floor and weapons are also cleaned in the area. As required, lead wipe samples were collected from the drill floor and the laboratory results reveal the following: All samples were below the 200 micrograms/sq.ft. guideline as required by NG PAM (AR) 385-16.
- G. Kitchen – The kitchen is adjacent to the drill floor and is fully functional. The kitchen is not used.
- H. Flammable Storage Operation – Paint, paint thinner, oils, lubricants, etc. are stored in this operation. This operation is accessed by the supply sergeant on weekdays and on drill weekends. There were no material safety data sheets (MSDS) or hazardous materials inventory list (HMIL) readily available. Some old and outdated chemicals were observed in the operation.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview, Texas.

Recommendations

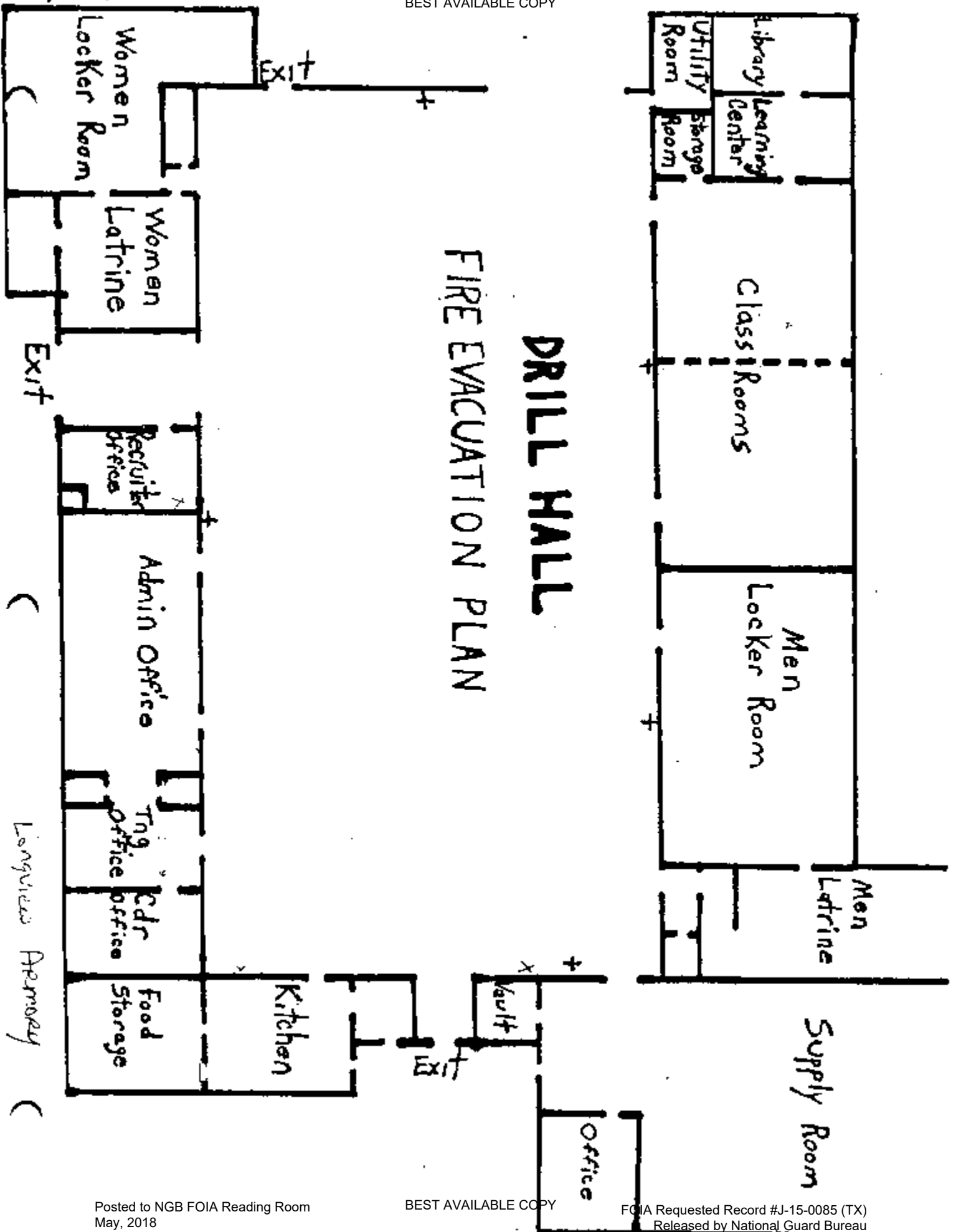
1. Lighting should be upgraded in all areas where indicated as deficient.
2. MSDS's and a HMIL should be provided for this operation. All old or unwanted chemicals should be purged.

SUBJECT: Industrial Hygiene Survey for the Longview National Guard Armory, Longview, Texas.

**Longview National Guard Armory
Lead Wipe Sample Analysis
Appendix E**

Sample No.	Location	Type Analysis	Micrograms /cubic ft ug/m3
LV-01	Drill Fl., Near overhead door	Lead	<10.0
LV-02	Drill Fl. Center of Floor	Lead	<10.0
LV-03	Drill Fl., @ serving station	Lead	<10.0
LV-04	Kitchen, at entrance	Lead	<10.0
LV-05	Blank	Lead	<10.0
LV-06	Orderly Room, Supply Vent	Lead	<10.0

APPENDIX A



APPENDIX B

APPENDIX C

NIHHS INDUSTRIAL HYGIENE SURVEY FORM

ARLOC Installation

Building Number

Room Number

Location **3C** Operation **NBC** Survey Date **03/20/08** Year **03** Month **20** Day **08**

Supervisor **Mr. [redacted]** Ms. **[redacted]** Telephone Number **[redacted]** DSN **[redacted]** Commercial ☒ Open Surface Tanks ☐ Ventilation Units ☐

MACOM **NG** Sub-MACOM **XX** RAC **4** Unit/Organization **303**

LOMGEVILEW **ARMORY**

NBC **Room**

303 **ARMORY** **356**

Lab Hoods ☐ Vapor Degreasers ☐ Spray Booths ☒

Controls present (if >6, continue in comments) [25]

Evaluation [25 char max per line]

Unit Code

Controls Required [25 char max per line]

Frequency (hrs/day) **001**

No. CIVs **1**

No. MIL **01**

Contractors **1**

No. LOCs **1**

BEST AVAILABLE COPY

BEST AVAILABLE COPY

Gloves

acid	<input checked="" type="checkbox"/>
cold surfaces	<input type="checkbox"/>
hot surfaces	<input type="checkbox"/>
NBC agents	<input type="checkbox"/>
oil	<input type="checkbox"/>
solvents	<input type="checkbox"/>
surgical gloves	<input type="checkbox"/>
leather/cotton	<input type="checkbox"/>
other	<input type="checkbox"/>

Respirator

airline	<input type="checkbox"/>
abrasive blasting hood	<input type="checkbox"/>
disposable	<input type="checkbox"/>
full face air purifying	<input type="checkbox"/>
1/2 face air purifying	<input type="checkbox"/>
powered air purifying	<input type="checkbox"/>
1/4 face air purifying	<input type="checkbox"/>
self-contained	<input type="checkbox"/>
other	<input type="checkbox"/>

Manufacturer's Description [10 char max]

NIOSH TC# or foreign equiv. [10 char max]

Eyes and Face

chemical splash	<input checked="" type="checkbox"/>
full face shield	<input type="checkbox"/>
chem/safety impact	<input type="checkbox"/>
safety impact	<input type="checkbox"/>
welding helmet	<input type="checkbox"/>
sunglasses	<input type="checkbox"/>
welding goggles/glasses	<input type="checkbox"/>
laser eye protection	<input type="checkbox"/>
other	<input type="checkbox"/>

Hearing

canal caps	<input type="checkbox"/>
(>85-108dBA steady) earplugs	<input type="checkbox"/>
helmets w/muffs	<input type="checkbox"/>
muffs alone	<input type="checkbox"/>
(108-118) muff/earplug comb	<input type="checkbox"/>
muffs and earplugs	<input type="checkbox"/>
(118 or >) with time limit	<input type="checkbox"/>
other	<input type="checkbox"/>
other	<input type="checkbox"/>

Body

aprons	<input type="checkbox"/>
cold weather clothing	<input type="checkbox"/>
coveralls	<input type="checkbox"/>
full body suit	<input type="checkbox"/>
heat reflective vest/suit	<input type="checkbox"/>
safety belt/harness	<input type="checkbox"/>
special purpose clothing	<input type="checkbox"/>
other	<input type="checkbox"/>
other	<input type="checkbox"/>

Head and Feet

cold weather boots/shoes	<input type="checkbox"/>
hard hats	<input type="checkbox"/>
impermeable boots	<input type="checkbox"/>
safety shoes (conductive)	<input checked="" type="checkbox"/>
safety shoes (nonconductive)	<input checked="" type="checkbox"/>
other	<input type="checkbox"/>
other	<input type="checkbox"/>
other	<input type="checkbox"/>

MEDDAC (F1 MEAD) 1 MAY 95 **FORM 609-R**

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

☐ There is a verification data sheet

HHIMS INDUSTRIAL HYGIENE SURVEY FORM

ARLOC Installation

480000 Location Operation 07 OTH Survey Date 03 10 08 Year Month Day MACOM MG Sub-MACOM XX RAC 4 Unit/Organization 303 AMERICAL 4 EGIOM BLVD 1 OMBV IEW TX 256

Mr. Ms.

Supervisor ☒ ☐

Supervisor or Point of Contact Telephone Number

DSN

Commercial ☒

Frequency (hrs/day) 009

No. CIVS ☐

No. MIL ☐

Contractors ☐

No. LOCs ☐

Lab Hoods Vapor Degreasers Spray Booths ☐ ☐ ☐

Open Surface Tanks ☐

Ventilation Units ☐

Controls present (if > 6, continue in comments) [25]

Evaluation [25 char max per line]

Unit Code

Controls Required [25 char max per line]

BEST AVAILABLE COPY

Gloves acid cold surfaces hot surfaces NBC agents oil solvents surgical gloves leather/cotton other

Respirator

abrasive blasting hood full face air purifying 1/2 face air purifying powered air purifying 1/4 face air purifying self-contained

Manufacturer's Description (10 char max)

NIOSH TC# or foreign equiv. (10 char max)

Eyes and Face

chemical splash full face shield chem/safety impact safety impact welding helmet sunglasses laser eye protection other

Hearing

canal caps (>85-108dBA steady) earplugs helmets w/muffs muffs alone (108-118) muffle/earplug comb muffs and earplugs (118 or >) with time limit other

Body

aprons cold weather clothing coveralls full body suit heat reflective vest/suit safety belt/harness special purpose clothing other

Head and Feet

cold weather boots/hat hard hats impermeable boots safety shoes (conductive) safety shoes (nonconductive) other other other

AC = evaluator's recommendation or agreement

MEDDAC (FT MEAD) FORM 609-R

Reminders: ergonomics - demands - physical agents - flammable storage EYE (permanent) - EYE (portable) - SHW - GMV - LEV

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

Posted to NNS FOIA Reading Room
May, 2018

☐ Personnel data provided by the facility is attached to this form

0-0000000000

2. OTHER OPERATIONS: LOW, M, AN

MILITARY INDUSTRIAL HYGIENE SURVEY FORM

Building Number

Room Number

486000

40 N G V I E W

R Army

Location 5C Operation DHP Survey Date 03 10 08

Sub-MACOM XX

RAC 3

Unit/Organization

FLA Mable STORAGE

Supervisor Mr. ☒ Ms. ☐

Supervisor or Point of Contact

Non-Responsive

Frequency (hrs/day)

009

No. CIVS

01

No. MIL

1

Contractors

1

No. LOCs

1

Lab Hoods Vapor Degreasers Spray Booths

Open Surface Tanks

Ventilation Units

Controls present (if > 6, continue in comments) [25]

Evaluation (25 char max per line)

Unit Code

Controls Required (25 char max per line)

BEST AVAILABLE COPY

Gloves

e* R U

Respirator

e* R U

Manufacturer's Description (10 char max)

NIOSH TC# or foreign equiv. (10 char max)

BEST AVAILABLE COPY

cold surfaces
hot surfaces
NBC agents
oil
solvents
surgical gloves
leather/cotton
otherabrasive blasting hood
airline
disposable
full face air purifying
1/2 face air purifying
powered air purifying
1/4 face air purifying
self-contained
other

Eyes and Face

e* R U

Hearing

e* R U

Body

e* R U

Head and Feet

e* R U

chemical splash
full face shield
chemsafety impact
safety impact
welding helmet
sunglasses
welding goggles/goggles
laser eye protection
othercanal caps
(>85-100dBA steady) earplugs
helmets w/muffs
muffs alone
(108-118) muff/earplugs comb
muffs and earplugs
(118 or >) with time limit
otheroptions
cold weather clothing
coveralls
full body suit
heat reflective vests/suit
safety bellharness
special purpose clothing
othercold weather boots/shirt
hard hats
impermeable boots
safety shoes (conductive)
safety shoes (nonconductive)
other
other
other
othere* = evaluator's recommendation
or agreementReminders: ergonomics - dermatitis - physical agents - flammable storage
EYE (permanent) - EYE (portable) - SHW - GMV - LEV

MAEDDAC (FT MEADE)

FORM 609-R

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

2013 2014

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Conclusions

1. Operation described is: DTP Storage and dispensing oils and lubricants.

FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 1063 of 1757

480000

Location Operation

AAA ADDO

Survey Year Month Day

Date 03/10/08

MACOM

Sub-MACOM

RAC

Unit/Organization

ARMORY

Office

Supervisor Mr. ☒ Ms. ☐

Supervisor or Point of Contact

Frequency (hrs/day)

009

No. CIVs

00

No. MIL

00

Contractors

00

No. LOCs

00

Lab Hoods

Vapor Degreasers

Spray Booths

Open Surface Tanks

Ventilation Units

Controls present (If > 6, continue in comments) (25)

Evaluation (25 char max per line)

Lighting

Unit Code

Controls Required (25 char max per line)

Gloves

Respirator

Manufacturers Description (10 char max)

NIOSH TC# or foreign equiv. (10 char max)

BEST AVAILABLE COPY

BEST AVAILABLE COPY

	acid	alkaline	oil	solvents	other
cold surfaces					
hot surfaces					
NBC agents					
oil					
solvents					
surgical gloves					
leather/cotton					
other					

	acid	alkaline	oil	solvents	other
abrasive blasting hood					
disposable					
full face air purifying					
1/2 face air purifying					
powered air purifying					
1/4 face air purifying					
self-contained					
other					

	acid	alkaline	oil	solvents	other
aprons					
cold weather clothing					
coveralls					
full body suit					
heat reflective vests/suit					
safety belt/harness					
special purpose clothing					
other					

	acid	alkaline	oil	solvents	other
cold weather boots/shoes					
hard hats					
impermeable boots					
safety shoes (conductive)					
safety shoes (nonconductive)					
other					
other					
other					

Eyes and Face

Hearing

Body

Head and Feet

	acid	alkaline	oil	solvents	other
chemical splash					
full face shield					
chem/safety impact					
safety impact					
welding helmet					
sunglasses					
welding goggles/glasses					
laser eye protection					
other					

	acid	alkaline	oil	solvents	other
canal caps					
(> 85-108 dBA steady) earplugs					
helmets w/muffs					
muffs alone					
(108-118) muff/earplug comb					
muffs and earplugs					
(118 or >) with time limit					
other					

	acid	alkaline	oil	solvents	other
aprons					
cold weather clothing					
coveralls					
full body suit					
heat reflective vests/suit					
safety belt/harness					
special purpose clothing					
other					

	acid	alkaline	oil	solvents	other
cold weather boots/shoes					
hard hats					
impermeable boots					
safety shoes (conductive)					
safety shoes (nonconductive)					
other					
other					
other					

MEDDAC

FORM 609-R

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

Posted to NGB FOIA Reading Room
May, 2018

Comments Remember to comment on problems, recommendations, and needed control items

FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 1065 of 1757

MILITARY INDUSTRIAL HYGIENE SURVEY FORM

Building Number

Room Number

48000

Location

Operation

5A SAH

Survey Date

Year Month Day

MACOM

Sub-MACOM

RAC

Unit/Organization

20N GV 1 EW ARMOBY

54001
800M4 vaultMr. ☒ Ms. ☐

Supervisor

Supervisor or Point of Contact

Non-Response

Frequency (hrs/day)

009

No. CIVS

00

No. MIL

00

Contractors

00

No. LOCs

00

Lab Hoods

Vapor Degreasers

Spray Booths

Open Surface Tanks

Ventilation Units

Controls present (if > 6, continue in comments) [25]

Evaluation [25 char max per line]

Unit Code

Controls Required [25 char max per line]

LIGHTS

Office
Storage AreaF T C
F T C50-100 ANSI
10 ANSI

Gloves

BEST AVAILABLE COPY

	e*	R	U
acid			
cold surfaces			
hot surfaces			
NBC agents			
oil			
solvents			
surgical gloves			
leather/cotton			
other			

Respirator

	e*	R	U
abrasive blasting hood			
disposable			
full face air purifying			
1/2 face air purifying			
powered air purifying			
1/4 face air purifying			
self-contained			
other			

Manufacturer's Description (10 char max)

NIOSH TC# or foreign equiv. (10 char max)

Eyes and Face

	e*	R	U
chemical splash			
full face shield			
chem/safety impact			
safety impact			
welding helmet			
sunglasses			
welding goggles/glasses			
laser eye protection			
other			

Hearing

	e*	R	U
canal caps			
(>85-108dBA steady) earplugs			
helmets w/muffs			
muffs alone			
(108-118) muffs/earplugs			
muffs and earplugs			
(118 or >) with time limit			
other			
other			

Body

	e*	R	U
aprons			
cold weather clothing			
coveralls			
full body suit			
heat reflective vest/suit			
safety belt/harness			
special purpose clothing			
other			
other			

Head and Feet


	e*	R	U
cold weather boots/shoe			
hard hats			
impermeable boots			
safety shoes (conductive)			
safety shoes (nonconductive)			
other			
other			
other			

e* = evaluator's recommendation

or agreement

MEDDAC (FT MEAD) FORM 609-R

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

 Personnel data provided by the facility is attached to this form.

Remember to comment on problems, recommendations, and needed control items

2 other operations: MAIN LOA

WEAPONS ARE STORED AND LOCKED IN THIS Vault.
This operation is meant for continuous occupation.

APPENDIX D

Kern - FYI

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
Washington, DC 20310-2500
31 January 1994

NG PAM (AR) 385-15/
ANGPAM 91-101

Safety

GUIDELINES FOR CONVERTING INDOOR FIRING RANGES TO OTHER USES

Summary. This is a new pamphlet. This guidance prescribes policy, responsibilities, and procedures on how to convert lead-contaminated indoor firing ranges to other uses.

Applicability. This guidance applies to all persons responsible for the operation of Army National Guard (ARNG) and Air National Guard (ANG) indoor firing ranges. As no regulation/guidance can foresee all situations that might arise, the following is written in a broad scope and is intended to be interpreted as to the INTENT of the law by health professionals.

Supplementation. Supplementation of this guidance is prohibited without prior approval from Chief, National Guard Bureau (NGB-AVN-SI).

Impact on New Manning System. This guidance does not contain information that affects the New Manning System.

Interim changes. Interim changes are not official unless they are authenticated by the Chief, Administrative Services. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

Suggested improvements. The proponent of this publication is the National Guard Bureau. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Chief, National Guard Bureau, Attn: NGB-AVN-SI, 111 South George Mason Drive, Arlington, VA 22204-1352.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12-09-E.

CONTENTS (Listed by paragraph numbers)

	Para
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Explanation of abbreviations and terms	3
Policy and procedures	4
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Background	6
Wipe Sample Media	7
Wipe Sampling Protocol	8
Range Cleaning Instructions	9
Cleaning Stored Contaminated Equipment	10
Contaminated Sand and Lead Waste	11
Medical Surveillance	12
Worker Education	13
Personal Protective Equipment	14
Point of Contact	15

Appendices

- A. Sampling Strategy for Collection of Wipe Samples
- B. Interpretation of Sample Results (Prior to Cleaning)
- C. Interpretation of Sample Results (After Cleaning)
- D. OSHA Instruction CPL 2-220B
- E. Where to Purchase Sample Media and Containers
- F. AEHA Form 8-R (Bulk Sample Data)
- G. Instructions to Complete AEHA Form 8-R
- H. Examples of Computation of Lead Level from Wipe Sample Results
- I. Supporting Laboratories and Areas Served

Glossary

1. Purpose

This pamphlet establishes policy and procedures for converting indoor firing ranges to other uses.

2. References

Related publications are listed below.

a. DODI 6052.1 (Department of Defense Occupational Safety and Health (OSH) Program).

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

c. AR 40-3 (Preventive Medicine).

d. NGR (AR) 385-15 (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARNG Indoor Firing Ranges).

e. TB MED 602 (Occupational and Environmental Health Respiratory Protection Program).

f. USAEHA TO 141 (Industrial Hygiene Air Sampling and Bulk Sampling Instructions).

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

31 January 1984

NG Pam (AR) 385-16/ANGPAM 91-101

APPENDIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO CLEANING)

B-1 200 micrograms/eq ft or LESS

If all sample results are 200 micrograms/eq ft or less, the range can be converted and/or used for any purpose.

B-2 BETWEEN 201 and 200,000 micrograms/eq ft

Range must be decontaminated. Continue with cleaning instructions listed in paragraph 15. Sample results will be used to establish a baseline. The baseline sample results will be used to ensure the 75 percent reduction is achieved.

B-3 OVER 200,000 micrograms/eq ft

Your sample media may not be capable of collecting additional lead dust and results that are above 200,000 micrograms/eq ft should be considered suspect. Larger concentrations of lead dust may exist on surfaces tested other than results indicate. If the initial sampling results are above 200,000 micrograms/eq ft, the range should be cleaned by either HEPA vacuuming and/or wet wiping to establish a baseline. After the cleaning procedure is completed, resampling should occur until sample results are under the 200,000 micrograms/eq ft limit.

B-4 High sample results may exist due to personnel walking or moving equipment/vehicles over the range surfaces causing the lead dust to be "ground" into the substratum. For example, a maintenance activity may have oversprayed paint or spilled solvents onto the surface which would bond with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

below the 75 percent reduction, a more thorough cleaning of the range is required along with resampling until criteria are met.

* PLEASE NOTE, that if your original wipe sample results were, i.e., 175,000 ug/eq ft then you would have to reduce the lead level below 13,125 ug/eq ft. This would meet the 75 percent reduction criteria; however, this is an enormous amount of lead dust and care should be taken to ensure a heavy coat of paint seals the lead dust. It is unknown at this time whether or not the remaining amount of lead dust will allow the latex paint to adhere to the substratum. If the paint peels, falls to the floor and is crushed over a period of time, it will create another respirable lead hazard. If this happens, contact your Regional Industrial Hygiene Office for guidance. Periodically monitor the converted range for signs of peeling paint. Paint chips can be analyzed for lead content. DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRING RANGE.

APPENDIX C INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING)

C-1 200 micrograms/eq ft or LESS

If all sample results are less than 200 micrograms/eq ft, the range can be converted and/or used for any purpose after a coat of lead-free latex paint is applied. The paint color must contrast the color of the present substratum.

C-2 ABOVE 200 micrograms/eq ft

As a minimum, a 75 percent reduction should occur from your initial sample results or the samples should be under the 200 micrograms/eq ft level. If all sample results meet this criteria, a contrasting color of lead-free latex paint must be applied before the area is utilized for other purposes. The room can only be used as a storage area. Storage of kitchen equipment and food is prohibited. The room cannot be used for a child care or nursery area. If sample results are not

APPENDIX E

Kx Date/Time

OCT-23-2003(THU)

18:12

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3019375701

P. 008

10/23/2003 18:15

3819375781

EMSL ANALYTICAL

PAGE 28/12

EMSL Analytical, Inc.

10786 Baltimore Avenue, Beltsville, MD 20705

Phone: (301) 937-5700 Fax: (301) 937-5741 Email: beltsvillelab@emsl.com

EMSL

Attn:

Non-ResponsiveCustomer ID: USA508
Customer PO: 1451-03W
Received: 10/22/03 4:55 PM

Fax:

EMSL Order: 190308714

Project:

Long View Primary

EMSL Project ID:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
LV-01 Drill floor near rolling door	0001	10/23/2003	144 in ²	<10.0 µg/ft ²
LV-02 Drill floor center of drill floor	0002	10/23/2003	144 in ²	<10.0 µg/ft ²
LV-03 Drill floor front of serving sta.	0003	10/23/2003	144 in ²	<10.0 µg/ft ²
LV-04 Kitchen entrance	0004	10/23/2003	144 in ²	<10.0 µg/ft ²
LV-05 Blank	0005	10/23/2003	N/A	<10.0 µg/wipe
LV-06 Ordinary rm, supply grill	0006	10/23/2003	144 in ²	<10.0 µg/ft ²

Non-Responsive

Reporting time is 10:00pm. The LQ data associated with this report must be received and checked requirements established by the AHA, unless otherwise indicated otherwise in the comment section.

ACCREDITATIONS: AHA Environmental Lead Laboratory Approval Program #102831

Printed: 10/23/2003 8:07:35 PM

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

December 17, 2003

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report dated 20 October 2003, Industrial Hygiene Survey, LAE Consulting, Severn, MD. 21144

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

b. The surveys were conducted by **Non-Responsive** of LEA Consulting, 1218 Scattered Pines Ct., Severn, MD.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.I, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

LAE Consulting

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

22 October 2003

MEMORANDUM FOR: Headquarters 2nd Infantry, ATTN: **Non-Responsive** 301 E. Regis Street, Suite 1117, Lubbock, Texas 79403-1144

SUBJECT: Industrial Hygiene Survey of Lubbock National Guard Armory, Lubbock, Texas

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. Industrial Ventilation, 22nd, Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- i. National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- j. Title 40, Code of Federal Regulations (CFR) Part 745, Lead, Identification of Dangerous Levels of Lead: Final rule.

SUBJECT: Industrial Hygiene Survey of Lubbock National Guard Armory, Lubbock, Texas

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Lubbock NG Armory. The facility was visually examined and the Building Custodian was interviewed for historical information related to the building and the operations performed. A diagram of the building can be found in Enclosure 1. Laboratory results of Lead wipe samples at Enclosure 2. Photographs of the facility can be found in Enclosure 3. Health Hazard Inventories can be found in Enclosure 4.

3. Background. At the request of **Non-Responsive** the National Guard Bureau Region South Industrial Hygiene Office of LAE Consulting conducted an industrial hygiene survey at Lubbock National Guard Armory, Lubbock, Texas on 23 September 2003.

4. Facility Description. This facility currently houses HQ 2-142 Infantry. The Marine Corp and the Navy share the building. The Armory has thirteen full time soldiers. The soldiers perform administrative duties Monday through Friday between 0700 and 1700 hours. The Armory is utilized for drills on the weekend. The facility houses administrative areas, Supply Room, and an Arms Room and a drill hall.

5. Findings.

a. A leaking roof has caused water damage on the walls in the Locker room. Wall lockers have become rusted from the prolong water leaking from the ceiling. The tar roof is flat. Leaking has been a recurring problem in this area since 1997. A contractor has done some reroofing.

b. Weapons cleaner, lubricant and protectant, spray paint and window cleaner was found stored in a Flammable storage cabinet. Material Safety Data sheets were not available for the items stored in the cabinet. An Organizational Maintenance Service is located next-door to the Armory. All hazardous material and waste is handled by this OMS.

c. A survey was performed on the lighting within the Armory. Lighting was measured in foot-candles (FC). All areas measured were above the recommended 50 FC stated in reference h except: Battalion HQ's overflow workstation 13.4-14.0 FC; distribution room 44.7; Sgt Kime workstation 35.3; SSG King workspace 28.0; SFC Leggett 29.0-30.0; S-3 office 24.2; CSM office 36.3; CPT Barbour's office 38.0; BN Cdr's office 40.6; XO office 28.0-28.8; HHC Area: Cdr's office 43.2; SGT Bishop 21.0; SSG Zuniga 36.0; 1SG Reid's office 35.0; PSC file area 20.1; retention office 27.9.

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

Page 2

SUBJECT: Industrial Hygiene Survey of Lubbock National Guard Armory, Lubbock, Texas

d. A deactivated Indoor Firing Range is located within the Armory. It is said that the range has never been fired in. The range is still intact. The five-lane range is divided into stations by dividers. Two exhaust ventilation units are located in the ceiling at the pit. The supply ventilation (4 Tubes) is located in the observation room behind the firing line. The observation room is separated from the range by a metal perforated wall. A weapon practice simulator and its associated equipment are stored in the range. Seventeen Lead wipe samples were taken (Table 1).

TABLE 1

Sample Number	Sample Location	Results
1	Backstop	<12 ug/ft ²
2	Right wall cinder block 5 ft up	<12 ug/ft ²
3	Left wall cinder block 6 ft up	<12 ug/ft ²
4	Floor in front of Pit	65 ug/ft ²
5	Floor 2 ft from left wall	60 ug/ft ²
6	Right wall 7 ft up	<12 ug/ft ²
7	Table located in the range	<12 ug/ft ²
8	Divider at weapons station 2	<12 ug/ft ²
9	Wall leading to supply on range side	<12 ug/ft ²
10	1 ft outside range door	<12 ug/ft ²
11	Floor of observation room	20 ug/ft ²
12	Exhaust tube in observation room	<12 ug/ft ²
13	Floor in front of NBC room	<12 ug/ft ²
14	Floor in front of MP office	<12 ug/ft ²
15	Floor in front of Supply HQ	<12 ug/ft ²
16	Kitchen, Top of dishwasher	<12 ug/ft ²
17	Blank	<12 ug/ft ²

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

6. Recommendations.

a. Recommend contacting a roofing company to inspect and/or repair areas of the roof that are leaking. If funds are available, consider a new roof for the Armory.

b. Recommend producing a Chemical Inventory for the chemicals that are stored and utilized by this Armory. Obtain MSDSs from the OMS #20. Maintain the MSDSs in area that is accessible to all Armory personnel. Suggest all Armory personnel obtain education on Hazard Communication. Contact the Texas Occupational Safety and Health Office for assistant in training requirements.

c. Consider purchasing supplemental lighting such as desk lamps and a floor lamp. If monies are available, recommend upgrading the lighting fixtures in the areas below 50 FC to meet the required 50 FC recommended [IES/ANSI RP1-1993].

d. Recommend that the Texas Safety and Occupational Health office review the Lead wipe sample results of this facility to determine if the range was properly decontaminated. If sample results are greater than or equal to 40 ug/ft² consider decontamination of the range.

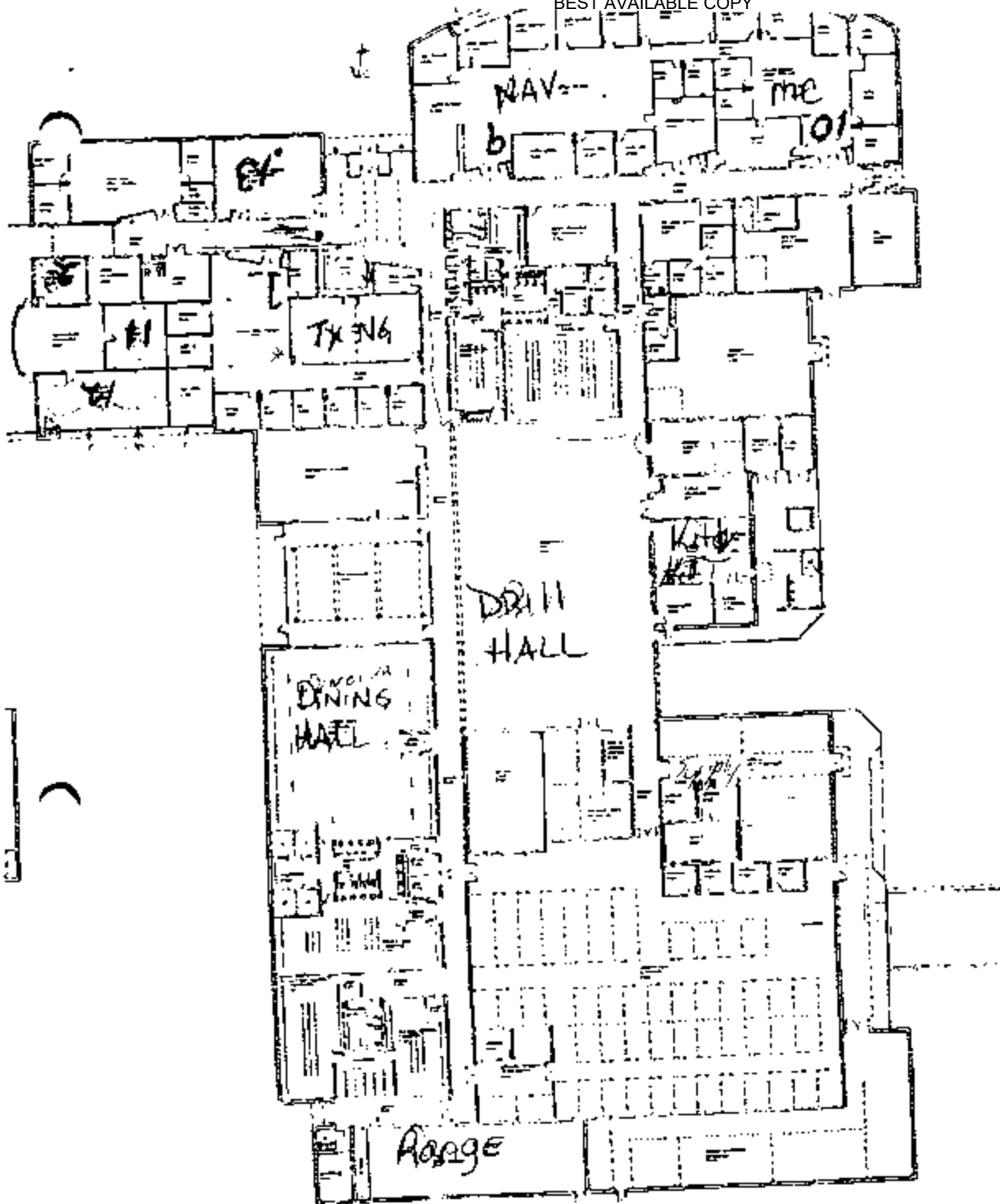
Non-Responsive

5. Facility Photos

4. Lead Wipe Results

CF: Texas Army National Guard, Safety Occupational Health Office,

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



Lubbock National Guard Armory
2/143 Infantry

LEVEL ONE FLOOR PLAN

1139	TX NATIONAL GUARD ARMORY BOARD	108 - FACILITY MAINTENANCE
1138	NAVAL RESERVE RECRUITING	130 - USNR RECRUITING
1137	PRIOR SERVICE MARINE RECRUITER	129 - USMC RECRUITING
1137	6TH MTBN 4TH FSSG	184 - USMC ADMINISTRATION
1122	HHC 2D BN (M) 142D INF	111 - ARNG ADMINISTRATION
1118	2D BN (M) 142D INF	163A - USNR ADMINISTRATION
1117	NAVAL RESERVE CENTER	111 - ARNG ADMINISTRATION
1114	OMS # 20	122 - 4005TH U.S. ARMY HOSPITAL
1114	AMSA # 11 (G)	117 - JUDGE ADVOCATE GENERAL
1114	5 BN 95 Regt 3Bde 95 Div	103 - 5 BN 95 Regt 3Bde 95 Div

CERTIFICATE OF ANALYSIS

Client: LAE Consulting
Address: 1218 Scattered Pine Court
Severn, Maryland 21144
Job Name: Not Provided
Job Location: Lubrock NG Ammery, TX
Job Number: Not Provided
P.O. Number: Not Provided
Chain Of Custody: 114895
Date Analyzed: 10/09/2003
Person Submitting: [Redacted]
Report Date: 09-Oct-03

Attention:

Summary of Atomic Absorption Analysis for Lead

Page 1 of 2

AMA Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (l)	Area Wiped (ft ²)	Reporting Limit	Final Result	Comments
0401331	1	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401332	2	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401333	3	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401334	4	Flame	Wipe	****	1,000	12.00 ug/ft ²	65 ug/ft ²	
0401335	5	Flame	Wipe	****	1,000	12.00 ug/ft ²	60 ug/ft ²	
0401336	6	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401337	7	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401338	8	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401339	9	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401340	10	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401341	11	Flame	Wipe	****	1,000	12.00 ug/ft ²	20 ug/ft ²	
0401342	12	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401343	13	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401344	14	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401345	15	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401346	16	Flame	Wipe	****	1,000	12.00 ug/ft ²	< 12 ug/ft ²	
0401347	17	Flame	Wipe Blank	****	N/A	12.00 ug	< 12 ug	

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This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples.

An AIHA (#8863), NVLAP (#101143), & New York ELAP (#10920) Accredited Laboratory
4475 Forbes Blvd. • Lanham, MD 20706 • (301) 459-2643 Toll Free (800) 346-0961 • Fax (301) 459-2643

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CERTIFICATE OF ANALYSIS

Client: LAE Consulting
Address: 1218 Scattered Pine Court
Severn, Maryland 21144
Attention: [Redacted]

Job Name: Not Provided
Job Location: Lubrock NGJ Army, TX
Job Number: Not Provided
P.O. Number: Not Provided

Chain Of Custody: 114895
Date Analyzed: 10/09/2003
Person Submitting: [Redacted]
Report Date: 09-Oct-03

Summary of Atomic Absorption Analysis for Lead

AMA Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (L)	Area Wiped (ft ²)	Reporting Limit	Final Result	Comments
-------------------	----------------------	---------------	-------------	----------------	-------------------------------	-----------------	--------------	----------

Analysis Method for Flame: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7420; Water: SM-3111B
Analysis Method For Furnace: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7421; Water: SM-3113B
N/A = Not Applicable mg/Kg = parts per million (ppm) by weight mg/L = parts per million (ppm)
%Pb = percent lead by weight ug = micrograms ug/L = parts per billion (ppb)
Note: All results have two significant digits. Any additional digits shown should not be considered when interpreting the result.

Anal [Redacted] Non-Responsive

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples.



Views of Lubbock Texas National Guard
Armory's Drill Hall



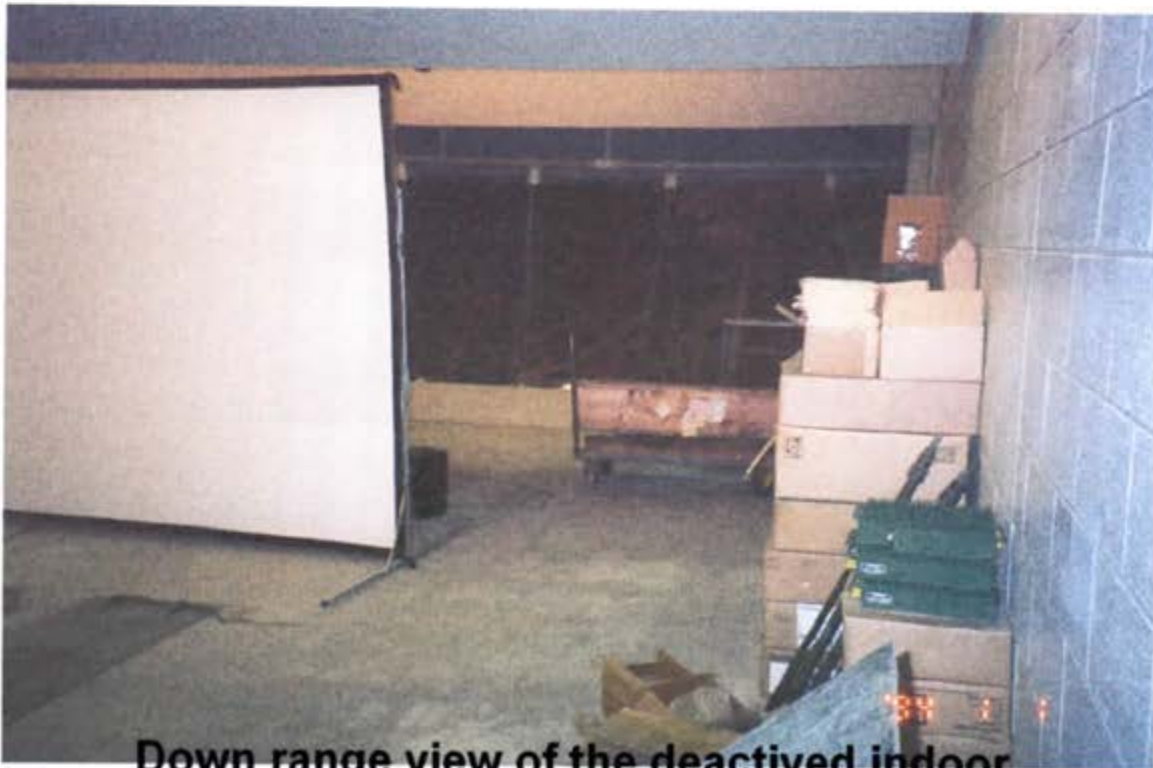


Views of Leaks above the wall locker
in the Locker room





View of Hazardous Materials stored in a Flammable storage cabinet



Down range view of the deactivated indoor firing at Lubbock NG Armory, Texas



View of Lead wipe sample location 1, the backstop



View of Lead wipe sample location #2



View of lead wipe sample location #3



View of lead wipe sample location #4



View of Lead wipe sample location #5



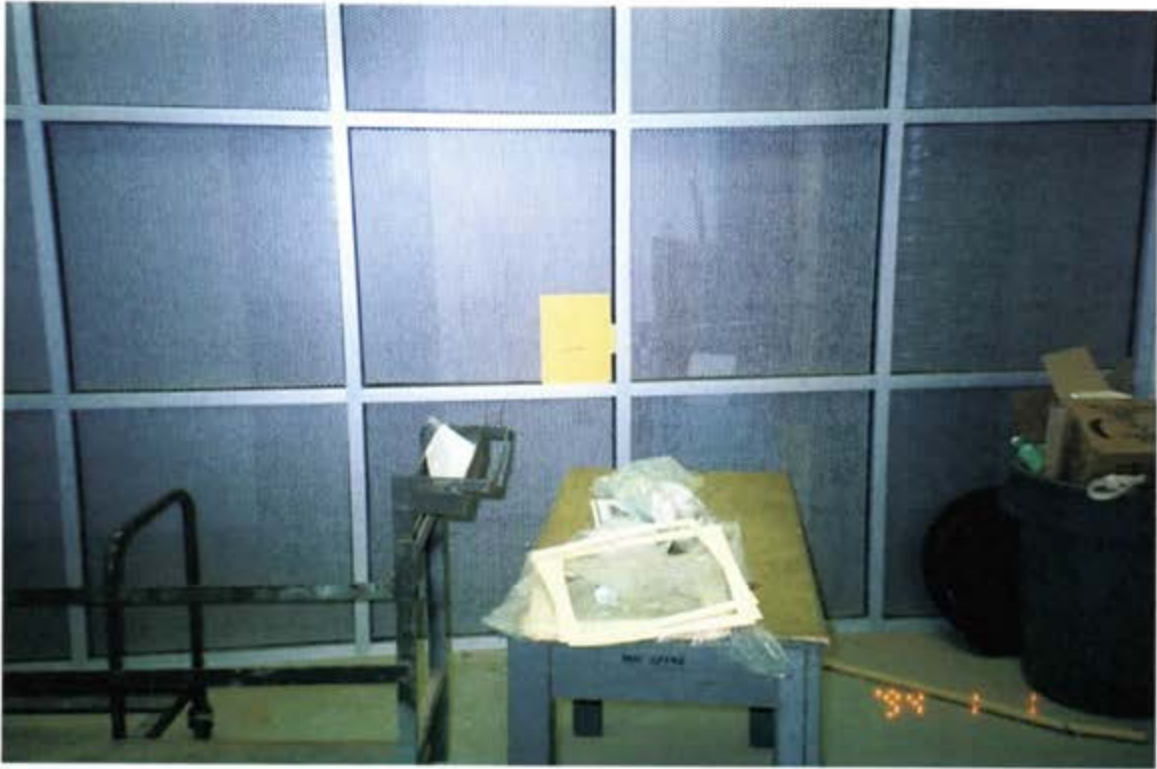
View of lead wipe sample location #6



View of Lead wipe sample location #7



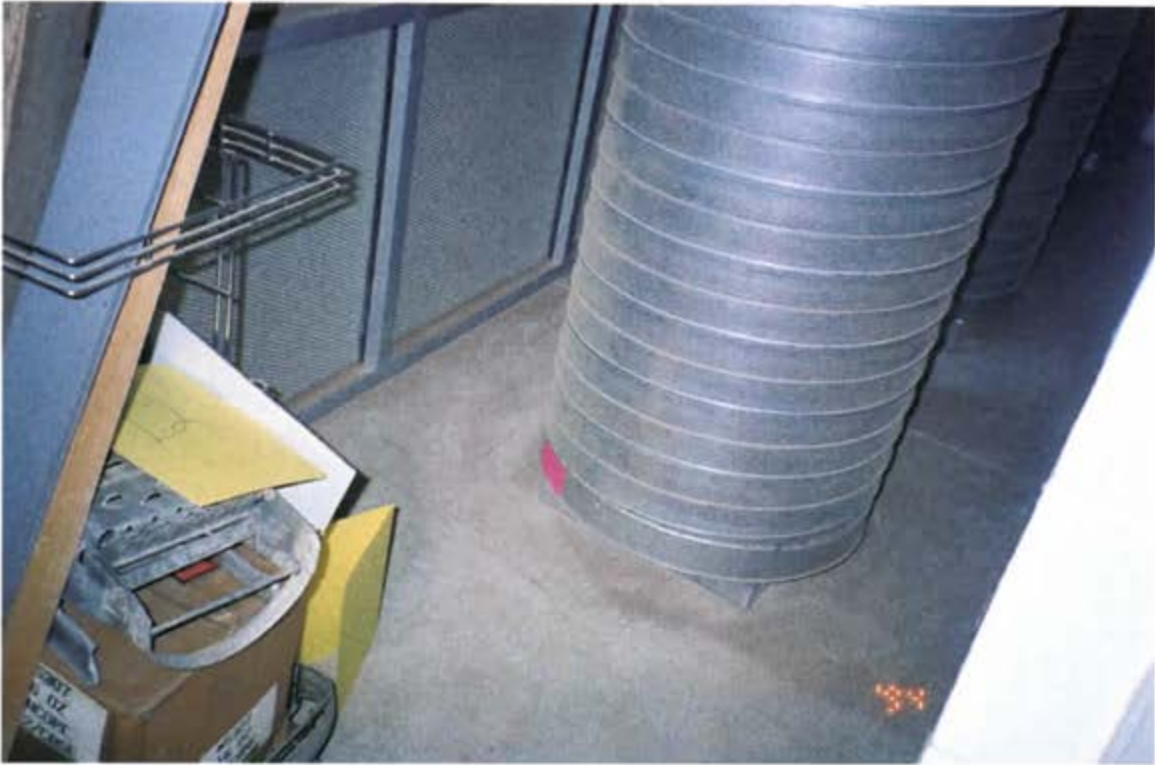
View of Lead wipe sample location #8



View of Lead wipe sample location #9



View of Lead wipe sample location #10



View of Lead wipe sample location #11



View of lead wipe sample location #12



View of Lead Wipe sample locations #13,14,15



View of Lead wipe sample location #16

BEST AVAILABLE COPY
LUBBOCK ARMED FORCES GUARD AND RESERVE CENTER
UNIT FULLTIME ACCESS ROSTER

TOY
✓

	A	B	C	D	E	F	G	H
1		LAST	FIRST	GRADE	DUTY POSITION	UNIT	PHONE	ROOM #
2	1	Non-Responsive						
3	2							
4	3							
5	4							
6	5							
7	6							
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HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

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

ARLOC	INSTALLATION Lubbock NG Armory	BLDG/RM NO. 301 E. Regis ST Suite 11117, Lubbock, TX
LOCATION/CODE AA	OPERATION/CODE ADO	
SURVEY DATE 23 Sep 03	EVALUATOR LAE Consultants	Non-Responsive
MACOM/CODE	SUBMACOM/CODE	
Non-Responsive	UNIT/ORGANIZATION Q 2-142 Infantry	FREQUENCY (hrs/day) 8+ hrs/day
	NO. CONTRACTORS	NO. LOC(S)
		NO. OTHER

SECTION 2: FACILITY DATA

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

SECTION 3: SURVEY DATA

CONTROLS PRESENT	EVALUATION	UNIT CODE	CONTROLS REQUIRED	STATUS

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

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

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

SECTION 4: HAZARD INVENTORY DATA

[illegible]

SECTION 5: PERSONNEL DATA

[illegible]

SECTION 6. COMMENTS

0 No comments

See attached sheet

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

December 17, 2003

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report Survey dated October 2003, Industrial Hygiene Survey, **Non-Responsive** **Non-Responsive** Environmental Management Solutions

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.
- b. The survey was conducted by **Non-Responsive** Environmental Management Solutions, Dallas, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

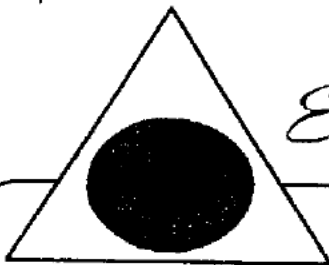
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as



Enviro-Management, Inc.

INDUSTRIAL HYGIENE SERVICE

MEMORANDUM FOR: Headquarters (HHQ) and Headquarters Company (HHC). Attn: Commander, Marshall National Guard Armory. 2109 Warren Drive, Marshall, Texas 75672.

SUBJECT: Industrial Hygiene Survey for the Marshall National Guard Armory, Marshall, Texas.

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. National Guard Pamphlet (NG PAM) AR 385-16, Safety Guidelines for Converting Indoor Firing Ranges to Other Uses.
- h. National Institute for Occupational Health and Safety (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- i. Industrial ventilation, 22nd Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- j. 29 CFR 1926.58, The OSHA Asbestos Standard.
- k. Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing.

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene Survey of the Marshall National Guard Armory. The survey consisted of a walk through inspection of all operations and administrative areas in the Marshall Armory. An interview was conducted with SGT James Wage to gather background and historical information relative to the various operations at the Marshall Armory. A diagram of the building is found in Appendix A. Photographs of the facility are located in Appendix B. Appendix C contains the health hazard inventory module (HHIM). Appendix D includes an excerpt from NG PAM 385-16, Guidelines for converting indoor firing ranges to other uses and Appendix E includes laboratory results.

3. Background. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an industrial hygiene survey was conducted at the Marshall National Guard Armory in Marshall, Texas on October 7th 2003 by **Non-Responsive** Industrial Hygienist.

SUBJECT: Industrial Hygiene Survey for the Marshall National Guard Armory, Marshall, Texas.

4. Facility Description. This facility houses the Headquarters (HHQ) and the Headquarters Company (HHC). Ten full time employee work in the Marshall Armory. The armory is utilized by administrative, supply and recruiting personnel during the week (Monday through Friday) and is utilized during drill on weekends. The physical structure is a one story yellow brick building. The building was constructed in early 1955. A list of the operations and administrative areas are detailed in Table I.

TABLE I
Operations and Administrative Areas

Supply Room/Vault(HHQ)	classrooms
Supply Room/ Vault(HHC)	HHQ Offices
Orderly Room (HHQ)	HHC Offices
Orderly Room (HHC)	
Kitchen	
Drill Hall	

5. Health Hazard Inventory Module (HHIM) & Risk Assessment Codes - The results of the walk through survey were entered into a health hazard inventory module (HHIM) industrial hygiene form. The form details the hazards found in the particular operation, the controls that are present, and types of personal protective equipment (PPE) used. Health hazard risk assessment codes (RAC's) were assigned to the operations. Risk assessment codes were determined using the RAC table in the Department of Defense (DOD) Instruction 6055.1 and are reproduced in Appendix C.

6. Findings.

- A. Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room - An initial walk through of the facility revealed that there was no inactive firing range located on the premises. A vehicle maintenance operation was not present and a boiler room was not present.

B. Suspect Asbestos Containing Materials

(1) Vinyl Floor tile (VFT) - Suspect asbestos containing 12X12 beige vinyl floor tile was observed and results revealed the following: The mastic beneath the floor tile revealed an asbestos content of 7 % Chrysotile asbestos.

(2.) Ceiling Material -Ceiling tiles observed were 2x2 white lay in tiles. All tiles were new, in good condition, and were not suspect asbestos containing.

SUBJECT: Industrial Hygiene Survey for the Marshall National Guard Armory, Marshall, Texas.

- C. Supply Room – One employee works in this operation **Non-Responsive** works in this area during the week and on weekends. Military equipment and supplies are ordered, stored, and distributed in this operation. The room is secured by lock and key. The ULLS and RCAS computer systems are utilized in the Supply room office. **Non-Responsive** uses the computer approximately five hours per day. Illumination measurements taken in the office area revealed 17-19 foot candles of illumination (FTC). The ANSI standard recommends a minimum of 50 FTC of illumination for general office work. The employee had no ergonomic concerns or complaints.
- D. Vault – The Vault is used to store military weapons. Entry into the vault is limited to SSG Krueger on weekdays and on drill weekends. Weapons repair is not performed inside the vault nor is the area meant for continuous occupancy. There is only one means of entry and egress and no independent ventilation is present in the vault. A radioactive source is stored in this operation. The appropriate signage warning of the radioactive hazard was not observed.
- E. Illumination survey - An illumination survey was conducted in four areas at this facility. The illumination levels in all the areas sampled were below the American National Standards Institute (ANSI) recommended minimum illumination levels.

The illumination levels in the survey can be seen in table II.

TABLE II
Illumination Survey

Location	Illumination Level (ftc)	ANSI Minimum Requirements (ftc)	DG 412-2 Minimum Requirements (ftc)
Orderly Office, Non-Responsive Office	32.0	50 – 100	50
Orderly Office vacant desk	21.0	50 – 100	50
Supply Office	17-19	50 – 100	50
Supply storage area	6-8	10	10

Notes: ANSI office illumination depending on the task is 50 ftc for general desk work and 90 ftc for reading poor quality print.

SUBJECT: Industrial Hygiene Survey for the Marshall National Guard Armory, Marshall, Texas.

- F. Drill Floor – The drill floor is used on guard weekends by drill personnel. The floor is composed of concrete and the ceiling is composed of a fiber board material that is approximately 30-35 feet in height. Interviews revealed that vehicles were occasionally driven onto the drill hall floor and that weapons are cleaned in this area. As required, lead wipe samples were collected from the drill floor and the laboratory results reveal the following: All samples were below the 200 micrograms/sq.ft. guideline as required by NG PAM (AR) 385-16.
- G. Kitchen – The kitchen is adjacent to the armory floor and is fully functional. The kitchen is not used during drill. Overall house keeping appeared to be good.

SUBJECT: Industrial Hygiene Survey for the Marshall National Guard Armory, Marshall, Texas.

Recommendations

1. Lighting should be upgraded in all areas which were indicated as deficient.
2. If the 12X12 beige floor tile in the facility becomes damaged or is replaced, a certified asbestos contractor should be contracted for the removal and disposal of the floor tile and mastic.

SUBJECT: Industrial Hygiene Survey for the Marshall Guard Armory, Marshall, Texas.

**Marshall National Guard Armory
Asbestos Analysis
Appendix E**

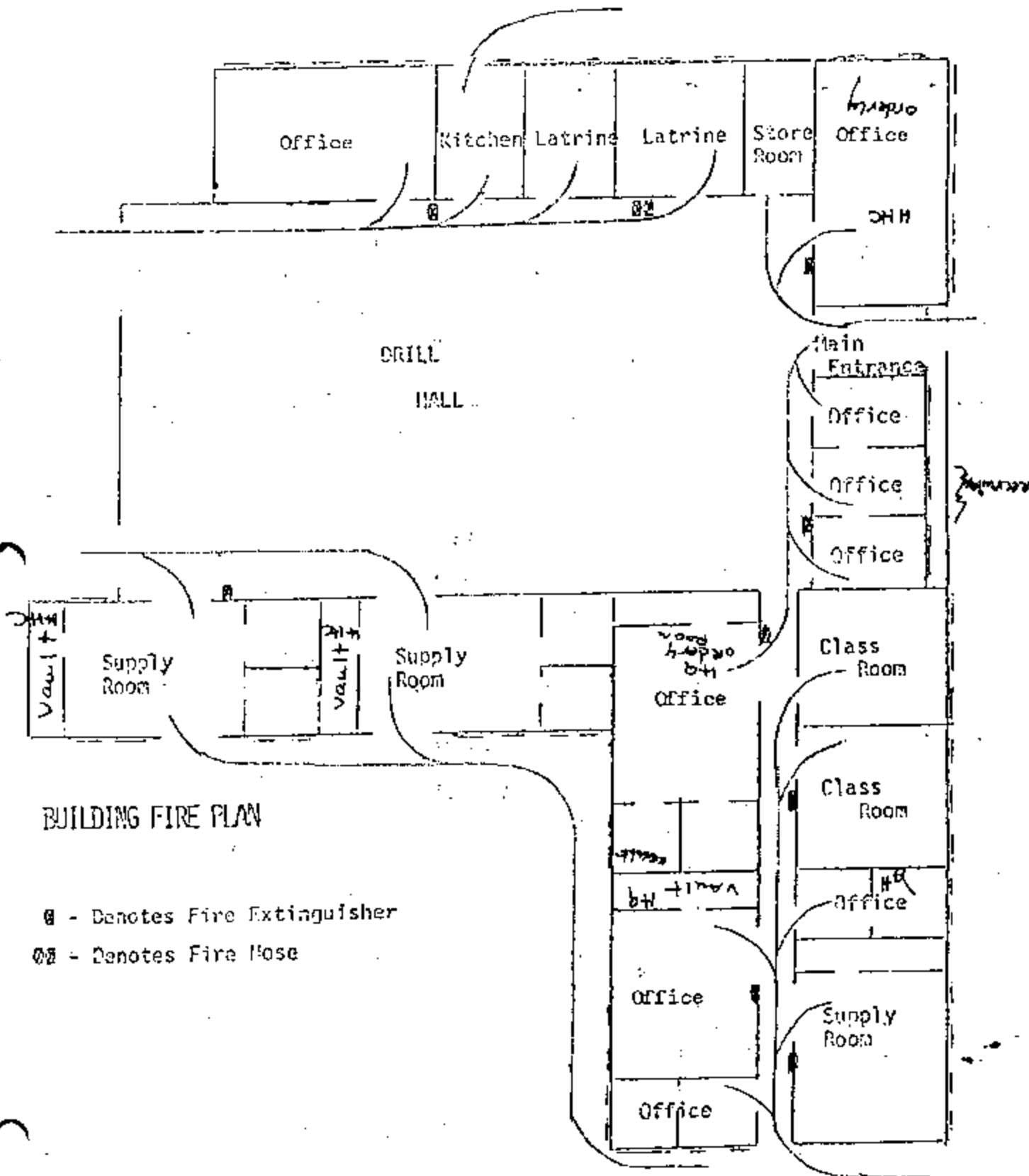
Sample No.	Location	Type Analysis	Results
01	Beige 12x12 beige VFT w/white & brown Stripes	Asbestos	None Detected
01A	Mastic from 12X12 beige VFT (sample 01)	Asbestos	7% Chrysotile

SUBJECT: Industrial Hygiene Survey for the Marshall Guard Armory, Marshall, Texas.

Marshall National Guard Armory
Lead Wipe Sample Analysis
Appendix E

Sample No.	Location	Type Analysis	Micrograms /cubic ft ug/m3
M-01	Drill Fl., Overhead door	Lead	14.0
M-02	Drill Fl. Center of Floor	Lead	10.0
M-03	Drill Fl., floor @ entrance to orderly room	Lead	17.0
M-04	Kitchen, floor at entrance	Lead	26.0
M-05	Orderly room supply grill	Lead	21.0
M-06	Blank		<10.0

APPENDIX A



BUILDING FIRE PLAN

- ⊗ - Denotes Fire Extinguisher
- ⊖ - Denotes Fire Hose

APPENDIX B



APPENDIX C

THIMS INDUSTRIAL HYGIENE SURVEY FORM

ARLOC Installation

480000
 Location Operation
 07 0TH
 Survey Date 03 10 07
 Year Month Day
 MACOM MG
 Sub-MACOM XX
 RAC 4
 Unit/Organization
 21099
 WARRR
 TEXAS
 35672

Building Number
 MARSHALL
 Room Number
 DRTL
 Floor

Supervisor ☒ Mr. ☐ Ms.
 Supervisor or Point of Contact

Non-Responsive

Frequency (hrs/day)

No. CIVS

No. MIL

Contractors

No. LOCS

Lab Hoods Vapor Degreasers Spray Booths

Open Surface Tanks

Ventilation Units

Controls present (if >6, continue in comments) [25]

Evaluation [25 char max per line]

Unit Code

Controls Required [25 char max per line]

Gloves

Respirator

Manufacturer's Description [10 char max]

NIOSH TC# or foreign equiv. [10 char max]

acid
 cold surfaces
 hot surfaces
 NBC agents
 oil
 solvents
 surgical gloves
 leather/cotton
 other

abrasive blasting hood
 disposable
 full face air purifying
 1/2 face air purifying
 powered air purifying
 1/4 face air purifying
 self-contained
 other

Eyes and Face

Hearing

Body

Head and Feet

chemical splash
 full face shield
 chem/safety impact
 safety impact
 welding helmet
 sunglasses
 welding goggles/glasses
 laser eye protection
 other

canal caps
 (>85-100dBA steady) earplugs
 helmets w/muffs
 muffs alone
 (108-118) multiple earplugs
 muffs and earplugs
 (118 or >) with time limit
 other

aprons
 cold weather clothing
 coveralls
 full body suit
 heat reflective vest/suit
 safety belt/harness
 special purpose clothing
 other

cold weather boots/shoes
 hard hats
 impermeable boots
 safety shoes (conductive)
 safety shoes (nonconductive)
 other
 other
 other

e* evaluator's recommendation
 or agreement

Reminders: ergonomics - dermalitis - physical agents - flammable storage
 EYE (permanent) - EYE (portable) - SHW - GMV - LEV

MEDDAC (FT MEADE) MAY 95 FORM 609-R

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

Posted to NGB FOIA Reading Room
May, 2018

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COPY

Remember to comment on problems, recommendations, and needed control items

1. Operation described is: other

THIEMS INDUSTRIAL HYGIENE SURVEY FORM

Building Number

Room Number

Room Name

Room Use

Location

Operation

Year

Month

Day

MACOM

Sub-MACOM

RAC

Unit/Organization

No. CIVs

No. MIL

Contractors

No. LOCs

SA SAH

Survey Date

031007

20

N

X

X

4

2109

WARR

EN

TEXAS

DR

Mr. Ms.

Supervisor

Supervisor or Point of Contact

Lab Hoods

Vapor Degreasers

Spray Booths

Open Surface Tanks

Ventilation Units

Frequency (hrs/day)

No. CIVs

No. MIL

Contractors

No. LOCs

☐ Personnel data provided by the facility is attached to this form
 Comments Remember to comment on problems, recommendations, and needed control items
 2. Operation described is: SALT
 2. Other operations: MAN, LOA
 3. WEAPONS ARE STORED AND LOCKED IN THIS VAULT
THIS OPERATION IS MEANT FOR CONTINUOUS OCCUPATION.
 () Comments continued on (last sheet)
☐ This operation was explained to the evaluators.
☐ There is a need for data sheet.

ABLE CORP	
-----------	--

Continued

2. OTHER OPERATIONS: MAN, LOA.

It documents confirmed or suspected cases

There is a wise data scientist

The choice of α was explained to the evaluators,

480000

Location Operation

AAAD00

Survey

Year Month Day

MACOM

Sub-MACOM

RAC

Unit/Organization

ARMORY

ORD E Rly

Mr. Ms.

Supervisor

Supervisor or Point of Contact

Lab Hoods

Vapor Degreasers

Spray Booths

Controls present (If >6, continue in comments) [25]

Evaluation [25 char max per line]

Lighting

Unit Code

Controls Required [25 char max per line]

Frequency (hrs/day)

No. CIVs

No. MIL

Contractors

No. LOCs

Ventilation Units

Manufacturer's Description [10 char max]

NIOSH TC# or foreign equiv. [10 char max]

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May, 2018

☐ Personnel data provided by the facility is attached to this form

!_Operation described is: ADO

DIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 1118 of 1757

Comments continued on page 10

APPENDIX D

Kern - FYI

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
Washington, DC 20310-2600
31 January 1994

NG PAM (AR) 385-16
ANGPAM 91-101

Safely

GUIDELINES FOR CONVERTING INDOOR FIRING RANGES TO OTHER USES

Summary. This is a new pamphlet. This guidance prescribes policy, responsibilities, and procedures on how to convert lead-contaminated indoor firing ranges to other uses.

Applicability. This guidance applies to all persons responsible for the operation of Army National Guard (ARNG) and Air National Guard (ANG) indoor firing ranges. As no regulation-guidance can foresee all situations that might arise, the following is written in a broad scope and is intended to be interpreted as to the INTENT of the law by health professionals.

Supplementation. Supplementation of this guidance is prohibited without prior approval from Chief, National Guard Bureau (NGB-AVN-SI).

Impact on New Manning System. This guidance does not contain information that affects the New Manning System.

Interim changes. Interim changes are not official unless they are authenticated by the Chief, Administrative Services. Users will destroy interim changes on their expiration date unless sooner superseded or rescinded.

Suggested improvements. The proponent of this publication is the National Guard Bureau. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Chief, National Guard Bureau, Attn: NGB-AVN-SI, 111 South George Mason Drive, Arlington, VA 22204-1352.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12-09-E.

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Range Cleaning Instructions	9
Cleaning Stored Contaminated Equipment	10
Contaminated Sand and Lead Waste	11
Medical Surveillance	12
Worker Education	13
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B. Interpretation of Sample Results (Prior to Cleaning)	
C. Interpretation of Sample Results (After Cleaning)	
D. OSHA Instruction CPL 2-2.208	
E. Where to Purchase Sample Media and Containers	
F. AEHA Form 8-R (Bulk Sample Data)	
G. Instructions to Complete AEHA Form 8-R	
H. Examples of Computation of Lead Level from Wipe Sample Results	
I. Supporting Laboratories and Areas Served	

Glossary

- 1. Purpose**
This pamphlet establishes policy and procedures for converting indoor firing ranges to other uses.
- 2. References**
Related publications are listed below.
 - a. DODI 6033.1 (Department of Defense Occupational Safety and Health (OSH) Program).
 - b. AR 11-34 (The Army Respiratory Protection Program).
 - c. AR 40-5 (Preventive Medicine).
 - d. NGR (AR) 385-15 (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARNG Indoor Firing Ranges).
 - e. TB MED 302 (Occupational and Environmental Health Respiratory Protection Program).
- 3. USAEHA TG 141 (Industrial Hygiene Air Sampling and Bulk Sampling Instructions).**
- 4. Title 29, Code of Federal Regulations (CFR) revision, Part 1910 (Occupational Safety and Health Standards).**

31 January 1994

NG Pam (AR) 395-16/ANGPAM 91-101

APPENDIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO CLEANING)

B-1 200 micrograms/sq ft or LESS

If all sample results are 200 micrograms/sq ft or less, the range can be converted and/or used for any purpose.

B-2 BETWEEN 201 and 200,000 micrograms/sq ft

Range must be decontaminated. Continue with cleaning instructions listed in paragraph 15. Sample results will be used to establish a baseline. The baseline sample results will be used to ensure the 75 percent reduction is achieved.

B-3 OVER 200,000 micrograms/sq ft

Your sample media may not be capable of collecting additional lead dust and results that are above 200,000 micrograms/sq ft should be considered suspect. Larger concentrations of lead dust may exist on surfaces tested other than results indicate. If the initial sampling results are above 200,000 micrograms/sq ft, the range should be cleaned by either HEPA vacuuming and/or wet wiping to establish a baseline. After the cleaning procedure is completed, resampling should occur until sample results are under the 200,000 micrograms/sq ft limit.

B-4 High sample results may exist due to personnel walking or moving equipment/vehicles over the range surfaces causing the lead dust to be "ground" into the substratum. For example, a maintenance activity may have oversprayed paint or spilled solvents onto the surface which would bond with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

below the 75 percent reduction, a more thorough cleaning of the range is required along with resampling until criteria are met.

* PLEASE NOTE, that if your original wipe sample results were, i.e., 175,000 ug/sq ft then you would have to reduce the lead level below 13,125 ug/sq ft. This would meet the 75 percent reduction criteria; however, this is an enormous amount of lead dust and care should be taken to ensure a heavy coat of paint seals the lead dust. It is unknown at this time whether or not the remaining amount of lead dust will allow the latex paint to adhere to the substratum. If the paint peels, falls to the floor and is crushed over a period of time, it will create another respirable lead hazard. If this happens, contact your Regional Industrial Hygiene Office for guidance. Periodically monitor the converted range for signs of peeling paint. Paint chips can be analyzed for lead content. **DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRING RANGE.**

APPENDIX C INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING)

C-1 200 micrograms/sq ft or LESS

If all sample results are less than 200 micrograms/sq ft, the range can be converted and/or used for any purpose after a coat of lead-free latex paint is applied. The paint color must contrast the color of the present substratum.

C-2 ABOVE 200 micrograms/sq ft

As a minimum, a 75 percent reduction should occur from your initial sample results or the samples should be under the 200 micrograms/sq ft level. If all sample results meet this criteria, a contrasting color of lead-free latex paint must be applied before the area is utilized for other purposes. The room can only be used as a storage area. Storage of kitchen equipment and food is prohibited. The room cannot be used for a child care or nursery area. If sample results are not

APPENDIX E

DATE/TIME 001-25-2003(THU) 16:30 BEST AVAILABLE COPY 5019375701

10/23/2003 16:32 3019375701 EMSL ANALYTICAL PAGE 01

EMSL Analytical, Inc.

10700 Battleground Avenue, Baltimore, MD 20705

Phone: (301) 837-6780 Fax: (301) 837-5701 Email: baltimore@emsl.com

EMSL

Alt:

Non-Responsive

Fax:

Project:

MARSHALL, TEXAS

Customer ID: USA308
Customer PO: 1450-03W
Received: 10/22/03 4:40 PM
EMSL Order: 100305712
EMSL Project ID:
Analysis Date: 10/22/2003

Asbestos Analysis of Bulk Materials via EPA 800/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
01 100305712-0001	12x12 VFT beige w/ white/brown stripes	Gray/Beige Non-Fibrous Heterogeneous	Teased Dissolved in H ₂ O	<1% Cellulose	100% Non-fibrous (other)	None Detected
D1A 100305712-0002	12x12 VFT beige w/ white/brown stripes	Black/Brown Fibrous Heterogeneous	Teased Dissolved in H ₂ O	5% Cellulose	88% Non-fibrous (other)	7% Chrysotile

Non-Responsive

or other approved signatory

PLM has been known to give erroneous results in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples suspected as 1% or more asbestos should be tested with TEM. The above test report releases only to the name inside. This report may not be reproduced, copied in full, without written approval by EMSL Analytical, Inc. This release must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Analytical (NVLAP #2002-01)

PLM-1

THIS IS THE LAST PAGE OF THE REPORT.

Rx Date/Time

OCT-23-2003(THU)

18:12

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P.002

10/23/2003 18:15

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EMSL ANALYTICAL

PAGE 02/12

EMSL Analytical, Inc.

10755 Baltimore Avenue, Beltsville, MD 20705

Phone: (301) 937-5700 Fax: (301) 937-5701 Email: beltsville@emsl.com

EMSL

Attn:

Non-ResponsiveCustomer ID: U6A80B
Customer PO: 1449-03W
Received: 10/23/03 9:05 AM

Fax:

EMSL Order: 100305720

Project: Marshall

EMSL Project ID:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
M-01 Drill floor near roll-up door	0001	10/23/2003	144 in ²	14.0 µg/in ²
M-02 Drill floor center of drill floor	0002	10/23/2003	144 in ²	10.0 µg/in ²
M-03 Drill floor near orderly office	0003	10/23/2003	144 in ²	17.0 µg/in ²
M-04 Kitchen floor inside entrance	0004	10/23/2003	144 in ²	28.0 µg/in ²
M-05 Orderly rm. supply grill	0005	10/23/2003	144 in ²	21.0 µg/in ²
M-06 Blank	0006	10/23/2003	n/a	<10.0 µg/wipe

or other approved signatory

Reporting Unit is 10 µg/wipe. The EPA data associated with the sample results included in this report meet the accuracy and precision requirements established by the EPA, unless specifically indicated otherwise in the certification section.

ACCREDITATIONS: AIA Environmental Lead Laboratory Approval Program #182861

Printed: 10/23/2003 8:08:18 PM

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory Brenham Armory, and Bryan Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Mexia Armory
500 East Tyler Street
Mexia, Texas

Prepared for:

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

By

Non-Responsive

July 08, 2004

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Appendices

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

Mexia Armory

Survey Date: 02 June 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Mexia Armory on 2 June 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
Armory Lead Wipe Samples	<10 to 47 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 80 footcandles	No action.
HVAC/IAQ	No issues observed or documented.	No action.

Mexia Armory

Survey Date: 02 June 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Mexia Armory in Mexia, Texas on 2 June 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Mexia Armory in Mexia, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 2 June 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory, which was built in 1963, houses Company C and the 249 Signal. The building is a one story structure and consists of administrative office areas, a kitchen, classrooms, a drill hall, and a supply room. No indoor firing range was found in this armory. Two full time employees work at this armory. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Ten wipe samples were collected from various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
MEX01	Top of serving line in kitchen.	<10.0
MEX02	Top of ice maker in kitchen.	<10.0
MEX03	Return air grill in administrative office.	<10.0
MEX04	Top of router in the commander office area.	<10.0
MEX05	Drill hall floor by supply room.	47.0
MEX06	Drill hall floor middle.	<10.0
MEX07	Drill hall floor diagonally opposite the supply room.	<10.0
MEX08	Top of the water fountain in the drill hall	<10.0
MEX09	Supply diffuser in the commander's office	<10.0
MEX10	Top of table in classroom.	<10.0

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

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of Cement floors, cinder block walls, and corrugated steel deck. No floor tiles, ceiling tiles or baseboard were found in the armory. Pipe insulation consisting of fiber glass and brown paper covering were found in the drill hall and bathrooms. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
MEXA01	12x12 Floor tile	None.
MEXA02	2x4 Ceiling tile	None
MEXA03	Baseboard	None

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified. However, readings were collected in some areas to document the levels. As expected, noise levels were well below the Occupational

Mexia Armory

Survey Date: 02 June 2004

Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA, as indicated in the table below.

Area	Reading in decibels dBA
Administrative Offices.	45 – 50
Classrooms.	45 – 55
Drill Hall.	55 – 65

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 80 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	30 – 80
Classrooms.	45 – 70
Supply Rooms.	10 – 15
Drill Hall.	15 – 45
Locker Rooms.	15 – 35
Kitchen.	20 – 45

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of two individual furnace forced air units. Outside makeup air capabilities is available in the furnace room. The common return air plenum is located underneath the unit and is constructed of wooden plywood. No water leaks signs were observed in the mechanical closets. However, the presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor air. All condensate water should be isolated from the wood on the return air plenum. Consideration should be given to

Mexia Armory

Survey Date: 02 June 2004

replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

None.

Technical Assistance: For technical assistance regarding information found in this report

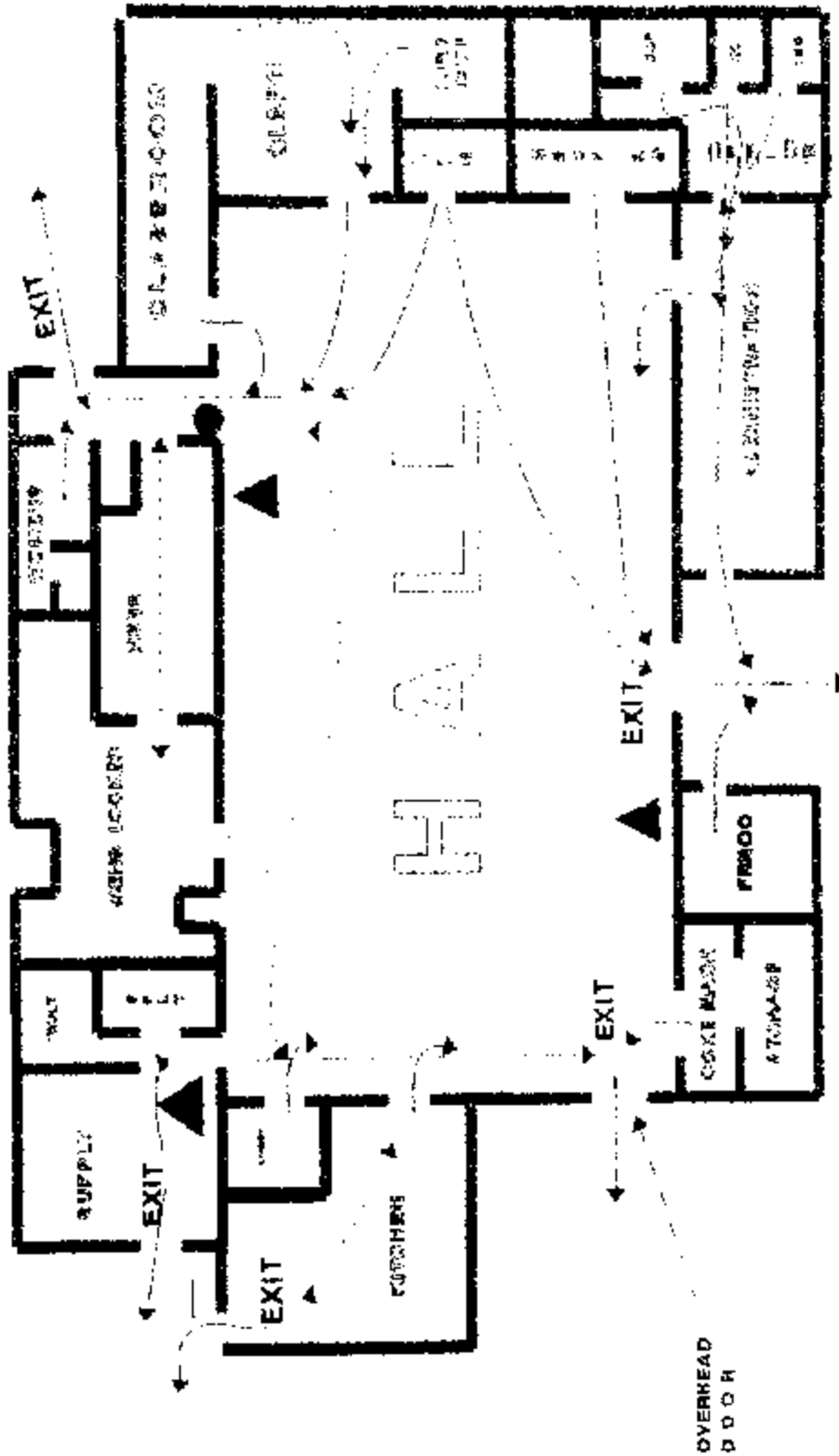
Non-Responsive

APPENDIX A

UTM 14 738958.0
R 3506834.1
CPH 123

UTM 14 739018.4
R 3506888.9
CPH 124

EVACUATION PLAN



EMERGENCY NUMBER

UTM 14 739452
R 3506834.1
CPH 123

FLAG
POLE

UTM 14 739018.2
R 3506888.2
FIRE EXTINGUISHER

FIRE HOSE

BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 558-4600 Fax: (856) 558-9551 Email: skuffman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:19 PM

Fax:

EMSL Order: 200406801

Project: NALXIA

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
MEX 01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	6/21/04	n/a	<10.0 µg/wipe
MEX 02	0002	6/21/04	n/a	<10.0 µg/wipe
MEX 03	0003	6/21/04	n/a	<10.0 µg/wipe
MEX 04	0004	6/21/04	n/a	<10.0 µg/wipe
MEX 05	0005	6/21/04	n/a	47.0 µg/wipe
MEX 06	0006	6/21/04	n/a	<10.0 µg/wipe
MEX 07	0007	6/21/04	n/a	<10.0 µg/wipe
MEX 08	0008	6/21/04	n/a	<10.0 µg/wipe
MEX 09	0009	6/21/04	n/a	<10.0 µg/wipe
MEX 10	0010	6/21/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NE LAP: 04653, AHA Environmental Lead Laboratory Approval Program, 100194

Date Printed: 6/21/04 4:57:38 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (356) 868-4800 Fax: (356) 868-4800 Email: asiaqa@EMSL.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 12:53 PM

Fax:

EMSL Order: 040410194

Project:

EMSL Proj:

Analysis Date: 6/16/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos	
				% Fibrous	% Non-Fibrous	% Type	
MEX A01 040410194-0001	MEXIA	White Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected	
MEX A02 040410194-0002	MEXIA	Gray/White Fibrous Heterogeneous	Teased	40% Cellulose 40% Glass	20% Non-fibrous (other)	None Detected	
MEX A03 040410194-0003	MEXIA	Brown Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected	

Non-Responsive

Non-Responsive

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% of none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

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

PLM

THIS IS THE LAST PAGE OF THE REPORT

1

BEST AVAILABLE COPY

APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: Same as bill to
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____
 Phone Results to: (Name) _____ Telephone: _____
 Fax Results to: (Name) _____ Fax #: _____

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	TAT
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% →	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* List Wipe Type	<input checked="" type="checkbox"/> -ASTM <input type="checkbox"/> -non ASTM	SW846-7420 / HCL Appendix 14.2 Digest	10 ug/wipe	
	or SW846-6010B	ICP	3.0 ug/wipe	
ICP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
STLC Lead (California) *	CA Title 22 6201.126 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil *				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

T/T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 *, **, ***, ****, +, ++, # Please Refer to Price Quote

* If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
1 MEX 01 - MEX 10	MEXIA		06801-F-10

@ Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

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

(g) The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 v STLC.doc



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Asbestos

EMSL Rep:

Third Party Billing requires written authorization
from third partyYour Company Name: Tommy Sciences, Inc.

EMSL-Bill to:

Same as mail to

Street:

Street:

Box #:

Box #:

City/State:

3744 Lawrence Drive
Naperville, IL Zip: 60564

City/State:

Zip:

Phone Results to:

Fax Results to:

Name:

Name:

Telephone #:

Fax #:

Project:

Purchase Order #:

Name/Number:

MATRIX

TURNAROUND

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

TEM AIR, 3 hours, 6 hour. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-226-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/mixc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 <input type="checkbox"/> Qualitative method <input type="checkbox"/> XRD <input type="checkbox"/> SEM <input type="checkbox"/> EDS <input type="checkbox"/> OTHER:
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative		

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)
	<u>MEXIA</u>	

Client Sample # (s)

Relinquished:

Received:

Non-Responsive

APPENDIX D



Photo #1: Armory front entrance.



Photo #2: Armory's rear side.

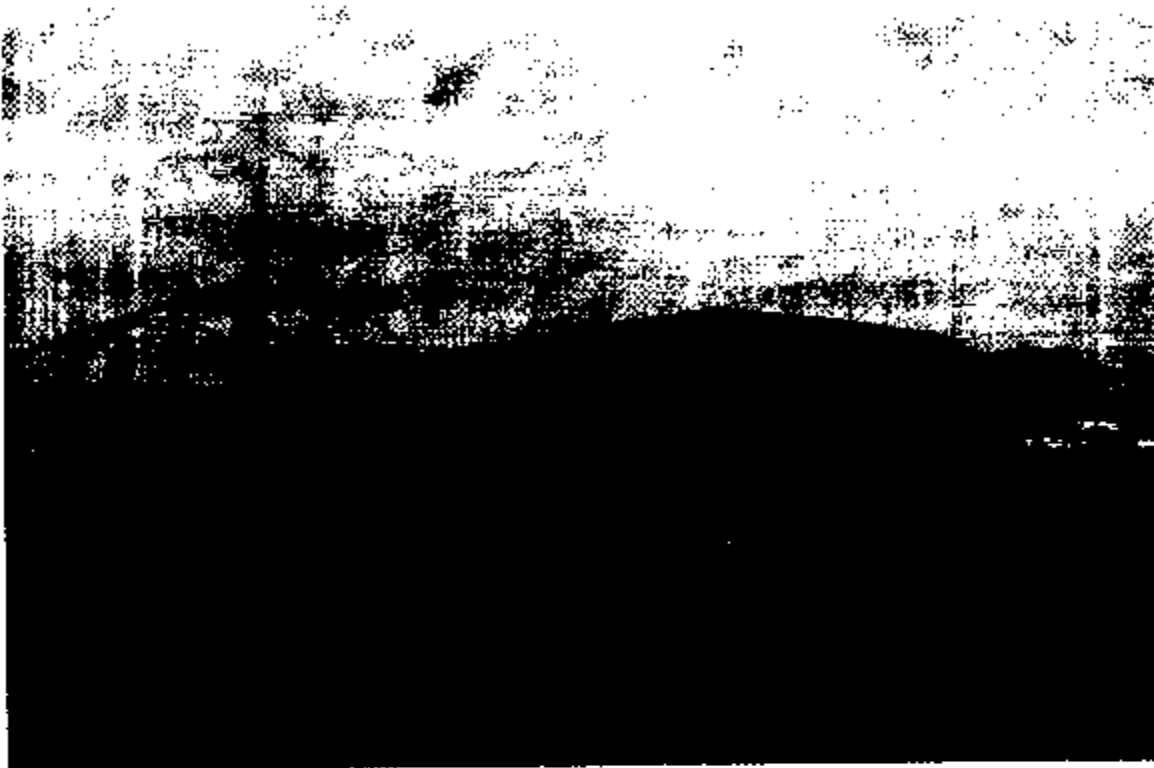


Photo #3: South east side of the armory.

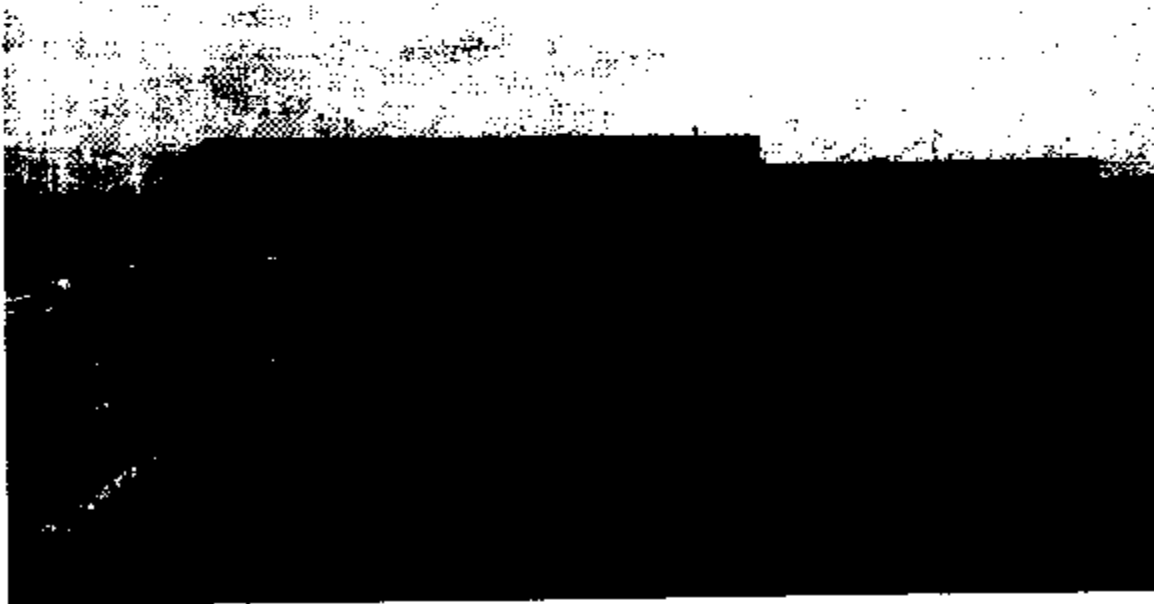


Photo #4: South west side of the armory.



Photo #5: Northwest corner of armory.



Photo #6: Drill hall facing west.



Photo #7: Drill hall facing east.



Photo #8: Armory's kitchen.



Photo #9: Furnace unit showing the wood common return plenum.

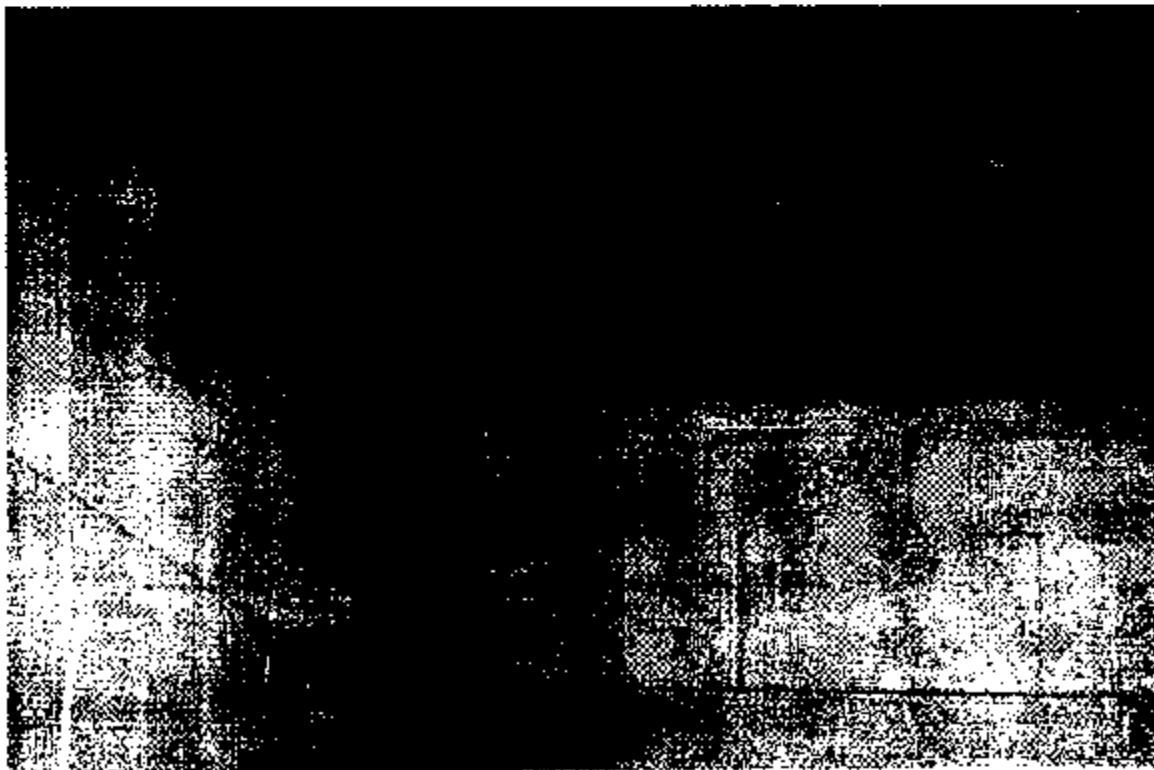


Photo #10: Mold contamination in the locker rooms.

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

February 10, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports **Seguin Armory**, **New Braunfels Armory**, **San Marcos Armory**, **Hondo Armory**, **Kerrville Armory** and **Fredericksburg Armory**, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of October 2003, Industrial Hygiene Survey, **Non-Responsive** Technical Solutions Fayetteville, GA.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

b. The survey was conducted by **Non-Responsive** Technical Solutions, Fayetteville, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.I., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
- 5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Army National Guard Industrial Hygiene Survey



New Braunfels Armory

2253 IH 35 W.

New Braunfels, TX 78130-6899

PO

Non-Responsive

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5 November 2003

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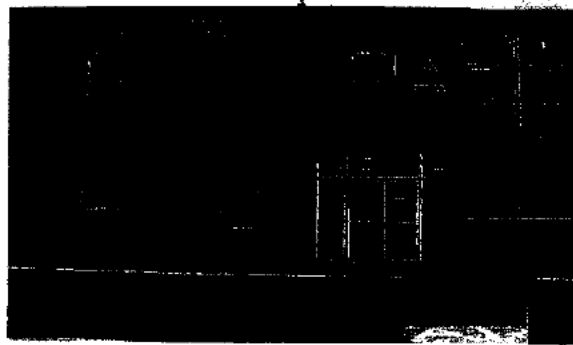
MEMORANDUM FOR: Texas Army National Guard, ATTN: **Non-Responsive** Commander, HQ
4-133 FA, 2253 IH 35 W., New Braunfels, TX 78130-6899

SUBJECT: Industrial Hygiene Survey of New Braunfels Armory Army National Guard, New
Braunfels, Texas

BACKGROUND

At the request of **Non-Responsive** National Guard Bureau Regional
Industrial Hygiene South Office, Atlanta, GA, an initial baseline industrial hygiene survey was
performed at the following Army National Guard Armory facility on **14 October 2003**:

**New Braunfels Armory
2253 IH 35 W.
New Braunfels, TX 78130-6899**



This facility houses the following units:

Unit			Commander
1	HQ 4-133 FA		LTC Robert Canon
2	HHB (-) 4th Battalion 133rd FA		1LT Henry Harris
3	Svc Battery 4th Battalion 133rd FA		CPT Brian Hale
4			
5			

The facility was built in the 1940's

The baseline industrial hygiene survey includes:

- Lead wipe dust surveys
- Illuminations surveys
- Ventilation surveys
- Noise surveys, if necessary

A field survey form is completed on all industrial operations at the facility, and the data contained in this report.

An initial baseline industrial hygiene survey was conducted at the New Braunfels Armory, New Braunfels, Texas, on 14 October 2003 as part of the Texas Army National Guard Occupational Health Program to identify potential hazards in the workplace. The survey consisted of collecting lead wipe samples, bulk asbestos samples (as needed), conducting noise and illumination survey, as well as evaluating the condition of the building, including the Heating Ventilation and Air Conditioning (HVAC) System as it relates to indoor air quality. A review of several industrial hygiene programs, such as hazard communication, radiation protection, ergonomics, and personal protective equipment was also performed.

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

Building condition / Indoor Air Quality	<ol style="list-style-type: none"> 1. There was evidence of leaks in certain areas of the facility. 2. The facility, overall, seems to be well maintained. 	<ol style="list-style-type: none"> 1. Create a maintenance work order to identify and fix sources of leaks. 2. Continue to follow good hygiene and housekeeping practices.
Lead Wipe Samples	Below Reportable Levels (BRL) to $119 \mu\text{g}/\text{ft}^2$	Continue to follow good hygiene and housekeeping practices.
Asbestos Bulk Samples	No issues	No action
Illumination Survey	16.7 to 132.5 foot-candles	Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
Noise Survey	No issues	No action
Hazards Communication	<p>No Chemical list available.</p> <p>MSDS are not updated for chemicals used.</p> <p>***Unit just returned from deployment, so they did not have all paperwork updated as yet.</p>	<p>Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.</p> <p>Personnel responsible for these items should receive annual training in HAZCOM requirements</p>

Ergonomics	Ergonomics BEST AVAILABLE COPY and Supply Areas	Complete ergonomics survey on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action

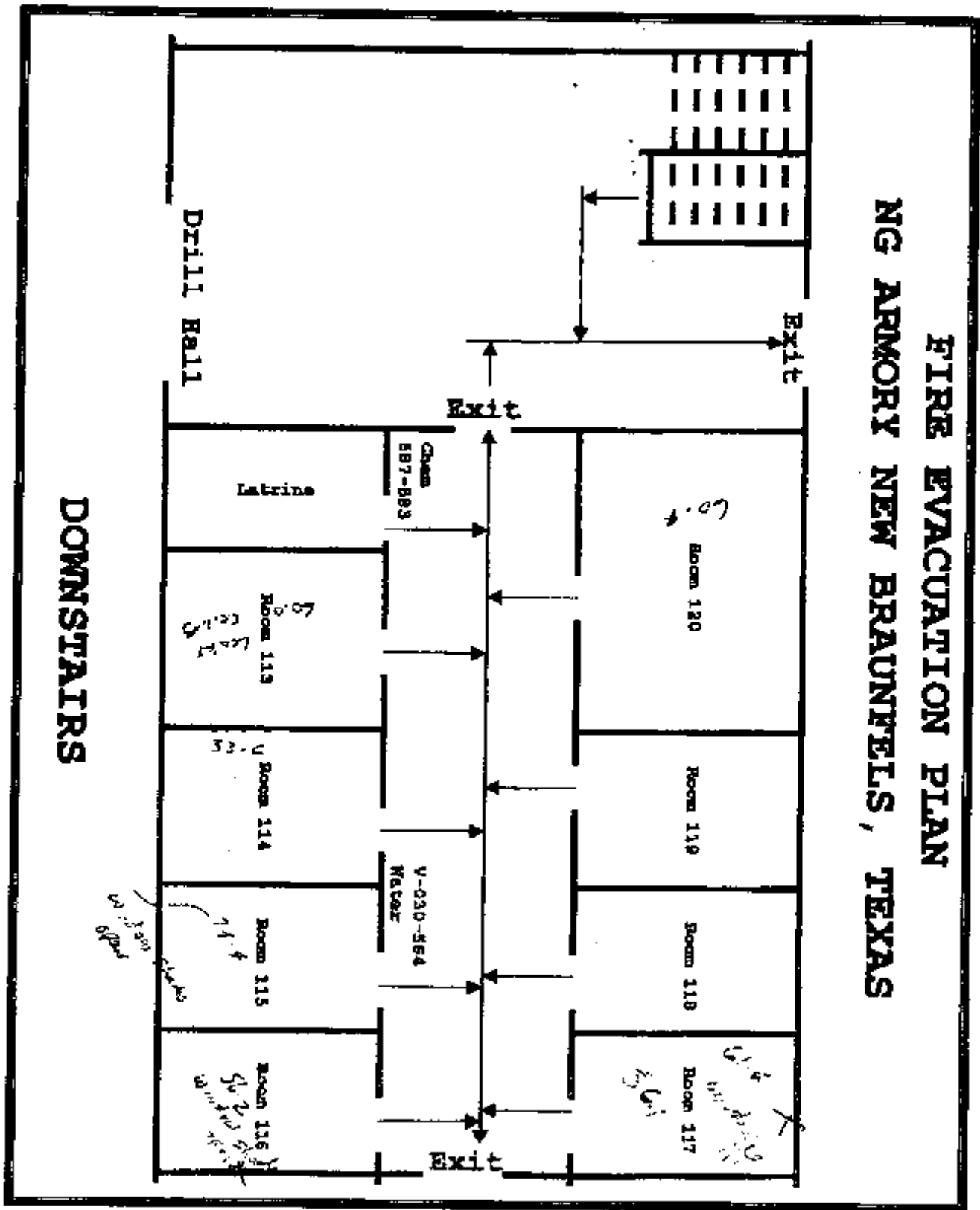
TECHNICAL ASSISTANCE

Non-Responsive

The following survey instrumentation was provided by or for the contractor, and was used to obtain lead wipe dust, illumination, ventilation, and noise sample measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

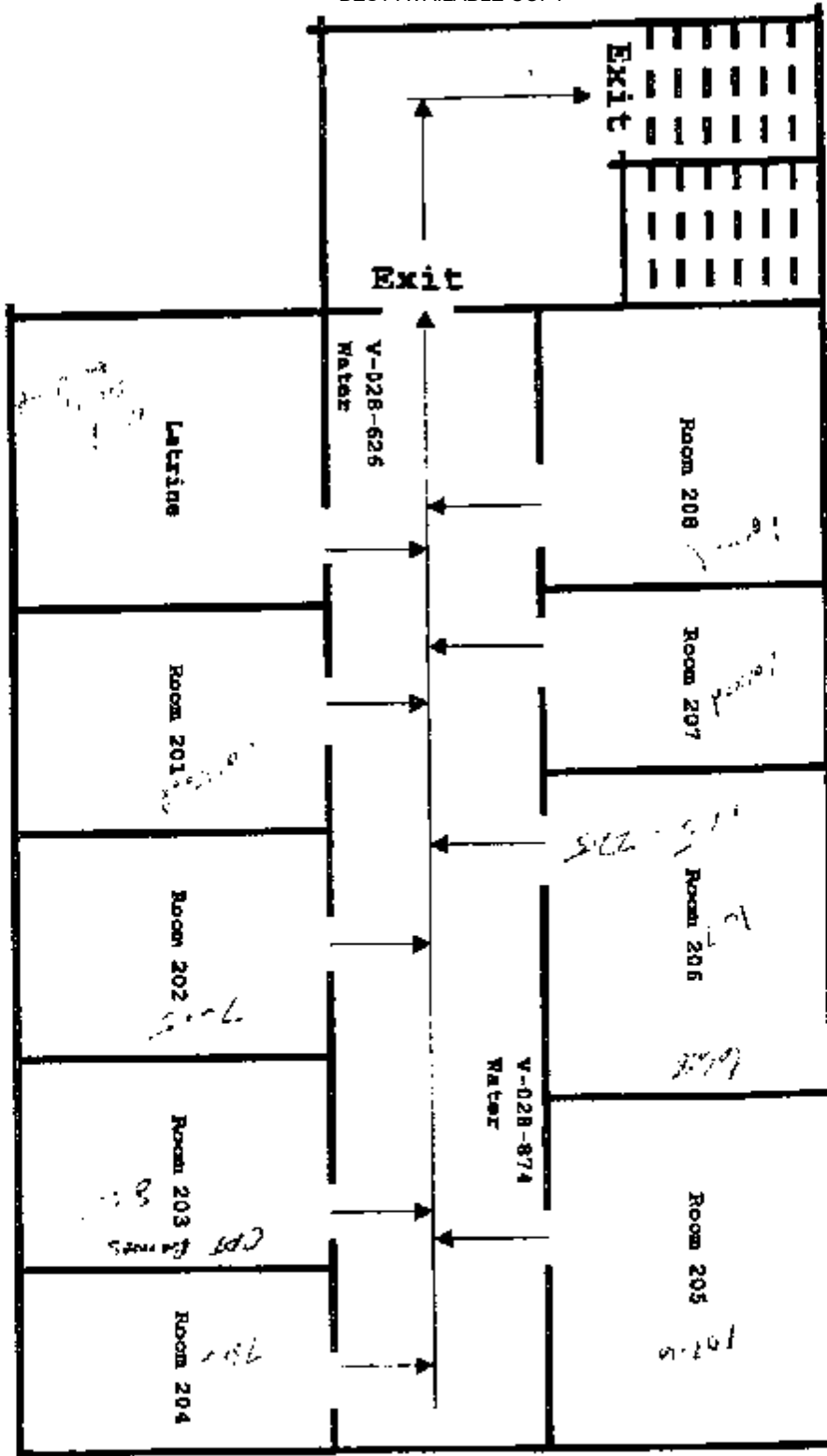
	Inventory Number	Calibration Date
Extech Light Meter	Q009472	Purchased New June 2003
Bruel & Kjaer Sound Level Meter	1942768	September 7, 2002
Bruel & Kjaer 4231 Acoustic calibrator	1944552	September 3, 2002
Alnor Velometer	53281	October 1, 2002
Ghost Wipe Lead Dust Wipes		

FACILITY DIAGRAM:

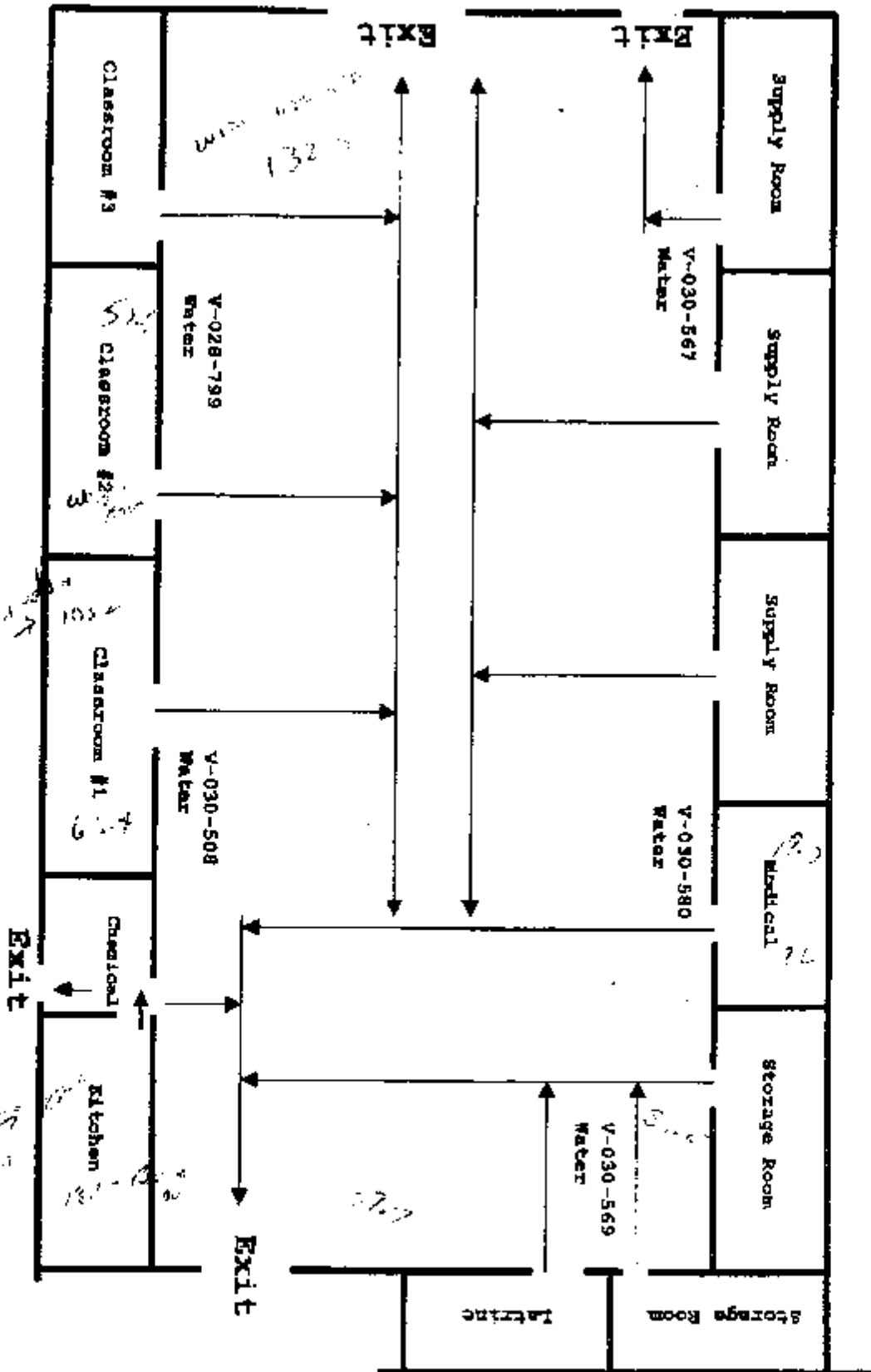


FIRE EVACUATION PLAN **NG ARMORY NEW BRAUNFELS, TEXAS**

UPSTAIRS



FIRE EVACUATION PLAN NG ARMORY NEW BRAUNFELS, TEXAS



DRILL HALL

PERSONNEL DATA:

This facility houses the following full-time personnel:

Last Name	First Name	MI	Sex	SSN (Last 4 digits)	Rank	Unit #
Non-Responsive						

BUILDING CONDITION:**Walk-through Observations**

Room #	Location	Description	Count
1	Room 113	Leaky ceiling	1
2	2 nd floor latrine	There is hard water build-up on the pipes and on the shower floor.	
3	Room 205	There are concerns about noise from the HVAC unit in the Commander's office (Room 205). **See noise sample result in the HVAC section of this document.	
4			
5			
6			

ADMINISTRATIVE OFFICES:

Light Reading Results:

There are several administrative offices in the facility. Administrative personnel are required to use computer systems, file, read, write and perform other administrative tasks as necessary. Computer use occurs throughout the day.

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the administrative areas are as follows:

Location	Sample Reading (Foot-candle (FC))	Foot-candle (FC)	Remarks
Room 120	60.4		
Room 117		58.75	With window shades open
Room 113	60.0		
Room 114	33.6		
Room 115	74.4		With window shades open
Room 116	56.2		With window shades open
Classroom #2 (Weight room)	50.5		
Classroom #1		84.8	
Medical		20.5	Lighting below minimum standards.
Room 202	76.5		
Room 203 Non-Responsive	87.5		
Room 204	73.6		
Room 205	107.6		
Room 206		37.0	

Ventilation Sample Results:

Location	Sample Reading (FPM)	Area (sq. ft.)	Comments
Room 203	500	12x6	
Room 205	800	12x6	

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Sample Location	Sample No.	Results (µg/ft ²)	Remarks
Grill in Commander's Office (RM 205)	2-New Braunfels	BRL	Below Reporting Levels

KITCHEN / MESS HALL

The kitchen is currently not used for cooking, however, the surfaces are used to prepare sandwiches and other light meals.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the kitchen / mess hall area are as follows:

By window	28.2		
Counter	18.1		Bulb out

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

1-New Braunfels	Blank (Admin, Kitchen, Drill Hall & HVAC)	BRL	Below Reporting Levels
3-New Braunfels	Kitchen Counter	BRL	

DRILL HALL

Personnel officially use the drill hall 2 days per month. It is NOT rented out for community events. Weapons cleaning take place by units during drill weekends.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the drill hall area are as follows:

By Front entrance	59.7		
By storage room	57.5		
By back door	132.5		With door open

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

4-New Braunfels	Drill Hall outside Supply Room 2 (SVC)	33.0	
5-New Braunfels	Drill Hall outside Supply Room 1	65.0	
6-New Braunfels	Drill Hall by back door	30.0	

Noise Sample Results:

Noise levels in the drill hall area were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 746) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

Location	Sample 1	Sample 2	Sample 3
None - This unit has never had an IFR			

Noise Sample Results:

Noise levels from the HVAC unit in the Commander's office were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

Location	Sound Pressure Level (dBA)	Distance (ft.)	Remarks
Commander's Office (205)	60.3	7 ft.	
Commander's office (205)	70.4	At source	

SUPPLY ROOM(s) and VAULT(s)

This facility has 2 supply rooms, with several storage areas. The supply SGT(s) use the computer between 8-10 hours per day. Due to recent return from deployment an inventory of all chemicals is not currently maintained by the supply SGT(s). A Material Safety Data Sheet book is not updated for chemicals used. Heavy lifting is performed with the aid of hand jacks, lifts, and other personnel.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the Supply Room / Vault areas are as follows:

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

7-New Braunfels	Supply Table	BRL	Below Reporting Levels
8-New Braunfels	Supply SGT Desk	BRL	
9-New Braunfels	Rack in Vault 1	BRL	
10-New Braunfels	Rack in Vault 1	48.0	
11-New Braunfels	Supply Desk - Table	25.0	
12-New Braunfels	Rack in Vault 2	119.0	
13-New Braunfels	Shelf in Vault 2	89.0	
14-New Braunfels	Blank (Supply / Vault)	BRL	

INDOOR FIRING RANGE

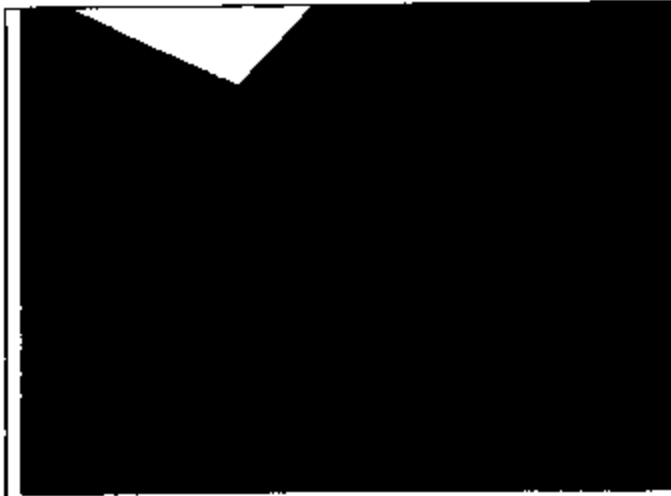
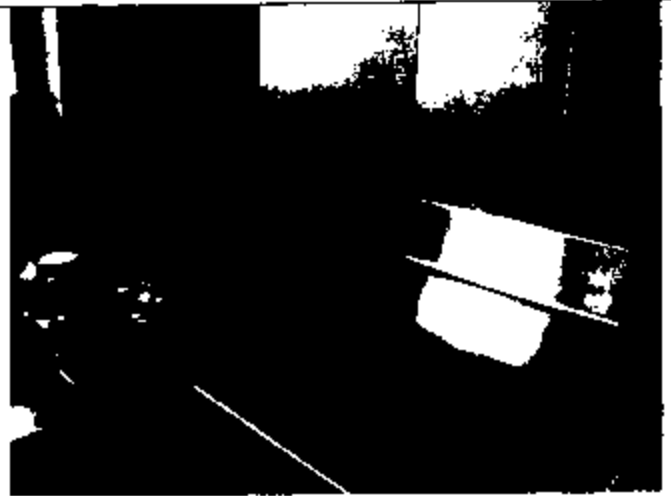
This facility has never had an indoor firing range.

MOTOR POOL

The motor pool is an outdoor parking area with a covered building where light maintenance is performed. Fire extinguishers were found in the area by the fuelers. However, the fire extinguishers did not have inspection tags on them.

Portable eyewash was supplied, but not set up for use. No log is available to record periodic maintenance of eyewash system to ensure water purity.

- a. Continue a maintenance schedule for ensuring that filters in the HVAC system are properly changed, any leaks or standing water are identified, repaired, and prevented, and supply and exhaust grilles are appropriately cleaned. Failure to do so may lead to indoor air quality issues. The plan should include monitoring, inspecting and cleaning HVAC components such as outside air intakes, outside air dampers, air filters, drain pans, heating and cooling coils, the interior of air handling units, fan motors and belts, air humidification, controls and cooling towers. Consult manufacturers' instructions for appropriate maintenance schedules.
- b. If indoor air quality issues develop, non-porous (e.g., metals, glass, and hard plastics) and semi-porous (e.g., wood, and concrete) materials that are structurally sound and are visibly moldy can be cleaned and reused. Cleaning should be done using a detergent solution. Porous materials such as ceiling tiles and insulation, and wallboards with more than a small area of contamination should be removed and discarded. Porous materials (e.g., wallboard, and fabrics) that can be cleaned, can be reused, but should be discarded if possible. A professional restoration consultant should be contacted when restoring porous materials with more than a small area of fungal contamination. All materials to be reused should be dry and visibly free from mold. Routine inspections should be conducted to confirm the effectiveness of remediation work.
- c. Any initial water infiltration should be stopped and cleaned immediately. An immediate response (within 24 to 48 hours) and thorough clean up, drying, and/or removal of water damaged materials will prevent or limit mold growth. If the source of water is elevated humidity, relative humidity should be maintained at levels below 60% to inhibit mold growth. Emphasis should be on ensuring proper repairs of the building infrastructure, so that water damage and moisture buildup does not recur.
- d. Contaminated materials that cannot be cleaned should be removed from the building in a sealed plastic bag. There are no special requirements for the disposal of moldy materials.
- e. Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
- f. An ergonomics survey should be completed for all supply and administrative personnel as a preventative measure to address and document any ergonomic concerns or problems. An emphasis on maintaining neutral postures and proper lifting techniques should be covered.
- g. Material Safety Data Sheets (MSDS) are required to be kept at the primary workplace facility and to be easily accessible in case of emergency. Personnel responsible for these items should receive annual training in the requirements of the Hazardous Communication Program and the appropriate keeping and storage of MSDSs.
- h. Ensure personnel are prohibited from drinking, eating, smoking chewing tobacco and gum, or applying makeup in supply and maintenance areas. Hands should be cleaned with soap and water before eating drinking, eating, smoking, chewing tobacco and gum, or applying makeup. Remove all refrigerators, cups, and other utensils from supply and maintenance areas.
- j. Fire extinguishers should be visually inspected on a monthly basis and recorded on service tag.
- k. Perform noise survey on maintenance equipment. Ensure that all noise hazardous machinery and noise hazardous areas are appropriately marked.
- l. Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.
- m. Portable eyewashes should be maintained on a weekly basis to ensure removal of opportunistic pathogens.

**Photo # 1****Room 113 ceiling shows evidence of leakage.****Photo # 2****Kitchen counter where samples were taken.****Photo # 3****Drill Hall area where samples were taken.**

Analytical Environmental Servs, Inc.

Date: 10/24/2003

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: Technical Solutions International
 Project: New Braunfels Armory
 Project No: New Braunfels A
 PO No:

Lab Order: 0310643
 Date Received: 10/20/2003 12:5
 Matrix: Wipe
 Analyst: SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
03106-03-001A	1-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-002A	2-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-003A	3-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-004A	4-NEW BRAUNFELS	33.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-005A	5-NEW BRAUNFELS	65.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-006A	6-NEW BRAUNFELS	30.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-007A	7-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-008A	8-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-009A	9-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-010A	0-NEW BRAUNFELS	48.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-011A	1-NEW BRAUNFELS	25.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-012A	2-NEW BRAUNFELS	11.9	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-013A	3-NEW BRAUNFELS	82.0	µg. Total	2.83	1	10/14/2003	10/23/2003
03106-03-014A	4-NEW BRAUNFELS	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003

Qualifiers: MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 2 of 1

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

April 12, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports **Orange Armory**, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report dated February 23, 2004, Industrial Hygiene Survey, Fayetteville, GA. **Non-Responsive**

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

- b. **Non-Responsive**er Cake RD, Fayetteville, GA, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- c. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.
- d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- e. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Non-Responsive

February 19, 2004

Non-Responsive

Orange, TX 77630

RE: Baseline Industrial Hygiene Survey

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FINAL REPORT

FOR

BASELINE INDUSTRIAL HYGIENE SURVEY

TEXAS ARMY NATIONAL GUARD

ORANGE ARMORY

ORANGE, TX

DATE:

JANUARY 14, 2004

PREPARED BY

Non-Responsive

CONTENTS

1.0 INTRODUCTION

2.0 INSTRUMENTATION

3.0 FINDINGS

4.0 REFERENCES

Attachment 1 HHIM Forms

Attachment 2 Laboratory Reports: Deactivated Indoor Firing Range
Kitchen, Drill Hall

Attachment 3 Laboratory Reports: A/C-Heating System

Attachment 4 Photographs of the Facility

Attachment 5 Schematic Drawing of Facility

1.0 INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, **Non-Responsive** performed a Baseline Industrial Hygiene Survey at the TX ARNG Orange Armory. The purpose of the survey was to perform a baseline survey to evaluate health hazards, controls present in the work site, collect lead wipe samples from renovated/inactive or closed Indoor Firing Ranges, Weapons Vault racks, A/C-Heating System, illumination survey and to make recommendations regarding health hazards associated with the work at the Orange Armory.

The building was finished between 1959 and 1960. The facility houses the DET 1 Service Battery 1/133rd FA. The armory is used by the troops of the DET 1 Service Battery 1/133rd FA for their monthly weekend drills.

The HHB 1/133rd FA 1 had full time AGR personnel at the time of the survey. The AGR employee is assigned to perform administrative duties, Tuesday-Friday 7:00am-6:00pm. The facility houses administrative areas, a drill Hall, classrooms, a supply room, a weapons vault, a kitchen, and a deactivated Indoor Firing Range. The armory has not been used for weekend drills a long time. **Non-Responsive** reported that he is the AGR assigned to this armory but at the present time is at the Port Neches armory where the troops also drill. He expect to have the troops doing the monthly drills here in the future but at this time the troops are been deployed and do not know when the troops will use this armory for weekend drills again. The weapons vault has been empty for a while with no weapons racks. The alarm was disabled. The weapons are at Port Neches. The supply room is also empty. A schematic drawing of the facility can be found in Attachment 5.

The facility was visually examined and personnel consulted to assess potential hazards present. Health Hazard Information Modules were completed. Illumination survey was performed throughout the facility. There is generalized poor lighting throughout the facility.

2.0 INSTRUMENTATION/CALIBRATION

The following instrumentation was used to obtain light measurements. The instrument used has been calibrated and was operated according to the manufacturer's recommendations:

- EXTECH Light Meter

3.0 FINDINGS

Illumination

Illumination levels were recorded in administration offices, classroom, the library the drill hall and the supply room. Light measurements were below IES guidelines at the following offices: Offices 1, 2, and 3. Two bulbs were out in the Drill Hall. The other areas tested were within IES minimum standards. Consideration should be given to provide supplemental lighting in those areas that were below the recommended standard and to replace burned out bulbs. See Light Readings Table at the end of this section.

Administration

Personnel perform administrative duties that consist of reading, handling and generating paper work. Computer use comprises a large portion of the working day, four to five hours per day. This continuous use of computers can in the long run lead to eyestrain and hand/wrist soreness. No health problems associated to the job was reported by personnel at the time of the survey.

Motor Pool

The motor pool is located in a fenced area in the left side of the building. Vehicles are still kept at this location. When the vehicles are needed for drills, troops come to the armory to pick them up. PMCS are performed on weekend drills mostly by OMS technicians that are members of the unit. Major and other repairs for the vehicles are performed by OMS #26 in Port Neches.

Drill Hall

The Drill Hall is located in the center of the building. It was used primarily for formation and training on weekend drills. Weapons are cleaned about once or twice a year at the Port Neches Armory. Rags with CLP are used during this procedure. One air exhaust ventilators was operational. Personnel stated that the rags are collected after cleaning weapons, placed in plastic bags and taken to the OMS facility for disposal. There were no vehicles in the Drill Hall the day of the survey.

Deactivated Indoor Firing Range

There is a deactivated Indoor Firing Range (IFR) at the facility. The locks on the door of the IFR were broken. Personnel from the state Facilities Office came to the facility the day of the survey to open the doors of the IFR so the sampling could be done. There was minimal lighting in the IFR. There were many bullet casings on one of the shooting lanes trays (See pictures). The IFR has not been "sanitized" or cleaned. The room was empty except for the shooting lanes and its

metal supports. The state Facilities Office employees changed the door locks to the IFR. The keys were given to **Non-Responsive** from the Occupational Health, Industrial Section that was present during the surveys. A sign was posted at the door to advise personnel and troops that the IFR can not be used for any reason due to lead contamination (See pictures). Six wipe samples were taken from the IFR. Five of the six samples were above the clearance level of 200ug/ft². See Table 1 for results.

Table 1

Sample Number	Sample Location	Results
40	Bullet backstop	1170000ug
41	Floor in front of bullet backstop	152000ug
43	Item stored in IFR	9290ug
43	Item stored in IFR	7300ug
44	Wall next to entrance/exit door	4940ug
47	Blank	BLR

Weapons Vault

The Orange Armory has a weapon storage vault located in the Supply Room. However the weapons vault is empty with no weapons racks. The alarm was deactivated a while back. All the weapons are at the Port Neches armory. Weapons are cleaned there about once a year in the Drill Hall with the air exhaust ventilators turned on. CLP/Break Free with rags is used to clean weapons in the Port Neches armory. The rags are collected after cleaning the weapons and then taken to the OMS #26 for disposal. No wipe samples were taken from the weapons since it was empty. One wipe sample was taken from the kitchen and one from the Drill Hall (fire hose base). The results are shown on Table 2.

Table 2

Sample Number	Sample Location	Results
45	Kitchen, Top of Towel Dispenser	57ug
46	Drill Hall, Fire Hose Box	1140ug
47	Blank	BLR

A/C Heating System

Central A/C units are used to cool and heat the administration offices, classrooms and the supply room. There were filters installed in all the units the day of the survey. The filters were dirty. Personnel not sure when was the last time the units filters had been changed. Nine wipe samples for Lead were collected from the supply air grills in the offices occupied by personnel of the Armory and the filter areas of units. All samples were below the clearance level of 200ug/R2 (See Table 3).

Table 3

Sample Number	Sample Location	Results
48	Outlet Grill, Office 1	BRL
49	Outlet Grill, Office 2	BRL
50	Outlet Grill, Office 3	28ug
51	Outlet Grill, Supply Room Office	109ug
52	A/C-Heating Unit 1, Supply Side of Filter	BLR

53	A/C-Heating Unit 1, Fan Side of Filter	20ug
54	A/C-Heating Unit 2, Supply Side of Filter	BLR
55	A/C-Heating Unit 2, Fan Side of Filter	BRL
56	Blank	BLR

Material Safety Data Sheets

There was no MSDS book found the day of the survey. There is no Flammables Cabinet either since the armory is closed. The CLP used to clean weapons is kept at the Port Neches armory where the troops drill.

Light Readings

Light measurements were taken in various locations throughout the facility. The results were compared to guidelines recommended by the Illuminating Engineering Society (IES). The results of the survey are shown in Table 4.

Table 4

Location	Light Reading (footcandles)	IES Recommendation (footcandles)
ADO Office 1	31-39 (Avg. 35)	50-100
ADO Office 2	30-55 (Avg. 41)	50-100
ADO Office 3	16-74 (Avg. 39)	50-100
ADO Office 4	42-91 (Avg. 57)	50-100
Library	32-68 (Avg. 50)	50-100
ADO Supply Room Storage	13-38 (Avg. 24)	20
Classroom 1	40-62 (Avg. 51)	50-100
Classroom 2	36-70 (Avg. 57)	50-100
Drill Hall	6-57 (Avg. 36)	30

Light measurements were below IES guidelines at the following offices: Offices 1, 2 and 3. There were two bulbs out at Drill Hall. The other areas tested were within IES minimum standards. Consideration should be given to provide supplemental lighting in those areas that were below the recommended standard and to replace burned out bulbs. ANSI RP7-1991.

4. 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.
- National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- 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.
- National Safety Council, Fundamentals of Industrial Hygiene, 4th edition, 1996.
- 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.

Non-Responsive

RECOMMENDATIONS

- Provide supplemental lighting in those areas where light measurements were below the recommended standard (as represented in Table 3). Replace burned out bulbs in the Drill Hall.
- Recommend that when using computers for extended periods of time, personnel should take occasional breaks and change position to minimize the possibility of eyes and/or hands/wrist injury.
- The A/C filter should be replaced in a timely manner according to manufacturer recommendation.
- Continue to ensure that weapon maintenance and cleaning is done in a well-ventilated area. Continue to practice good personal hygiene by washing hands after handling and cleaning weapons and ammunition. And that the used rags are properly disposed.
- A request should be made with the proper state agency to obtain a Flammables Cabinet when and if the armory is used again for weekend drills. A Hazardous Materials Inventory List with current MSDS forms should be developed and placed in the Flammables Cabinet that is used at Port Neches.
- Ensure that personnel and troops have knowledge of the location of the MSDS book. And is enrolled hazardous materials safety training.
- Ensure that personnel and troops refrain from going inside the closed indoor firing range (IFR) now and when the armory is used again for weekend drills and that the sign at the door is not removed.
- That in the when the armory is to be used again for weekend drills again, contact should be made with the state Facilities Office so they inspect and perform necessary repairs to render the facility in good working and safe conditions.

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

BEST AVAILABLE COPY
 *SEE PRIVACY ACT AVAILABLE COPY ON REVERSE.
 (For use of this form, see FPHM User's Instructions.)

SECTION 1. DEMOGRAPHIC DATA

1. ARLC _____ 2. INSTALLATION Orange TR Army 3. BLDG/RM NUMBER _____
 4. LOCATION/CODE RA 5. OPERATION/CODE ADJ SHH 6. DESCRIPTION 4-5 hrs/day
in airway NCO Supply Sgt. Computer Unit
 7. MACOM/CODE NG 8. SUPERV _____ **Non-Responsive**
 9. TELEPHONE/AUTOVON NUMBER _____ 10. RAC _____ 11. FREQUENCY (HOURS) _____
 12. NO CIV(S) _____ 13. NO M _____ 14. NO CONTING OR(S) _____ 15. NO LOC(S) _____ 16. NO OTHER _____

SECTION 2. IH STAFFING DATA

1. LAB HOODS _____ 2. VAPOR DEGREASERS _____ 3. MAINTENANCE BAYS _____ 4. SPRAY BOOTS _____
 5. OPEN SURFACE TANKS _____ 6. VENTILATION UNITS _____ **Non-Responsive**

SECTION 3. SURVEY DATA

1. SURVEY DATE 1-16-08 2. EVALUATOR (INITIALS) _____

3. CONTROLS PRESENT	4. EVALUATION	5. UNIT CODE	6. CONTROLS REQUIRED	7. STATUS
<u>Lighting Office</u>	<u>42-91, Aug 57</u>	<u>FL</u>	<u>50-100</u>	<u>Adapt.</u>
<u>Supply Room Storage</u>	<u>13-38, Aug 20</u>	<u>FL</u>	<u>20</u>	<u>Adapt.</u>

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

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	R/A
DISPOSABLE	_____	_____	_____
W/ FACE AIR PURIFYING	_____	_____	_____
W/ 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	/		
NBC AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

1. CAS CODE	2. HAZARD DESCRIPTION	3. PAC or EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
<u>PC PDI</u>	<u>Daily use of Computer for my job</u>	<u>3</u>	
<u>PC LIFTING</u>	<u>Heavy lifting</u>	<u>3</u>	
<u>PC HOT H2O</u>	<u>Hot water</u>	<u>3</u>	

Analytical Environmental Services, Inc.

Date: 3/11/2004

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT:	Non-Responsive	Lab Order:	0403358
Project:	Orange, TX Armory	Date Received:	3/8/2004 11:00:0
Project No:	Orange, TX Arm	Matrix:	Wipe
PO No:		Analyst:	SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403358-001A	40	1170000	µg, Total	3050	1077	1/14/2004	3/10/2004
0403358-002A	41	152000	µg, Total	283	100	1/14/2004	3/10/2004
0403358-003A	42	9290	µg, Total	25.6	9.06	1/14/2004	3/10/2004
0403358-004A	43	7300	µg, Total	21.7	7.68	1/14/2004	3/10/2004
0403358-005A	44	4940	µg, Total	9.31	3.29	1/14/2004	3/10/2004
0403358-006A	45	57.0	µg, Total	2.83	1	1/14/2004	3/10/2004
0403358-007A	46	1140	µg, Total	2.83	1	1/14/2004	3/10/2004
0403358-008A	47	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004

Qualifiers:

MDL - Method Detection Limit
ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Analytical Environmental Services, Inc.

Date: 3/11/2004

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT:	Non-Responsive	Lab Order:	0403370
Project:	Orange, TX Armory	Date Received:	3/8/2004 11:00:0
Project No:	Orange, TX Arm	Matrix:	Wipe
PO No:		Analyst:	SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403370-001A	48	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-002A	49	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-003A	50	28.0	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-004A	51	109	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-005A	52	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-006A	53	20.0	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-007A	54	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-008A	55	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004
0403370-009A	56	BRL	µg, Total	2.83	1	1/14/2004	3/10/2004

Qualifiers:

MDL - Method Detection Limit

DF - Dilution Factor

ND - Not Detected at the Reporting Limit

BEST AVAILABLE COPY



ORANGE, TX ARMORY



BEST AVAILABLE COPY



DRILL HALL





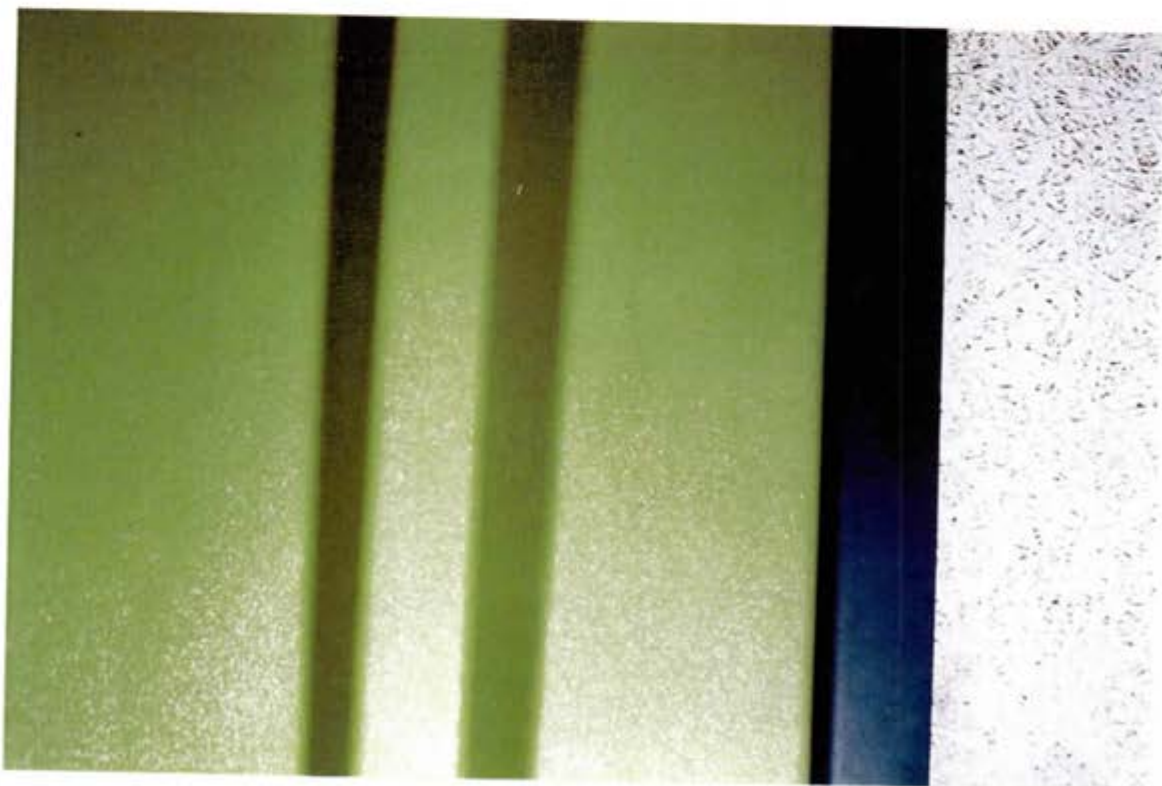
**IFR, BULLET
BACKSTOP**

IFR, BULLET CASINGS





IFR, SAMPLING AREAS





**A/C-HEATING UNIT,
FILTER**

A/C OUTLET, OFFICE



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**A/C OUTLET, SUPPLY
ROOM**

**SUPPLY ROOM
EMPTY**



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MOTOR POOL



Erck, Phillip A. (TX)

From: [Non-Responsive]
Sent: Thursday, May 08, 2003 3:05 PM
To: TXALL
Subject: Closed Indoor Firing Ranges

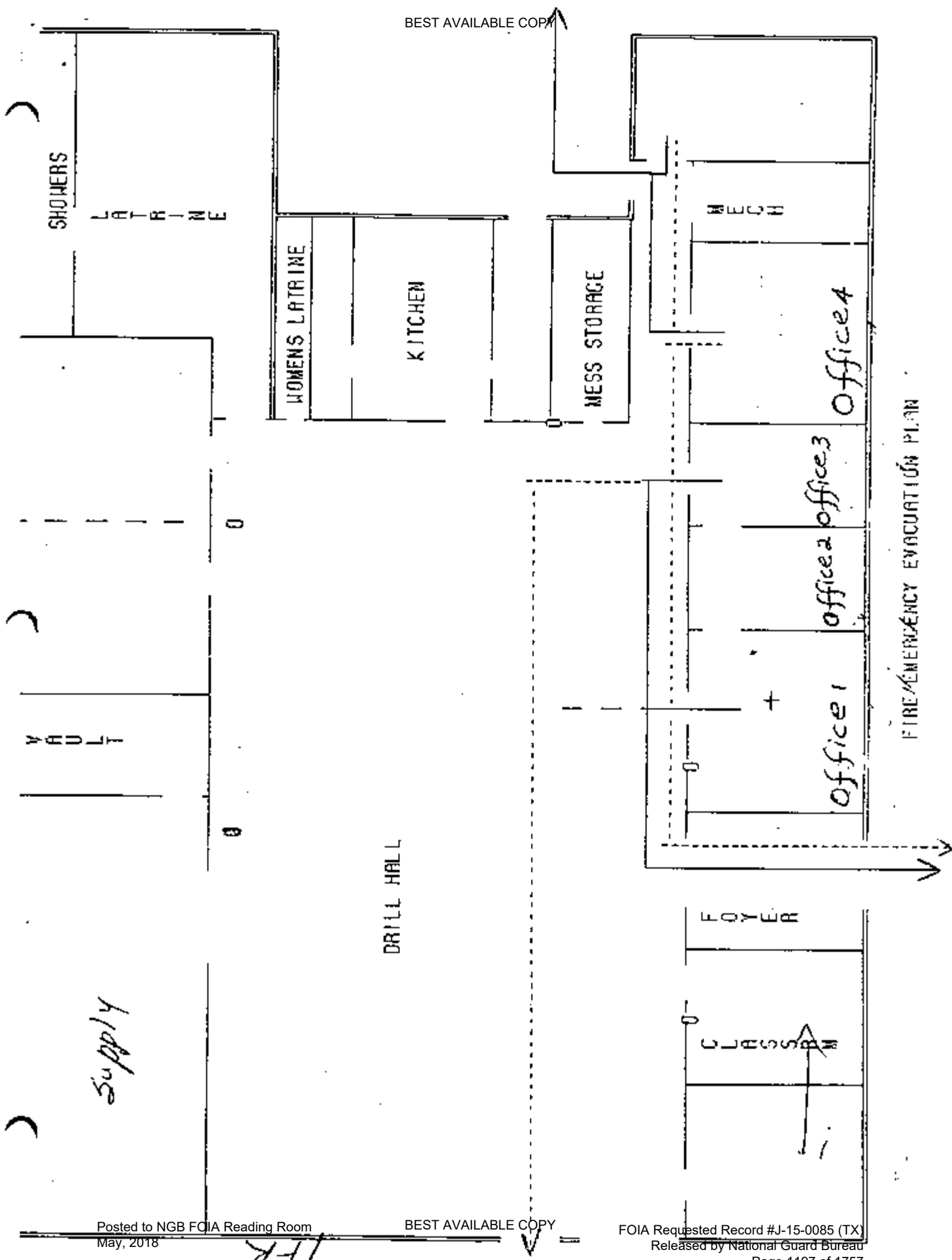
This message approved by [Non-Responsive] Director of Army Aviation and Safety

It has been brought to the attention of the Safety and Occupational Health Office (AGTX-SO) that closed indoor firing ranges at some armories are being used for other purposes, i.e., storage, supply rooms, weight training rooms, etc. These ranges must be closed and no one is to enter. They are to be locked and marked with a warning sign indicating the (possible) presence of lead dust. These ranges **cannot** be used for **any** reason. Any equipment presently in these rooms must be left alone until it can be checked, cleaned, and approved by an industrial hygienist prior to its removal and/or use.

[Non-Responsive]

COL, GS, TXARNG
Director of Army Aviation
and Safety

WARNING SIGN, IFR DOOR





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**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-ARS-IHSE (40-5f)

06 July 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Pasadena Armory,
CO A, 72d BSTB (ENG), 2917 Saint Augustine Pasadena, Texas 77501.

Thru **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Pasadena Armory, CO A, 72d BSTB (ENG),
2917 Saint Augustine Pasadena, Texas 77501

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2009, a follow-up industrial hygiene survey was performed at the Pasadena Armory located at, 2917 Saint Augustine Pasadena, Texas 77501. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 5 May 2009.

3. General.

- a. **Site Description.** The Pasadena Armory; a one story brick over cinder block structure with Central HVAC was built in 1959 and renovated in 1986. The facility houses several training rooms and classrooms, administrative office areas, indoor range and a supply room with storage and vault. Five full time employees work at the Armory supporting 140 M-Day Soldiers. The armory has several residential use Central HVAC with interior units mounted inside mechanical rooms. The POC has sent request for various repairs to be made throughout the armory, which are addressed, in the survey. A copy of the floor layout and photos are included in Appendix A.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples collected from various surfaces throughout the building are collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples are then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples are collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples are collected from inconspicuous areas. Bulk samples are also collected from suspect friable and damaged building material. Each bulk sample are then placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings are taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 19 February 2004. Elevated results were self-contained in the empty locked indoor range. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. The tops of the coke machine and the kitchen refrigerator, which has been removed, also had elevated levels of lead as listed in the 2004 survey. No areas were sampled, tested or noted during current survey.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

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- b. **Asbestos Suspect Building Material:** Floor tile was removed in all areas except the admin and classroom areas during the 1986 renovation. No ACBM were tested or noted during current survey.
- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Evaluated Lighting levels within the Armory ranged between 13 foot-candles to 110 foot-candles.

Pasadena Armory	Reading in Foot-candles
Classrooms	88-90
Office Areas	28-110
Hallways and Lobby	13-38
Latrines	58-68
Drill Hall	41-72
Indoor Range	Not Accessible
Supply Areas	20-36
Kitchen	58-84

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units inside mechanical rooms and local ceiling mounted heating units in latrines and supply areas. The system up dated in 1995 is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include, repairing of leaky faucets and roof leaks as needed. These repairs; as well as removing items in mechanical room may contribute excess humidity within the building and affect overall indoor quality. A copy of the floor layout and photos are included in Appendix A..

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found inside the locked range as listed in the 2004 report. Continue to clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving weapons vault. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces inside Indoor Range per NG PAM 385-18 and NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, continue document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)
- g. Remove items in mechanical rooms and place in storage areas. (RAC 3)

6. If additional information is needed about this report, please contact

Non-Responsive

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Appendix A

Photographs and Floor Layout

Pasadena Armory



Pasadena Armory



Admin Area



Drill Hall



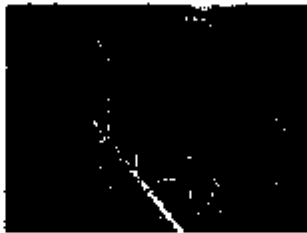
Kitchen



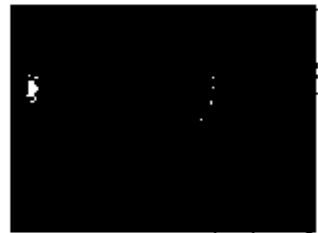
**Mechanical Room w/ vents
blocked**



Supply Room



Indoor Range



Indoor Range

Fasadena

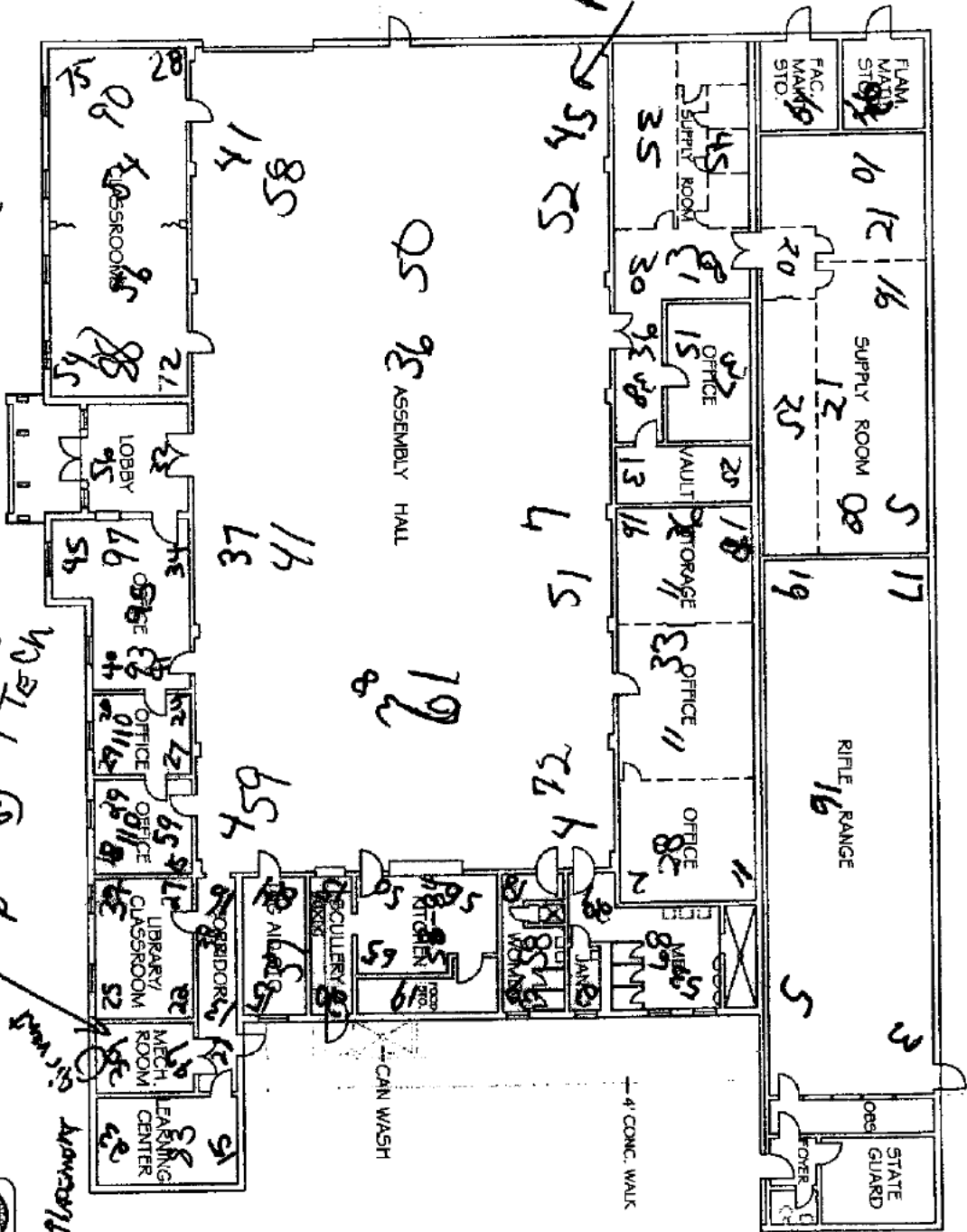
Non-Responsive

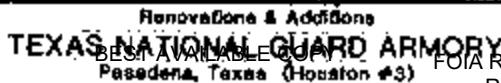
140 Midway
2 AG 2
3 AG 3
1 Tech

(not installed 1985)
David Stone
clean up

CT Refractory

DEPARTMENT OF CORRECTIONS	
FLOOR PLAN	
SHEET OF 1	







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DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

24 March 2008

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Pasadena Armory,
CO A, 72d BSTB (ENG), 2917 Saint Augustine Pasadena, Texas 77501.

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Pasadena Armory, CO A, 72d BSTB (ENG),
2917 Saint Augustine Pasadena, Texas 77501

1. References.

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- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Pasadena Armory located at, 2917 Saint Augustine Pasadena, Texas 77501. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 23 January 2008.

3. General.

- a. **Site Description.** The Pasadena Armory; a one story brick over cinder block structure with Central HVAC was built in 1959 and renovated in 1986. The facility houses several training rooms and classrooms, administrative office areas, indoor range and a supply room with storage and vault. Two full time employees work at the Armory supporting 40 M-Day Soldiers. The armory has several residential use Central HVAC with interior units mounted inside mechanical rooms. The POC has sent request for various repairs to be made throughout the armory, which are addressed, in the survey. A copy of the floor layout and photos are included in Appendix C.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples collected from various surfaces throughout the building are collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples are then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples are collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples are collected from inconspicuous areas. Bulk samples are also collected from suspect friable and damaged building material. Each bulk sample are then placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings are taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various areas in the prior survey dated 19 February 2004. Elevated results were self-contained in the empty locked indoor range. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. The tops of the coke machine and the kitchen refrigerator, which has been removed, also had elevated levels of lead as listed in the prior survey. Reportedly no action has been taken after the last survey; the visual inspection confirmed that finding. Due to this no areas were sampled or tested during current survey.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

- b. Asbestos Suspect Building Material: Floor tile was removed in all areas except the admin and classroom areas during the 1986 renovation. No ACBM were tested or noted during current survey.
- c. Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. Illumination Survey Evaluated Lighting levels within the Armory ranged between 2 foot-candles to 104 foot-candles.

Pasadena Armory	Reading in Foot-candles
Classrooms	21-104
Office Areas	2-56
Hallways and Lobby	13-56
Latrines	2-53
Drill Hall	4-45
Indoor Range	3-19
Supply Areas	5-45
Kitchen	15-65

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units inside mechanical rooms and local ceiling mounted heating units in latrines and supply areas. The system up dated in 1995 is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include, repairing of leaky faucets and roof leaks as needed. These repairs; as well as removing items in mechanical room may contribute excess humidity within the building and affect overall indoor quality. A copy of the floor layout and photos are included in Appendix A..

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found inside the locked range as listed in the 2004 report. Continue to clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving weapons vault. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces inside Indoor Range per NG PAM 385-18 and NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, continue document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)
- g. Remove items in mechanical rooms and place in storage areas. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

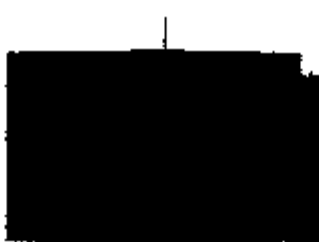
Appendix A

Photographs and Floor Layout.

Pasadena Armory



Pasadena Armory



Pasadena Armory



Drill Hall



Kitchen



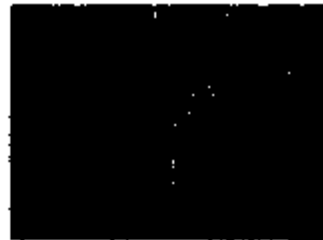
Admin Area



Supply Room



Supply Room



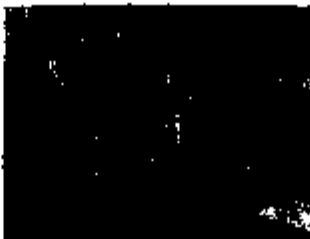
Supply Room



Indoor Range



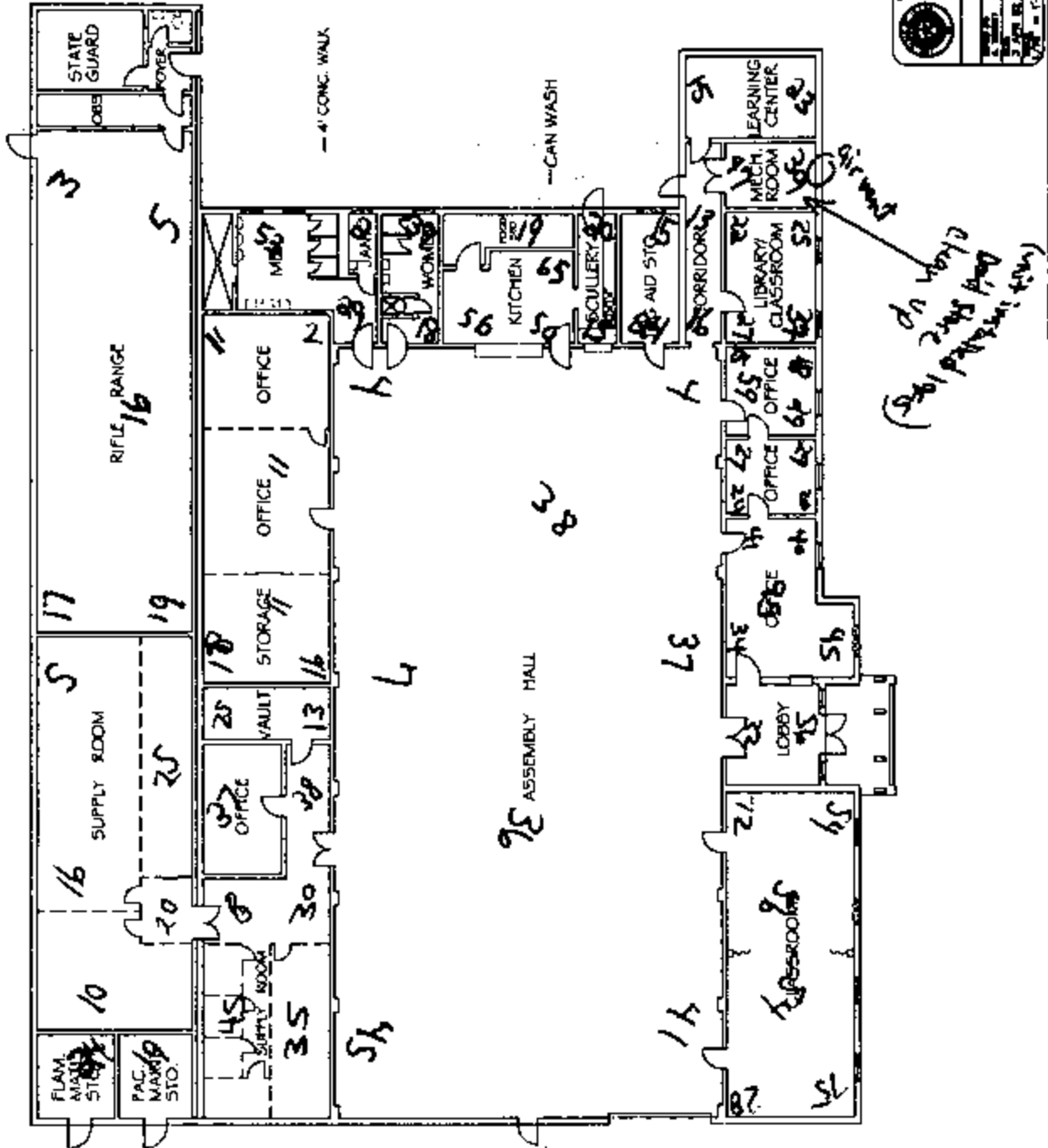
Classroom



**Mechanical Room w/ vents
blocked**

BEST AVAILABLE COPY

 ADJUTANT GENERAL'S DEPARTMENT		FLOOR PLAN SHEET 1 OF 1
PRESENCE		



[illegible]

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

April 12, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report dated February 23, 2004, Industrial Hygiene Survey, **Non-Responsive** Fayetteville, GA.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

b. **Non-Responsive** Anger Cake RD, Fayetteville, GA, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- c. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.
- d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- e. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Orange Armory, Port Arthur Armory, Beaumont Armory, Nacogdoches Armory, Lufkin Armory and Port Naches Armory, TX.

f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Non-Responsive

February 18, 2004

Non-Responsive

3451 57th St

Port Arthur, TX 77642

RE: Baseline Industrial Hygiene Survey

BEST AVAILABLE COPY

FINAL REPORT

FOR

BASELINE INDUSTRIAL HYGIENE SURVEY

TEXAS ARMY NATIONAL GUARD

PORT ARTHUR ARMORY

PORT ARTHUR, TX

DATE:

JANUARY13, 2004

PREPARED BY

Non-Responsive

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3.0 FINDINGS

4.0 REFERENCES

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Attachment 2 Laboratory Reports: Deactivated Indoor Firing Range
Weapons Vault Racks, Drill Hall

Attachment 3 Laboratory Reports: A/C-Heating System

Attachment 4 Photographs of the Facility

Attachment 5 Schematic Drawing of Facility

Attachment 6 A User-Friendly Workstation Diagram

1.0 INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, **Non-Responsive** performed a Baseline Industrial Hygiene Survey at the TX ARNG Port Arthur Armory. The purpose of the survey was to perform a baseline survey to evaluate health hazards, controls present in the work site, collect lead wipe samples from renovated/inactive or closed Indoor Firing Ranges, Weapons Vault racks, A/C-Heating System, illumination survey and to make recommendations regarding health hazards associated with the work at the Port Arthur Armory.

The building was finished in 1982 or 1983. New A/C Heating Systems were installed about one year ago to provide cooling and heating to the different offices. There is no A/C unit to cool the supply room. The facility houses the Battery B 1/133rd FA. The armory is used by the troops of the Battery B 1/133rd FA for their monthly weekend drills.

The Battery B 1/133rd FA with about 98 troops had two full time AGR personnel at the time of the survey. A recruiter also has an office at the facility. The AGR employees are assigned to perform administrative duties, Tuesday-Friday 7:00am-6:00 pm. The facility houses administrative areas, a drill hall, classroom, a supply room, a weapons vault, a kitchen, and a deactivated indoor firing range. The kitchen was not been used to cook for the troops at the time of the survey. They go to contracted restaurants that provide the service on drill days. Supply SGT reported that one of the heating units in the Supply Room does not work. There is no A/C in the room either. He uses a fan to cool area in the summer. The paint in some areas of the walls has peeled off. There were broken floor tiles in the kitchen (See pictures). A schematic drawing of the facility can be found in Attachment 5.

The facility was visually examined and personnel consulted to assess potential hazards present. Health Hazard Information Modules were completed. Illumination survey was performed throughout the facility. There is generalized poor lighting throughout the facility.

2.0 INSTRUMENTATION/CALIBRATION

The following instrumentation was used to obtain light measurements. The instrument used has been calibrated and was operated according to the manufacturer's recommendations:

- EXTECH Light Meter

3.0 FINDINGS

Illumination

Illumination levels were recorded in administration offices, classroom, the drill hall and the supply room. Light measurements were within IES guidelines throughout the facility. However, there were two bulbs out at the Drill Hall. Consideration should be given to replace burned out bulbs. See Light Readings Table at the end of this section.

Administration

Personnel perform administrative duties that consist of reading, handling and generating paper work. Computer use comprises a large portion of the working day, five to ten hours per day. This continuous use of computers can in the long run lead to eyestrain and hand/wrist soreness. The recruiter, there for a short time the day of the survey, reported that his desk chair do not have adjustable arm rests and it tilts back too far as soon as he sits down (See pictures).

Motor Pool

The motor pool is located in a fenced area in the rear of the building. The motor pool includes HUMMWV vehicles, AMO trailers and water buffalo. Only PMCS are performed at the motor pool on weekend drills. Major and other repairs for the vehicles are performed at the OMS #26 in Port Neches.

Drill Hall

The Drill Hall is located in the center of the building. It is used primarily for formation and training on weekend drills. The Drill Hall is used to clean weapons about six times a year. Tables are used for this purpose. Weapons racks are moved to the Drill Hall for distribution. Rags with Break-Free (CLP) are used during this procedure. Personnel stated that the rags used to clean the weapons are collected after cleaning weapons, are disposed off with the regular garbage. Bay (Roll-up) door are opened when the weapons are cleaned. Air exhaust ventilator, located at the roof, is turned on. No vehicles were stored in the Drill Hall at the time of the survey. The Drill Hall is rented out about five times a year for birthday parties or wedding receptions. Renters bring their own food.

Deactivated Indoor Firing Range

There is a deactivated Indoor Firing Range (IFR) at the facility. Personnel reported that it probably has not been "sanitized" or cleaned. It was ordered to be

closed a while back. A water leak was repaired in the IFR last year. Afterwards it was re-keyed. Whatever is inside has been there for long time. The IFR was mostly empty except for a table and the firing lanes partitions (See pictures). Six wipe samples were taken from the IFR. Four of the six samples were above the clearance level of 200ug/ft². See table 1 for results.

Table 1

Sample Number	Sample Location	Results
20	Bullet backstop	72000ug
21	Floor in front of bullet backstop	310000ug
22	Item stored in IFR	321ug
23	Item stored in IFR	1840ug
24	Wall next to entrance/exit door	43ug
30	Blank	BLR

Weapons Vault

The Port Arthur Armory has a weapon storage vault located in the Supply Room. Personnel stated that accountability and issuing of weapons are performed in this area and the Drill Hall. Weapons are cleaned about six times a year in the Drill Hall with the air exhaust ventilators turned on, the roll-up bay door open, using tables that are set up in the Drill Hall. The weapons cleaning material is kept in an unlocked metal cabinet in the Supply Room. The dehumidifier in the weapons vault was working the day of the survey and stays on all the time. It is checked about once a month. The water drains to the outside through a tube connected to the humidifier. Two wipe samples were taken from the weapons vault racks and two from the Drill Hall where weapons are cleaned. One of the samples was above the clearance level of 200ug/ft². See Table 2 for results.

Table 2

Sample Number	Sample Location	Results
25	Weapons Vault Racks (A)	95ug
26	Weapons Vault Racks (B)	262ug
27	Drill Hall, Weapons Cleaning Area	31ug
28	Drill Hall, Weapons Cleaning Area	25ug
30	Blank	BLR

A/C Heating System

Central A/C units are used to cool the administration offices. The Supply Room does not have A/C. There were filters installed in all the units the day of the survey. Seven wipe samples for Lead were collected from the supply air grills in the offices occupied by personnel of the armory, the classroom and the filter areas of units. All samples were below the clearance level of 200ug/R2. See Table 3 for results.

Table 3

Sample Number	Sample Location	Results
31	Outlet Grill, Administration Office (1)	32ug
32	Outlet Grill, Administration Office (2)	21ug
33	Outlet Grill, Recruiter Office	188ug

34	Outlet Grill, Classroom	2lug
35	A/C-Heating Unit , Fan Side of Filter	BLR
36	A/C-Heating Unit , Supply Side of Filter	BRL
37	Blank	BLR

Material Safety Data Sheets

There was no MSDS Book in the facility the day of the survey. There was a locked oil storage, within the building structure, with the entrance door located outside. There is a small sign, "Flammable Material Storage" at the wall to the right of the door. It is very small. It has gasoline and spray paint cans. The weapons cleaning materials are kept in an unlocked metal cabinet in the Supply Room. There is no Hazardous Materials Inventory List. There are no warning signs outside the metal cabinet.

Light Readings

Light measurements were taken in various locations throughout the facility. The results were compared to guidelines recommended by the Illuminating Engineering Society (IES). The results of the survey are shown in Table 4.

Table 4

Location	Light Reading (footcandles)	IES Recommendation (footcandles)
ADO Adm. Office (SSG Campbell side)	41-70 (Avg. 61)	50-100
ADO Adm. Office (SPC Logan side)	43-75 (Avg. 59)	50-100
ADO Supply Room (Storage)	23-37 (Avg. 27)	20
ADO Recruiter Office	22-88 (Avg. 66)	50-100
Classroom	65-110 (Avg. 86)	50-100
Drill Hall	18-55 (Avg. 36)	30

Light measurements were within IES guidelines throughout the facility. There were two bulbs out at the Drill Hall. Consideration should be given to replace burned out bulbs. ANSI RP7-1991.

4.0 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.
- National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- 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.
- National Safety Council, Fundamentals of Industrial Hygiene, 4th edition, 1996.
- 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.

Non-Responsive



RECOMMENDATIONS

- Replace burned out light bulbs in the Drill Hall.
- Recommend that when using computers for extended periods of time, personnel should take occasional breaks and change position to minimize the possibility of eyes and/or hands/wrist injury. Provide ergonomic desk chairs for personnel for the use of computers for long periods of time.
- Repair the broken heating unit in the Supply Room if it has not been done yet. A request order should be made with the proper state agency to repair the broken heating unit in the Supply Room and for the possibility acquiring and installation of an A/C unit for the Supply Room.
- Continue to ensure that weapon maintenance and cleaning is done in a well-ventilated area. Continue to practice good personal hygiene by washing hands after handling and cleaning weapons and ammunition.
- Recommend that after weapons cleaning, the used rags should be properly disposed of through an independent contractor or through an OMS facility.
- The weapons vault racks and the areas in the Drill Hall where the weapons are cleaned should be cleaned properly after been used for such a purpose.
- A request order should be made with the proper state agency to repair the broken floor tiles in the kitchen.
- An MSDS Book should be developed with current MSDS forms. A Hazardous Materials Inventory List with current MSDS forms should be then developed and placed in the Flammable Material Storage or any other place where chemicals are stored.
- Consider the possibility of obtaining a new Flammables Cabinet with proper color and signs to place weapons cleaning chemicals locked in the Supply Room.
- Ensure that personnel and troops have knowledge of the location of the MSDS book. And is enrolled hazardous materials safety training.
- That the IFR be permanently locked by the state Facilities Office (if it has not been done yet) to prevent entrance to this area unless the IFR is cleaned/ "sanitized" first. The IFR will need decontamination if it is going to be used for any other purpose.

SECTION 1. DEMOGRAPHIC DATA

1. ARLOC _____ 2. INSTALLATION Fort Arthur TX Army 3. BLDG/RM NUMBER Administration Room
4. LOCATION/CODE 4A 5. OPERATION/CODE Pro 6. DESCRIPTION Readers NCO Computer work on computers about 9-10 hrs/day
7. MACOM/CODE A6 8. SUPERVISOR _____
9. TELEPHONE/AUTOVON NUMBER _____ 10. RAC _____ 11. FREQUENCY (Hrs Per Day) _____
12. NO CIV(S) _____ 13. NO N _____ 14. TOR(S) _____ 15. NO LOC(S) _____ 16. NO OTHER _____

Non-Responsive

Non-Responsive

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 1-13-84 2. EVALUATOR (INITIALS) _____

Non-Responsive

3. CONTROLS PRESENT	4. EVALUATION	5. UNIT CODE	6. CONTROLS REQUIRED	7. STATUS
<u>Lighting Admin Office</u>	<u>4-75; 159.60</u>	<u>FC</u>	<u>50-100</u>	<u>Adgt.</u>

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

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	9. 1
DISPOSABLE			
FACE AIR PURIFYING			
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/HARNESS	/	SAFETY/NONCONDUCTIVE SHOES	
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

1. GAS CODE	2. HAZARD DESCRIPTION	3. PAC or EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
<u>POVDT</u>	<u>Computer work for long periods of time</u>	<u>2</u>	

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

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

SECTION 1. DEMOGRAPHIC DATA

1. ARLOC _____ 2. INSTALLATION Post Arthur 3. BLDG/RM NUMBER Administrative Office
4. LOCATION/CODE AA 5. OPERATION/CODE FA 6. DESCRIPTION Supply Sgt B Battery 1/133rd FA, Direct Issue supplies, computer work about 5-6 hrs/day.
7. MACOM/CODE NG 8. SUPERVISOR Non-Responsive
9. TELEPHONE/AUTOVON NUMBER _____ 10. RAC _____ 11. FREQUENCY (H) _____
12. NO CIV(S) _____ 13. NO MIL _____ 14. NO CONTRACTOR(S) _____ 15. NO LOC(S) _____ 16. NO OTHER _____

SECTION 2. IH STAFFING DATA

1. LAB HOODS _____ 2. VAPOR DEGREASERS _____ 3. MAINTENANCE BAYS _____ 4. SPRAY BOOT(S) _____
5. OPEN SURFACE TANKS _____ 6. VENTILATION UNITS Non-Responsive

SECTION 3. SURVEY DATA

1. SURVEY DATE 1-13-88 2. EVALUATOR (INITIALS) _____

1. CONTROLS PRESENT	2. EVALUATION	3. UNIT CODE	4. CONTROLS REQUIRED	5. STATUS
Lighting-Office	41-75; Aug 60	FC	50-100	Adgt
Supply Room-Storage	23-37; Aug 87	FC	20	Adgt

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

7. RESPIRATOR

MANUFACTURER

NIOSH TC NO

R/A

DISPOSABLE

W/ FACE AIR PURIFYING

W/ 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	/		
NBC AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

1. CAS CODE	2. HAZARD DESCRIPTION	3. PAC UI EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
PC VDT	Computer work for long periods of time	3	
PO LIFTING	Hoisting lifting	3	
PO FOOT HAZ	Foot hazard	3	

Analytical Environmental Services, Inc.

Date: 3/11/2004

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT:	Non-Responsive	Lab Order:	0403372
Project:	Port Arthur, TX Armory	Date Received:	3/8/2004 11:00:0
Project No:	Port Arthur, TX	Matrix:	Wipe
PO No:		Analyst:	SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403372-001A	20	72000	µg, Total	283	100	1/13/2004	3/10/2004
0403372-002A	21	310000	µg, Total	756	267	1/13/2004	3/10/2004
0403372-003A	22	321	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-004A	23	1840	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-005A	24	43.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-006A	25	95.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-007A	26	262	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-008A	27	31.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-009A	28	25.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403372-011A	30	BRL	µg, Total	2.83	1	1/13/2004	3/10/2004

Qualifiers: MDL - Method Detection Limit
ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 1 of 1

Analytical Environmental Services, Inc.

Date: 3/11/2004

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: **Non-Responsive**
 Project: Port Arthur, TX Armory
 Project No: Port Arthur, TX
 PO No:

Lab Order: 0403371
 Date Received: 3/8/2004 11:00:0
 Matrix: Wipe
 Analyst: SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0403371-001A	31	32.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-002A	32	21.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-003A	33	188	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-004A	34	21.0	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-005A	35	BRL	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-006A	36	BRL	µg, Total	2.83	1	1/13/2004	3/10/2004
0403371-007A	37	BRL	µg, Total	2.83	1	1/13/2004	3/10/2004

Qualifiers: MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 1 of 1

Analytical Environmental Services, Inc.

Date: 11-Mar-04

CLIENT:

Non-Responsive

Client Sample ID: 29

Lab Order:

Tag Number:

Project: Port Arthur, TX Armory

Collection Date: 1/13/2004 3:30:00 PM

Lab ID: 0403372-010A

Matrix: PAINT

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS IN PAINT		PAINT				Analyst: SSS
Lead	BRL	0.00964		wt%	1	3/11/2004

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
N	Analyte not NELAC certified	P	NELAC analyte certification pending
Rpt Limit	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Page 1 of 1



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ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report

Client Name:

Non-Responsive

Project Name:

Port Arthur, TX Armory

Project Number:

NVLAQ

Lab ID# 102082-0

AES Job Number: 0403344

Page 1 of 1

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
38 Layer: 1	0403344 -001A	Broken Floor Tile Kitchen							Floor Tile
38 Layer: 2	0403344 -001A	Broken Floor Tile Kitchen	5						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.

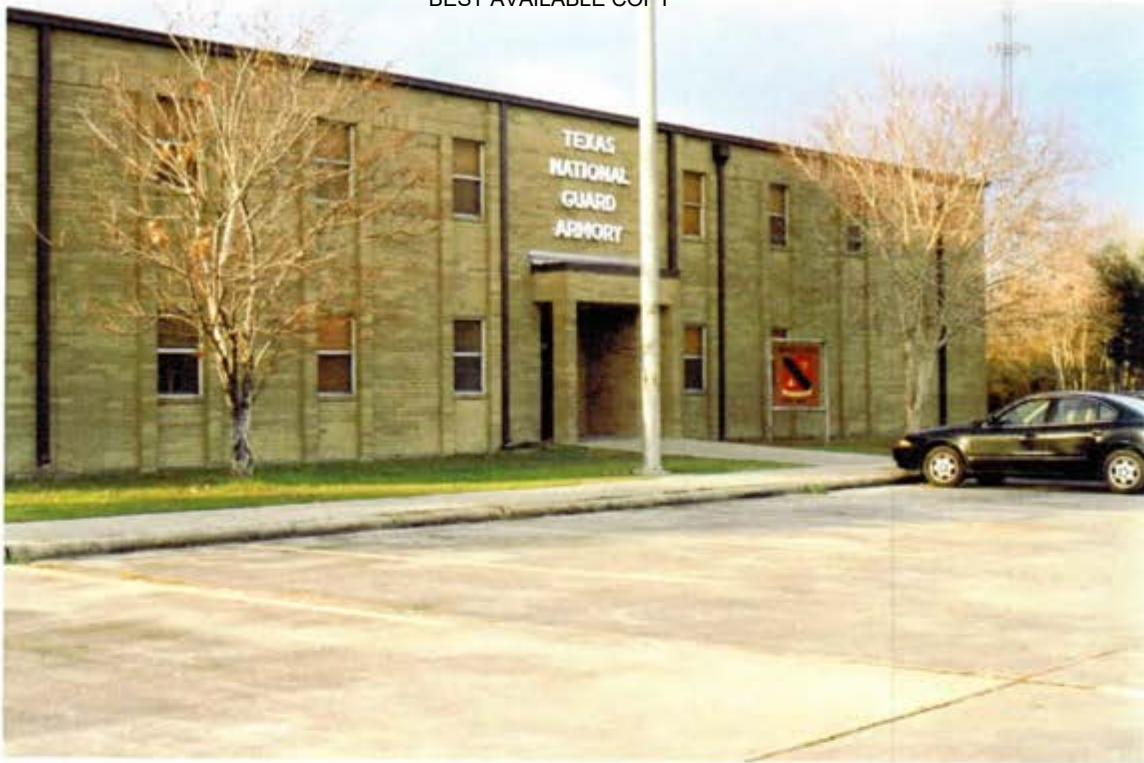
ND = None Detected

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 the conclusive asbestos content.

It is certified by the signatures below that the laboratory identified is accredited by the National Institute of Standards and Technology for Polarized Light Microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Quality Assurance Program, Laboratory ID 102082-0. All percentages given are by visually estimated volume. All analyses are performed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116, July 1993." This report must not be reproduced except in full without the approval of Analytical Environmental Service, Inc. These test results apply only to the samples actually tested.

Microanalyst:

Non-Responsive



PORT ARTHUR, TX ARMORY



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DRILLHALL





IFR, FRONT VIEW

IFR, REAR VIEW



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IFR, SAMPLING AREAS



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A/C OUTLETS, OFFICES



BEST AVAILABLE COPY



MOTOR POOL

A/C-HEATING UNIT



BEST AVAILABLE COPY



**RECRUITER OFFICE,
DESK CHAIR**

**FLAMMABLE
MATERIAL STORAGE**



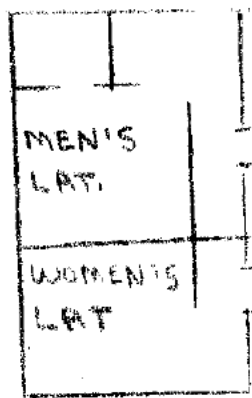
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**PAINT OFF, SUPPLY
ROOM**

**BROKEN FLOOR
TILES, KITCHEN**





HALL

KITCHEN

ASSEMBLY
HALL

RIFLE
RANGE

UNIT
STORAGE

VAULT

ADM
OFF

Non-Responsive

HALL

ADM OFF

Non-Responsive

UNIT
STOR

VAULT

LOCKER
RM

LOCKER
RM

FLAM
STOR

FRONT

PORT ARTHUR, TX

3451 57

Non-Responsive



BEST AVAILABLE COPY
DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

04 September 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Port Arthur Armory,
BTRY B, 1st BN 133rd FA, 3451 57th ST, Port Arthur, Texas 77642

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Port Arthur Armory, BTRY B, 1st BN 133rd FA,
3451 57th ST, Port Arthur, Texas 77642

1. References.

a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.

b. AR 40-5, Preventive Medicine, 22 July 2005.

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

d. AR 385-10, 29 February 2000, Army Safety Program.

f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.

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

h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.

k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2009, a follow-up industrial hygiene survey was performed at the Port Arthur Armory, located at, 3451 57th ST, Port Arthur, Texas 77642. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.

b. The Point of Contact during the survey was **Non-Responsive**

c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 01 June 2009.

3. General.

- a. **Site Description.** The Port Arthur Armory ; a one story brick over cinder block structure with Central HVAC was built in 1984. The facility houses several training rooms and classrooms, administrative office areas, indoor range and a supply room with storage and vault. Two full time employees work at the Armory supporting 144 M-Day Soldiers. The armory has roof top HVAC units and several residential use Central HVAC with interior units mounted inside mechanical rooms. Due to transformation additional Motor pool space is needed to accommodate vehicles and commercial lawn equipment to maintain grounds. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey and have been forwarded to State Facilities Commission. A copy of the floor layout and photos are included in Appendix C.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples collected from various surfaces throughout the building are collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples are then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples are collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples are collected from inconspicuous areas. Bulk samples are also collected from suspect friable and damaged building material. Each bulk sample are then placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings are taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix C.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 12 April 2004. Elevated Lead dust contamination was found in supply areas, on drill hall floor and in the locked indoor range as listed in the prior survey. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. Due to non-remediation, no areas were wipe sampled during current survey. Paint chips were collected and tested. Results are listed in table below. During the out brief, personnel were encouraged to follow recommendations listed in the survey to reduce lead exposures prevent further cross contamination.

Sample Number	Sample Location	% by weight
PAT 65	Paint Chip Supply Area	0.0185%
PAT 66	Paint Chip Storage Area	Below Recordable Limits

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

- b. **Asbestos Suspect Building Material:** Various types of building materials were identified as potentially containing asbestos. Bulk samples were collected randomly from the identified materials. The table below lists the samples collected and the results

Sample Number	Sample Location	% Asbestos Type
PAT 64	12 x 12 Floor Tile (Layer 1)	None Detected
PAT 64	12 x 12 Floor Tile (Layer 2)	Black Mastic contains 3% Chrysotile

- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.

- d. **Illumination Survey** Evaluated lighting levels within the Armory ranged between 0 to 139 foot-candles.

Beaumont Armory	Reading in Foot-candles
Classrooms	26-121
Office Areas	35-66
Hallways and Lobby	29-46
Latrines	02-23
Drill Hall	10-44
Indoor Range	0-24
Supply Areas	10-36
Kitchen	50-89

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix C

- e. **Heating Ventilating and Air Conditioning (HVAC)**: The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory, consisted of various roof top, residential use Central HVAC with units inside mechanical rooms and local ceiling mounted heating units in latrines and supply areas. The system is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC to include water infiltration and peeling paint in drill hall and supply areas. Due to geographical location areas without adequate ventilation will continue to have issues until properly constructed to prevent moisture within occupied area. Work orders are in place and have been forwarded to the State Facilities Commission. A copy of the floor layout and photos are included in Appendix C.



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report

Client Name: National Guard Bureau Region-South IH

Project Name: Armory w/ IFR

Project Number: PAT 0609



Lab ID# 102082-0

AES Job Number: 0906192

Page 1 of 1

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
PAT 64	0906192-001A	12x12 Floor Tile	ND	ND	ND	ND	ND	ND	Gray Floor Tile
Layer: 1									
PAT 64	0906192-001A	12x12 Floor Tile	3	ND	ND	ND	ND	ND	Bitumen
Layer: 2									

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

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 the conclusive asbestos content.

It is certified by the signatures below that the laboratory identified is accredited by the National Institute of Standards and Technology for Polarized Light Microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Quality Assurance Program, Laboratory ID 102082-0. All percentages given are by visually estimated volume. All analyses are performed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116, July 1993." This report must not be reproduced except in full without the approval of Analytical Environmental Service, Inc. These test results apply only to the samples actually tested.

Microanalyst:

Non-Responsive

Analytical Environmental Services, Inc.

Date: 6/30/2009

**TOTAL LEAD IN PAINT (N7082)
PAINT**

CLIENT: National Guard Bureau Region-South III
Project: Port Arthur, TX Armory
Delivery Order:
PO No:

Lab Order: 0906J06
Date Received: 6/24/2009 9:55 AM
Matrix: Paint

Laboratory ID	Client Sample ID	Results	Units	Report Limit	DF	Date Collected	Date Analyzed	Analyst
0906J06-001A	PAT 65	0.0185	wt%	0.00964	1	6/1/2009	6/26/2009	AZS
0906J06-002A	PAT 66	BRL	wt%	0.00979	1	6/1/2009	6/26/2009	AZS

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Degrees of Freedom

Results are blank corrected where applicable

Page 1 of 1

Appendix B:
Lab Chain of Custody

0906792

BULK SAMPLE DATA

For use of this form see USAEHA TC 141; the proponent is HSHB-CO.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH (H OFFICE)
518 PLAZA DRIVE, SUITE 1310
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

PORT ARTHUR, TX ARMORY

Project Number

PAT 0609

Samples Collected By

Non-Responsive

Date Collected

1 June 09

Date Shipped

18 June 09

Location (Bldg/Area)

ARMORY FLOOR TILE

ARMORY W/ IFR

Associated Complaints (be specific)

Associated Air Samples

☐ Yes☒ No

If yes, list sample numbers

Label Information

Trade Name

HSN

Manufacturer

Address

MSDS Attached

☐ Yes☐ No

Analysis Desired

ASBESTOS - PLM

Lab Use Only	Sample No.	Constituents	Results	Remarks
	PAT 64	12x12 FLOOR TILE		

Comments to Lab:

Lab Use Only

Analyst/Inspector

Reviewed By (Inspector)

Date Received

Date Forwarded

Procedures Performed

Comments:

RECEIVED
29/9 9:35

Non-Responsive

AEHA Form 6-R 1 Oct 94

Replaces AEHA Form 6, 1 Oct 90 which is obsolete.

BEST AVAILABLE COPY
BULK SAMPLE DATA

For use of this form see USAEPA TG 141; the proponent is BSHB-WD.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IN OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

PORT ARTHUR, TX ARMORY

Project Number

PAT 0609

AAEJC

--	--	--	--	--

Samples Collected

Non-Responsive

Date Collected

1 June 09

Date Shipped

18 June 09

Description of Operation

ARMORY W/ IFR

Location (BLDG/AREA)

Associated Complaints (be specific)

Associated Air Samples

☐ Yes ☒ No

If yes, list sample numbers

Label Information

Trade Name

RSN

Manufacturer

Address

MSDS Attached

☐ Yes ☒ No

Analysis Desired

LEAD

Lab Use Only	Sample No.	Constituents	Results	Remarks
--------------	------------	--------------	---------	---------

	PAT 65	PAINT CHIP SUPPLY		
--	--------	-------------------	--	--

	PAT 66	PAINT CHIP STORAGE		
--	--------	--------------------	--	--

Comments to Lab:

Lab Use Only

Analyst/Inspector

Reviewed By (Inspector)

Date Received

Date Reported

Procedures Performed

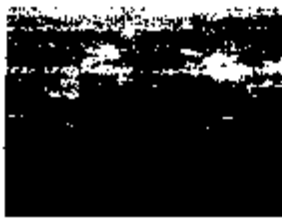







Comments:

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Appendix C:

Photographs and Floor Layout

Port Arthur Armory

			
Port Arthur Armory	Drill Hall	Admin Area	Kitchen
			
Supply Room	Motor Pool	Mechanical Room	Class Room

REMOVE
ITEMS FROM
EJECT PROHIBIT

2	
MEN'S LAT. 23	
WOMEN'S LAT	

25

B BTY

1-133 PA

Non-Responsive

30

HALL

53	89
KITCHEN	
59	50

ASSEMBLY
HALL

30

RIFLE
RANGE

UNIT
STORAGE

44

10

37

VAULT

36

18

60

66 ADM
OFF 40

37

HALL

Non-Responsive

76

64

Non-Responsive

46

98

UNIT
STOR

SADDS 2 full
144
FRONT

PORT ARTHUR, TX

3451 57th ST

BLUE RED CASE + ASU KST
 Riding Lowdown

97	26	62	74		
101	31	72	91	121	SS
				SS	
					92

NOT A FILE
STATE OF TEXAS
THE ADJUTANT GENERAL'S DEPARTMENT
CHIEF OF BUREAU
AUSTIN, TEXAS
LUCAS
CAMP MARR



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DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

06 July 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Port Neches Armory
G Co 536th BSB, 511 Grigsby Drive, Port Neches, Texas 77651.

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Port Neches Armory G Co 536th BSB, 511 Grigsby Drive,
Port Neches, Texas 77651

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2009, a follow-up industrial hygiene survey was performed at the Port Neches Armory located at 511 Grigsby Drive, Port Neches, Texas 77651. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 05 May 2009.

3. General.

- a. **Site Description.** The Port Neches Armory ; a one story brick over cinder block structure with Central HVAC was built in 1977 with roof replacement in February 2006. The facility houses several training rooms and classrooms, administrative office areas and a supply room with storage and vault. Two full time employees work at the Armory supporting 91 M-Day Soldiers. The armory has residential use Central HVAC with interior units mounted inside mechanical closets and local window in converted supply office area. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey to include a request to pump out grease trap in kitchen area. A copy of the floor layout and photos are included in Appendix A..
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 14 January 2004. No abatement projects or clean up of contaminated areas have been done. No areas were sampled, tested or noted during current survey.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

- b. **Asbestos Suspect Building Material:** In the 2004 survey one sample of building materials was identified as potentially containing asbestos. The identified type included 12x12 inch Floor Tile. A bulk sample was collected randomly from the identified material. The table below lists the sample collected and the results in 2004:

Sample #	Description	% Asbestos Type
105 (Layer 1)	12x12 inch Floor Tile (Floor Tile)	<1% Chrysotile
105 (Layer 2)	12x12 inch Floor Tile (Black Mastic)	5% Chrysotile

- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Evaluated Lighting levels within the Armory ranged between 7 foot-candles to 65 foot-candles.

Port Neches Armory	Reading in Foot-candles
Classrooms	35-47
Office Areas	34-67
Hallways and Lobby	20-67
Latrines	02-05
Drill Hall	11-29
Supply Areas	07-50
Kitchen	47-60

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs of ballast in latrine and storage areas. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units mounted inside mechanical closets and local ceiling mounted heating units in latrines and supply areas. The system updated in 2008 and April 2009 are capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include repairing cracks and painting of drill hall walls and ventilating supply areas. During 2006 roof replacement the contractor sealed off exhaust vents in drill hall and kitchen. A copy of the floor layout and photos are included in Appendix A..

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found as listed in the 2004 report. Continue to clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving supply areas. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces per NG PAM 385-18 and NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, continue to document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines, drill hall, kitchen and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. During the current survey it was noted that HVAC systems on the supply side were inop. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Appendix A:
Photographs and Floor Layout

Port Neches Armory

			
Port Neches Armory	Drill Hall w/covered vents	Admin Area	Classroom
			
Kitchen w/covered vents	Supply Room	Supply Room	HVAC

BEST AVAILABLE COPY

S11 GROSSBY

2 Agd 3 ADOs
q1 not a q

16
Wash +
1-00 m



Storage - Supply

(18/18)

Posted to NGB FOIA Reading Room
May, 2018

① FLOOR PLAN
② SCALE



THEODORE S. MAFFITT, JR. A.I.A.
ARCHITECT PLANNER CONSULTANT
1110 N. LAMAR
DALLAS, TEXAS 75202

TEXAS NATIONAL GUARD
100 MAN ARMORY
FORT WORTH, TEXAS



BEST AVAILABLE COPY
DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

10 October 2007

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Port Neches Armory
SVC BTY 1-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651.

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby
Drive, Port Neches, Texas 77651

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Port Neches Armory located at 511 Grigsby Drive, Port Neches, Texas 77651. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 25 September 2007.

NGB-ARS-IHSE (40-5f)

10 October 2007

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY I-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651

3. General.

- a. **Site Description.** The Port Neches Armory ; a one story brick over cinder block structure with Central HVAC was built in 1977 with roof replacement in February 2006. The facility houses several training rooms and classrooms, administrative office areas and a supply room with storage and vault. Two full time employees work at the Armory supporting 80 M-Day Soldiers. The armory has residential use Central HVAC with interior units mounted inside mechanical closets and local window in converted supply office area. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey to include. A copy of the floor layout and photos are included in Appendix A..
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 14 January 2004. No abatement projects or clean up of contaminated areas have been done. No areas were sampled, tested or noted during current survey.
 1. The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.
- b. **Asbestos Suspect Building Material:** In the 2004 survey one sample of building materials was identified as potentially containing asbestos. The identified type included 12x12 inch Floor Tile. A bulk sample was collected randomly from the identified material. The table below lists the sample collected and the results in 2004:

10 October 2007

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651

Sample #	Description	% Asbestos Type
105 (Layer 1)	12x12 inch Floor Tile (Floor Tile)	<1% Chrysotile
105 (Layer 2)	12x12 inch Floor Tile (Black Mastic)	5% Chrysotile

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

- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Evaluated Lighting levels within the Armory ranged between 7 foot-candles to 65 foot-candles.

Port Neches Armory	Reading in Foot-candles
Classrooms	30-65
Office Areas	33-52
Hallways and Lobby	22-45
Latrines	7-8
Drill Hall	24-27
Supply Areas	18-53
Kitchen	54-59

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units mounted inside mechanical closets and local ceiling mounted heating units in latrines and supply areas. The system is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include repairing cracks and painting of drill hall walls and ventilating supply areas. During 2006 roof replacement the contractor sealed off

NGB-ARS-IHSE (40-5f)

10 October 2007

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651

exhaust vents in drill hall and kitchen. A copy of the floor layout and photos are included in Appendix A..

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found as listed in the 2004 report. Continue to clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving supply areas. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces per NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, continue to document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines, drill hall, kitchen and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. During the current survey it was noted that HVAC systems on the supply side were inop. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

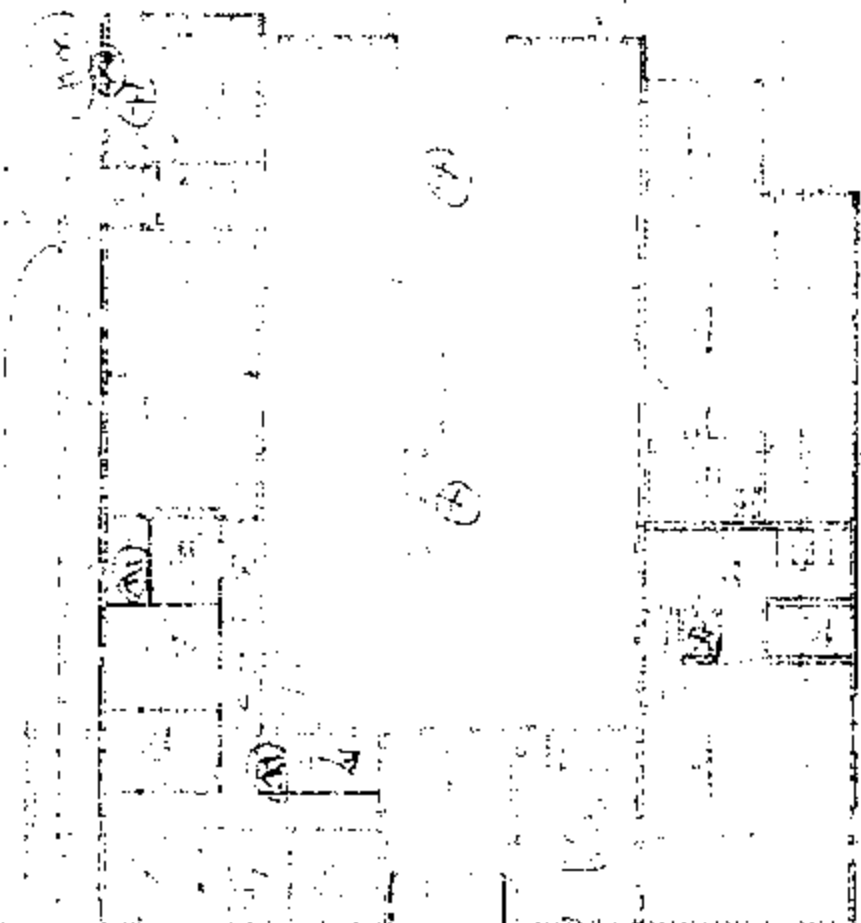
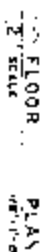
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NGB-ARS-IHSE (40-50)

10 October 2007

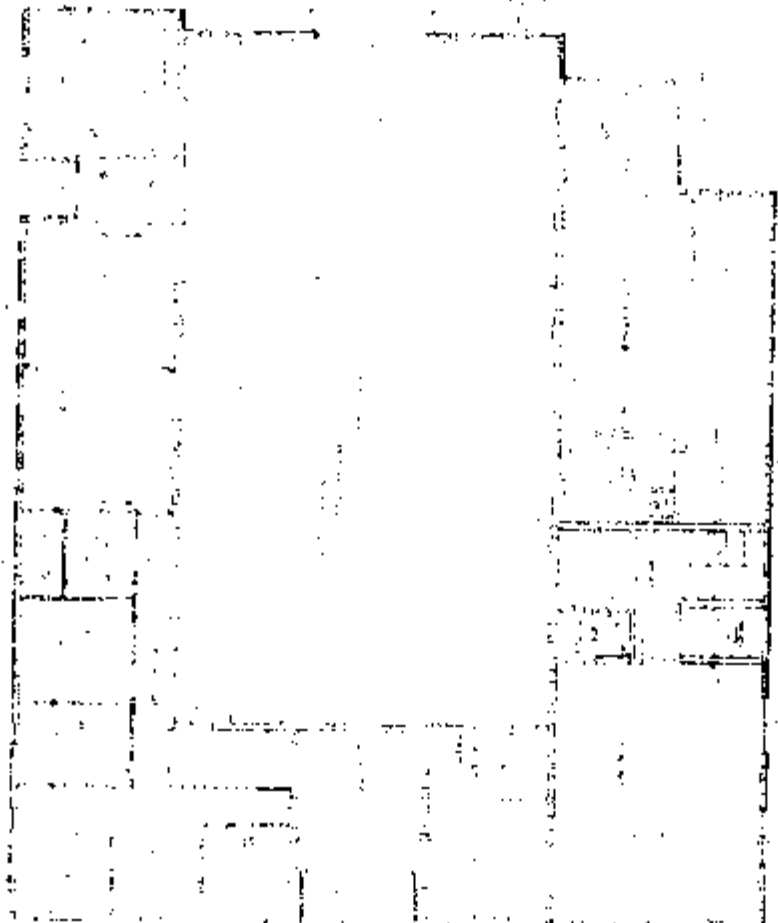
SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651

**Appendix A:
Photographs and Floor Layout.**



(Faint handwritten notes)

2 FLOOR - PLAN
2nd FLOOR - PLAN

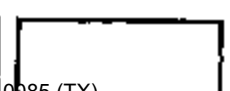


2



THEODORE S. MAFFITT, JR. AIA
ARCHITECT PLANNED ENGINEER
118 W. 11th Street
FORT WORTH, TEXAS











TEXAS NATIONAL GUARD
20 MAN ARMORY
FORT WORTH, TEXAS



10 October 2007

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby Drive,
Port Neches, Texas 77651

Port Neches Armory

			
Port Neches Armory	Port Neches Armory	Drill Hall w/covered vents	Drill Hall Wall
			
Admin Area	Kitchen w/covered vents	Classroom	Supply Room
			
	HVAC	HVAC	

NGB-ARS-THSE (40-5f)

10 October 2007

SUBJECT: Transmittal of IIR Survey, Port Neches Armory SVC BTY 1-133rd FA, 511 Grigsby Drive, Port Neches, Texas 77651



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DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

21 April 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Redbird Armory, CO A, 372nd FSB, 3130 West Redbird LN, Dallas, Texas 75237-2299

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Redbird Armory, CO A, 372nd FSB, 3130 West Redbird LN, Dallas, Texas 75237-2299

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Redbird Armory located at 3130 West Redbird LN, Dallas, Texas 75237-2299. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.

- a. The Point of Contact during the survey was **Non-Responsive**
- b. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 22 October 2008.

3. General.

- a. **Site Description.** The Redbird Armory, a one story brick over cinder block structure with Central HVAC was built in 1957 and renovated 1993. The facility houses several training rooms and classrooms, administrative office areas, indoor range and a supply room with storage and vault. Four full time employees work at the Armory supporting 70 M-Day Soldiers. The armory has several residential use Central HVAC with interior units mounted inside mechanical closets on wooden plenums. The POC has sent request for various repairs to be made throughout the armory, which are addressed, in the survey. A copy of the floor layout and photos are included in Appendix A.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples collected from various surfaces throughout the building are collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples are then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples are collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples are collected from inconspicuous areas. Bulk samples are also collected from suspect friable and damaged building material. Each bulk sample are then placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings are taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 30 July 2003. Elevated results were self contained in the empty locked indoor range. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. Due to prior testing and non-remediation no areas was sampled or tested during current survey. During the out brief, site personnel were encouraged to follow recommendations listed in the survey to minimize lead exposures and prevent further cross contamination.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

- b. **Asbestos Suspect Building Material:** Bulk samples were collected from various in the prior survey dated 30 July 2003. No samples collected during prior survey were identified as potentially containing asbestos. No ACBM were tested or noted during current survey.
- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Evaluated lighting levels within the Armory ranged between 0 to 73 foot-candles. Lighting issues to include have been documented with slate facilities.

Hondo Armory	Reading in Foot-candles
Classrooms	21-73
Office Areas	27-73
Hallways and Lobby	6-30
Latrines	11-35
Drill Hall	2-33
Supply Areas	0-51
Kitchen	18-58

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory and within the motor pool and repair of ballast in B Co Storage area. A copy of the floor layout and photos are included in Appendix A.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of several residential use Central HVAC with interior units mounted inside mechanical closets on wooden plenums and local ceiling mounted heating units in latrines drill hall and supply areas. The system is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and have been forwarded to the State Facilities Commission to include replacing wooden plenums in HVAC closet, repairing and replacing thermostats, repairing and replacement of oven and freezer and various plumbing issues. A copy of the floor layout and photos are included in Appendix A.

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found inside the locked range as listed in the 2003 report. To maintain low levels of lead and prevent cross contamination; clean weapons offsite, practice good housekeeping by washing hands after handling, cleaning weapons and after leaving weapons vault and supply areas. (RAC 2)
- b. Have facilities clean and decontaminate lead contaminated surfaces inside Indoor Range per NG PAM 385-18 and NG PAM 420-15. (RAC 3)
- c. To maintain overall indoor air quality, continue to document and monitor all leaks and contact your local facilities commission for roof and drywall repair and ceiling tile replacement when needed. (RAC 3)
- d. Keep all occupied areas ventilated and contact facilities for repair of exhaust vents, dehumidifiers when needed and to ensure vents in latrines and supply rooms are within design guide and ventilation standards. Balance HVAC system and place working thermostats in designed areas to eliminate hot and cold spots and reduce excess humidity in occupied areas. (RAC 3)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines, offices, and supply rooms or increase fan motors in areas to keep areas adequately ventilated. (RAC 3)
- f. POC states that bulbs in the B Co storage area randomly flicker on and off. Evaluate electrical system and repair and or replace light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 2)
- g. Keep water in all P-traps to prevent sewer gases from occupied areas. Check and or repair kitchen and latrine drains to building code and ensure the two are not operating on the same line without P-Traps. Check kitchen appliances to ensure all are within safety code and proper working conditions.(RAC 2)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Appendix A

Photographs and Floor Layout

Redbird Armory

			
Redbird Armory	Drill Hall	Kitchen	Admin Area
			
Hallway Cracked Wall and Bent Ceiling Tiles	Hallway Cracked Wall and Bent Ceiling Tiles	Classroom	Supply Room
			
Supply Room	HVAC Closet	HVAC Closet	

372nd Fire Evacuation Plan

Rooms and areas labeled include:

- Class Room 1
- Class Room 2
- Battalion Conference Room
- Distant Learning Center
- Class Room 3
- Class Room 4
- Boiler Room
- Conference Room
- B Co.
- CDR
- RNCO
- HHD
- CDR/RNCO
- Quality Office
- Study Room
- Recruiters
- Mail Room
- A Co.
- NBC COMMO
- BN SI/41
- Male Latrine
- Female Latrine
- Mess Section
- State Guard
- Freezer
- Kitchen
- Armory Drill Hall
- Physical Fitness Center
- HHD Storage
- B Co. Storage
- A Co. Storage
- Indoor Range
- Female Showers
- Male Showers
- HHD Supply Room
- Haz-Mat
- B Co. Supply Room
- A Co. Supply Room

Handwritten annotations include numbers (e.g., 45, 35, 48, 34, 41, 42, 43, 44, 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, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200) and letters (e.g., A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z).

Routes:

- Primary
- Alternate

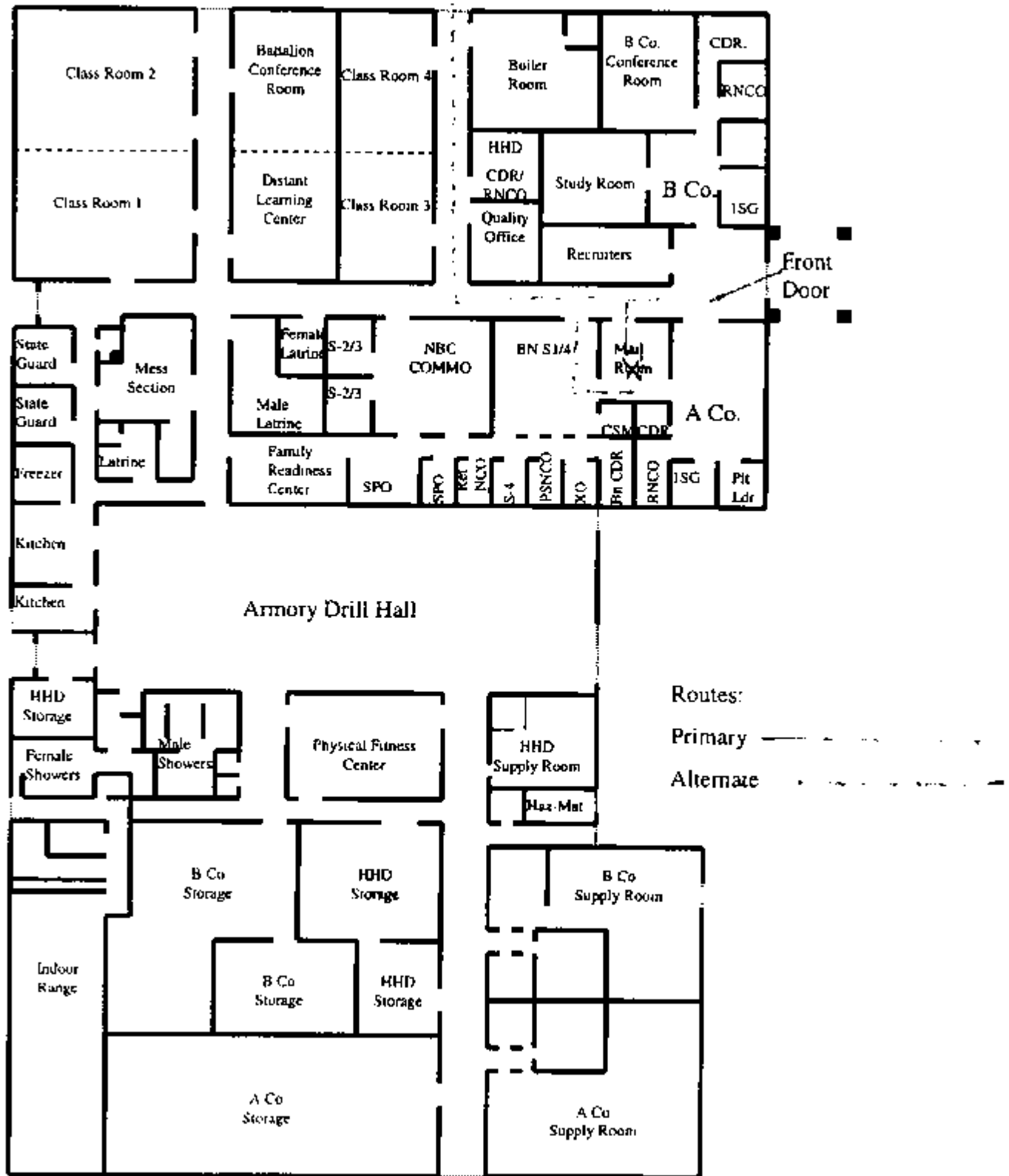
LEAF

No

Non-Responsive

TEST IN
BEO supply
OFFICE

372nd Fire Evacuation Plan



TEXAS MILITARY FORCES
Co A 372ND FORWARD SUPPORT BATTALION
TEXAS ARMY NATIONAL GUARD
3130 WEST REDBIRD LANE, DALLAS, TX. 75237-2299

JFTX-ARM-IDS-CAOT

15 October 2008

MEMORANDUM TO: Dallas Fire-Rescue Department

FOR: Deficiency/Corrections

SUBJECT: Fire Code Requirements

To Whom It May Concern, we have brought it to the attention to the state of the deficiency and the state has already sent personal out to repair the fire system in the kitchen, and the fire panel in the hallway. I have sent to our battalion the other deficiency as far as fire lanes being corrected and the other items you have listed in your report and they will try to have them corrected by the state.

Non-Responsive

DATE 08.19.08DALLAS FIRE DEPARTMENT
GENERAL INSPECTION

Non-Responsive

Non-Responsive

LOCATION 3130 W Red Bird Ln NAME
OCCUPANCY Texas National Guard ADDR
PROPERTY CODE: 1 LTRS: ☐ 1 ☐ 2 ☐ 3 REINSMixed Use400

Maintaining hazardous conditions is a VIOLATION of City ordinances. The following conditions must be corrected immediately:

- ☐ Post ADDRESS visible from the street.
- ☒ Provide marking/stripping for all designated FIRE LANES.
- ☒ Provide ~~access~~ fire department connections. Cover plates
- ☐ MAINTAIN fire lanes free of parked vehicles or other obstructions. • Security gates must comply with DFD Standard #4.
- ☐ SECURELY CLOSE all openings to the building within 48 hours to prevent unauthorized entry.
- ☒ Provide and maintain - test - repair - FIRE ALARM system. 1 Shop 2 Army
- ☐ Provide and maintain smoke detectors in approved locations for each RENTAL UNIT.
- ☒ PROVIDE one 2A10BC rated portable fire extinguisher for each 3000 square feet. Maximum travel distance 75ft
- ☒ SERVICE fire extinguishers and recharge those expended. Annual service required by state licensee.
- ☒ MOUNT portable fire extinguishers in conspicuous accessible locations. Replace #7 Shop / Army near exit
- ☐ MOUNT portable fire extinguishers so that the tops are not more than 5 feet above the floor.
- ☐ Install extinguishing system for COOKING APPLIANCES producing grease laden vapors.
- ☒ Service extinguishing systems for commercial cooking applications every MONTHS or after activation. Army
- ☐ Remove GREASE from cooking appliances, vent-hoods, ducts, etc.
- ☒ Provide and maintain - repair - extend - service - the ~~fire department connections~~ label Fire Dept connection, 3" pipe
- ☐ Provide extra sprinklers and a sprinkler WRENCH sprinkler connection @ Building Service.
- ☒ Discontinue LOCKING - BLOCKING - exit doors, exit windows, or exit pathways. Army
- ☐ Maintain exit doors and/or windows easily OPENABLE without a key or special knowledge.
- ☒ Repair illuminated EXIT SIGNS. Thruport Shop / Army
- ☐ Remove additional LOCKS or LATCHES from exit doors equipped with panic hardware.
- ☐ SEAL penetrations in floors, walls, ceilings with approved material.
- ☐ Remove the accumulation of combustible WASTE.
- ☐ Secure compressed gas CYLINDERS.
- ☐ Provide FLAME PROOFING for combustible decorations, drapes, etc.
- ☐ Maintain 30 inch clearance to ELECTRICAL equipment.
- ☐ Provide COVERS for electrical outlets, switches, junction boxes, and breaker boxes.
- ☒ Discontinue using EXTENSION CORDS as substitutes for permanent electrical wiring. computer office near Learning Center
- ☐ Provide metal containers with metal lids for the storage of OILY RAGS.
- ☐ Maintain STORAGE 18 inches below sprinkler heads, and 24 inches below the ceiling.
- ☐ Provide approved CABINETS for storage of flammable/combustible liquids in excess of gallons.
- ☒ Obtain City of Dallas PERMIT for: Certificate of Occupancy / Flammable Combustible
- ☐ Post OCCUPANT LOAD sign near main exit.
- ☒ Provide Secondary containment containers in Shop
- ☒ Provide Knox Lock note crossing fire lane
- ☒ Provide 2 sets of plans of proposed Fire Lane for approval
- ☐ Plans shall indicate location of hydrants/Fire Dept connections
- ☐ notes crossing fire lane/Knox Lock/Fuel Dispensing Area
- ☒ Provide Emergency fuel shutoff per IFC 2003.2 within 10 feet not less than 1 ft
- ☒ Provide Flammable Combustible placard/ Flammable storage area outside
- ☒ Tank vehicles shall be equipped with 2A10BC Fire Extinguisher out of
- ☐ carrying device on vehicle not shall be 15 feet or more from the unloading

An \$80.00

Inspector

Non-Responsive



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DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

24 March 2008

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Commander, Rosenberg Armory, B TRP 1st BN 112th CAV, 2020 Wallis Wehering, Rosenberg, Texas 77471

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Rosenberg Armory, B TRP 1st BN 112th CAV, 2020 Wallis Wehering, Rosenberg, Texas 77471

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Rosenberg Armory located at 2020 Wallis Wehering, Rosenberg, Texas 77471. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.

- a. The Point of Contact during the survey was **Non-Responsive**
- b. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 24 January 2008.

3. General.

- a. **Site Description.** The Rosenberg Armory, a one story brick over cinder block structure with Central HVAC was built in 1993. The facility houses several training rooms and classrooms, administrative office areas, rear maintenance area, closed indoor range and a supply room with storage and vault. Three full time employees work at the Armory supporting 55 M-Day Soldiers. The armory has roof top HVAC units and several residential use Central HVAC with interior units mounted inside mechanical rooms. The POC has sent request for various repairs to be made throughout the armory, which are addressed, in the survey. A copy of the floor layout and photos are included in Appendix A.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples collected from various surfaces throughout the building are collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples are then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples are collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples are collected from inconspicuous areas. Bulk samples are also collected from suspect friable and damaged building material. Each bulk sample are then placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings are taken on work surfaces and approximately four feet from the floor. A copy of the floor layout and photos are included in Appendix A.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various areas in the prior survey dated 19 November 2003. Elevated Lead dust contamination was found in maintenance bay areas and in the locked indoor range as listed in the prior survey. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. Reportedly no action has been taken after the last survey; the visual inspection confirmed that finding. Due to this no areas were sampled or tested during current survey. During the out brief, site personnel were encouraged to follow recommendations listed in the survey to reduce lead exposures and prevent further cross contamination.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard.

- b. Asbestos Suspect Building Material: Based in the build date, 1993 and visual inspection, no ACM was identified or tested during the current survey.
- c. Noise Survey: No noise Hazardous areas were identified or tested on the day of the survey.
- d. Illumination Survey Evaluated lighting levels within the Armory ranged between 3 and 69 foot-candles.

Rosenberg Armory	Reading in Foot-candles
Classrooms	10-35
Office Areas	22-133
Hallways and Lobby	21-51
Latrines	15-50
Drill Hall	36-55
Indoor Range	3-17
Maintenance Bay Areas	8-45
Supply Areas	15-51
Kitchen	12-42

Most readings are within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light. A copy of the floor layout and photos are included in Appendix A.

- e. Heating Ventilating and Air Conditioning (HVAC): The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory, consisted of various roof top, residential use Central HVAC with units inside mechanical rooms and local ceiling mounted heating units in latrines and supply areas. The system is capable to deliver outside makeup air to the occupied space. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission to include repair of AHU and unit in mechanical closet, repairing leaks in drill hall, and the professional removal of the Bee Colony Hive from within the Right front foyer wall cavity enclosure. A copy of the floor layout and photos are included in Appendix A.

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found in various areas and inside the locked range as listed in the 2003 report. To reduce further cross contamination clean weapons offsite and practice good housekeeping by washing hands after handling and cleaning weapons and after leaving weapons vault. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces inside Indoor Range per NG PAM 385-18 and NG PAM 420-15. (RAC 3)
- c. To reduce further damage and maintain overall indoor air quality, continue to document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement where needed. (RAC 3)
- d. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines and supply rooms are within design guide and ventilation standards. Repair HVAC in rear mechanical room and Balance HVAC system to eliminate hot and cold spots and reduce excess humidity in occupied areas. (RAC 2)
- e. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. (RAC 2)
- f. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings and add additional exterior lighting per POC request. (RAC 3)
- g. POC request the professional removal of the Bee Colony Hive from within the Right front foyer wall cavity enclosure. (RAC 2)
- h. Due to reorganization the Armory requires additional parking lot and motor pool areas for vehicle inventory, electrical and LAN drops in classrooms, additional security lighting and adequate drainage from parking lot areas. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.



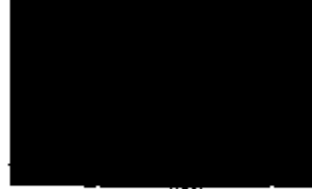









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Appendix A

Photographs and Floor Layout

Rosenberg Armory

			
Rosenberg Armory	Rosenberg Armory RT Foyer	Bee Hive Colony Point of Entrance	Indoor Range
			
Kitchen	Supply Room	Drill Hall	Admin Area
			
	Rear Maintenance Bay	Mechanical Room with Missing HVAC Parts	

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ARCHITECTURE ETC*
RAYMOND L. BURROUGHS, AIA ARCHITECT

KEYNOTES

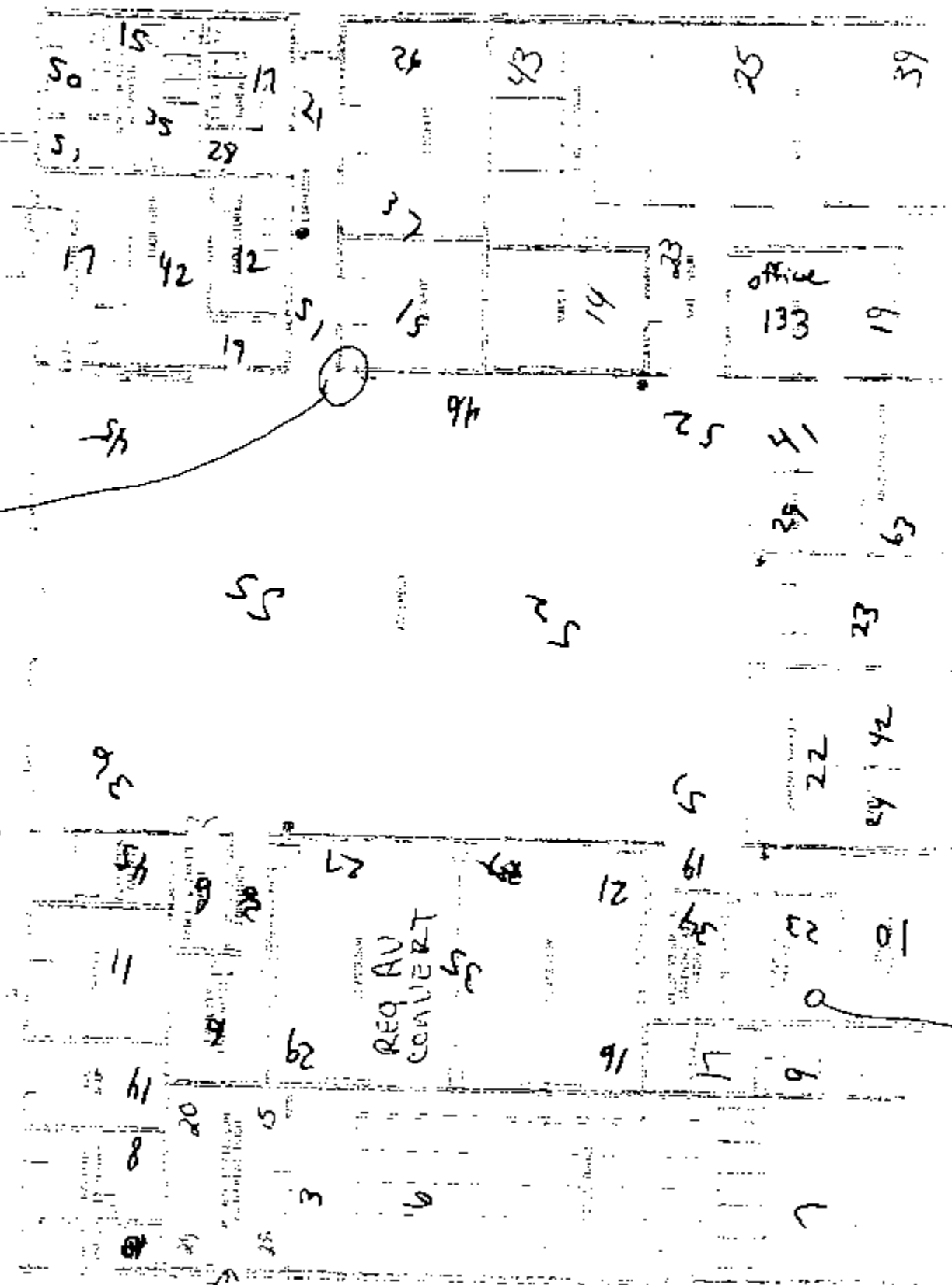
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ROSENBERG Armory

ROOF LEAK

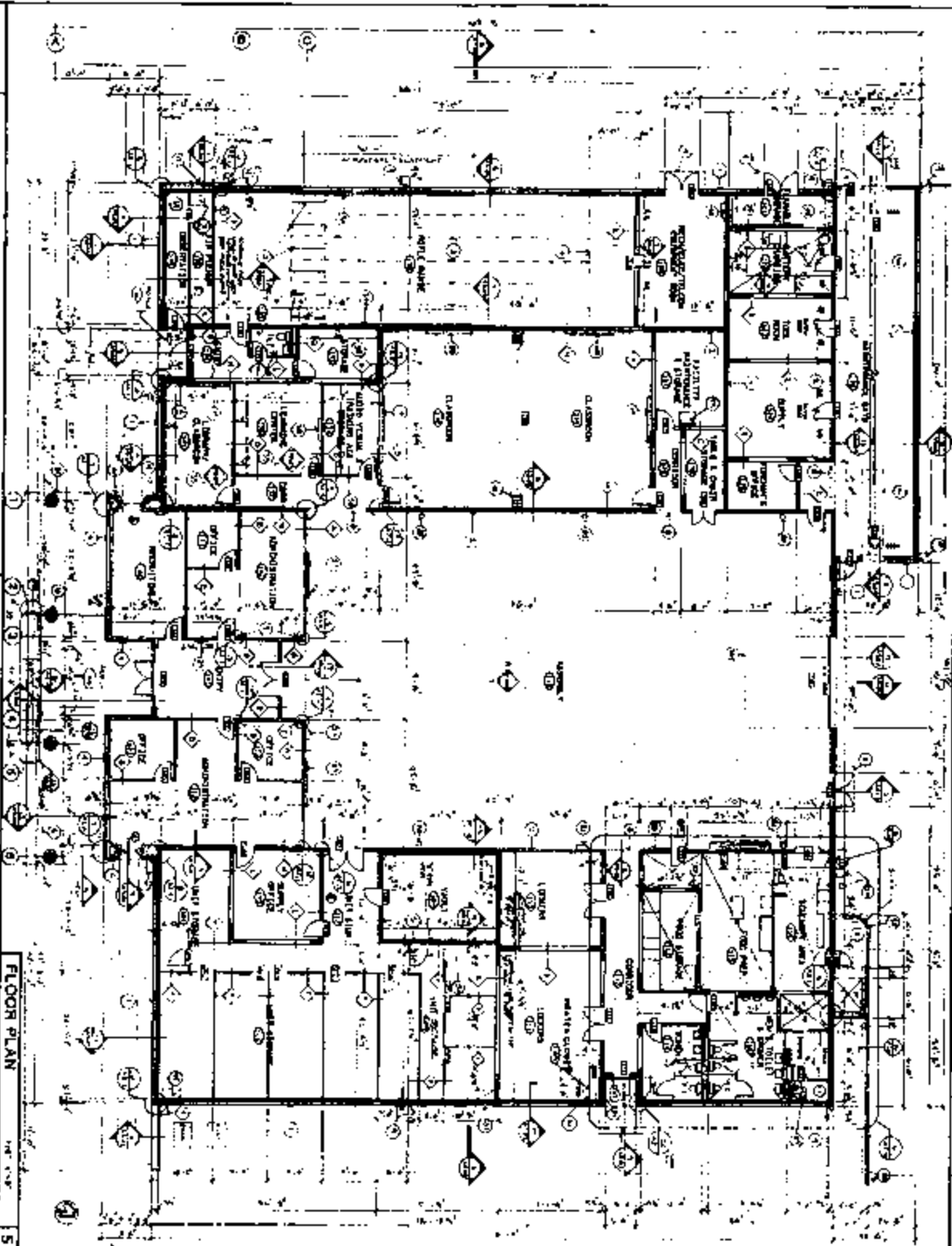
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PROJECT NO. 480075
ROSENBERG, TEXAS

ARCHITECTURE ETC.*
RAYMOND L. BURROUGHS, AIA ARCHITECT

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**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

ARNG-CSG-P (40-5f)

July 23, 2012

MEMORANDUM FOR: The Adjutant General of TX ARNG, ATTN: **Non-Responsive** TX
Army National Guard Armory, 2020 Wallace Wehring Road, Rosenberg, TX 77471.

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey of TX ARNG Rosenberg Armory, Rosenberg, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1998.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, January 2007, Guidelines for Air Sampling and Bulk sample Collection.
- k. Title 29, Code of Federal Regulations (CFR), 2004 rev., part 1910, Occupational Safety and Health Standards.

2. General. At the request of TX ARNG Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling at of TX ARNG Rosenberg Armory, Rosenberg, TX.

July 23, 2012

SUBJECT: Transmittal of IH Survey of TX ARNG Rosenberg Armory, Rosenberg, TX.

3. Findings. The information that follows is based on the findings of the survey performed. All HHIM field survey forms, industrial hygiene sampling and survey findings of the report are enclosed (See ENCL 1). Operations of very short duration were not sampled due to the requirements of the sampling method. If the operation changes or if the length of the operation is increased, contact this office to schedule sampling if it is deemed needed.
4. Recommendations. Follow the recommendations made in the enclosed report, requesting industrial hygiene (IH) services where needed to complete the recommendations.
 - a. The recommendations given in the comments section of the HHIM data sheets and data collected will serve as an update of the baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY2012. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY2013 IHIP.
 - b. Have all HHIM data entered into the HHIM computer module.
 - c. Use the report to help in correcting all deficiencies noted.
 - d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present visits, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - e. Contact the State Occupational Health Office for any medical Surveillance that may be needed.
 - f. To execute your responsibilities in correcting all deficiencies, coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
5. The present report addressed to the local facility commanders was divided in such a way that personal data can be detached and kept by the OHM or blocked when forwarding these reports to other entities within the appropriate offices of TX ARNG. If additional

Non-Responsive

CF:

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Non-Responsive



April 23, 2012

Non-Responsive



hory

2020 Wallace Wehring Road
Rosenberg, TX 77471

RE: Baseline Industrial Hygiene Survey

FINAL REPORT

FOR

BASELINE INDUSTRIAL HYGIENE SURVEY

TEXAS ARMY NATIONAL GUARD

ROSENBERG ARMORY

ROSENBERG, TX

DATE:

APRIL 10, 2012

PREPARED BY

Non-Responsive

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2.0 INSTRUMENTATION

3.0 FINDINGS

4.0 REFERENCES

Attachment 1 IHIM Forms

Attachment 2 Laboratory Reports: Converted IFR, Drill Hall, Weapons Vault

Laboratory Reports: A/C-Heating System Outlet Grills

Attachment 3 Converted IFR, Drill Hall and Weapons Vault Sampling Areas

Attachment 4 Photographs of the Facility

Attachment 5 Schematic Drawing of Facility

1.0 INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, **Non-Responsive** performed a Baseline Industrial Hygiene Survey at the TX ARNG Rosenberg Armory. The purpose of the survey was to perform a baseline survey to evaluate health hazards, controls present in the work site, collect lead swipe samples from renovated/inactive or closed Indoor Firing Ranges, Weapons Vault, A/C-Heating System, illumination survey and to make recommendations regarding health hazards associated with the work at the Rosenberg Armory.

The facility was built in 1992. The facility houses the B Troop 1-112th CAV. The armory is used by the troops of the above mentioned unit for their monthly weekend drills.

The B Troop 1-112th CAV with about 70 troops had two full time AGR personnel at the time of the survey. The AGR employees are assigned to perform administrative duties Monday-Friday 7:00am-4:00pm. The facility houses administrative areas, a drill hall, supply room, weapons vault, a maintenance bay, a converted IFR and a kitchen. The maintenance bay is used to store vehicles, lawn care machines and other equipment. Personnel reported that the men's bathroom is very hot and adding A/C would help with heat control in the warm days. It was also reported that the fenced motor pool area is too small to accommodate the vehicles assigned to the unit. The trailers had to be stored outside the fenced area. They are chained together. A schematic drawing of the facility can be found in Attachment 5.

The facility was visually examined and personnel consulted to assess potential hazards present. Health Hazard Information Modules were completed. Illumination survey was performed throughout the facility.

2.0 INSTRUMENTATION/CALIBRATION

The following instrumentation was used to obtain light measurements. The instrument used has been calibrated and was operated according to the manufacturer's recommendations:

- EXTECH INSTRUMENTS Light Meter
- GHOST WIPES, Lead Wipes

3.0 FINDINGS

Illumination

Illumination levels were recorded in administration offices, the drill hall and the supply room. Light measurements were at or above IES guidelines throughout the facility. See Light Readings Table at the end of this section.

Administration

Personnel perform administrative duties that consist of reading, handling and generating paper work. Computer use comprises a large portion of the working day, four to five hours per day. This continuous use of computers can in the long run lead to eyestrain and hand/wrist soreness. Personnel reported no health problems associated with the job at the time of the survey.

Motor Pool

The motor pool is located at the rear of the building. It is locked and fenced. At the time of the survey, many of their vehicles were at an FMS facility having radios installed. Personnel reported that the fenced area is too small to accommodate all their vehicles. There is open space that can be used to expand the pool area. Most of the vehicles are HMMWV and a couple of trucks. Personnel reported that they have to store the trailers outside the fenced area and chained to each other. Two vehicles were located inside a maintenance area used for storage and PMCS. Operator level PMCS are performed at the armory prior to using the vehicles. When major repairs are needed, it is done at FMS 36.

Drill Hall

The Drill Hall is located at the left side of the building. It is used primarily for formation and training on weekend drills. It was reported that the Drill Hall is occasionally used (About two times a year) to clean weapons using wipes and CLP either on the floor or on tables. The used rags are collected in bags and taken to FMS 36 for disposal. The tables are cleaned afterwards. There are six air exhaust ventilation fans, located at the roof area and spread around the room. At the time of the survey all air exhaust ventilation fans were working. When weapons are used in the field, they are cleaned there. Personnel reported occasionally vehicles are brought in the Drill Hall to load and unload equipment but the vehicles are not stored there. The Drill Hall is rented occasionally for activities such as birthday parties and Cubs Scouts. Renters bring their own food. They are allowed to use the ice machine and the sink in the kitchen.

Laboratory Results From Drill Hall

All lead samples were taken using a 10 inch by 10 inch template. The US environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Two wipe samples were taken from the Drill Hall. None of the two samples were above the clearance level of the EPA 40ug/ft² or the NGB 200ug/ft². See table 1 for results. See attachment 3 for sampling locations.

Table 1

Sample Number	Sample Location	Results	
8	Drill Hall Floor, Right Side Wall, 14'3" To The Left Of The Fire Extinguisher	BRL	BRL
9	Drill Hall Floor, Left Side Wall, 15' 6" To The Left Of The Fire Extinguisher	BRL	BRL
14	Blank	BRL	BRL

Kitchen

The facility has a kitchen that is not used to cook on weekend drills. The unit does not have a mess section. They go to contracted restaurants to eat on weekend drills. At the time of the survey, the refrigerator and the washer were no working and the stove was disconnected. The ice machine was working.

Deactivated Indoor Firing Range

There is a deactivated Indoor Firing Range (IFR) at the facility which is used once in a while for training. Personnel reported that the IFR was never used as such. Personnel also reported that it was cleared for use by the environmental office. The backstop and the shooting areas at the rear were still in place. All lead samples were taken using a 10 inch by 10 inch template. The US environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Four wipe samples were taken from the IFR. None of the samples were above the EPA clearance level of 40ug/ft² or the NGB clearance level of 200ug/ft². See table 2 for results. See attachment 3 for sampling locations.

Table 2

Sample Number	Sample Location	Results	
1	Bullet Backstop, 8' From The Right Wall, 2' From The Bottom	BRI.	BRI.
2	Floor In Front Of The Backstop, 5'6" From Left Wall	BRI.	BRI.
3	Right Side, Top Of Cabinet About The Middle Of The Room	BRI.	BRI.
4	Top Of The 4 th Shooting Platform (Folded) From The Left, At The Rear Of Room	BRI.	BRI.
14	Blank	BRI.	BRI.

Weapons Vault

The Rosenberg Armory has a weapons storage vault located in the Supply Room. When the troops are going for annual weapons qualification, the Supply NCO transports the weapons from the armory to the field. The weapons are distributed there. After using them they are cleaned in the field, placed back in the racks and return to the armory. As stated in the Drill Hall section, weapons are also cleaned there on tables not covered. Weapons are distributed at the supply room. After, the weapons are returned; tables are cleaned and any dirty rags are collected in containers and taken later to the FMS 36 for proper disposal. The dehumidifier in the weapons vault was working the day of the survey. It was reported that it is on all the time. It is connected to hoses that drain the water. All lead samples were taken using a 10 inch by 10 inch template. The US environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Four wipe samples were taken from the weapons vaults racks and floor. All of the samples were above the EPA clearance level of 40ug/ft². None of the samples was above the clearance level of 200ug/ft². See table 3 for results. See attachments 3 for sampling locations and pictures.

Table 3

Sample Number	Sample Location	Results	
10	Rear Wall Right, Only Rack At Rear, Floor & Rack Bottom	50ug	71ug/ft2
11	Right Wall, 1 st Rack From The Rear, Floor & Rack Bottom	131ug	187ug/ft2
12	Right Wall, 2 nd Rack From The Rear, Floor & Rack Bottom	100ug	142ug/ft2
13	Right Wall, 4 th Rack From The Rear, Floor & Rack Bottom	53ug	75ug/ft2
14	Blank	BRL	BRL

A/C System

Central A/C-Heating units are used to cool the administration offices and the classrooms. The units have been changed over the years. Personnel reported that the units cool and heat well. The A/C-Heating furnaces are located inside the electrical room. There are two filters, one per unit. The filters were clean (New) the day of the survey. The filters are changed on a regular basis by state personnel. All lead samples were taken using a 10 inch by 10 inch template. The US environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Three wipe samples were collected from the A/C-Heating outlet grills in the offices and the classroom. All samples were below the clearance level of the EPA 40ug/ft2 and NGB 200ug/ft2. See Table 4 for results. See attachments 4 for pictures.

Table 4

Sample Number	Sample Location	Results
5	A/C-Heating Outlet, Admin Office (Orderly Room)	BRL
6	A/C-Heating Outlet, Supply NCO Office	BRL

7	A/C-Heating Outlet, Classroom	BRI.
14	Blank	BLR

Material Safety Data Sheets

There was an MSDS Book on top of the right flammables cabinet in the POI room/Flammable storage room located at the rear left of the building. This was the only MSDS Book found in the armory the day of the survey. There were two flammables cabinets inside. On one of the cabinets, CLP, spray paint cans, fuel for lawn care equipment, transmission oil and motor oil were stored. The other had 5 Gallons fuel tanks.

Light Readings

Light measurements were taken in various locations throughout the facility. The results were compared to guidelines recommended by the Illuminating Engineering Society (IES). The results of the survey are shown in Table 5.

Table 5

Location	Light Reading (footcandles)	IES Recommendation (footcandles)
ADO Readiness NCO Office	62-90 (Avg. 76)	50-100
ADO Admin Office	51-78 (Avg. 68)	50-100
ADO Supply NCO Office	75-90 (Avg. 83)	50-100
ADO Supply Room Storage Area	21-51 (Avg. 36)	20
Learning Center	57-72 (Avg. 63)	50-100
Classroom	42-80 (Avg. 66)	50-100
1 SG Office	51-57 (Avg. 52)	50-100
CO Office	50-56 (Avg. 53)	50-100
Library/Classroom	48-53 (Avg. 50)	50-100
Drill Hall	48-77 (Avg. 64)	30

Light measurements were at or above IES guidelines throughout the facility.
ANSI RP7-1991.

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

Non-Responsive

RECOMMENDATIONS

- Recommend that when using computers for extended periods of time, personnel should take occasional breaks and change position to minimize the possibility of eyes and/or hands/wrist injury.
- Continue to ensure that weapon maintenance and cleaning is done in a well-ventilated area. Continue to practice good personal hygiene by washing hands after handling and cleaning weapons and ammunition. Ensure that the weapons racks are well cleaned before placing them back in the vault.
- Recommend that a request should be made to the appropriate state agency for the possibility of installing an A/C unit or A/C outlets in the bathrooms.
- A request should be made to the appropriate state agency to evaluate the possibility of expanding the Motor Pool fenced area to accommodate more vehicles.
- Recommend as an alternative the use of disposable plastic to cover the tables when weapons are cleaned at the facility.
- Recommend that the MSDS book be updated as products are eliminated or new products arrive.
- Ensure that personnel and troops have knowledge of the location of the MSDS book. And is enrolled hazardous materials safety training.

DEMOGRAPHIC DATA

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a. ARLOC 48000 b. INSTALLATION Rosenberg TX Armory c. BLDG/RM NUMBER RNCO office
d. LOCATION/CODE Readiness WCO e. OPERATION/CODE Admin work f. DESCRIPTION Platoon Sgt
g. MACOM/CODE NG h. NO 0 i. SUPERVISOR shy/Dg
j. TELEPHONE/AUTOVON NUMBER Non-Responsive k. NO CONTRACTOR(S) 0 l. NO LOC(S) 0 m. NO CIV(S) 0 n. NO OTHER 0

SECTION 2. IH STAFFING DATA

a. LAB HOODS 0 b. VAPOR DEGREASERS 0 c. MAINTENANCE BAYS 1 d. SPRAY BOOT(S) 0
e. OPEN SURFACE TANKS 0 f. VENTILATION UNITS 0 g. NO OTHER 0

SECTION 3. SURVEY DATA

a. SURVEY DATE 4/10/12 b. EVALUATOR (INITIALS) Non-Responsive

c. CONTROLS PRESENT	d. EVALUATION	e. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
Lighting - office	62-90, Avg: 76	FC	50-100	Adgt

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

1. RESPIRATOR

DISPOSABLE

FACE AIR PURIFYING

FACE AIR PURIFYING

FULL FACE AIR PURIFYING

POWERED AIR PURIFYING

AIRLINE

SELF-CONTAINED

ABRASIVE BLASTING HOOD

MANUFACTURER

NIOSH TC NO

P.A.

2. GLOVES	R/A	3. EYES/FACE	R/A	4. HEARING	R/A	5. BODY	R/A	6. HEAD/FOOT	P.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/HARNESS	/	SAFETY/NONCONDUCTIVE SHOES	/
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

a. CAS CODE	b. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
POVDT	Hands/Eye Strain - Computer use for long periods of time	3	NO

DEMOGRAPHIC DATA

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a. ARLOC 48000 b. INSTALLATION Roseberg, TX Armory c. BLDG/RM NUMBER Supply Room Office
d. LOCATION/CODE AA, SA e. OPERATION/CODE AD0, SAH f. DESCRIPTION
g. MACOM/CODE N6 h. NO CIV(S) 1 i. NO MIL 3 j. NO CONTRACTOR(S) 1 k. NO LOC(S) 1 l. NO OTHER 1
m. NO CIV(S) 1 n. NO MIL 3 o. NO CONTRACTOR(S) 1 p. NO LOC(S) 1 q. NO OTHER 1

Non-Responsive

Non-Responsive

SECTION 2. IH STAFFING DATA

a. LAB HOODS 1 b. VAPOR DEGREASERS 1 c. MAINTENANCE BAYS 1 d. SPRAY BOOT-S 1
e. OPEN SURFACE TANKS 1 f. VENTILATION UNITS 1

Non-Responsive

SECTION 3. SURVEY DATA

a. SURVEY DATE 4/10/12 b. EVALUATOR (INITIAL) [Redacted]

c. CONTROLS PRESENT	d. EVALUATION	e. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
Lighting, Office	75-90; Aug. 83	FL	30-100	Adapt
Lighting, Supply Storage	21-51; Aug. 36	FL	20	Adapt

n. PERSONAL PROTECTIVE EQUIPMENT (H-REQUIRED; A-AVAILABLE)

1. RESPIRATOR

MANUFACTURER	NIOSH TC NO	P.E.
DISPOSABLE		
FACE AIR PURIFYING		
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	P.E.
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/NGNCONDUCTIVE SHOES	
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

a. CAS CODE	b. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDATION (YES or NO)
PO VDT	Hand/Eye Strain, Computer work for long periods of time	3	0
FOOT HAZ	Falling Objects	3	0
PO LIFTING	Heavy Lifting	3	0

Analytical Environmental Services, Inc

Date: 26-Apr-12

Lab Order: 1204E77
 Client: **Non-Responsive**
 Project: Rosenberg, 1x Armory
 Matrix: Wipe
 Date Received: 4/19/2012 2:23:00 PM

LEAD ON WIPES (N9100/7082)
N7082

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1204E77-001A	1	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-002A	2	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-003A	3	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-004A	4	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-005A	5	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-006A	6	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-007A	7	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-008A	8	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-009A	9	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-010A	10	50	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-011A	11	131	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-012A	12	100	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-013A	13	53	ug, Total	20	1		04/10/2012	04/24/2012	MW
1204E77-014A	14	BRL	ug, Total	20	1		04/10/2012	04/24/2012	MW

Qualifiers: BRL - Not Detected at the Reporting Limit

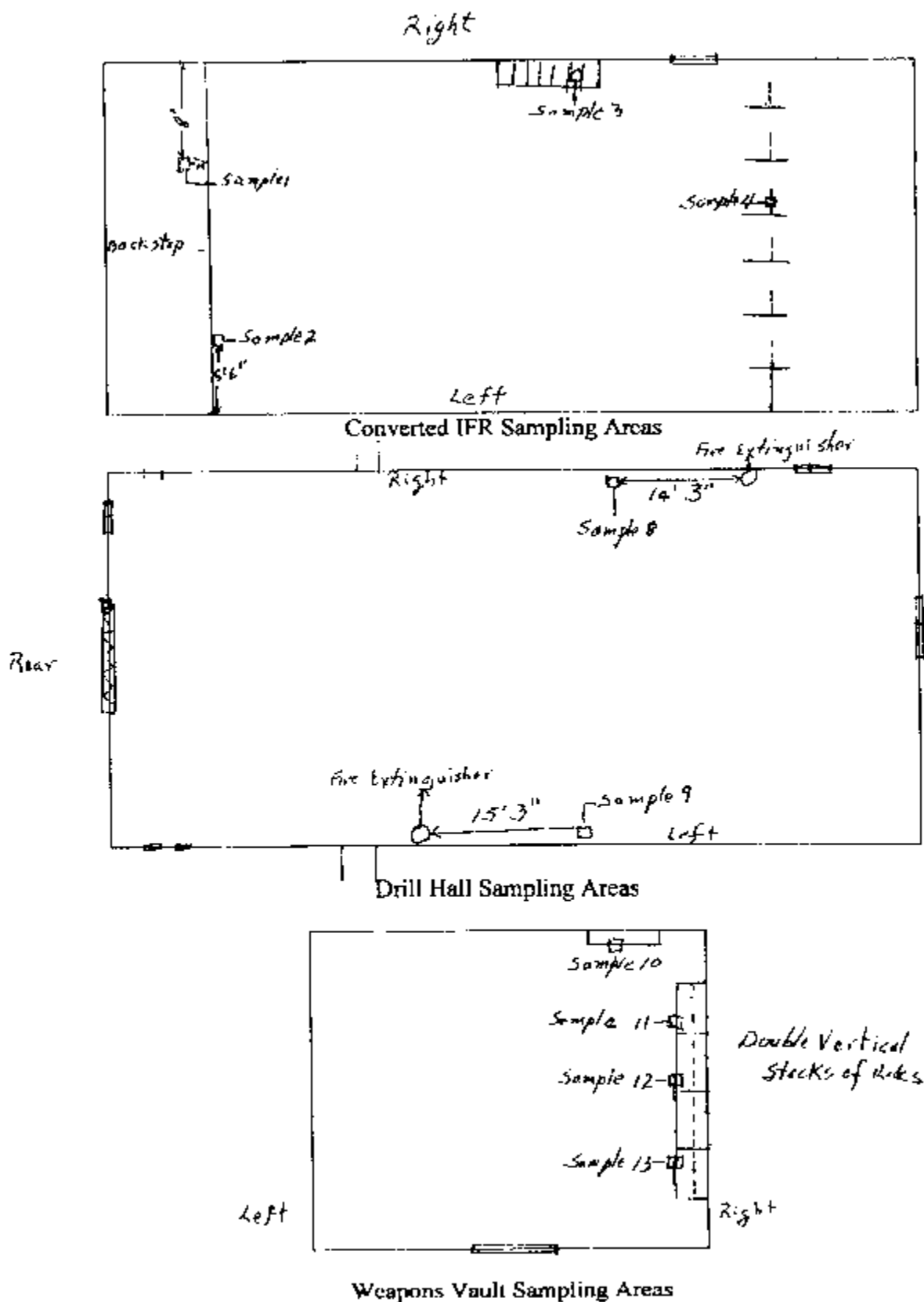
DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable
 Posted to NGB FOIA Reading Room
 May, 2018

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FOIA Requested Record #J-15-0085 (TX)
 Released by National Guard Bureau
 Page 13 of 1757



Rosenberg, TX Armory



Rosenberg, TX Armory



Drill Hall, Front View



Drill Hall, Rear View



Drill Hall, One OF Six Air Exhaust Ventilators



Sample, Drill Hall



Sample, Drill Hall



Sample, A/C-Heating Outlet



Sample, A/C-Heating Outlet



Sample, A/C-Heating Outlet



Clean A/C-Heating Filter



Whisper Cool Unit In Men's Bathroom



Converted IFR, Front View



Converted IFR, Backstop Close Up



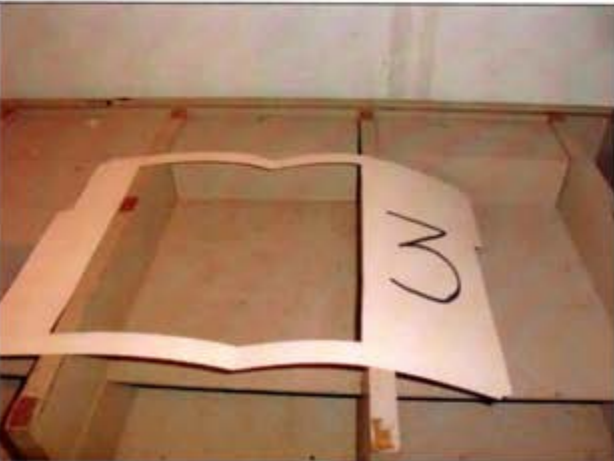
Converted IFR, Rear View



Sample, Converted IFR



Sample, Converted IFR



Sample, Converted IFR



Sample, Converted IFR



POL, Outside



Two Flammables Cabinets Inside POL



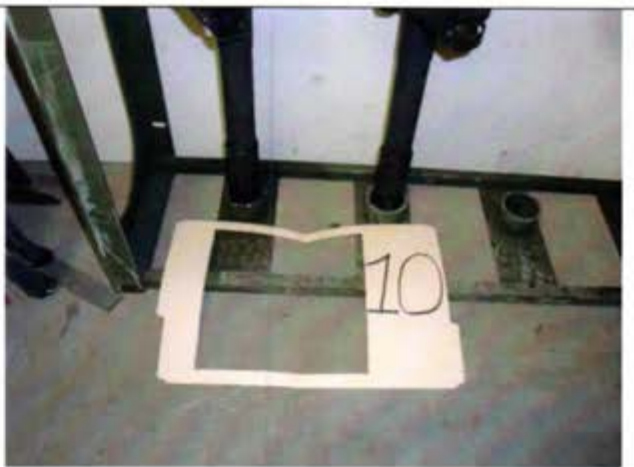
MSDS Book On Top Of Flammables Cabinet



Contents, Flammables Cabinet



Contents, Flammables Cabinet



Sample, Weapons Vault



Sample, Weapons Vault



Sample, Weapons Vault



Sample, Weapons Vault



Maintenance Bay



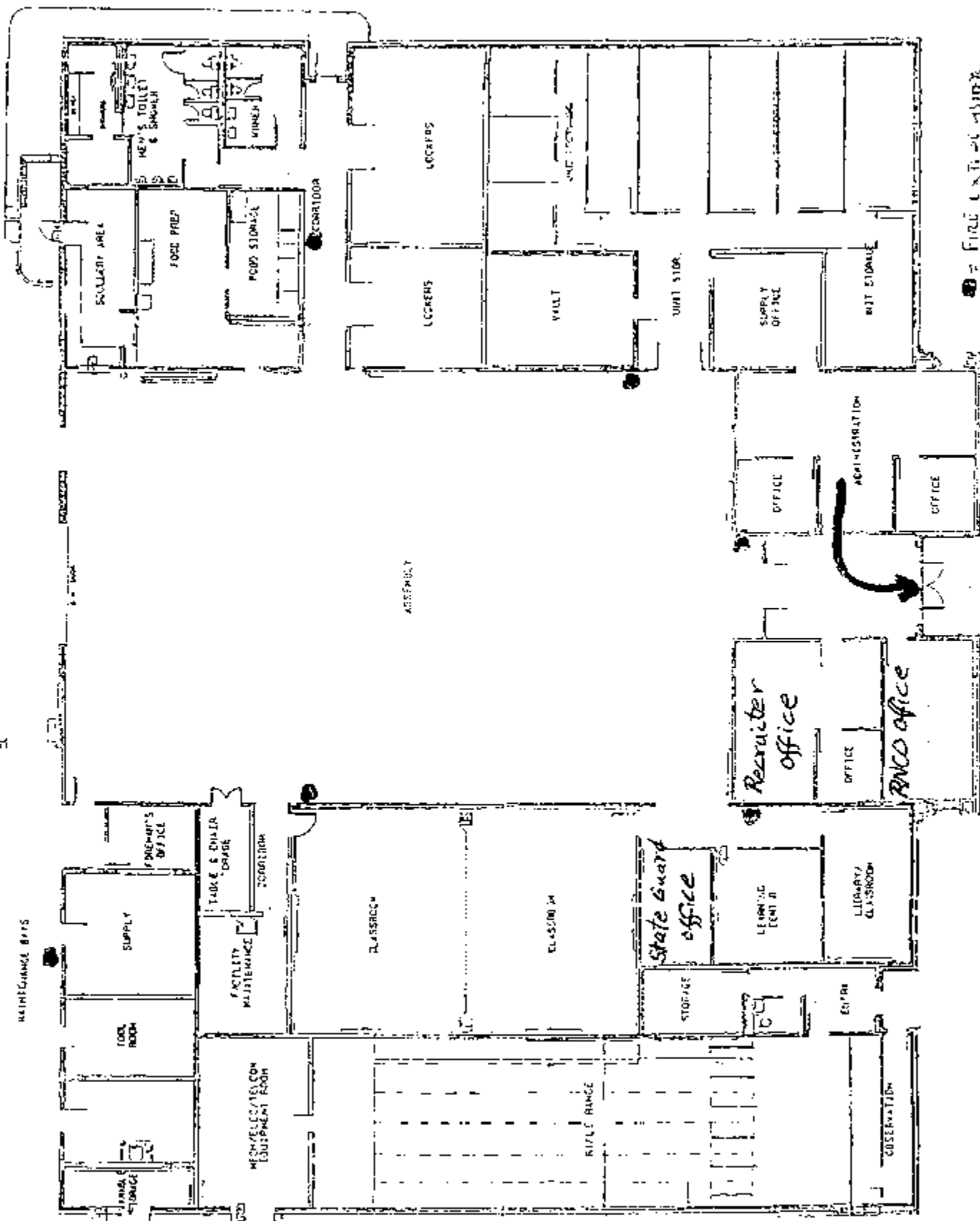
Motor Pool



Trailers Stored Outside Fenced Area Of Motor Pool

FIRE PLAN

Rosenberg, TX Armory



DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

February 10, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of October 2003, Industrial Hygiene Survey, **Non-Responsive** Technical Solutions Fayetteville, GA.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

b. The survey was conducted by **Non-Responsive** Technical Solutions, Fayetteville, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.I., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
- 5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

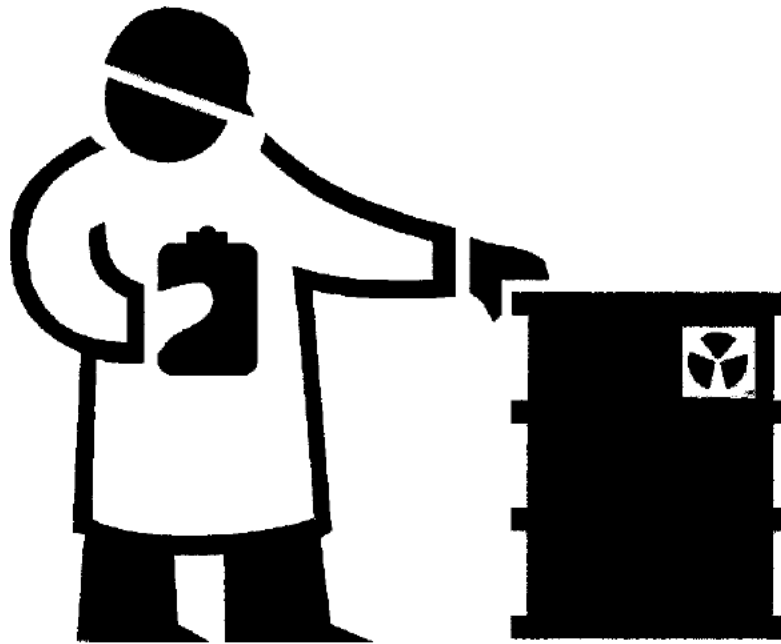
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Army National Guard Industrial Hygiene Survey



San Marcos Armory

201 City Park
San Marcos, TX 78666-5826

POC

Non-Responsive

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5 November 2003

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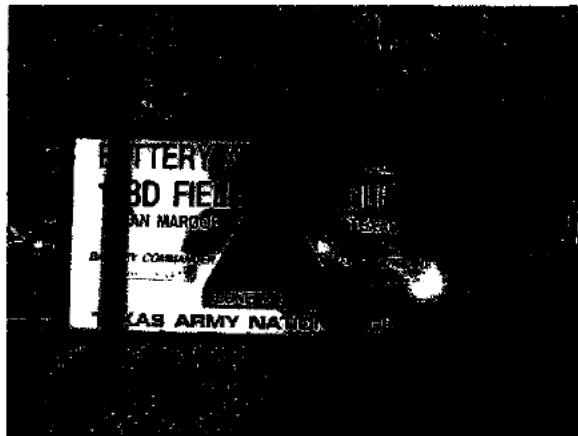
MEMORANDUM FOR: Texas Army National Guard, ATTN: **Non-Responsive** Commander,
Battery A 4th Battalion 133 FA, 201 City Park, San Marcos, TX 78666-5826

SUBJECT: Industrial Hygiene Survey of San Marcos Armory Army National Guard, San Marcos,
Texas

BACKGROUND

At the request of **Non-Responsive** National Guard Bureau Regional
Industrial Hygiene South Office, Atlanta, GA, an initial baseline industrial hygiene survey was
performed at the following Army National Guard Armory facility on 14 October 2003:

**San Marcos Armory
201 City Park
San Marcos, TX 78666-5826**



This facility houses the following units:

	Unit	Commander
1	Battery A 4th Battalion 133 FA	Non-Responsive
2		

The facility was built in 1956

The baseline industrial hygiene survey includes:

- Lead wipe dust surveys
- Illuminations surveys
- Ventilation surveys
- Noise surveys, if necessary

A field survey form is completed on all industrial operations at the facility, and the data contained in this report.

An initial baseline industrial hygiene survey was conducted at the San Marcos Armory, San Marcos, Texas, on 14 October 2003 as part of the Texas Army National Guard Occupational Health Program to identify potential hazards in the workplace. The survey consisted of collecting lead wipe samples, bulk asbestos samples (as needed), conducting noise and illumination survey, as well as evaluating the condition of the building, including the Heating Ventilation and Air Conditioning (HVAC) System as it relates to indoor air quality. A review of several industrial hygiene programs, such as hazard communication, radiation protection, ergonomics, and personal protective equipment was also performed.

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

Building condition / Indoor Air Quality	<ol style="list-style-type: none"> 1. There were no obvious signs of occupational hazards or concerns. 2. The facility is maintained very well. 	Continue to follow good hygiene and housekeeping practices.
Lead Wipe Samples	Below Reportable Levels (BRL) to 439 µg/ft ²	Continue to follow good hygiene and housekeeping practices.
Asbestos Bulk Samples	No issues	No action
Illumination Survey	12.0 to 135 foot-candles	Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
Noise Survey	No issues	No action
Hazards Communication	<p>No Chemical list available.</p> <p>MSDS are not updated for chemicals used.</p> <p>***Unit just returned from deployment, so they did not have all paperwork updated as yet.</p>	<p>Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.</p> <p>Personnel responsible for these items should receive annual training in HAZCOM requirements</p>

Ergonomics	Ergonomics Survey in Work Areas and Supply Areas	Complete ergonomics survey on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action

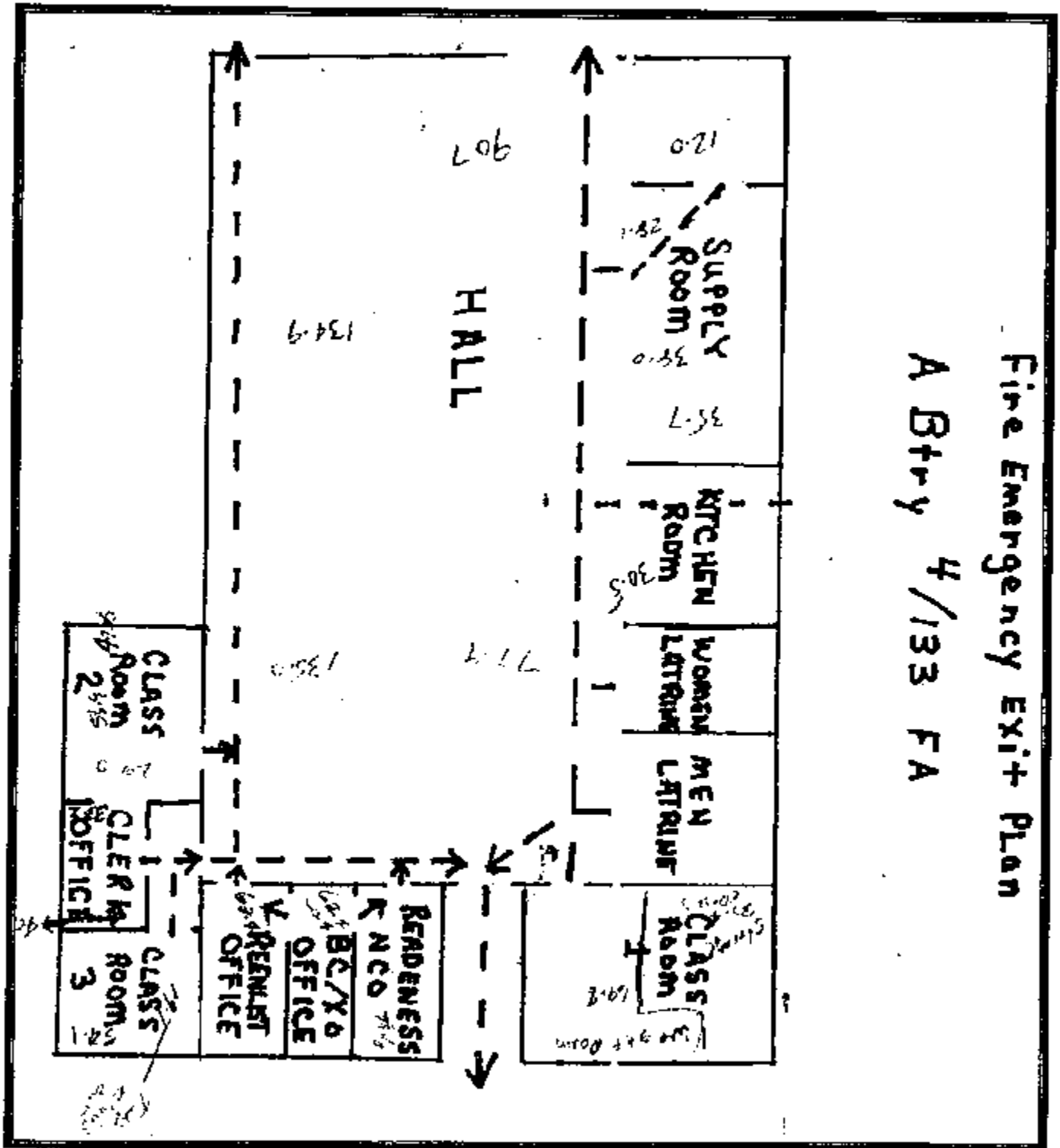
TECHNICAL ASSISTANCE

Non-Responsive

The following survey instrumentation was provided by or for the contractor, and was used to obtain lead wipe dust, illumination, ventilation, and noise sample measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

Extech Light Meter	Q009472	Purchased New June 2003
Brueel & Kjaer Sound Level Meter	1942768	September 7, 2002
Brueel & Kjaer 4231 Acoustic calibrator	1944552	September 3, 2002
Alnor Velometer	53281	October 1, 2002
Ghost Wipe Lead Dust Wipes		

FACILITY DIAGRAM:



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PERSONNEL DATA:

This facility houses the following full-time personnel:

Last Name	First Name	MI	Sex	SSN (Last 4 digits)	Rank	Unit #
Non-Responsive						

BUILDING CONDITION:

Walk-through Observations

No.	Location	Observation	Photo
1		There were no obvious signs of occupational hazards or concerns. This facility is under good maintenance.	
2	Kitchen	Lead wipe samples take on kitchen counter	1
3	Drill Hall	Lead wipe samples taken near Supply Room	2
4	Drill Hall	Lead wipe samples taken in vehicle parking area	3
5			
6			
7			

Paint Chips Lead Sample Results:

Sample Location	Sample No.	Results (ppb)	Photo

ADMINISTRATIVE OFFICES:

Light Reading Results:

There are several administrative offices in the facility. Administrative personnel are required to use computer systems, file, read, write and perform other administrative tasks as necessary. Computer use occurs throughout the day.

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the administrative areas are as follows:

ReEnlist Office	63.4		
BC / XO Office		61.4	
Readiness NCO	75.6		
Classroom 1 (Weight Room)	69.8		
Classroom 1 (Storage)	80.4		
Classroom 2		42.8	
Clerk Office		37.2	
Classroom 3	19.7		Two bulbs blown
Classroom 3	54.1		

Ventilation Sample Results:

BC / XO Office	800	12 X 12	

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

KITCHEN / MESS HALL

The kitchen is currently used for cooking, and the surfaces are used to prepare sandwiches and other light meals.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the kitchen / mess hall area are as follows:

Kitchen Counter	30.5		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

1-San Marcos	Blank (Administrative Offices, Kitchen, Drill Hall and HVAC)	BRL	Below Reporting Levels
2-San Marcos	Kitchen Counter	BRL	

DRILL HALL

Personnel officially use the drill hall 2 days per month. It is not rented out for community events. Weapons cleaning take place by units during drill weekends.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the drill hall area are as follows:

Drill Hall 1	72.9		
Drill Hall 2	135.0		
Drill Hall 3	134.9		
Drill Hall 4	90.7		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

3-San Marcos	Drill Hall near rear door	BRL	Below Reporting Levels
4-San Marcos	Drill Hall outside supply office	BRL	

Noise Sample Results:

Noise levels in the drill hall area were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

[illegible]

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SUPPLY ROOM(s) and VAULT(s)

This facility has one supply room, with several storage areas. The supply SGT uses the computer between 4-8 hours per day. An inventory of all chemicals and a Material Safety Data Sheet book are currently not updated due to recent return from deployment. Heavy lifting is performed with the aid of hand jacks, lifts, and other personnel.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the Supply Room / Vault areas are as follows:

Lighting			
Supply Counter	28.1		
Supply Desk 1	38.0		Readings taken near window
Supply Desk 2	35.7		Readings taken near window

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Lead Wipe Sample Results			
5-San Marcos	Blank (Supply and Vault)	BRL	Below Reporting Levels
6-San Marcos	Vault Rack	32.70	
7-San Marcos	Shelf in Vault	439	
8-San Marcos	Supply Desk	86.0	

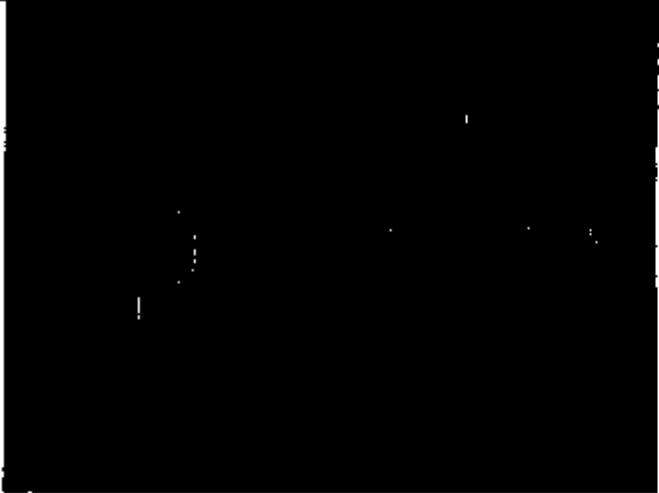


INDOOR FIRING RANGE

This facility has never had an indoor firing range.

MOTOR POOL

The motor pool is an outdoor area used to park vehicles and perform light maintenance.

- a. Continue a maintenance schedule for ensuring that filters in the HVAC system are properly changed, any leaks or standing water are identified, repaired, and prevented, and supply and exhaust grilles are appropriately cleaned. Failure to do so may lead to indoor air quality issues. The plan should include monitoring, inspecting and cleaning HVAC components such as outside air intakes, outside air dampers, air filters, drain pans, heating and cooling coils, the interior of air handling units, fan motors and belts, air humidification, controls and cooling towers. Consult manufacturers' instructions for appropriate maintenance schedules.
- b. If indoor air quality issues develop, non-porous (e.g., metals, glass, and hard plastics) and semi-porous (e.g., wood, and concrete) materials that are structurally sound and are visibly moldy can be cleaned and reused. Cleaning should be done using a detergent solution. Porous materials such as ceiling tiles and insulation, and wallboards with more than a small area of contamination should be removed and discarded. Porous materials (e.g., wallboard, and fabrics) that can be cleaned, can be reused, but should be discarded if possible. A professional restoration consultant should be contacted when restoring porous materials with more than a small area of fungal contamination. All materials to be reused should be dry and visibly free from mold. Routine inspections should be conducted to confirm the effectiveness of remediation work.
- c. Any initial water infiltration should be stopped and cleaned immediately. An immediate response (within 24 to 48 hours) and thorough clean up, drying, and/or removal of water damaged materials will prevent or limit mold growth. If the source of water is elevated humidity, relative humidity should be maintained at levels below 60% to inhibit mold growth. Emphasis should be on ensuring proper repairs of the building infrastructure, so that water damage and moisture buildup does not recur.
- d. Contaminated materials that cannot be cleaned should be removed from the building in a sealed plastic bag. There are no special requirements for the disposal of moldy materials.
- e. Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
- f. An ergonomics survey should be completed for all supply and administrative personnel as a preventative measure to address and document any ergonomic concerns or problems. An emphasis on maintaining neutral postures and proper lifting techniques should be covered.
- g. Material Safety Data Sheets (MSDS) are required to be kept at the primary workplace facility and to be easily accessible in case of emergency. Personnel responsible for these items should receive annual training in the requirements of the Hazardous Communication Program and the appropriate keeping and storage of MSDSs.
- h. Ensure personnel are prohibited from drinking, eating, smoking chewing tobacco and gum, or applying makeup in supply and maintenance areas. Hands should be cleaned with soap and water before eating drinking, eating, smoking, chewing tobacco and gum, or applying makeup. Remove all refrigerators, cups, and other utensils from supply and maintenance areas.
- j. Fire extinguishers should be visually inspected on a monthly basis and recorded on service tag.
- k. Perform noise survey on maintenance equipment. Ensure that all noise hazardous machinery and noise hazardous areas are appropriately marked.
- l. Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.

	
Photo # 1	Photo # 2
Kitchen Counter – Sample taken here	Drill Hall near Supply Room – Sample taken here
	
Photo # 3	Photo # 4
Drill Hall near back door parking area – Sample taken here	

Analytical Environmental Servs, Inc.

Date: 10/24/2003

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: Technical Solutions International
 Project: San Marcos Armory
 Project No: San Marcos Arm
 PO No:

Lab Order: 0310640
 Date Received: 10/20/2003 12:5
 Matrix: Wipe
 Analyst: CDW

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0310640-001A	1-SAN MARCOS	BRL	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-002A	2-SAN MARCOS	BRL	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-003A	3-SAN MARCOS	BRL	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-004A	4-SAN MARCOS	BRL	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-005A	5-SAN MARCOS	BRL	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-006A	6-SAN MARCOS	32.0	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-007A	7-SAN MARCOS	179	µg. Total	2.83	1	10/14/2003	10/21/2003
0310640-008A	8-SAN MARCOS	86.0	µg. Total	2.83	1	10/14/2003	10/21/2003

Qualifiers: MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 2 of 1

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

February 10, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

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- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
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- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
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NGB-AVN-SI

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l. Report of October 2003, Industrial Hygiene Survey, **Non-Responsive** Technical Solutions Fayetteville, GA.

2. General.

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b. The survey was conducted by **Non-Responsive** Technical Solutions, Fayetteville, GA.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.I, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Seguin Armory, New Braunfels Armory, San Marcos Armory, Hondo Armory, Kerrville Armory and Fredericksburg Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
- 5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

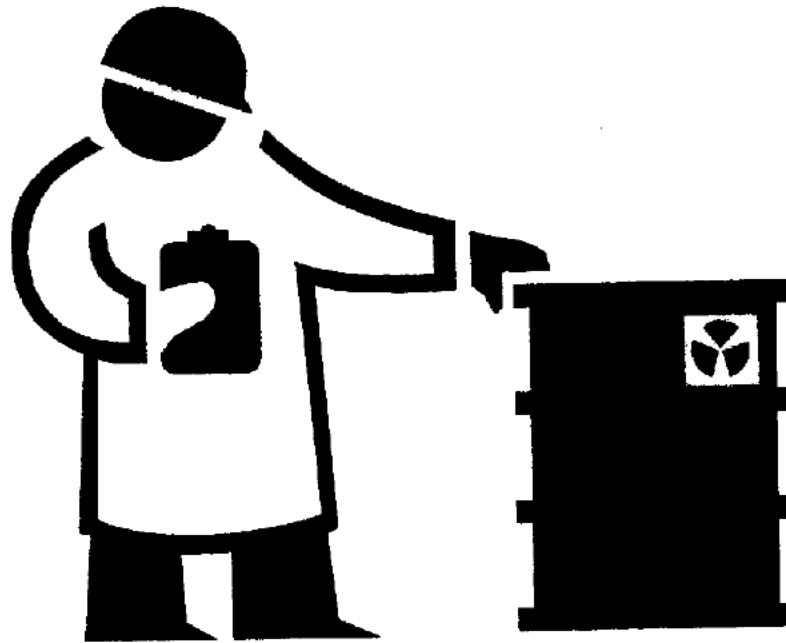
NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Army National Guard Industrial Hygiene Survey



Seguin Armory

1002 S. Guadalupe

Seguin, TX 78155-6829

Non-Responsive

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5 November 2003

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MEMORANDUM FOR: Texas Army National Guard, ATTN: CPT Martin G. Jobe, Commander,
Battery B 4-133 FA, 1002 S. Guadalupe, Seguin, TX 78155-6829

SUBJECT: Industrial Hygiene Survey of Seguin Armory Army National Guard, Seguin, Texas

BACKGROUND:

At the request of **Non-Responsive** National Guard Bureau Regional Industrial Hygiene South Office, Atlanta, GA, an initial baseline industrial hygiene survey was performed at the following Army National Guard Armory facility on **14 October 2003**:

**Seguin Armory
1002 S. Guadalupe
Seguin, TX 78155-6829**

This facility houses the following units:

1002 S. Guadalupe		CONFIDENTIAL	
1	Battery B 4-133 FA	Non-Responsive	
2			

The facility was built in 1963

The baseline industrial hygiene survey includes:

- Lead wipe dust surveys
- Illuminations surveys
- Ventilation surveys
- Noise surveys, if necessary

A field survey form is completed on all industrial operations at the facility, and the data contained in this report.

An initial baseline industrial hygiene survey was conducted at the Seguin Armory, Seguin, Texas, on 14 October 2003 as part of the Texas Army National Guard Occupational Health Program to identify potential hazards in the workplace. The survey consisted of collecting lead wipe samples, bulk asbestos samples (as needed), conducting noise and illumination survey, as well as evaluating the condition of the building, including the Heating Ventilation and Air Conditioning (HVAC) System as it relates to indoor air quality. A review of several industrial hygiene programs, such as hazard communication, radiation protection, ergonomics, and personal protective equipment was also performed.

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

Building condition / Indoor Air Quality	<ol style="list-style-type: none"> 1. There were no obvious signs of occupational hazards or concerns. 2. The facility is maintained very well. 	Continue to follow good hygiene and housekeeping practices.
Lead Wipe Samples	Below Reportable Levels (BRL) to 29 $\mu\text{g}/\text{ft}^2$	Continue to follow good hygiene and housekeeping practices.
Asbestos Bulk Samples	No issues	No action
Illumination Survey	25.5 to 163.3 foot-candles	Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
Noise Survey	No issues	No action
Hazards Communication	<p>No Chemical list available.</p> <p>MSDS are not updated for chemicals used.</p> <p>***Unit just returned from deployment, so they did not have all paperwork updated as yet.</p>	<p>Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.</p> <p>Personnel responsible for these items should receive annual training in HAZCOM requirements</p>

Ergonomics	Ergonomics concerns in Administrative and Supply Areas BEST AVAILABLE COPY	Complete ergonomics survey on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action

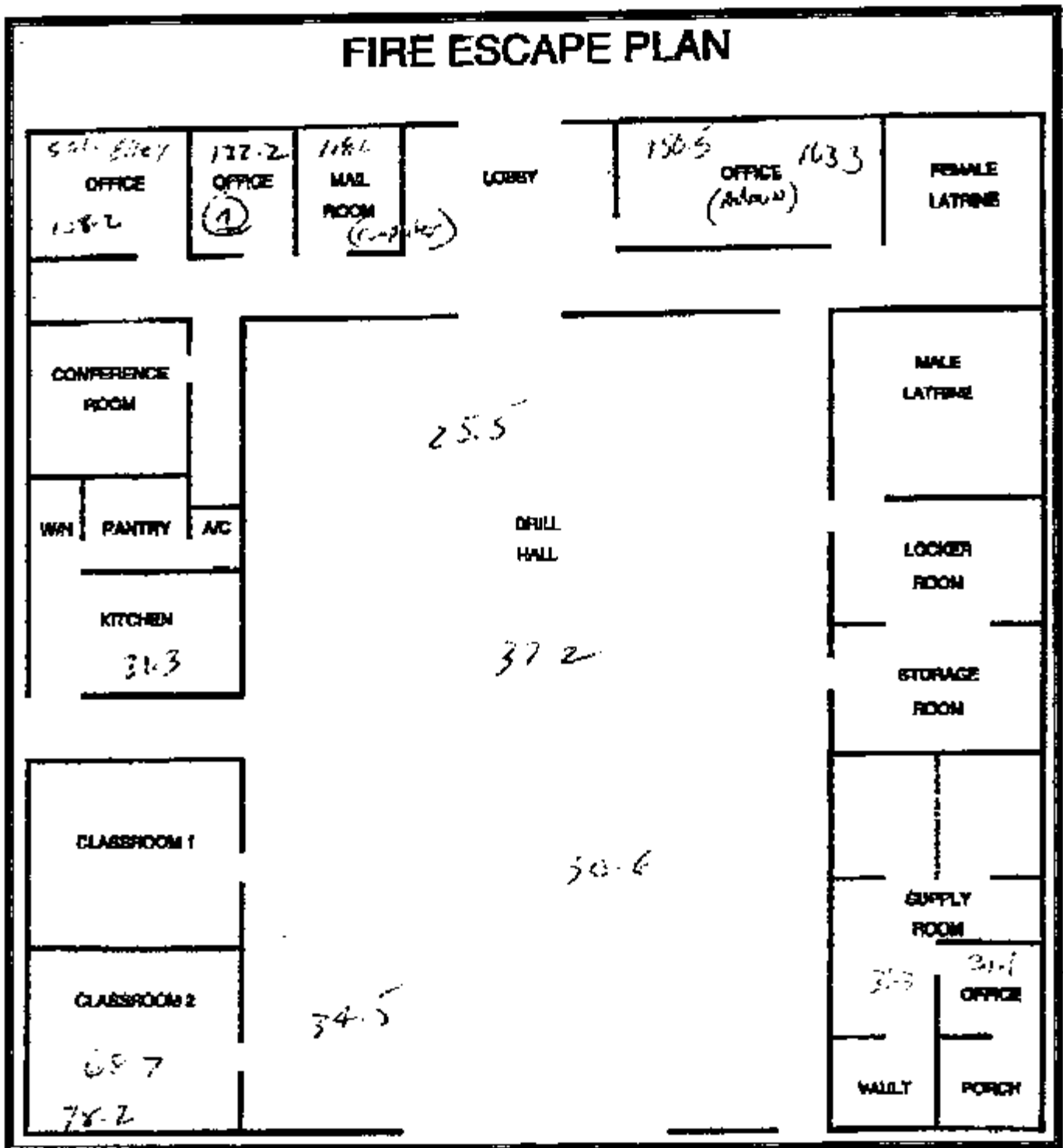
TECHNICAL ASSISTANCE

Non-Responsive

The following survey instrumentation was provided by or for the contractor, and was used to obtain lead wipe dust, illumination, ventilation, and noise sample measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to manufacture recommendations.

Instrumentation	Serial Number	Date Acquired
Extech Light Meter	Q009472	Purchased New June 2003
Bruel & Kjaer Sound Level Meter	1942768	September 7, 2002
Bruel & Kjaer 4231 Acoustic calibrator	1944552	September 3, 2002
Alnor Velometer	53281	October 1, 2002
Ghost Wipe Lead Dust Wipes		

FACILITY DIAGRAM:



PERSONNEL DATA:

This facility houses the following full-time personnel:

Last Name	First Name	MI	Sex	SSN (Last 4 digits)	Rank	Unit #
Non-Responsive						

BUILDING CONDITION:**Walk-through Observations**

1	2	3	4
1		The building is newly renovated and is well maintained.	
2		The vault has new security locks, so no weapons are stored until the new Supply SGT gets the combination changed.	

ADMINISTRATIVE OFFICES:

Light Reading Results:

There are several administrative offices in the facility. Administrative personnel are required to use computer systems, file, read, write and perform other administrative tasks as necessary. Computer use occurs throughout the day.

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the administrative areas are as follows:

Location	Sample Reading (Foot-candles)	Average FC	Remarks
Non-Responsive office	108.2		
Office (1)	122.2		
Mail Room (computer area)	119.6		
Admin 1	150.5		
Admin 2	163.3		
Classroom 2		73.5	

Ventilation Sample Results:

Location	Sample Reading (CFM)	Average CFM	Remarks
Office (1)	400	12x12	
Admin	700	12x12	

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Sample Location	Sample No.	Result (µg/ft²)	Remarks
NONE – Newly remodeled and no IFR			

KITCHEN / MESS HALL

The kitchen is currently not used for cooking, however, the surfaces are used to prepare sandwiches and other light meals.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the kitchen / mess hall area are as follows:

Kitchen Counter	31.3		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Blank (Kitchen / Admin / HVAC)	4-Seguín	BRL	Below Reporting Levels
Kitchen Counter	5-Seguín	BRL	

DRILL HALL

Personnel officially use the drill hall 2 days per month. It is not rented out for community events. Weapons cleaning take place by units during drill weekends.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the drill hall area are as follows:

Drill Hall 1	25.5		
Drill Hall 2	37.2		
Drill Hall 3	30.6		
Drill Hall 4	34.5		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

Drill Hall Outside Supply Office	6-Seguin	BRL	Below Reporting Levels
Drill Hall by back door	7-Seguin	BRL	

Noise Sample Results:

Noise levels in the drill hall area were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

HVAC SYSTEM**Lead Wipe Sample Results:**

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

Sample Location	Sample No.	Results (µg/ft²)	Remarks
Newly Remodeled			

SUPPLY ROOM(S) and VAULT(S)

This facility has one supply room, with several storage areas. The supply SGT uses the computer in the front office area between 8 and 10 hours per day. The Supply SGT does not currently maintain an inventory of all chemicals because he is new to the job and they have just returned from deployment. A Material Safety Data Sheet (MSDS) book is not updated for chemicals used. Heavy lifting is performed with the aid of hand jacks, lifts, and other personnel.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the Supply Room / Vault areas are as follows:

Supply Desk	30.1		
Vault	31.3		

Lead Wipe Sample Results:

Under the Environment Protection Agency standard (40 CFR 745) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

Blank (Supply and vault)	1-Seguín	BRL	Below Reporting Levels
Supply Desk	2-Seguín	BRL	
Vault Floor	3-Seguín	29.0	

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INDOOR FIRING RANGE

This facility has never had an indoor firing range.

MOTOR POOL

The motor pool is an outdoor parking area.

Light Reading Results:

Illumination and Engineering Society of North America (IES) requires 20 to 50 foot-candles (FC) for storage areas and 50 – 100 FC for administrative areas.

Light levels found in the motor pool area are as follows:

[REDACTED]			
N/A			

- a. Continue a maintenance schedule for ensuring that filters in the HVAC system are properly changed, any leaks or standing water are identified, repaired, and prevented, and supply and exhaust grilles are appropriately cleaned. Failure to do so may lead to indoor air quality issues. The plan should include monitoring, inspecting and cleaning HVAC components such as outside air intakes, outside air dampers, air filters, drain pans, heating and cooling coils, the interior of air handling units, fan motors and belts, air humidification, controls and cooling towers. Consult manufacturers' instructions for appropriate maintenance schedules.
- b. If indoor air quality issues develop, non-porous (e.g., metals, glass, and hard plastics) and semi-porous (e.g., wood, and concrete) materials that are structurally sound and are visibly moldy can be cleaned and reused. Cleaning should be done using a detergent solution. Porous materials such as ceiling tiles and insulation, and wallboards with more than a small area of contamination should be removed and discarded. Porous materials (e.g., wallboard, and fabrics) that can be cleaned, can be reused, but should be discarded if possible. A professional restoration consultant should be contacted when restoring porous materials with more than a small area of fungal contamination. All materials to be reused should be dry and visibly free from mold. Routine inspections should be conducted to confirm the effectiveness of remediation work.
- c. Any initial water infiltration should be stopped and cleaned immediately. An immediate response (within 24 to 48 hours) and thorough clean up, drying, and/or removal of water damaged materials will prevent or limit mold growth. If the source of water is elevated humidity, relative humidity should be maintained at levels below 60% to inhibit mold growth. Emphasis should be on ensuring proper repairs of the building infrastructure, so that water damage and moisture buildup does not recur.
- d. Contaminated materials that cannot be cleaned should be removed from the building in a sealed plastic bag. There are no special requirements for the disposal of moldy materials.
- e. Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a light color, cleaning existing light fixtures, rearranging furniture to make better use of available light, and supplemental or task lighting are considerations in increasing available light levels.
- f. An ergonomics survey should be completed for all supply and administrative personnel as a preventative measure to address and document any ergonomic concerns or problems. An emphasis on maintaining neutral postures and proper lifting techniques should be covered.
- g. Material Safety Data Sheets (MSDS) are required to be kept at the primary workplace facility and to be easily accessible in case of emergency. Personnel responsible for these items should receive annual training in the requirements of the Hazardous Communication Program and the appropriate keeping and storage of MSDSs.
- h. Ensure personnel are prohibited from drinking, eating, smoking chewing tobacco and gum, or applying makeup in supply and maintenance areas. Hands should be cleaned with soap and water before eating drinking, eating, smoking, chewing tobacco and gum, or applying makeup. Remove all refrigerators, cups, and other utensils from supply and maintenance areas.
- j. Fire extinguishers should be visually inspected on a monthly basis and recorded on service tag.
- k. Perform noise survey on maintenance equipment. Ensure that all noise hazardous machinery and noise hazardous areas are appropriately marked.
- l. Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.
- m. Portable eyewashes should be maintained on a weekly basis to ensure removal of opportunistic pathogens.

Analytical Environmental Servs, Inc.

Date 10/24/2003

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT:	Technical Solutions International	Lab Order:	0310644
Project:	Seguin Armory	Date Received:	10/20/2003 12:45
Project No:	Seguin Armory	Matrix:	Wipe
PO No:		Analyst:	SSS

Laboratory ID	Client Sample ID	Results	Units	MDL	DF	Date Collected	Date Analyzed
0310644-001A	1-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-002A	2-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-003A	3-SEGUTN	79.0	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-004A	4-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-005A	5-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-006A	6-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003
0310644-007A	7-SEGUTN	BRL	µg. Total	2.83	1	10/14/2003	10/23/2003

MDL - Method Detection Limit
 ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Page 2 of 1

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.**
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.**
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.**
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.**
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.**
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.**
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.**
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.**
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.**
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection**

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Snyder Armory
4401 El Paso
Snyder, Texas

Prepared for:

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

Non-Responsive

June 24, 2004

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Snyder Armory

Survey Date: 13 April 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Snyder Armory on 13 April 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	41 to 21,000 microgram per square foot.	Do not use the firing range space until it is cleaned and decontaminated properly.
Armory Lead Wipe Samples	<10 to 4,300 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	15 to 80 footcandles	No action.
HVAC/IAQ	No issues observed or documented.	No action.

Snyder Armory

Survey Date: 13 April 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Snyder Armory in Snyder, Texas on 13 April 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Snyder Armory in Snyder, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 13 April 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses Det 1, Company A and the 111 Engineers. The building is a one-story structure and consists of administrative office areas, a library, classrooms, a drill hall, supply rooms and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

Snyder Armory

Survey Date: 13 April 2004

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
SNY-FR01	IFR bullet Stop lower left	8,500.00
SNY-FR02	IFR bullet Stop middle	1,200.0
SNY-FR03	IFR bullet Stop upper right	1,200.0
SNY-FR04	IFR right wall (facing trap) upper right (facing wall)	19,000.0
SNY-FR05	IFR right wall (facing trap) middle (facing wall)	19,000.0
SNY-FR06	IFR right wall (facing trap) lower left (facing wall)	21,000.0
SNY-FR07	IFR left wall (facing trap) bottom right (facing wall)	830.0
SNY-FR08	IFR left wall (facing trap) middle (facing wall)	1,400.0
SNY-FR09	IFR left wall (facing trap) upper left (facing wall)	1,500.0
SNY-FR10	IFR ceiling surface to the right of the observation deck (facing trap)	260.0
SNY-FR11	IFR ceiling surface in the middle of the range	130.0
SNY-FR12	IFR ceiling surface by the bullet trap left side (facing trap)	80.0
SNY-FR13	IFR floor to the left of the bullet trap	16,000.0
SNY-FR14	IFR floor middle of range	8,700.0
SNY-FR15	IFR floor to the right of the observation area	2,300.0
SNY-FR16	IFR back wall (facing wall) lower right	110.0
SNY-FR17	IFR back wall (facing wall) middle	41.0
SNY-FR18	IFR back wall (facing wall) upper left	55.0
SNY-01	Top of refrigerator in kitchen.	<10.0
SNY-02	Top of serving line between kitchen and drill hall	<10.0
SNY-03	Supply diffuser in administrative office	12.0
SNY-04	Return air grill in the administrator office	10.0
SNY-05	Top of a cabinet in the administrative office	43.0
SNY-06	Drill hall floor by supply room	21.0
SNY-07	Drill hall floor diagonally opposite the floor sample by supply	20.0
SNY-08	Drill hall floor in center.	14.0
SNY-09	Top of the soda machine in the drill hall	150.0
SNY-10	Top of a surface in the classroom	<10.0
SNY-11	Top of a random surface in the armory	4,300.0
SNY-12	Field Blank	<10.0

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

Snyder Armory

Survey Date: 13 April 2004

micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C.

The indoor firing range as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-15.

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas, classrooms, and library. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, and storage areas. Bulk samples were collected from typical suspect materials. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
SNY-A01B	2x4 foot ceiling tile in drill hall and exercise room	None.
SNY-A02B	12x12 inch floor tile.	None.
SNY-A02B	Mastic from 12x12 inch floor tile.	None.
SNY-A03B	Baseboard.	None.

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

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 15 foot-candles to 80 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	30 - 80
Classrooms	30 - 70
Supply Rooms.	15 - 50
Drill Hall.	20 - 50
Indoor Firing Range.	30 - 35
Kitchen.	20 - 25

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of individual forced air furnace units with cooling capabilities. The common return air plenum for the unit is located under it and is made out of plywood. No water stains were observed on the wooden common plenum. However, water stains were observed in other armories with similar setup. The presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor air. Consideration should be given to replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

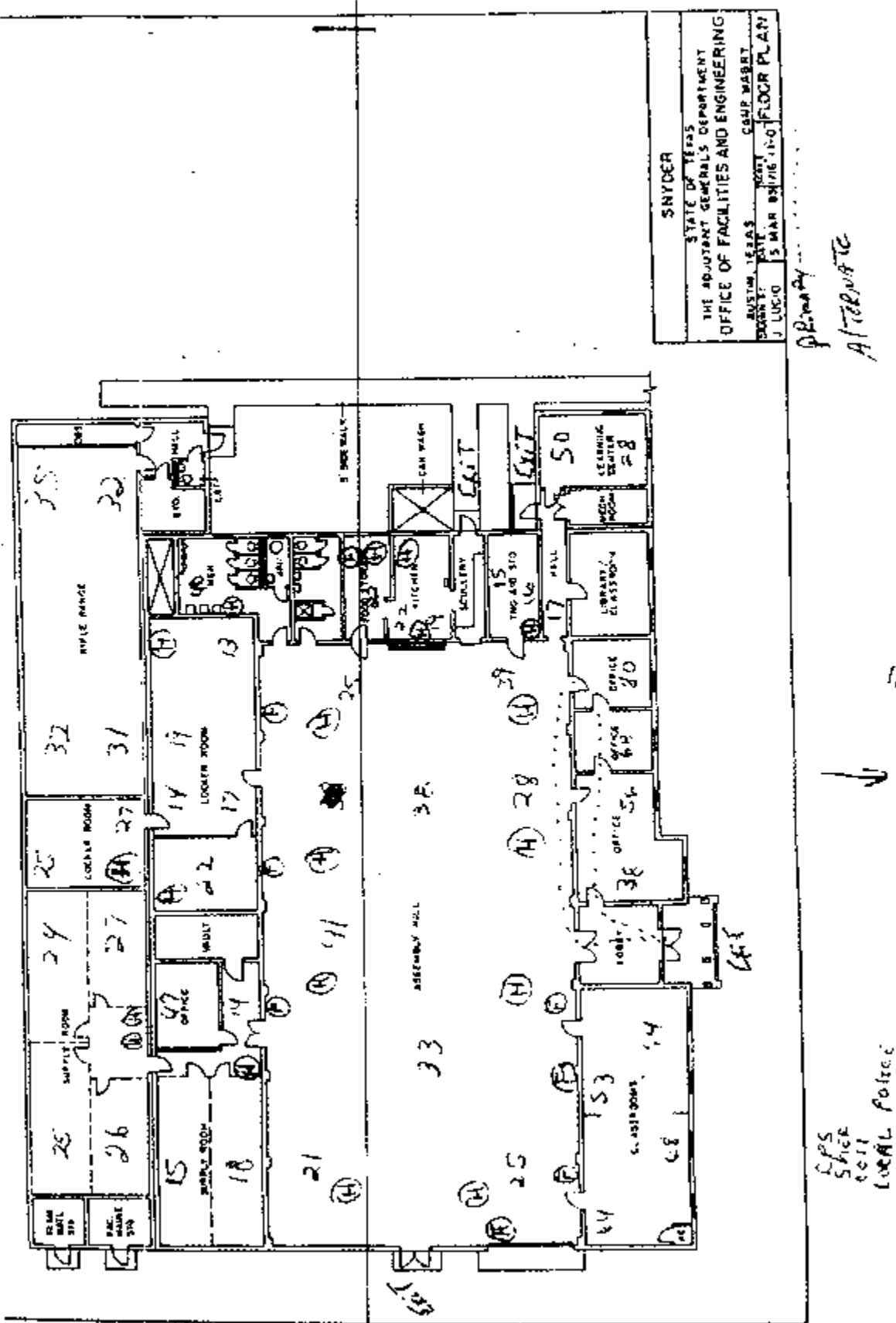
Recommendation:

Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A



BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 958-4800 Fax: (856) 858-8661 Email: skaufman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS60

Customer PO:

Received: 04/22/04 1:43 PM

Fax:

SL Order:

200404879

Project:

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
SNY-FR01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/6/04	144 in ²	8500.0 µg/ft ²
SNY-FR02	0002	5/6/04	144 in ²	1200.0 µg/ft ²
SNY-FR03	0003	5/6/04	144 in ²	1200.0 µg/ft ²
SNY-FR04	0004	5/6/04	144 in ²	19000.0 µg/ft ²
SNY-FR05	0005	5/6/04	144 in ²	19000.0 µg/ft ²
SNY-FR06	0006	5/6/04	144 in ²	21000.0 µg/ft ²
SNY-FR07	0007	5/6/04	144 in ²	830.0 µg/ft ²
SNY-FR08	0008	5/6/04	144 in ²	1400.0 µg/ft ²
SNY-FR09	0009	5/6/04	144 in ²	1500.0 µg/ft ²
SNY-FR10	0010	5/6/04	144 in ²	250.0 µg/ft ²
SNY-FR11	0011	5/6/04	144 in ²	130.0 µg/ft ²
SNY-FR12	0012	5/6/04	144 in ²	80.0 µg/ft ²
SNY-FR13	0013	5/6/04	144 in ²	16000.0 µg/ft ²
SNY-FR14	0014	5/6/04	144 in ²	8700.0 µg/ft ²
SNY-FR15	0015	5/6/04	144 in ²	2300.0 µg/ft ²
SNY-FR16	0016	5/6/04	144 in ²	110.0 µg/ft ²
SNY-FR17	0017	5/6/04	144 in ²	41.0 µg/ft ²
SNY-FR18	0018	5/6/04	144 in ²	55.0 µg/ft ²
SNY-C1	0019	5/6/04	144 in ²	<10.0 µg/ft ²
SNY-C2	0020	5/6/04	144 in ²	<10.0 µg/ft ²
SNY-C3	0021	5/6/04	144 in ²	12.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04083; AHA Environmental Lead Laboratory Approval Program: 100194

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4100 Fax: (856) 858-8551 Email: skauffman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 1:43 PM

Fax:

EMSL Order: 200404879

Project: SNY-04

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
SNY-04	0022	5/6/04	144 in ²	10.0 µg/ft ²
SNY-05	0023	5/6/04	144 in ²	43.0 µg/ft ²
SNY-06	0024	5/6/04	144 in ²	21.0 µg/ft ²
SNY-07	0025	5/6/04	144 in ²	20.0 µg/ft ²
SNY-08	0026	5/6/04	144 in ²	14.0 µg/ft ²
SNY-09	0027	5/6/04	144 in ²	150.0 µg/ft ²
SNY-10	0028	5/6/04	144 in ²	<10.0 µg/ft ²
SNY-11	0029	5/6/04	144 in ²	4300.0 µg/ft ²
SNY-12	0030	5/6/04	144 in ²	<10.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report must meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP, unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04853, AHA Environmental Lead Laboratory Approval Program: 100194

Printed: 5/04 5:55:50 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4300 Fax: (856) 858-4940 Email: eslinfo@EMSL.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 12:29 PM

Fax:

EMSL Order: 040407150

Project:

EMSL Proj

Analysis Date: 4/30/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
SNY-A01B 040407150-0001		Gray Fibrous Heterogeneous	Tessed	70% Cellulose	30% Non-fibrous (other)	None Detected
SNY-A02B-Tile 040407150-0002		White Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
SNY-A02B-Mastic 040407150-0004		Tan Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
SNY-A03B 040407150-0003		Black Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected

Non-Responsive

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL Westmont (NJ) LAP #101048-01, NY ELAP 10872

PLM-1

THIS IS THE LAST PAGE OF THE REPORT

APPENDIX C

200404879

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences Inc. EMSL-Bill to: Same as mail to.
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: (Name) Non-Responsive Telephone: _____
 Fax Results to: (Name) Non-Responsive Fax #: _____

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	TAT
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% +-	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air ***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* <input checked="" type="checkbox"/> -ASTM <input type="checkbox"/> -non ASTM	SW846-7420 / HUD Appendix 14.2 Digest	Flame Atomic Absorption	10 ug/wipe	Routine 6-11
Lead in Wipe Type	or SW846-6010B	ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
STLC Lead - California *	CA Title 22 68001.22 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	EST 10/11/12
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	EST 10/11/12
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** +, ++, # Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume: L Area, in ²	LAB #
SNY-FR01	Snyder, TX	144	64879/1
SNY-FR02			2

@ Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

Note: Please supervise and sign the chain of custody. The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain: Nov 2001 - STLC.doc

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
SNY - FR 03		144	0989-3
SNY - FR 04			7
FR 05			6
FR 06			7
FR 07			1
FR 08			3
FR 09			10
FR 10			9
FR 11			14
FR 12			13
FR 13			12
FR 14			16
FR 15			11
FR 16			17
FR 17			18
FR 18			
SNY - 01			
SNY - 02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			

2004 APR 22 PM 11:43

WESTMONT, N.J.

19
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29
30

Relinquished By: (Person)

Non-Responsive

Date: 4/21/04

Received at EMSL By:

Date:

Received at EMSL By:

Date: 4/21/04

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2000 - STLC.doc

040407190



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Asbestos

EMSL Rep:

Your Company Name: Tommy Sciences Inc

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project:

Name/Number:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase Order #:

Third Party Billing requires written authorization
from third party

Same as bill to

Non-Responsive

Non-Responsive

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

TEM AIR, 3 hours, 6 hour: Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-226-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 quantitative method
GEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	XRD <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica OTHER	

SAMPLES ACCEPTED
FOR ANALYSIS BY
EMSL ANALYTICAL INC.

SAMPLE NUMBER	LOCATION	VOLUME (if Applicable)
SNY-A01B	Snyder, TX	

Client Sample # (s) SNY-A01B - SNY-A03B Total Samples #: 3

Relinquished: Non-Responsive 4/19/04 Time: AM

Received: Non-Responsive Time: _____

APPENDIX D



Photo #1: Armory front entrance.

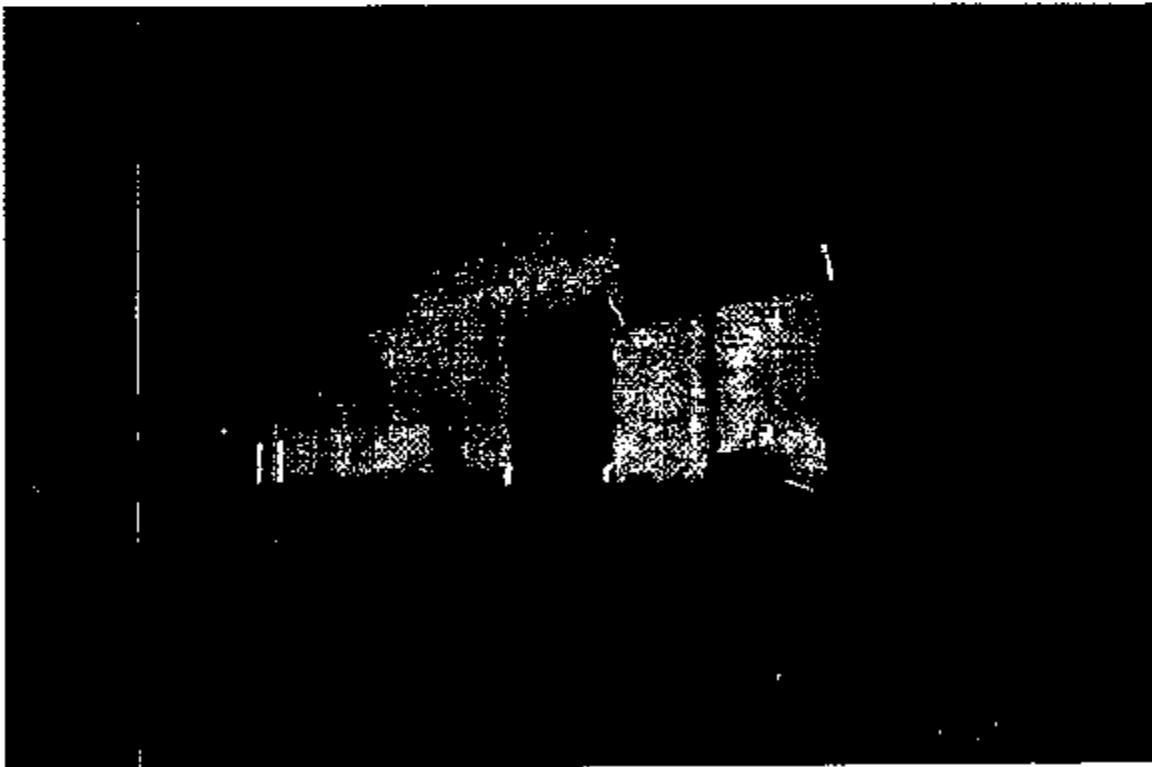


Photo #2: East side of the armory.

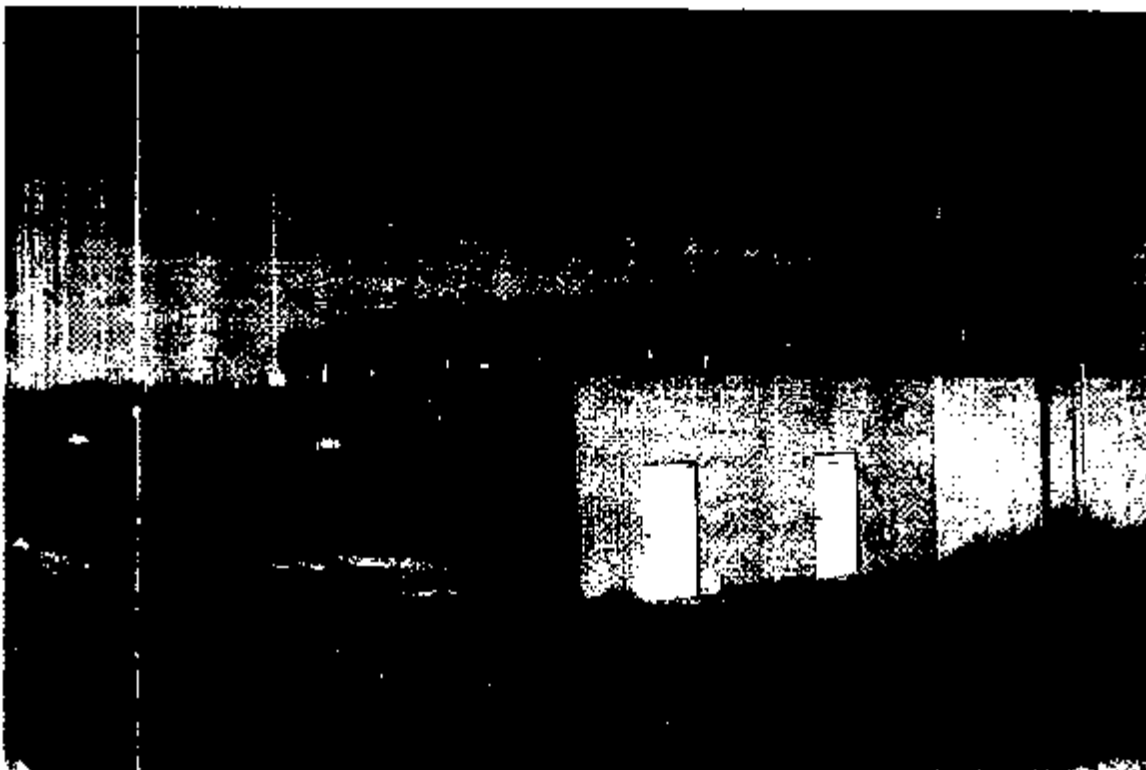


Photo #3: South west corner of the armory showing the outside of the firing range.

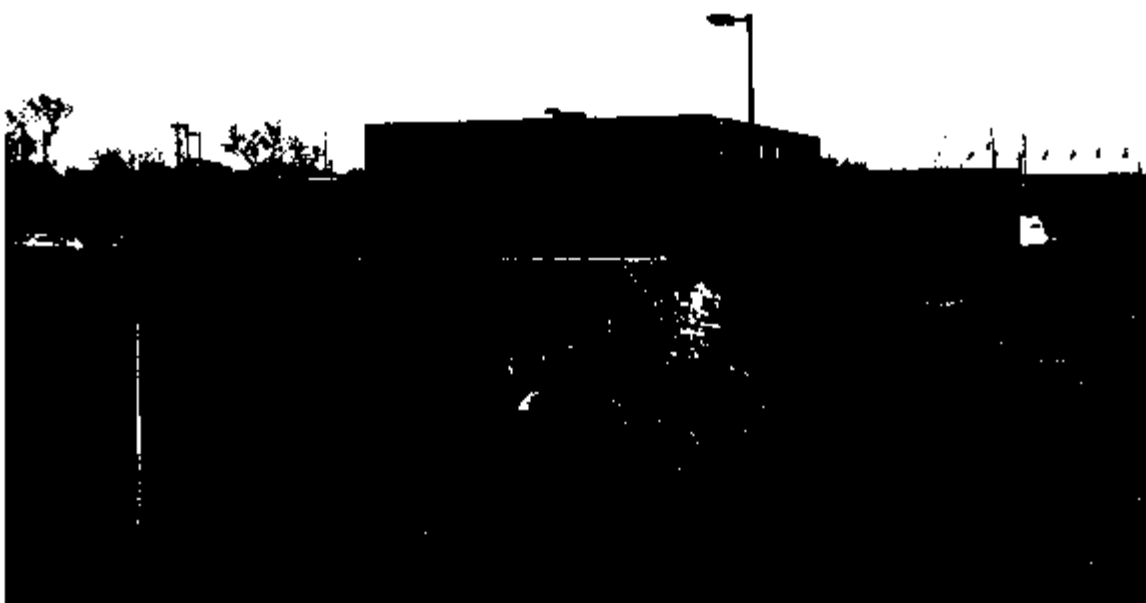


Photo #4: North side of the armory.



Photo #5: Drill hall facing east.

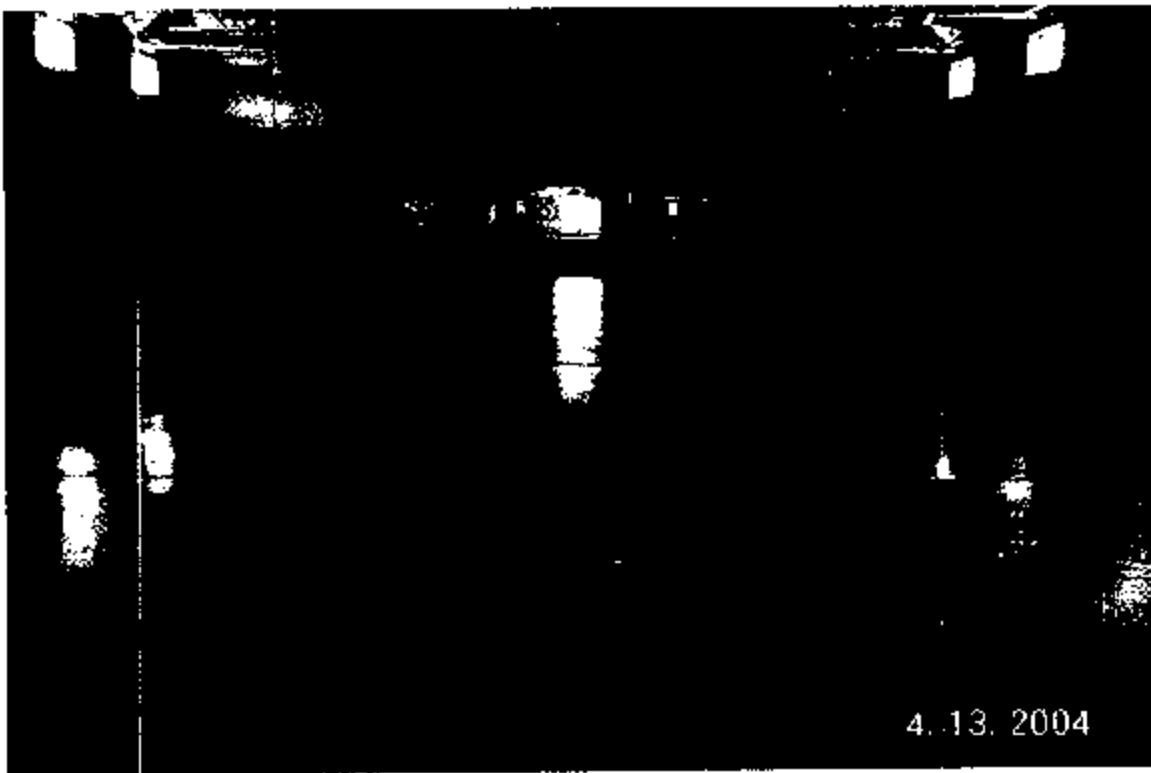
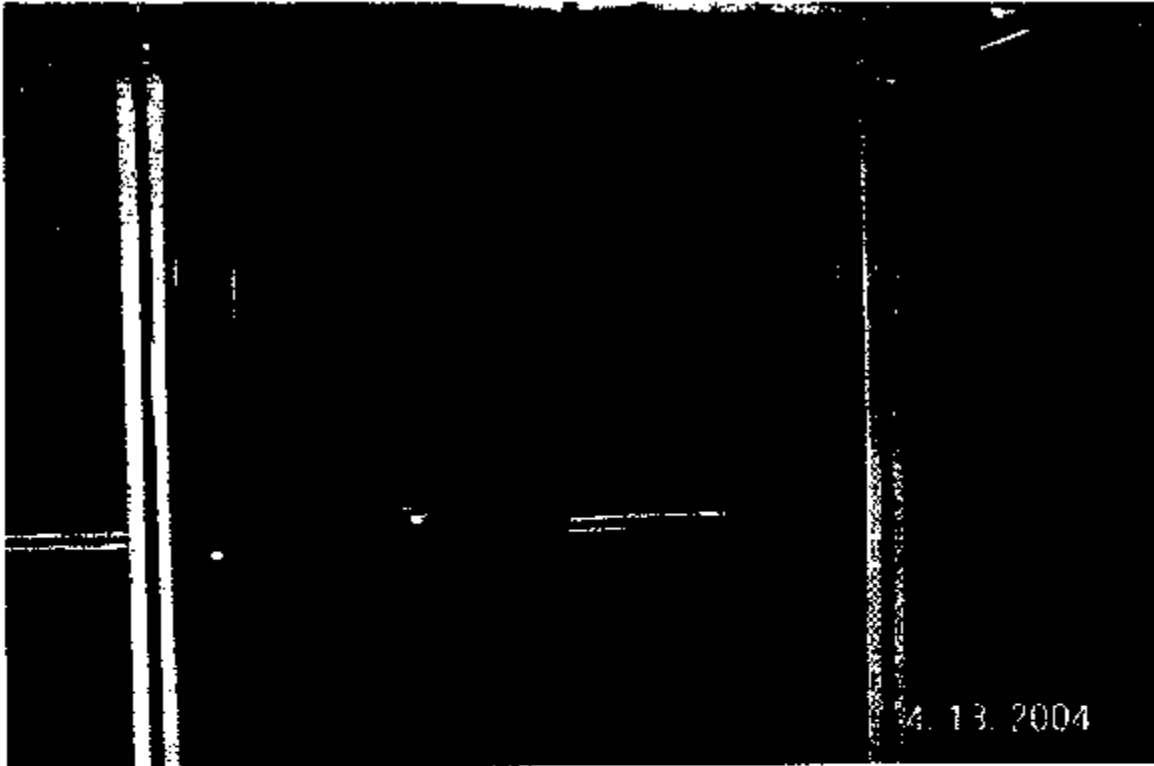


Photo #6: Drill hall facing west.



Photo#7: Indoor firing range facing bullet stop.



Photo #8: Indoor firing range facing firing line.



Photo #9: Armory's kitchen showing the stove.

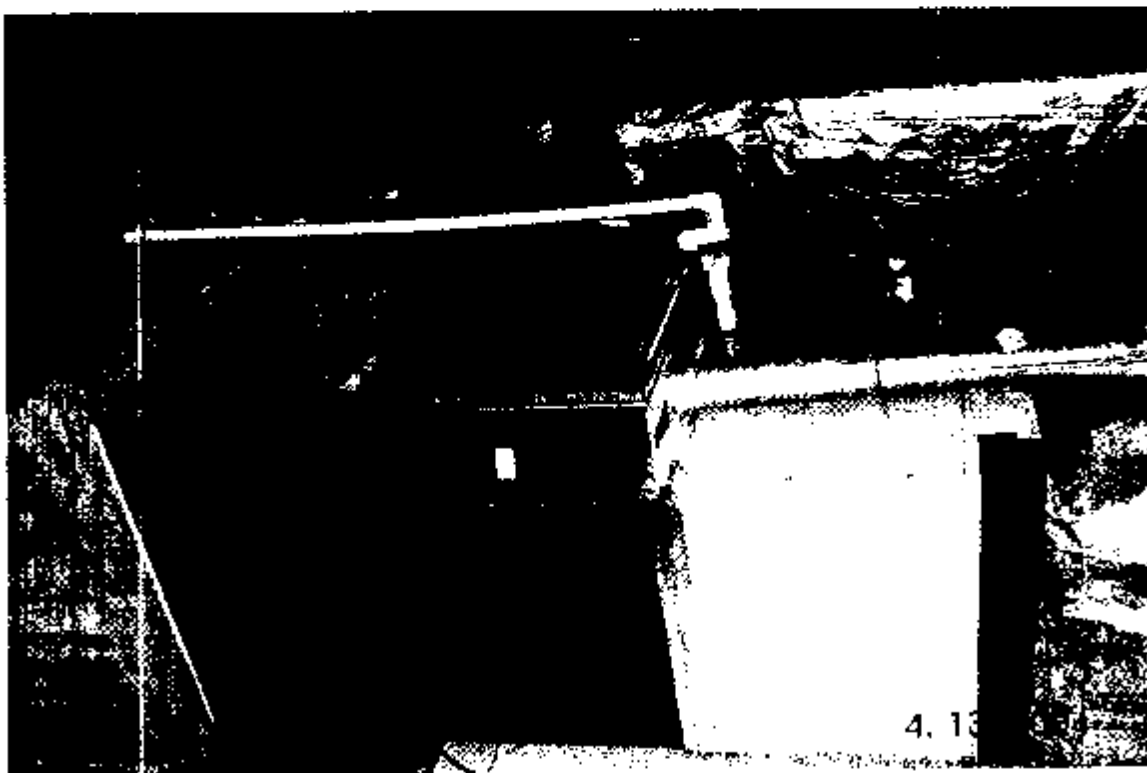


Photo #10: Armory's forced air furnace showing the wooden air plenum.



DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

21 April 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: HQ 36th SUST BDE
Temple Armory 8502 Airport Road Temple, TX 76502-4646

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, HQ 36th SUST BDE Temple Armory 8502 Airport Road
Temple, TX 76502-4646

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2009, a follow-up industrial hygiene survey was performed at the Temple Armory 8502 Airport Road Temple, TX 76502-4646 The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 18 March 2009.

3. General.

- a. **Site Description.** The Temple Armory is a one-story brick over cinder block structure with Central HVAC.. The facility houses several training or classrooms, administrative office areas, and a supply room with storage and vault. Twenty eight full time employees work at the Armory supporting 420 M-Day Soldiers. The armory has Rooftop Central HVAC with interior units mounted on wooden plenum inside mechanical closets. Various repairs have been made throughout the armory since the prior survey. These repairs are noted in current survey. A copy of the floor layout and photos are included in Appendix C.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were not collected. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor.

4. Findings.

- a. **Lead Wipe Samples:** On the day of the survey total access to the indoor range was limited to the Weight room area only. Wipe samples for lead dust were collected from various areas as listed in the tables below

Sample Number	Sample Location 2009 (IFR - Weight / Storage Room)	Micrograms of lead (ug) per square foot
TEM91	Blank	Below Recordable Limits
TEM92	TV	Below Recordable Limits
TEM93	Observation Wall Right Middle Beam	20
TEM94	Observation Wall Left Middle Panel	Below Recordable Limits

Sample Number	Sample Location 2007	Micrograms of lead (ug) per square foot
TEM0701	136 th BN Admin Supply Duct	Below Recordable Limits
TEM0702	136 th BN Admin Return Duct	25
TEM0703	Classroom #032 Supply Duct	Below Recordable Limits
TEM0704	Classroom #032 Return Duct	Below Recordable Limits
TEM0705	Drill Hall (Right Rear Wall locker top)	96
TEM0706	Drill Hall Floor (Center)	Below Recordable Limits
TEM0707	Drill Hall Floor (Left front wall Fire Extinguisher)	Below Recordable Limits
TEM0708	HHC Supply Floor	Below Recordable Limits
TEM0709	HHC Vault/Arms Room Safe	59
TEM0710	Admin Blank	Below Recordable Limits
TEM0711	IFR Bullet Stop (Upper Left)	52
TEM0712	IFR Bullet Stop (Center)	Below Recordable Limits
TEM0713	IFR Bullet Stop (Lower Right)	34
TEM0714	IFR Bullet Stop (Left Front Bottom Deflector Shield)	54
TEM0715	IFR Floor (Mid Center)	Below Recordable Limits
TEM0716	IFR Right Front (Stored Tents)	22
TEM0717	IFR Rear Shelf (HP Printer)	Below Recordable Limits
TEM0718	IRF Firing Position Wall (Ht/Wt Scale)	255
TEM0719	IFR Back Observation Wall	Below Recordable Limits
TEM0720	IFR Blank	Below Recordable Limits
TEM0721	Kitchen (Top Center Serving Window)	Below Recordable Limits
TEM0722	Kitchen Blank	Below Recordable Limits

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard. The laboratory report and chain of custody forms are attached in Appendices A and B.

The contaminated areas as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18.

- a. **Asbestos Suspect Building Material:** The identified types included 12 by 12 inch floor tiles, baseboard trim, 2x4 foot ceiling tiles and sprayed on fireproof insulation in ceiling crawl spaces. In the prior survey dated 8 July 2004; Bulk samples were collected randomly from the identified materials. All identified types of building materials were tested and identified as non-asbestos containing materials.
- b. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- c. **Illumination Survey** Lighting levels throughout the Armory ranged between 3 foot-candle to 81 foot-candles. Specific readings were as follows:

Temple Armory	Reading in Foot-candles
Classrooms	25-72
Office Areas	03-81
Kitchen	18-25
Hallways and Lobby	45-61
Drill Hall	04-48
Supply and Storage Areas	07-62
Latrines	05-25

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

- d. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various rooftop Central HVAC with interior units mounted on wooden plenum inside mechanical closets and local ceiling mounted heating units. The system is capable to deliver outside makeup air to the occupied space. The supply room area are equipped with a roof mounted exhaust system and does not have AC; heating units are working. Roof and HVAC repairs and improvements were completed in September 2008. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission.

5. Recommendations.

- a. Evidence of Lead contaminated surfaces were found as listed in the 2007 and current report. Monitor contaminated surfaces areas and contact your local facilities commission for cleaning of areas. **DO NOT DISTURB or HAVE SOLDIERS ATTEMPT TO CLEAN THE CONTAMINATED AREAS.** (RAC 3)
- b. Ensure all equipment and materials in the IFR are properly decontaminated before they are reissued to its corresponding unit. (RAC 2)
- c. Have facilities clean and decontaminate lead contaminated surfaces per NG PAM 385-18. (RAC 2)
- d. To prevent lead dust cross-contamination, practice good housekeeping by washing hands after vehicle maintenance, handling and cleaning weapons and after leaving supply areas. (RAC 2)
- e. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings. (RAC 3)
- f. Ensure HVAC System is balanced by having adequate supply and return ducts on all occupied areas. (RAC 3)
- g. To maintain overall indoor air quality, continue to document and monitor all leaks and contact your local facilities commission for roof and drywall repair and ceiling tile replacement when needed. (RAC 3)
- h. Install Drop ceiling and HVAC Ducts in S4 area. Due to transformation; the occupied area once utilized as storage has been converted to office space. (RAC 3)
- i. The back wall in the S4 area and around each bay door, show evidence of water intrusion. To reduce further damage and maintain overall indoor air quality, document and monitor water leaks and intrusion by contacting your local facilities commission for repairs and ceiling tile replacement if needed. (RAC 3)

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Appendix A:
Laboratory Analytical Results.

Analytical Environmental Services, Inc.

Date: 4/14/2009

**LEAD ON WIPES (N9100/7082)
N7082****CLIENT:** National Guard Bureau Region-South III**Lab Order:** 0904345**Project:** Temple, Texas Armory**Date Received:** 4/6/2009 10:55 AM**Delivery Order:****Matrix:** Wipe**PO No:**

Laboratory ID	Client Sample ID	Results	Units	Report Limit	DF	Date Collected	Date Analyzed	Analyst
0904345-001A	TEM 91	BRL	ug. Total	20	1	3/31/2009	4/8/2009	MAW
0904345-002A	TEM 92	BRL	ug. Total	20	1	3/31/2009	4/8/2009	MAW
0904345-003A	TEM 93	20	ug. Total	20	1	3/31/2009	4/8/2009	MAW
0904345-004A	TEM 94	BRL	ug. Total	20	1	3/31/2009	4/8/2009	MAW

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

Results are blank corrected where applicable

Page 1 of 1

Appendix B:
Lab Chain of Custody

BULK SAMPLE DATA

For use of this form see OSAESA TG 141; the proponent is HSHB-DO.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IN OFFICE
510 PLAZA DRIVE, SUITE 1530
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

Project Number

TEMPLE, TEXAS ARMORY

Non-Responsive

Date Collected

18 MAR 09

Date Shipped

31 MAR 09

Description of Operation

CONVERTED IFR ARMORY

Location (BLDG/AREA)

ARMORY WT ROOM

Associated Complaints (be specific)

Associated Air Samples

If yes, list sample numbers

☐ Yes ☒ No

Label Information

Trade Name

NSN

Manufacturer

Address

MSDS Attached

☐ Yes ☒ No

Analysis Desired

LEAD

Lab Use Only	Sample No.	Constituents	Results	Remarks
	TEM91	BLANK		
	TEM92	TU WT ROOM		
	TEM93	OBSERVATION WALL RIGHT MID BEAM		
	TEM94	OBSERVATION WALL LEFT		

Comments to Lab:

Lab Use Only

Analyst (Initials)

Reviewed By (Initials)

Date Received

Date Reported













Procedures Performed

Comments:

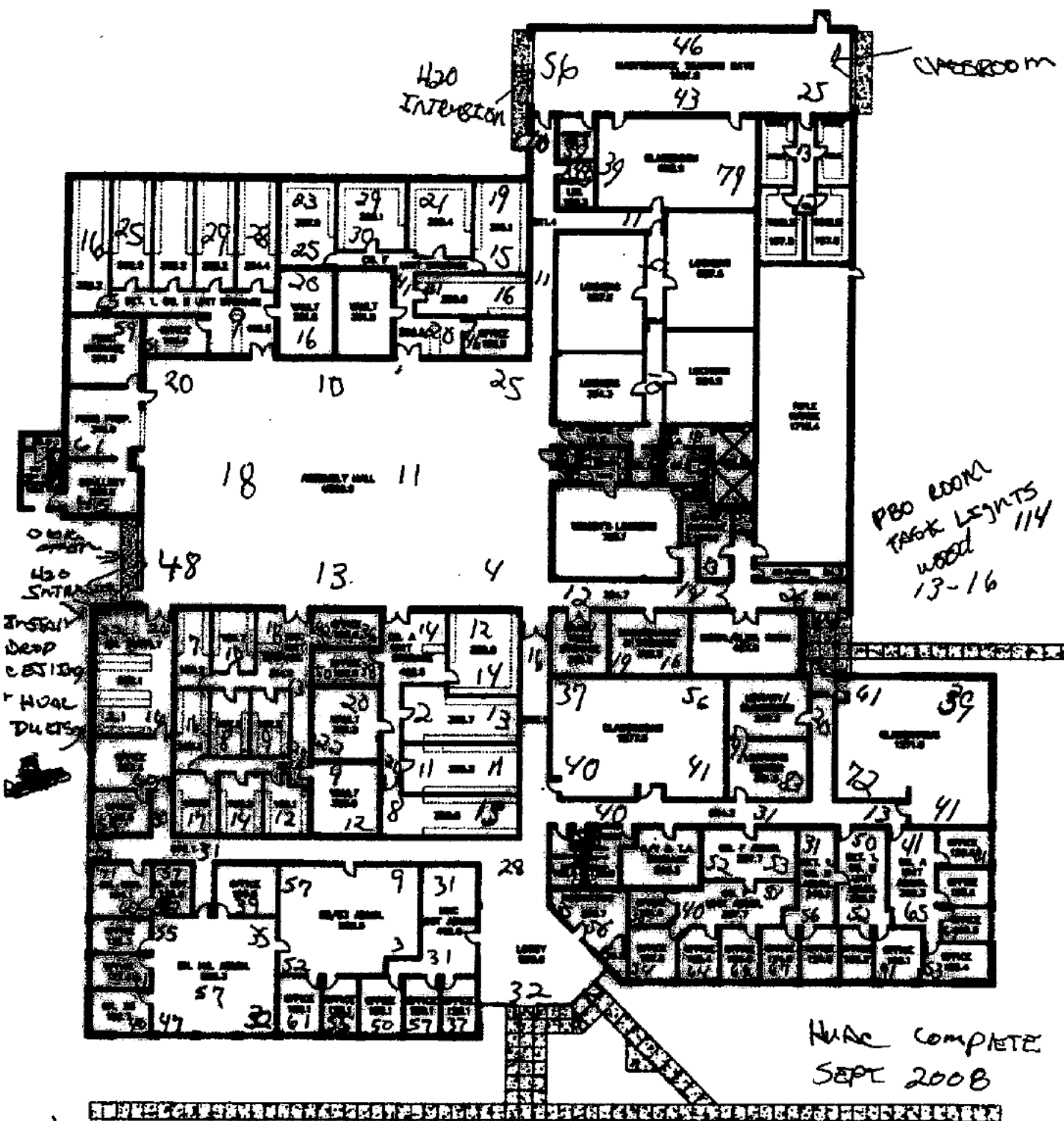
Appendix C

Photographs and Floor Layout.

Temple Armory

			
Temple Armory	Temple Armory	Drill Hall	Admin Area
			
Kitchen	S4 Area	H2O intrusion S4 area	Supply Area
			
Indoor Range Storage Area	Indoor Range Storage Area	Indoor Range Weight Room Area	Mechanical Room

BEST AVAILABLE COPY



HQ
36 SUST BDE

Non-Responsive

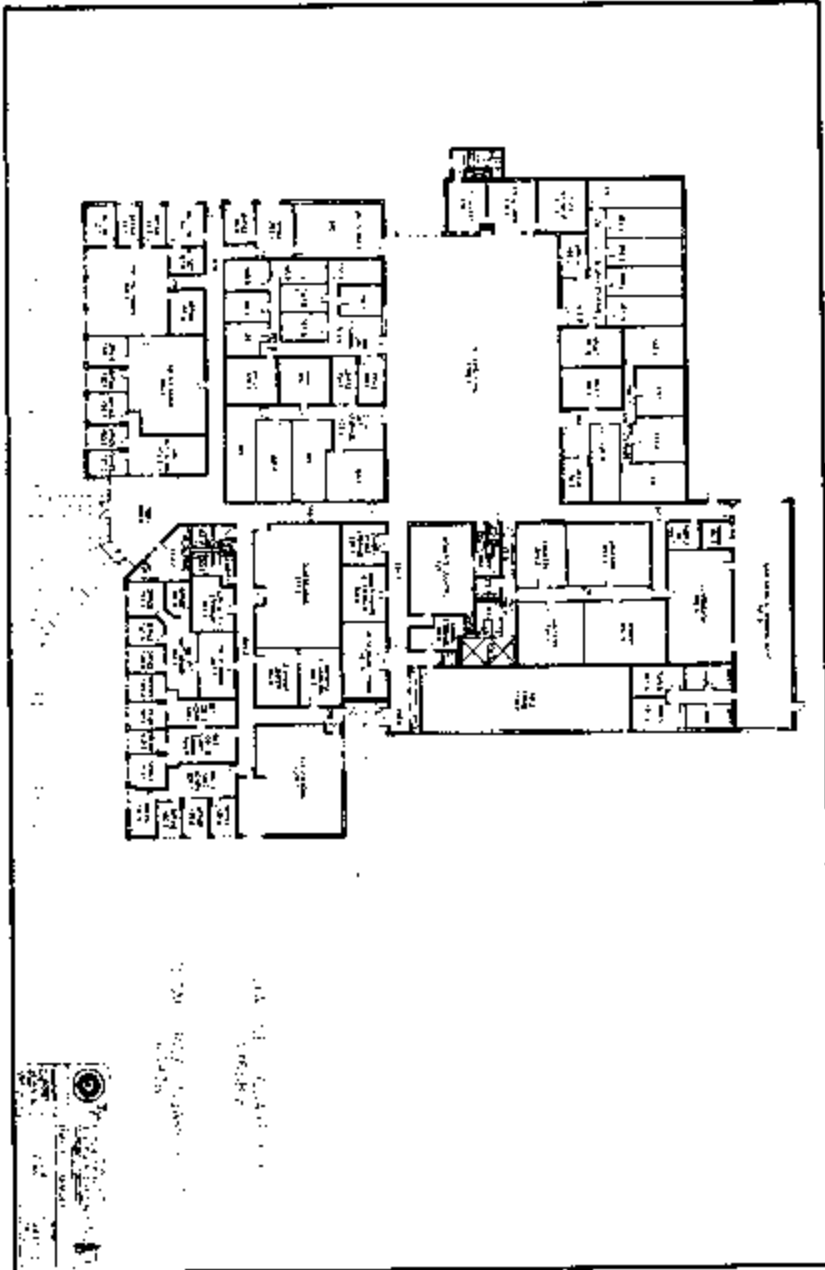
HuAc COMPLETE
SEPT 2008

Posted to NGB FOIA Reading Room
May, 2018

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FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 1402 of 1757

?





**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

ARNG-CSG

February 3, 2015

MEMORANDUM Adjutant General TX ARNG, ATTN: Facility Supervisor, C/O: SGT Morgan, TX ARNG Temple Armory, 8502 Airport Rd, Temple, TX 76502.

SUBJECT: Transmittal of Industrial Hygiene Survey Report of TXARNG Temple Armory, Temple, Texas

1. References.
 - a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
 - b. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 19 August 1998.
 - c. Title 29, Code of Federal Regulations (CFR), 2009 rev., part 1910, Occupational Safety and Health Standards.
 - d. Title 29 CFR, General Industry, revised 1996 rev. Part 1940
 - e. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 25 May 2007
 - f. AR 385-10, the Army Safety Program, 23 August 2007.
 - g. AR 11-34, 15 February 1990, the Army Respiratory Protection Program.
 - h. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, 12 September 2008.
 - i. TB MED 503, the Army Industrial Hygiene Program, 30 October 2000.
 - j. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
 - k. Industrial Ventilation, 26th Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
 - l. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.
2. General. At the request the Safety & Occupational Health Office an Industrial Hygiene Service was put together to conduct an IH Survey of the TX ARNG Temple Armory, Temple, Texas
3. Findings. All sampling data and field survey forms, industrial hygiene sampling and survey findings of the report are enclosed (See ENCL 1). Operations of very short duration were not sampled due to the requirements of the sampling method. If the operation changes or if the

February 3, 2015

length of the operation is increased, contact this office to schedule sampling if it is deemed needed then.

4. Recommendations.

- a. Follow all recommendations made in the report enclosed, requesting industrial hygiene (IH) services where needed to complete the recommendations
 - b. Data sheets and data collected will serve as an update of the baseline for the Industrial Hygiene Master Plan (IHMP) for FY2015. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY2016 IHMP.
 - c. Use the report to help in correcting all deficiencies noted.
 - d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present visits, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - e. Contact the State Occupational Health Office, for any medical Surveillance that may be needed.
 - f. To execute your responsibilities in correcting all deficiencies, coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
5. The present report addressed to the local facility commanders was divided in such a way that personal data can be detached and kept by the OHM or blocked when forwarding the report.

Non-Responsive

CF: ARNG

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.
Deputy State Army Surgeon, **Non-Responsive** JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78763-5218.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as



Industrial Hygiene Report For the Baseline Evaluation of Temple Armory Temple, TX

January 2015



Submitted to:

National Guard Region South
Attn: Mr. Fuller / Mr. Rodriguez
510 Plaza Drive, Suite 1530
College Park, GA 30349

Submitted by:

Environmental Consulting and Training Services, Inc. (ECATS)
1000 Val Street
Knoxville, TN 37921-6854
865-521-9898

 **ORIGINAL**



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NOISE DOSIMETRY	5
HAZARDOUS NOISE PRODUCING EQUIPMENT/TOOLS	6
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Appendices

- Appendix A – References
- Appendix B – Photos
- Appendix C – Lighting Surveys
- Appendix D - Lead Swipe Results
- Appendix E - Asbestos Test Results



Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
cfm	cubic feet per minute
CFR	Code of Federal Regulations
dB	decibels
dBA	decibels (a weighted measurement)
fc	foot candles
FMS	Facility Maintenance Shop
ft ²	square feet
ft ³	cubic feet
HCP	Hearing Conservation Program
HHIM	Health Hazard Information Module
IHIP	Industrial Hygiene Implementation Plan
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Act
PPE	personal protective equipment
RAC	Risk Assessment Code
SDS	Safety Data Sheets
TWA	Time Weighted Average
UFC	Unified Facilities Criteria
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USARNG	United States Army National Guard
USPFO	United States Property and Fiscal Officer



EXECUTIVE SUMMARY

A baseline industrial hygiene survey was conducted on 5 November 2014 at the Temple Armory as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The purpose of the survey was to perform a comprehensive industrial hygiene survey to identify and make recommendations regarding health hazards associated with operations at the Temple Armory.

TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Air Sampling		
Air sampling was not conducted during the survey due to no chemical hazards at the facility.	N/A	N/A
Ventilation Measurements		
No local exhaust ventilation systems in use at the facility.	N/A	N/A
Noise Measurements		
No noise producing equipment or operations at the facility.	N/A	N/A



TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Noise Dosimetry		
Noise dosimetry was not conducted due to having no noise producing equipment or operations at the facility.	N/A	N/A
Lighting Measurements		
Lighting measurements were taken in various locations throughout the facility. Lighting levels varied from room to room with most rooms not meeting the recommended level.	Update lighting levels in those areas that do not meet recommended levels.	RAC 4
Mold		
Potential areas of mold growth were noted on the ceiling of the drill floor.	Contact a mold testing contractor with a high lift to collect and analyze samples.	RAC 4
Firing Range		
Lead swipe samples were collected in the former firing range area.	Results of the samples indicate levels were below detectable limits.	NO RAC



TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Asbestos		
Samples of suspected asbestos-containing material were collected from ceiling trusses in Armory utility room.	Analysis of the samples indicated that the material is NOT asbestos-containing.	NO RAC



MEMORANDUM FOR

Texas Army National Guard
Temple Armory
8502 Airport Rd
Temple, TX 76502
Phone: (254) 778-3659

SUBJECT

Industrial Hygiene Survey of Temple Armory was performed 5 November 2014 at Temple, TX.

INTRODUCTION

At the request of **Non-Responsive** and the Tennessee State Occupational Health Office, an industrial hygiene survey was performed at the Temple, TX Armory. **Non-Responsive** of Environmental Consulting and Training Services (ECATS) conducted the survey. The purpose of this effort was to evaluate potential health hazards present at the Armory. The point of contact was **Non-Responsive** in the ARNG Recruiting Office at the facility.

SITE DESCRIPTION

The Temple Armory has nine (9) full-time military technicians and a full-time recruiting office. Operations performed at the facility are administrative in nature.

SCOPE OF WORK

A site visit to the Temple Armory was conducted. Shop personnel were interviewed to identify potential occupational hazards including noise, chemical and ergonomics.



FINDINGS AND DISCUSSION

ADMINISTRATIVE AREAS

Nine personnel work in the administrative areas and perform administrative and supply duties. Supply operations include ordering, receiving, and shipping parts. Personnel interviewed did not express any complaints in regards to ergonomic concerns. Personnel are urged to take periodic breaks when needed while utilizing computers.

LIGHTING

Lighting levels were measured throughout the Temple Armory facility. Results of the lighting survey are in the table below:

SHOP AREA	AVERAGE LIGHTING LEVEL IN FOOT CANDLES (FC)	RECOMMENDED LIGHTING LEVEL (FC)	MEETS CRITERIA
Armory Floor	63	25 to 50	Yes
Administrative Office	11 - 45	50 to 100	No
Supply Room	19	50 to 100	No
Classroom	53	50 to 100	Yes

NOISE DOSIMETRY

Noise dosimetry was not performed during the site visit. All functions at this facility are administrative in nature and hazardous noise levels did not appear to be present.



HAZARDOUS NOISE PRODUCING EQUIPMENT/TOOLS

No noise producing equipment/tools are used at this facility.

HAZARDOUS MATERIALS

Hazardous materials are used in limited quantities at this facility and include aerosol paints for equipment touch-up and various cleaners such as window cleaner.

POTENTIAL MOLD

Areas of potential mold were noted along the ceiling of the drill floor (See photo in Appendix B). Due to the height of the ceiling, we were not able to collect a sample. Recommend a mold sampling contractor with a high lift be contacted to collect samples.

FORMER FIRING RANGE

A former firing range is present at the armory and has now been converted to a classroom. Lead swipe samples of the walls and floor were collected and results were negative for lead contamination. (See Appendix D for laboratory test results)

ASBESTOS

Samples of spray-on insulation were collected from the steel trusses located in the utility room of the Armory. Samples were analyzed and determined negative for asbestos. (See Appendix E for laboratory test results)



RECOMMENDATIONS

1. Lighting levels on the Armory floor do not meet the recommended levels. Recommend submitting a work request to have the lighting improved bulbs/ballasts. [ANSI/IES RP7-1991] **(RAC 4)**
2. Consult with a mold testing contractor to test the drill floor ceiling for mold growth. **(RAC 4)**



APPENDIX A

REFERENCES



REFERENCES

- American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice, 2011.
- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices, 2011.
- American National Standards Institute (ANSI), Illumination Engineering Society (IES), Industrial Lighting 10th Edition, 2010.
- American National Standards Institute (ANSI), Z358.1-2004. Emergency Eyewash and Shower Equipment 2004.
- AR 11-34, Army Respiratory Protection Program, 15 February 1990.
- AR 40-5, Preventative Medicine, 25 May 2007.
- AR 385-10, The Army Safety Program, 23 August 2007, Rapid Action Revision Issue Date 14 June 2010.
- DA PAM 40-501, Hearing Conservation Program, 10 December 1998.
- DA PAM 40-503, Army Industrial Hygiene Program, 30 October 2000.
- National Fire Protection Association (NFPA) No. 30, Standard for Flammable and Combustible Liquid Code, 2008.
- National Institute of Occupational Safety and Health, Pocket Guide to Chemical Hazards, 2010.
- NGR 385-10, Army National Guard Safety and Occupational Health Program, 12 September 2008.
- TB MED 503, The Army Industrial Hygiene Program, 30 October 2010.
- Title 29, Code of Federal Regulations (CFR), 1999, revision, Part 1910, Occupational Safety and Health Standards.
- TG 141, US Army for Health Promotion and Preventative Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, December 2010.



APPENDIX B

PHOTOS



Temple Armory



Potential Mold – Drill Floor Ceiling

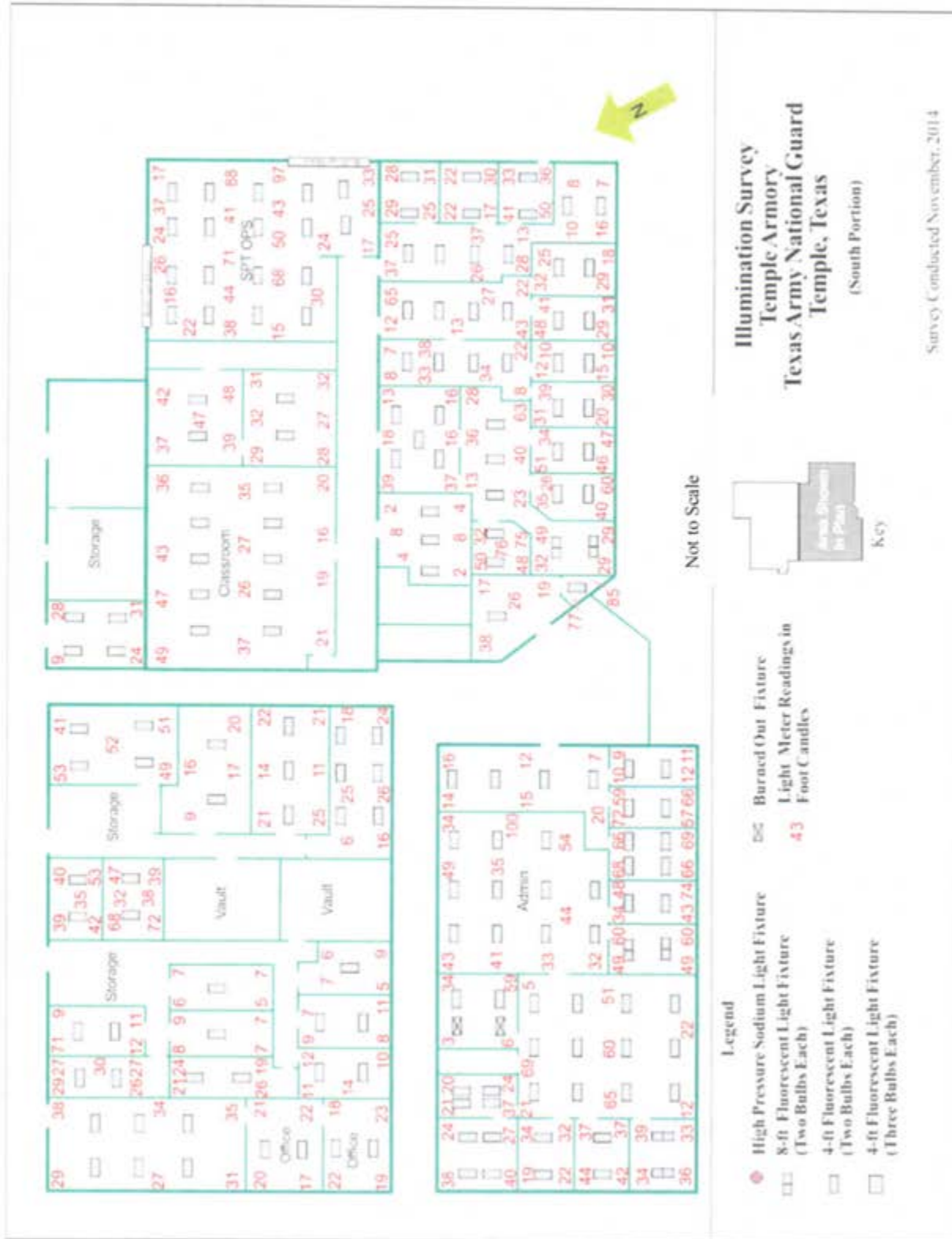


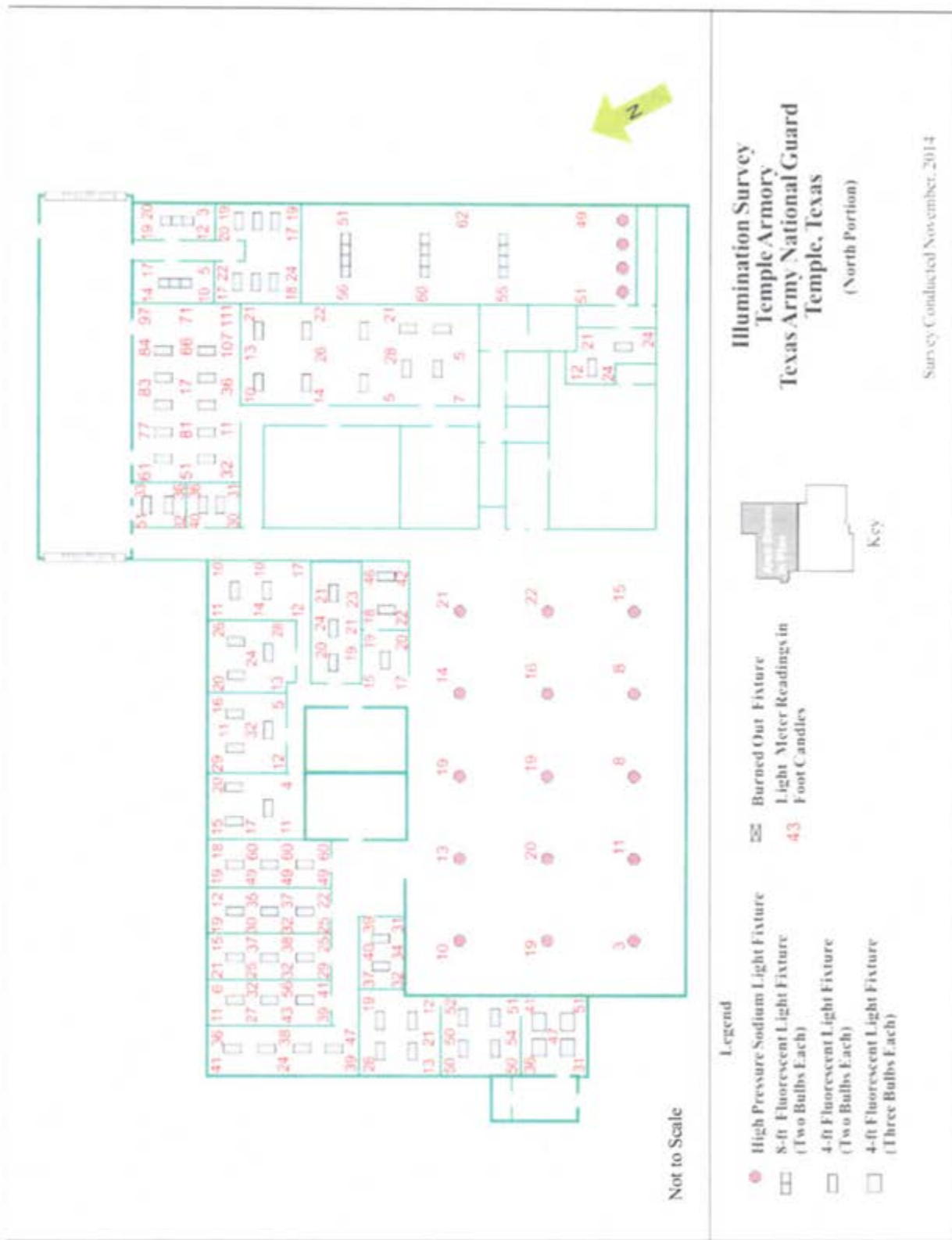
Potential Asbestos Insulation - Test Results were negative



APPENDIX C

LIGHTING SURVEYS







APPENDIX D

LEAD TEST RESULTS



Environmental Consulting and
Training Services, Inc. (ECATS)

Temple Armory ARNG, Temple, TX



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 18, 2014

Non-Responsive

RE TX Army National Guard

Dear

Non-Responsive

Order No: 1411821

Analytical Environmental Services, Inc. received 7 samples on 11/11/2014 10:10:00 AM for the analyses presented in following report.

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

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/14-06/30/15.
- AIHA-LAP, LLC Laboratory ID 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/15.

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



Environmental Consulting and Training Services, Inc. (ECATS)

Temple Armory ARNG, Temple, TX



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

CHAIN OF CUSTODY

Work Order: 1411821
Date: 10/14/14 Page: 1 of 1

ADDRESS		ANALYSIS REQUESTED		PRESERVATION (see codes)		REMARKS	
SAMPLE ID		DATE	TIME	Grb	Composite	Matrix (see codes)	
1	14-1	6/14/14	0600	X			
2	14-2			X			
3	14-3			X			
4	14-4			X			
5	14-5			X			
6	14-6			X			
7	14-7 (Duplicate)						
8							
9							
10							
11							
12							
13							

DATE/TIME		PROJECT INFORMATION		RECEIPT	
11/11/14 10:05		TX ARMY NATIONAL GUARD		Total # of Containers	
PROJECT #		SITE ADDRESS		00000	
SEND REPORT TO		INVOICE TO		STATE PROGRAM (if any)	
UP DIFFERENT				Email? Y/N Fax? Y/N	
QUOTE #		PO#		DATA PACKAGE I II III IV	

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED IN DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.
MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (liquid) WW = Waste Water
PRESERVATIVE CODES: R-1 = Hydrochloric acid + Ice I = Ice only N = Nitric acid S-1 = Sodium acid + Ice S-Na+ = Sodium Bisulfate/Nitrosulfate + Ice O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client


**Environmental Consulting and
Training Services, Inc. (ECATS)**
Temple Armory ARNG, Temple, TX
Analytical Environmental Services, Inc
Date: 18-Nov-14

Lab Order: 1411821
Client: ECATS
Project: TX Army National Guard
Matrix: Wipe
Date Received: 11/11/2014 10:10:00 AM

**LEAD ON WIPES (N7082)
N7082**

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1411821-001A	14-1	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-002A	14-2	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-003A	14-3	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-004A	14-4	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-005A	14-5	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-006A	14-6	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG
1411821-007A	14-7	BRL	ug. Total	20	1		11/06/2014	11/17/2014	JG

(BRL) - Not Detected at the Reporting Limit
 () - Sample detected to the action level (44000 BQL)
 Samples are listed in ascending order of BQL

L.R. - Action Factor

Page 3 of 4


**Environmental Consulting and
Training Services, Inc. (ECATS)**
Temple Armory ARNG, Temple, TX
Analytical Environmental Services, Inc.
Sample/Cooler Receipt Checklist

 Client GA Army National Guard

 Work Order Number 141821

 Checklist completed by S
Non-Responsive
11/14

 Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐

 Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

 Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

 Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

 Container/Temp Blank temperature in compliance? (4°C±2)* Yes ☒ No ☐

 Cooler #1 Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐

 Chain of custody present? Yes ☒ No ☐

 Chain of custody signed when relinquished and received? Yes ☒ No ☐

 Chain of custody agrees with sample labels? Yes ☒ No ☐

 Samples in proper container/bottle? Yes ☒ No ☐

 Sample containers intact? Yes ☒ No ☐

 Sufficient sample volume for indicated test? Yes ☒ No ☐

 All samples received within holding time? Yes ☒ No ☐

 Was TAT marked on the COC? Yes ☐ No ☒

 Proceed with Standard TAT as per project history? Yes ☒ No ☐ Not Applicable ☐

 Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐

 Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒

 Adjusted? ☐ Checked by ☐

 Sample Condition: Good ☒ Other(Explain) ☐

 (For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

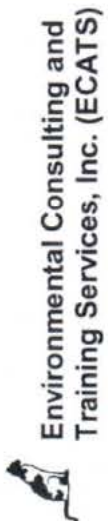
* Samples do not have to comply with the given range for certain parameters.

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



APPENDIX E

ASBESTOS TEST RESULTS



Temple Armory ARNG, Temple, TX

* PLEASE BILL TO

[Redacted]

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3785 Presidential Pkwy, Atlanta, GA 30340-3704
(770) 457-8177 / Toll Free (800) 972-4889 / Fax (770) 457-8188

CHAIN OF CUSTODY

BULK ASBESTOS ANALYSIS

1411835
RECEIVED
Non-Responsive

[Redacted]

Client Name: TX ARMY NATIONAL GUARD Phone: [Redacted]
Address: [Redacted] Fax: [Redacted]

City, State, Zip: TEMPLE, TX Project Name: TX ARMY GUARD

Contact: [Redacted] Project Number: 14-9

Sampler's: [Redacted] Sampling Date: 5/26/11

	Sample ID	Sample Location/Description	Analysis Requested	Turnaround Time	Comments	For AES Use Only
1	14-8	SPR UTILITY ROOM	ASBESTOS	2 DAY		
2	14-9	SUPPLY ROOM	ASBESTOS	2 DAY		
3						
4	PLUMBING	[Redacted]				
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						



**Environmental Consulting and
Training Services, Inc. (ECATS)**

Temple Armory ARNG, Temple, TX



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
Bulk Sample Summary Report



Lab Code 102082-0

12-Nov-14

Client Name: National Guard Bureau Region-South III		AES Job Number: 1411835							
Project Name: TX Army Guard		Project Number: 14-9							
Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
14-8 Layer: 1	1411835-001A	Utility Room	ND	ND	ND	ND	ND	ND	
14-9 Layer: 1	1411835-002A	Supply Room	ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amianto, 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 600/5-82-010), 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 600/5-93-116), 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.

This report must not be reproduced except in full without written approval of Analytical Environmental Services, Inc.

Microanalyst:

Non-Responsive



DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

06 March 2007

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: HQ 136 Signal BN
Temple Armory 8502 Airport Road Temple, TX 76502-4646

Thru: **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th
Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, HQ 136 Signal BN Temple Armory 8502 Airport Road
Temple, TX 76502-4646

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Temple Armory 8502 Airport Road Temple, TX 76502-4646. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 29 January 2007.

3. General.

- a. **Site Description.** The Temple Armory is a one-story brick over cinder block structure with Central HVAC.. The facility houses several training or classrooms, administrative office areas, and a supply room with storage and vault. Eighteen full time employees work at the Armory supporting 200 M-Day Soldiers. The armory has Rooftop Central HVAC with interior units mounted on wooden plenum inside mechanical closets. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey. A copy of the floor layout and photos are included in Appendix C.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were not collected. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various areas as listed in the table below

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
TEM0701	136 th BN Admin Supply Duct	Below Recordable Limits
TEM0702	136 th BN Admin Return Duct	25
TEM0703	Classroom #032 Supply Duct	Below Recordable Limits
TEM0704	Classroom #032 Return Duct	Below Recordable Limits
TEM0705	Drill Hall (Right Rear Wall locker top)	96
TEM0706	Drill Hall Floor (Center)	Below Recordable Limits
TEM0707	Drill Hall Floor (Left front wall Fire Extinguisher)	Below Recordable Limits
TEM0708	HHC Supply Floor	Below Recordable Limits
TEM0709	HHC Vault/Arms Room Safe	59
TEM0710	Admin Blank	Below Recordable Limits
TEM0711	IFR Bullet Stop (Upper Left)	52
TEM0712	IFR Bullet Stop (Center)	Below Recordable Limits
TEM0713	IFR Bullet Stop (Lower Right)	34
TEM0714	IFR Bullet Stop (Left Front Bottom Deflector Shield)	54
TEM0715	IFR Floor (Mid Center)	Below Recordable Limits
TEM0716	IFR Right Front (Stored Tents)	22
TEM0717	IFR Rear Shelf (HP Printer)	Below Recordable Limits
TEM0718	IRF Firing Position Wall (Ht/Wt Scale)	255
TEM0719	IFR Back Observation Wall	Below Recordable Limits
TEM0720	IFR Blank	Below Recordable Limits
TEM0721	Kitchen (Top Center Serving Window)	Below Recordable Limits
TEM0722	Kitchen Blank	Below Recordable Limits

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard. The laboratory report and chain of custody forms are attached in Appendices A and B.

The contaminated areas as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18.

- b. **Asbestos Suspect Building Material:** The identified types included 12 by 12 inch floor tiles, 2x4 foot ceiling tiles, sprayed on flooring and baseboard trim. In the prior survey dated 8 July 2004, Bulk samples were collected randomly from the identified materials. All identified types of building materials were tested and identified as non-asbestos containing materials.
- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.

- d. **Illumination Survey** Lighting levels throughout the Armory ranged between 1 foot-candle to 136 foot-candles. Specific readings were as follows:

Temple Armory	Reading in Foot-candles
Classrooms	2-64
Office Areas	37-136
Kitchen	18-25
Hallways and Lobby	7-40
Drill Hall	15-49
Supply and Storage Areas	2-23
Latrines	1-27

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

- e. **Heating Ventilating and Air Conditioning (HVAC)**: The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various rooftop Central HVAC with interior units mounted on wooden plenum inside mechanical closets and local ceiling mounted heating units. The system is capable to deliver outside makeup air to the occupied space. The supply room area are equipped with a roof mounted exhaust system and does not have AC; heating units are working. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the State Facilities Commission. Currently roof and HVAC repairs are pending contract per POC.

5. Recommendations.

- a. Evidence of Lead contaminated surfaces were found as listed in the report. Monitor contaminated surfaces areas and contact your local facilities commission for cleaning of areas. DO NOT DISTURB or HAVE SOLDIERS ATTEMPT TO CLEAN THE CONTAMINATED AREAS. RAC 3
- b. Ensure all equipment and materials in the IFR are properly decontaminated before they are reissued to its corresponding unit. RAC 2
- c. Have facilities clean and decontaminate lead contaminated surfaces per NG PAM 385-18. RAC 3
- d. To prevent lead dust cross-contamination, practice good housekeeping by washing hands after vehicle maintenance, handling and cleaning weapons and after leaving supply areas. RAC 2
- e. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings. RAC 3
- f. Ensure HVAC System is balanced by having adequate supply and return ducts on all occupied areas. RAC 3
- g. To reduce further damage and maintain overall indoor air quality, document and monitor roof leaks and contact your local facilities commission for roof repair and ceiling tile replacement if needed. RAC 3

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

BEST AVAILABLE COPY

Appendix A:
Laboratory Analytical Results.

Analytical Environmental Services, Inc.

Date: 2/20/2017

TOTAL LEAD IN WIPE SAMPLES
N7082

CLIENT: National Guard Bureau Region-South III
 Project: Temple, Texas Armory
 Delivery Order:
 PO No:

Lab Order: 0702723
 Date Received: 2/13/2007 10:05 AM
 Matrix: Wipe

Laboratory ID	Client Sample ID	Results	Units	Report Limit	DF	Date Collected	Date Analyzed	Analyst
0702723-001A	TEM0701	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-002A	TEM0702	25	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-003A	TEM0703	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-004A	TEM0704	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-005A	TEM0705	96	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-006A	TEM0706	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-007A	TEM0707	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-008A	TEM0708	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-009A	TEM0709	59	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-010A	TEM0710	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-011A	TEM0711	52	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-012A	TEM0712	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-013A	TEM0713	34	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-014A	TEM0714	54	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-015A	TEM0715	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-016A	TEM0716	22	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-017A	TEM0717	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-018A	TEM0718	255	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-019A	TEM0719	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-020A	TEM0720	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-021A	TEM0721	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY
0702723-022A	TEM0722	BRL	µg, Total	20	1	1/29/2007	2/15/2007	JY

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

Results are blank corrected where applicable

Page 1 of 1

Appendix B:
Lab Chain of Custody

BULK SAMPLE DATA

For use of this form see USAFHA TC 141; the proponent is BSHB-10.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IN OFFICE
510 PLAZA DRIVE, SUITE 1330
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

Temple, Texas Armory

Project Number

TEM 290107

Non-Responsive

Date Collected

29 Jan 07

Date Shipped

12 FEB 07

Armory w/ IFR (Follow up 2007)

Location (Bldg/Area)

Armory

Associated Complaints (be specific)

Associated Air Samples

If yes, list sample numbers

☐ Yes

☒ No

Trade Name

Label Information

HSN

Manufacturer

Address

MSDS Attached

☐ Yes

☐ No

Analysis Desired

LEAD

Lab Use Only	Sample No.	Constituents	Results	Remarks
	TEM0701	136 BN Admin Supply		
	TEM0702	136 BN Admin RTN		
	TEM0703	CLASSROOM #032 SUPPLY		
	TEM0704	CLASSROOM #032 RTN		
	TEM0705	DRILL HALL FLOOR (RR WALL LOCKER)		
	TEM0706	DRILL HALL FLOOR (CENTER)		
	TEM0707	DRILL HALL FLOOR (LEFT FR FIRE EXT.)		

Comments to Lab:

Lab Use Only

Analyst (Initials)

Reviewed By (Initials)

Date Received

Date Reported

Procedures Performed

Comments:

BULK SAMPLE DATA

For use of this form see USAERA TG 141; the proponent is BSHB-10.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH HQ OFFICE
510 PLAZA DRIVE, SUITE 1130
COLLEGE PARK, GA 30340

Non-Responsive

Sampled Installation

Temple, Texas Armory

Project Number

TEM 290107

Non-Responsive

Date Collected

29 Jan 07

Date Shipped

12 FEB 07

Location (Bldg/Area)

ARMORY

ARMORY W IFR (Follow up 2007)

Associated Complaints (be specific)

Associated Air Samples

☐ Yes ☒ No

If yes, list sample numbers

Trade Name

Label Information

NSN

Manufacturer

Address

MSDS Attached

☐ Yes ☒ No

Analysis Desired

LEAD

Lab Use Only

Sample No.

Constituents

Results

Remarks

TEM0708

HHC Supply Floor

TEM0709

HHC Arms Room SAFE

TEM0710

Blank

TEM0711

IFR BULLET STOP UPPER LEFT

TEM0712

IFR BULLET STOP CENTER

TEM0713

IFR BULLET STOP LOWER RIGHT

TEM0714

IFR BULLET STOP (Center Bottom) detector - Bottom Shield

Comments to Lab:

Lab Use Only

Analyst/Inspector

Reviewed By (Inspector)

Date Received

Date Recorred

Procedures Performed

Comments:

BULK SAMPLE DATA

For use of this form see USAEHA TG 141; the proponent is BSHB-LO.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IH OFFICE
310 PLAZA DRIVE, SUITE 1130
COLLEGE PARK, GA 30349

Non-Responsive

Sampled Installation

Temple, Texas Armory

Project Number

TEM 290107

Non-Responsive

Date Collected

29 Jan 07

Date Shipped

12 FEB 07

Location (Bldg/Area)

Armory

Associated Complaints (be specific)

Associated Air Samples

☐ Yes ☒ No

If yes, list sample numbers

Trade Name

Label Information

NSN

Manufacturer

Address

MSDS Attached

☐ Yes

☐ No

Analysis Desired

LEAD

Lab Use Only	Sample No.	Constituents	Results	Remarks
	TEM0715	IFR FLOOR MID CENTER		
	TEM0716	IFR RT FRONT (STORED TENTS)		
	TEM0717	IFR REAR SHELF (HP PRINTER)		
	TEM0718	IFR FIRING POSITION WALL (SCALE)		
	TEM0719	BACK OBSERVATION WALL		
	TEM0720	IFR BLANK		
	TEM0721	TOP KITCHEN SERVING WINDOW		

Comments to Lab:

Lab Use Only

Analyst (Initials)

Reviewed By (Initials)

Date Received

Date Reported

Procedures Performed

Comments:

BULK SAMPLE DATA

For use of this form see USARBA TG 141; the proponent is BSHB-20.

Return Address (complete address including Zip Code)

NATIONAL GUARD BUREAU REGION SOUTH IH OFFICE
310 PLAZA DRIVE, SUITE 1530
COLLINS PARK, GA 30049

Non-Responsive

Sampled Installation

TEMPLE TEXAS ARMORY

Project Number

TEM 290107

Non-Responsive

Date Collected

29 Jan 07

Date Shipped

12 FEB 07

ARMORY W IFR (Follow up 2007)

Location (BLDG/AREA)

ARMORY

Associated Complaints (be specific)

Associated Air Samples

☐ Yes ☒ No

If yes, list sample numbers

Trade Name

Label Information

HSN

Manufacturer

Address

MSDS Attached

☐ Yes

☐ No

Analysis Desired

LEAD

Lab Use Only

Sample No.

Constituents

Results

Remarks

Tem0722

Kitchen Blank

Tem0721

Tem0720

Tem0719

Tem0718

Tem0717

Tem0716

Tem0715

Comments to Lab:

Lab Use Only

Analyst Initials

Reviewed By (Initials)

Date Received

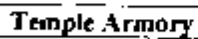
Date Reported

Procedures Performed

Comments:

Appendix C

Photographs and Floor Layout.

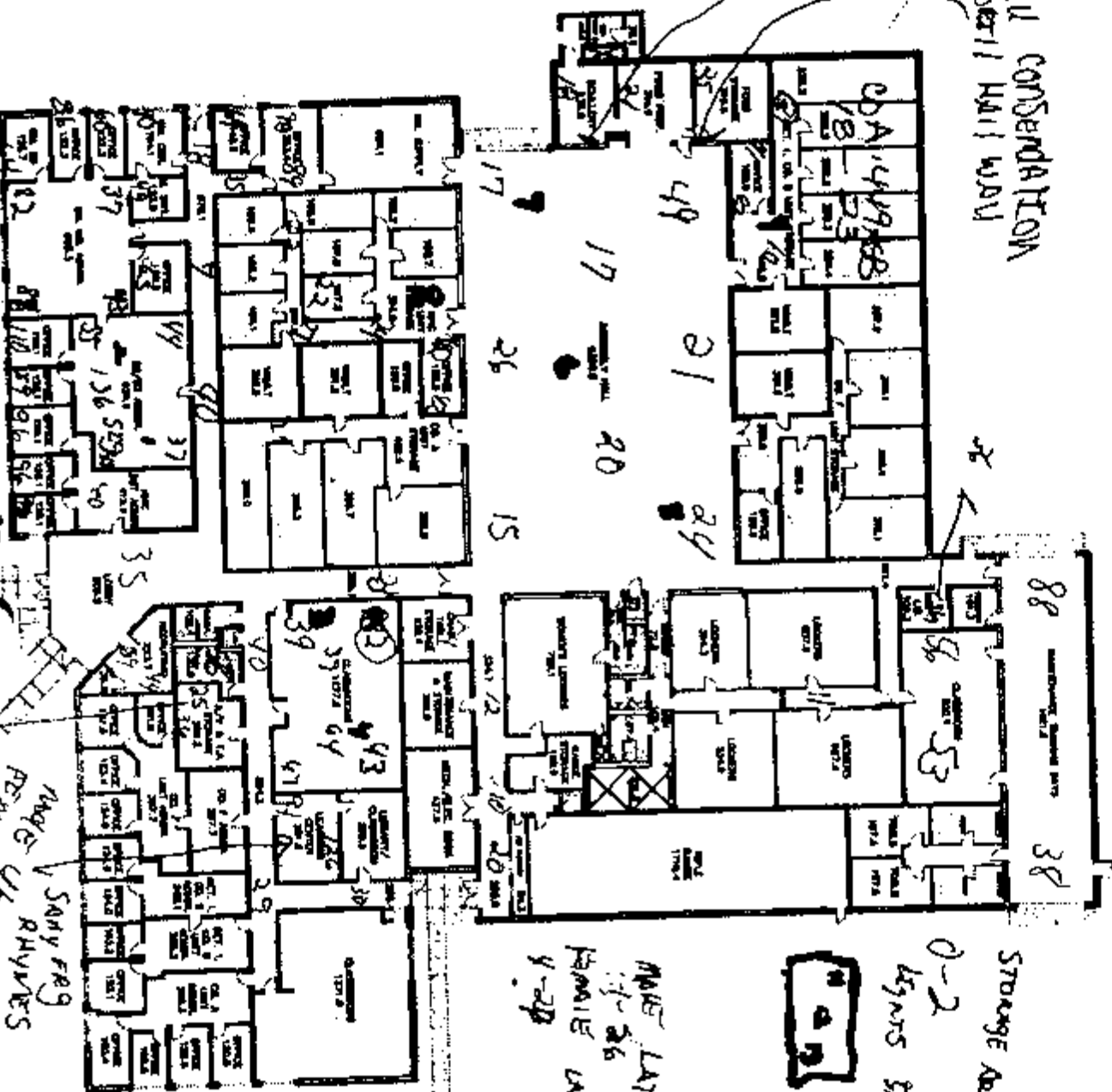


NOISE
NO NOISES
NOISE PROZNOSES

TEMPLE 20 JAN 07

ASBESTOS
NO ALB M

WALL CONDENSATION
DETH HALL WAY



STORAGE AREA
0-2
KITCHEN SHOP

MALE LATRINES
FEMALE LATRINES
4-20

55 HMC
1-2 3/12
249
446

April 200

18-186

ROOFTOP UNITS
ROOF - HVAC
WATER CONDENSER
ENSURE SUPPLY & RETURN
WATER BLOWN

TOTAL NET SODA
42608.8
TOTAL GROSS
45875.0

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory Brenham Armory, and Bryan Armory, TX.
- b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Temple Armory
8502 Airport Road
Temple, Texas

Prepared for:

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

By
Non-Responsive

July 8, 2004

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Temple Armory

Survey Date: 04 June 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Temple Armory on 4 June 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 630 microgram per square foot.	No action.
Armory Lead Wipe Samples	<10 to 62 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	20 to 70 footcandles	No action.
HVAC/IAQ	No issues were found.	No action.

Temple Armory

Survey Date: 04 June 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Temple Armory in Temple, Texas on 4 June 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Temple Armory in Temple, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 4 June 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses the headquarter of the 136 Signal Battalion. The building is a one-story structure and consists of an administrative office area, a kitchen, classrooms, a drill hall, supply rooms, orderly rooms, library, and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
TEM 01	Top of serving line in kitchen	<10.0
TEM 02	Top of coffee maker in kitchen.	18.0
TEM 03	Supply diffuser in lobby.	<10.0
TEM 04	Top of router in the administrative office	<10.0
TEM 05	Return air grill in the administrator office	<10.0
TEM 06	Drill hall floor by supply room #71.	<10.0
TEM 07	Drill hall floor in center.	<10.0
TEM 08	Drill hall floor by supply room #78.	18.0
TEM 09	Top of the soda machine in the drill hall.	62.0
TEM 10	Top of refrigerator in break room.	<10.0
TEM 11	IFR bullet Stop lower left facing stop.	20.0
TEM 12	IFR bullet Stop middle.	110.0
TEM 13	IFR bullet Stop upper right facing stop.	28.0
TEM 14	IFR top of shelves by bullet stop.	180.0
TEM 15	IFR top of filing cabinet mid range.	37.0
TEM 16	IFR plexiglass observation wall.	<10.0
TEM 17	IFR floor to the left facing the range.	<10.0
TEM 18	IFR floor middle of range.	23.0
TEM 19	IFR floor to the right of the bullet trap.	130.0
TEM 20	IFR top of bullet deflector to the left facing the trap.	<10.0
TEM 21	IFR top of a shelf unit in the middle of the range.	11.0
TEM 22	IFR top of heat shield by firing line.	25.0
TEM 23	IFR right wall (facing trap) lower left (facing wall).	<10.0
TEM 24	IFR right wall (facing trap) middle (facing wall).	<10.0
TEM 25	IFR right wall (facing trap) upper right (facing wall).	<10.0
TEM 26	IFR left wall (facing trap) lower left (facing wall).	<10.0
TEM 27	IFR left wall (facing trap) middle (facing wall).	<10.0
TEM 28	IFR left wall (facing trap) upper right (facing wall).	<10.0
TEM 29	IFR top Acetylene tank stored in IFR	630.0
TEM 30	IFR top of 5 gal. water container and cooler stored in range	<10.0

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

Temple Armory

Survey Date: 04 June 2004

taken from the top of the welding compressed gas tanks, which could have been contaminated prior to moving them in the IFR. No further action is required.

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. Sprayed on fireproofing was also found on the steel deck. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
TEM A01	Sprayed on fireproofing.	None.
TEM A02	12x12 inch floor tile.	None.
TEM A03	2x4 foot ceiling tile.	None.
TEM A04	Baseboard.	None.

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

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 20 foot-candles to 70 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	20 - 70
Supply Room.	20 - 50
Drill Hall.	20 - 60
Classrooms.	30 - 75
Kitchen.	50 - 60

The Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and

poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of a forced air furnace unit. Outside makeup air capabilities is available in the furnace room. The common return air plenum is located underneath the unit and is constructed of wooden plywood. No water leaks signs were observed in the mechanical closets. However, the presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor air. All condensate water should be isolated from the wood on the return air plenum. Consideration should be given to replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

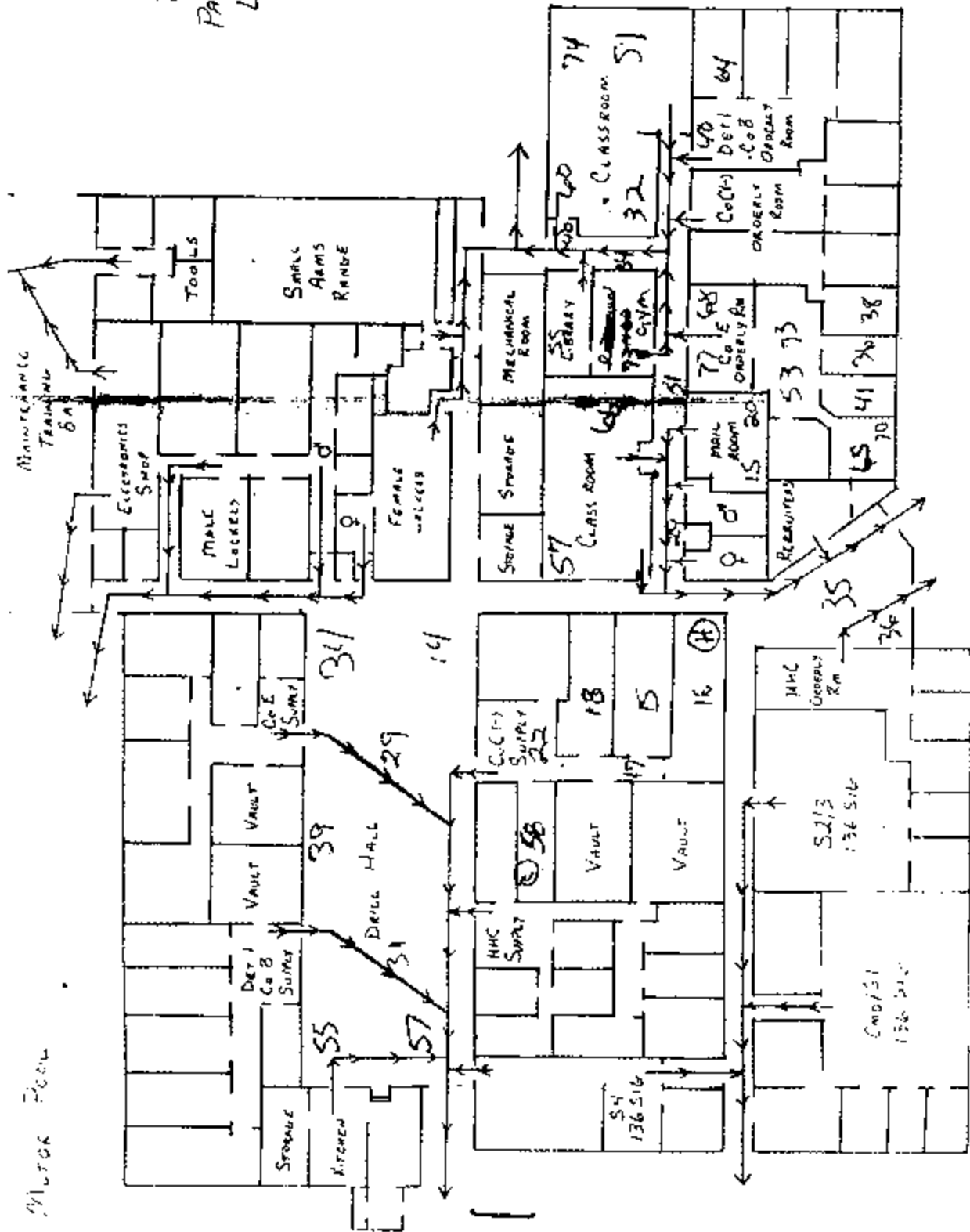
None.

Technical Assistance: For technical assistance regarding information found in this report

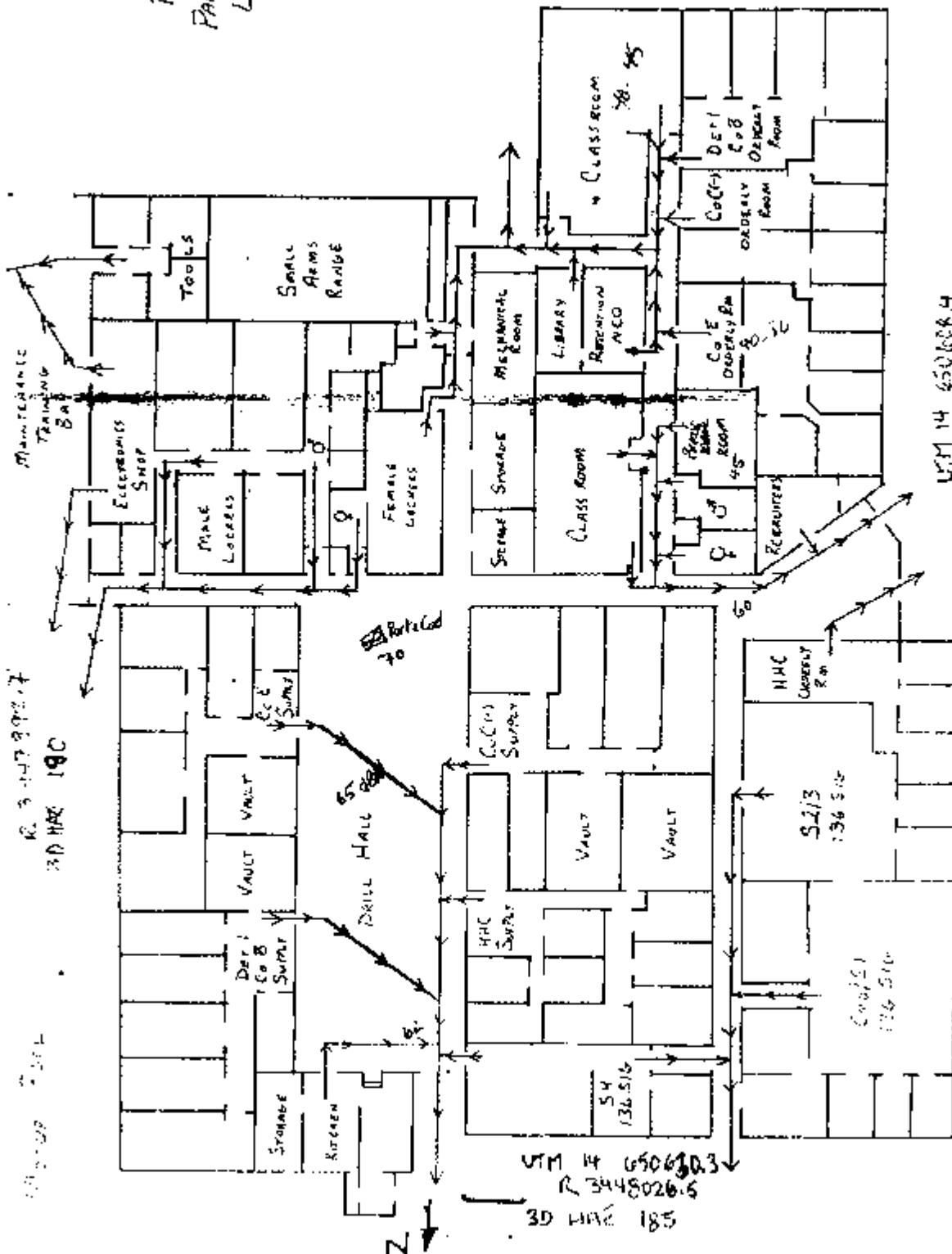
Non-Responsive

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APPENDIX A



POV
Facing
Lor



14 650608.4
2 3443930.6
30 141 197.14

1

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APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-8551 Email: skauflman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:18 PM

Fax:

EMSL Order: 200406798

Project:

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Analyzed</i>	<i>Area Sampled</i>	<i>Lead Concentration</i>
TEM 01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NELAP accreditation program	0001	6/21/04	n/a	<10.0 µg/wipe
TEM 02	0002	6/21/04	n/a	18.0 µg/wipe
TEM 03	0003	6/21/04	n/a	<10.0 µg/wipe
TEM 04	0004	6/21/04	n/a	<10.0 µg/wipe
TEM 05	0005	6/21/04	n/a	<10.0 µg/wipe
TEM 06	0006	6/21/04	n/a	<10.0 µg/wipe
TEM 07	0007	6/21/04	n/a	<10.0 µg/wipe
TEM 08	0008	6/21/04	n/a	18.0 µg/wipe
TEM 09	0009	6/21/04	n/a	62.0 µg/wipe
TEM 10	0010	6/21/04	n/a	<10.0 µg/wipe
TEM 11	0011	6/21/04	n/a	20.0 µg/wipe
TEM 12	0012	6/21/04	n/a	110.0 µg/wipe
TEM 13	0013	6/21/04	n/a	28.0 µg/wipe
TEM 14	0014	6/21/04	n/a	180.0 µg/wipe
TEM 15	0015	6/21/04	n/a	37.0 µg/wipe
TEM 16	0016	6/21/04	n/a	<10.0 µg/wipe
TEM 17	0017	6/21/04	n/a	<10.0 µg/wipe
TEM 18	0018	6/21/04	n/a	23.0 µg/wipe
TEM 19	0019	6/21/04	n/a	130.0 µg/wipe
TEM 20	0020	6/21/04	n/a	<10.0 µg/wipe
TEM 21	0021	6/21/04	n/a	11.0 µg/wipe

Non-Responsive

The GC data associated with the sample results included in this report meet the recovery and precision requirements established by the ASHA, unless specifically indicated otherwise in the comment section. The test results obtained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04853, ASHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:50:31 PM

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

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

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:18 PM

Fax:

EMSL Order: 200406798

Project: Tempite

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
TEM 22	0022	6/21/04	n/a	25.0 µg/wipe
TEM 23	0023	6/21/04	n/a	<10.0 µg/wipe
TEM 24	0024	6/21/04	n/a	<10.0 µg/wipe
TEM 25	0025	6/21/04	n/a	<10.0 µg/wipe
TEM 26	0026	6/21/04	n/a	<10.0 µg/wipe
TEM 27	0027	6/21/04	n/a	<10.0 µg/wipe
TEM 28	0028	6/21/04	n/a	<10.0 µg/wipe
TEM 29	0029	6/21/04	n/a	630.0 µg/wipe
TEM 30	0030	6/21/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested, unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NAEELAP: D4653, AIA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:50:38 PM

EMSL Analytical, Inc.

107 Hudson Ave., Westwood, NJ 08105

Phone: (908) 866-4800 Fax: (908) 866-4969 Email: esl@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 12:58 PM

Fax:

EMSL Order: 040410188

Project:

EMSL Proj:

Analysis Date: 6/14/2004

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
TEM01 040410188-0001	Temple	Gray Fibrous Heterogeneous	Teased Dissolved	1% Cellulose 95% Min. Wool	4% Non-fibrous (other)	None Detected
TEM02 040410188-0002	Temple	White Non-Fibrous Homogeneous	Crushed Dissolved	1% Cellulose	99% Non-fibrous (other)	None Detected
TEM03 040410188-0003	Temple	Tan Fibrous Homogeneous	Teased Crushed Dissolved	35% Cellulose 25% Min. Wool	40% Non-fibrous (other)	None Detected
TEM04 040410188-0004	Temple	Brown Non-Fibrous Homogeneous	Crushed Dissolved	5% Cellulose	95% Non-fibrous (other)	None Detected

Non-Responsive**Non-Responsive**

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL Westwood (NY) LAP #1010480, NY ELAP 10872

PLM 1

THIS IS THE LAST PAGE OF THE REPORT.

1

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APPENDIX C

EMSL ANALYTICAL CHAIN OF CUSTODY LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences Inc. EMSL Bill to: Same as mail to
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: (Name) Non-Responsive Telephone: Non-Responsive
 Fax Results to: (Name) _____ Fax #: _____

MATRIX		INSTRUMENT	RL (Reporting Limit)	FAI
Lead Chip*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% +-	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ng/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* List Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest. <input type="checkbox"/> -non ASTM or SW846-6010B	Flame Atomic Absorption	10 ug/wipe	
		ICP	3.0 ug/wipe	
TCLP Lead**	SW846-1311 / 7420 or SW846-6010B	Flame Atomic Absorption	0.4 mg/l (ppm)	
		ICP	0.1 mg/l (ppm)	
STLC Lead - California)	CA Title 22 section 128 / SW846-7420 or SW846-6010B	Flame Atomic Absorption	0.4 mg/l (ppm)	
		ICP	0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7420	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil +				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

T.T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days

* ** *** **** + - # Please Refer to Price Quote
 + If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
TEM01 - TEM30	TEMPLE		00798124

30 samples

Relinquished By: (Person) Non-Responsive Date: 6/5/04
 Received at EMSL By: _____ Date: 6/7/04
 Received at EMSL By: _____ Date: _____

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

② The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 - STLC.doc



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

82000400

EMSL Rep:

Your Company Name: Tammy Sciences, Inc.

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project:

Name/Number:

EMSL-Bill to:

Street:

Box #:

City/State:

Fax Results to:

Name:

Fax #:

Purchase Order:

Third Party Billing requires written authorization from third party

Same as bill to

Non-Responsive

Non-Responsive

MATRIX			TURNAROUND			
--------	--	--	------------	--	--	--

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

*EAT AIR, 3 hours, 6 hour: Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-320-3475 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 555-95 <input type="checkbox"/> Other:
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	SAMPLES ACCEPTED ANALYSIS BY EMSL ANALYTICAL TEMPLE	

SAMPLE NUMBER	FOR ANALYSIS BY	VOLUME (If Applicable)
	EMSL ANALYTICAL	
	TEMPLE	

Client Sample # (s)

Relinquished:

Received:

Total Samples #:

Non-Responsive

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APPENDIX D



Photo #1: Armory front entrance.



Photo #2: South side of the armory.



Photo #3: East side of the armory.

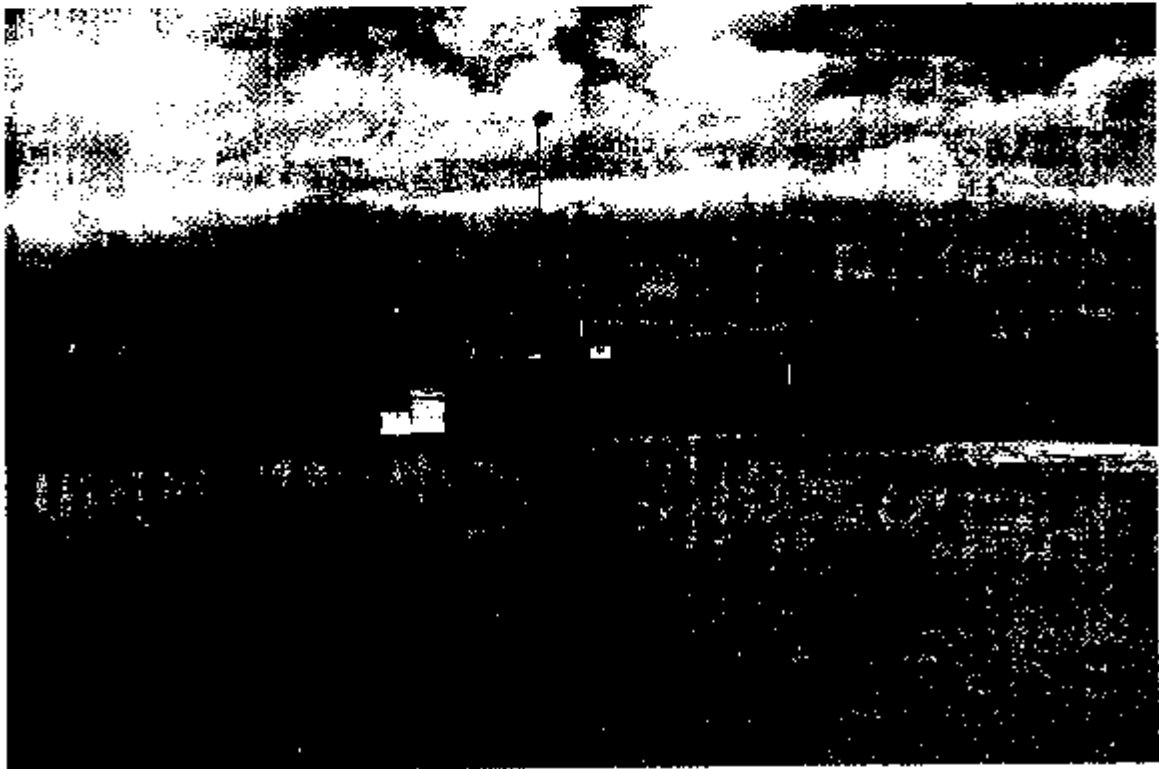


Photo #4: North side of the armory.

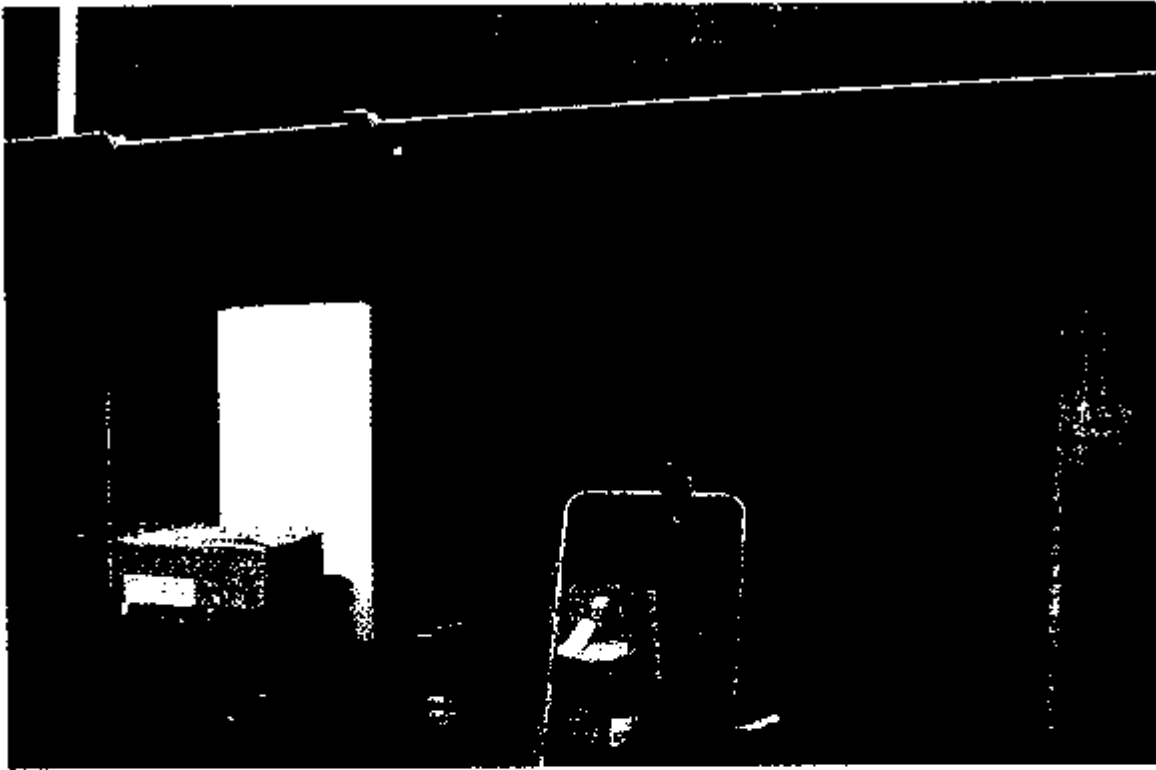


Photo #5: IFR showing the welding compressed gas stored in the range.

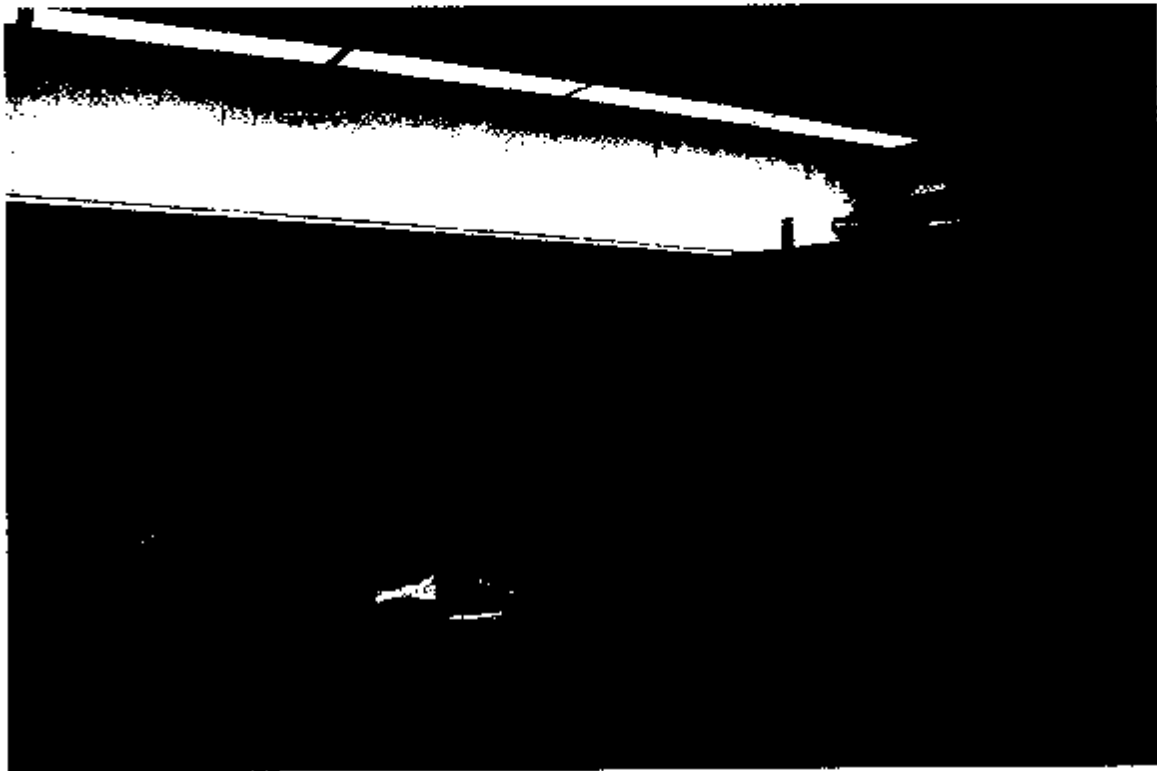


Photo #6: Indoor firing range facing the bullet trap.

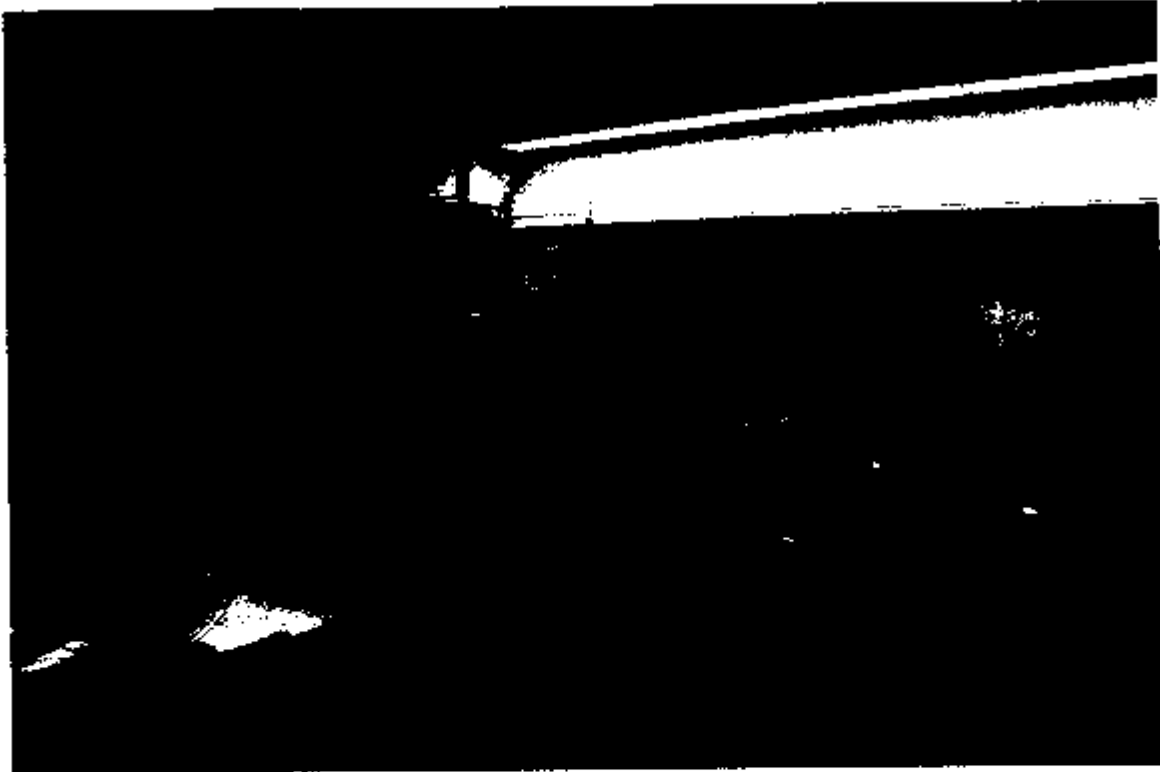


Photo #7: Indoor firing range showing items stored.

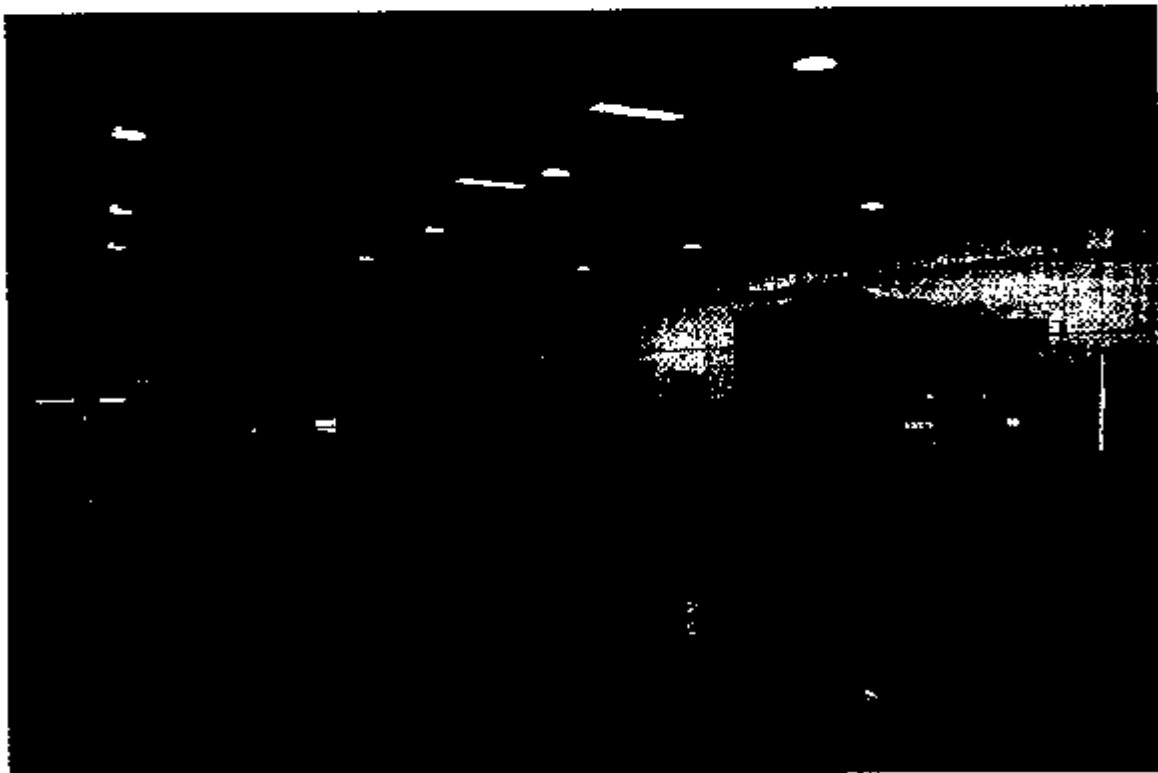


Photo #8: Drill hall facing south.



Photo #9: Drill hall facing north.



Photo#10: Armory's kitchen showing the stove.

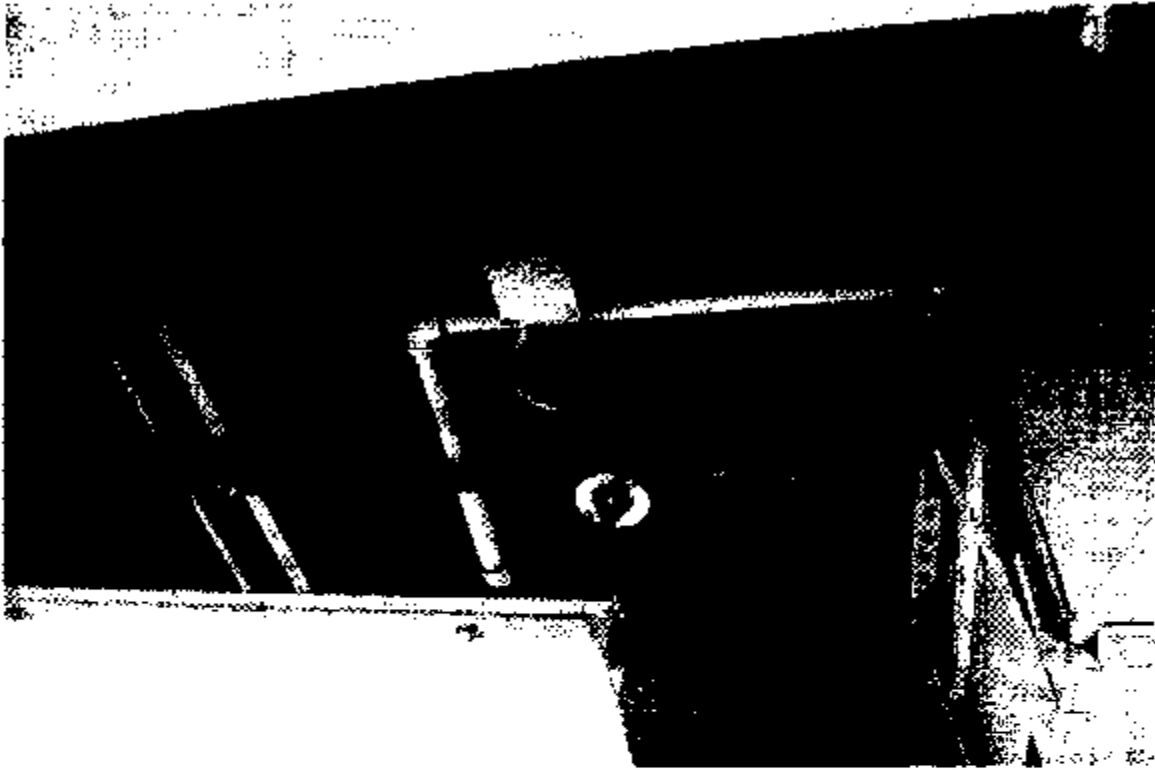


Photo #11: Sprayed on fireproofing in the break room.



Photo #12: Observation deck in the L.R.

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001. American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition. American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Terrell Armory
Lions Club Parkway
Highway 80W
Terrell, Texas

Prepared for:

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

Non-Responsive

June 25, 2004

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C. Lab Chain of Custody.	
D. Photographs.	

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Terrell Armory on 14 April 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 31,000 microgram per square foot.	Do not use the firing range space until it is cleaned and decontaminated properly.
Armory Lead Wipe Samples	<10 to 280 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 80 footcandles	No action.
HVAC/IAQ	Water damaged ceiling tiles were observed.	Repair water leaks and replace all water damaged building materials.

Terrell Armory

Survey Date: 14 April 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Terrell Armory in Terrell, Texas on 14 April 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Terrell Armory in Terrell, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 14 April 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses the headquarters and the third of the 144 infantry. The building is a one-story structure and consists of administrative office areas, a library, classrooms, a drill hall, supply rooms and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty one wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
TER-FR01	IFR bullet Stop lower left	110.0
TER-FR02	IFR bullet Stop middle	27.0
TER-FR03	IFR bullet Stop upper right	1,100.0
TER-FR04	IFR right wall (facing trap) upper right (facing wall)	5,600.0
TER-FR05	IFR right wall (facing trap) middle (facing wall)	3,600.0
TER-FR06	IFR right wall (facing trap) lower left (facing wall)	4,400.0
TER-FR07	IFR left wall (facing trap) bottom right (facing wall)	750.0
TER-FR08	IFR left wall (facing trap) middle (facing wall)	61.0
TER-FR09	IFR left wall (facing trap) upper left (facing wall)	450.0
TER-FR10	IFR ceiling surface to the right of the observation deck (facing trap)	75.0
TER-FR11	IFR ceiling surface in the middle of the range	13.0
TER-FR12	IFR ceiling surface by the bullet trap left side (facing trap)	<10.0
TER-FR13	IFR floor to the left of the bullet trap	31,000.0
TER-FR14	IFR floor middle of range	12,000.0
TER-FR15	IFR floor to the right of the observation area	13,000.0
TER-FR16	IFR back wall (facing wall) lower right	150.0
TER-FR17	IFR back wall (facing wall) middle	12.0
TER-FR18	IFR back wall (facing wall) upper left	130.0
TER-FR19	IFR Back of bullet stop	21,000.0
TER-01	Top of refrigerator in kitchen.	280.0
TER-02	Top of serving line between kitchen and drill hall	<10.0
TER-03	Supply diffuser in administrative office	<10.0
TER-04	Return air grill in the administrator office	28.0
TER-05	Top of a cabinet in the administrative office	<10.0
TER-06	Drill hall floor by supply room	27.0
TER-07	Drill hall floor diagonally opposite the floor sample by supply	<10.0
TER-08	Drill hall floor in center.	23.0
TER-09	Top of the soda machine in the drill hall	92.0
TER-10	Top of a surface in the classroom	19.0
TER-11	Top of a random surface in the armory	30.0
TER-12	Field Blank	19.0

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

Terrell Armory

Survey Date: 14 April 2004

The indoor firing range as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-15.

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas, classrooms, and library. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, and storage areas. Bulk samples were collected from typical suspect materials. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
TER-A01B	2x4 foot ceiling tile in drill hall and exercise room	None.
TER-A02B	12x12 inch floor tile.	None.
TER-A02B	Mastic from 12x12 inch floor tile.	<1 % Chrysotile
TER-A03B	Baseboard.	None.

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

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 80 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	30 - 65
Classrooms	50 - 80
Supply Rooms.	10 - 25
Drill Hall.	50 - 75
Hallway.	30 - 35
Kitchen.	10 - 40

The Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various

factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of individual forced air furnace units with cooling capabilities. Water damage was observed in various parts of the armory. All water leaks should be repaired as soon as possible and water damaged building materials should be replaced or cleaned and contaminated if replacement is not feasible. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendations:

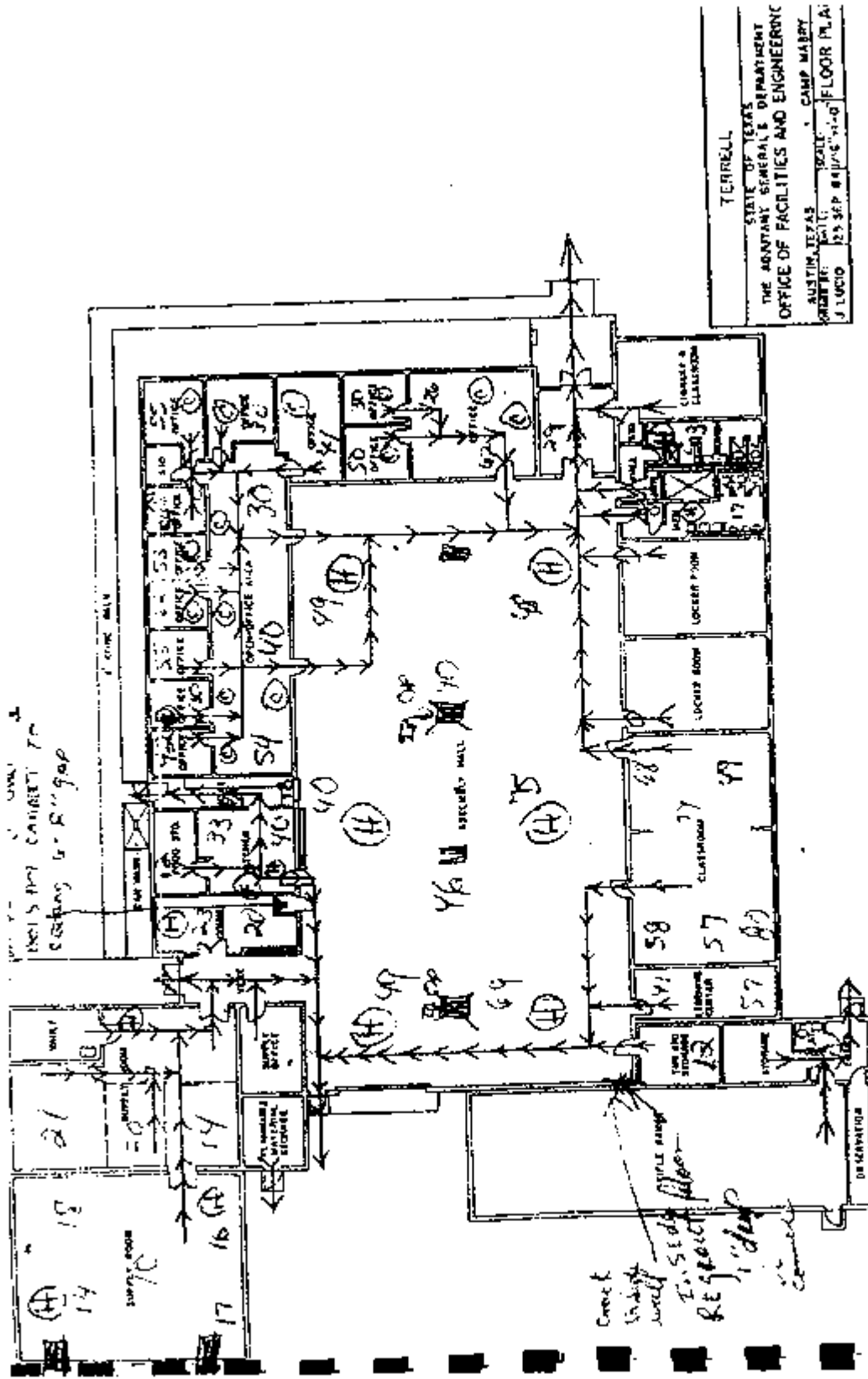
1. Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.
2. Repair water leaks and replace all water damaged building materials.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

BEST AVAILABLE COPY

APPENDIX A



FIRE EVACUATION PLAN

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APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4100 Fax: (856) 858-0551 Email: skauffman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 1:42 PM

Fax:

EMSL Order: 200404865

Project: Terrell, TX

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
TER-FR01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/7/04	144 in ²	110.0 µg/ft ²
TER-FR02	0002	5/7/04	144 in ²	27.0 µg/ft ²
TER-FR03	0003	5/7/04	144 in ²	1100.0 µg/ft ²
TER-FR04	0004	5/7/04	144 in ²	5800.0 µg/ft ²
TER-FR05	0005	5/7/04	144 in ²	3500.0 µg/ft ²
TER-FR06	0006	5/7/04	144 in ²	4400.0 µg/ft ²
TER-FR07	0007	5/7/04	144 in ²	750.0 µg/ft ²
TER-FR08	0008	5/7/04	144 in ²	61.0 µg/ft ²
TER-FR09	0009	5/7/04	144 in ²	450.0 µg/ft ²
TER-FR10	0010	5/7/04	144 in ²	75.0 µg/ft ²
TER-FR11	0011	5/7/04	144 in ²	13.0 µg/ft ²
TER-FR12	0012	5/7/04	144 in ²	<10.0 µg/ft ²
TER-FR13	0013	5/7/04	144 in ²	31000.0 µg/ft ²
TER-FR14	0014	5/7/04	144 in ²	12000.0 µg/ft ²
TER-FR15	0015	5/7/04	144 in ²	13000.0 µg/ft ²
TER-FR16	0016	5/7/04	144 in ²	150.0 µg/ft ²
TER-FR17	0017	5/7/04	144 in ²	12.0 µg/ft ²
TER-FR18	0018	5/7/04	144 in ²	130.0 µg/ft ²
TER-FR19	0019	5/7/04	144 in ²	21000.0 µg/ft ²
TER-01	0020	5/7/04	144 in ²	280.0 µg/ft ²
TER-02	0021	5/7/04	144 in ²	<10.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NEELAP: 04853, AHA Environmental Lead Laboratory Approval Program: 100194

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4000 Fax: (856) 858-8681 Email: skauflman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 1:42 PM

Fax:

MSL Order: 200404965

Project:

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
TER-03	0022	5/7/04	144 in ²	<10.0 µg/ft ²
TER-04	0023	5/7/04	144 in ²	28.0 µg/ft ²
TER-05	0024	5/7/04	144 in ²	<10.0 µg/ft ²
TER-06	0025	5/7/04	144 in ²	27.0 µg/ft ²
TER-07	0026	5/7/04	144 in ²	<10.0 µg/ft ²
TER-08	0027	5/7/04	144 in ²	23.0 µg/ft ²
TER-09	0028	5/7/04	144 in ²	92.0 µg/ft ²
TER-10	0029	5/7/04	144 in ²	19.0 µg/ft ²
TER-11	0030	5/7/04	144 in ²	30.0 µg/ft ²
TER-12	0031	5/7/04	144 in ²	19.0 µg/ft ²

Non-Responsive

The QC data are correlated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04603, AHA Environmental Lead Laboratory Approval Program: 100194

Printed: 04/22/04 12:12:30 PM

Phone: (856) 868-4000 Fax: (856) 868-4940 Email: info@OFMSI.com

Customer ID: TS80
Customer PO:
Received: 04/22/04 12:31 PM
EMSL Order: 040407153
EMSL Proj.
Analysis Date: 4/30/04

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
TER-A01B 040407153-0001		Gray Fibrous Heterogeneous	Teased	80% Cellulose 20% Glass	20% Non-fibrous (other)	None Detected
TER-A02B-Tile 040407153-0002		White Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
TER-A02B-Mastic 040407153-0004		Black Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	<1% Chrysotile
TER-A03B 040407153-0002		Brown Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected

Non-Responsive

EMSLA and its staff do not warrant, endorse, or assume any responsibility for the use of the information reported in this report. EMSLA may require additional testing by TEM to confirm substance quantities. The above lab report relates only to the items listed and may not be reproduced in any form without the express written approval of EMSLA. Additionally, the EMSLA's liability is limited to the cost of analysis. EMSLA bears no responsibility for sample collection activities or analytical method limitations, interpretation and use of test results, or the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted. Analysis performed by EMSLA, Westmont (NYLAP #101048-0), NY ELAP 10872

PLU-1

~~THIS IS THE LAST PAGE OF THE REPORT~~

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APPENDIX C

200704965

EMSL ANALYTICAL CHAIN OF CUSTODY LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: Same as mail to.
 Street: 3744 Lawrence Drive Box #: _____
 City/State: Naperville, IL 60564 City/State: _____
 Phone Results to: (Name) _____ Phone #: _____
 Fax Results to: (Name) _____ Fax #: _____

MATRIX	METHOD	INSTRUMENT	Limit	
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% →	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil *	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest. <input type="checkbox"/> -non ASTM or SW846-6010B	Flame Atomic Absorption	10 ug/wipe	Rejection
		ICP	3.0 ug/wipe	
TCLP Lead**	SW846-1311 / 7420 or SW846-6010B	Flame Atomic Absorption	0.4 mg/l (ppm)	
		ICP	0.1 mg/l (ppm)	
STLC Lead (California)	CA Title 22 (2001) 126 / SW846-7420 or SW846-6010B	Flame Atomic Absorption	0.4 mg/l (ppm)	
		ICP	0.1 mg/l (ppm)	
Lead in Air***	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	2007 APR 22 PM 1:42
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil *				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** * Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume: L Area, in ²	LAB #
TER-FR01	Terrell, TX	144	649601
TER-FR02			

Relinquished By: (Person)

Received at EMSL By:

Received at EMSL By:

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 v STLC.doc

70404965

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
TER - FR03		144	64965-1
FR04			2
FR05			5
FR06			6
FR07			7
FR08			8
FR09			9
FR10			10
FR11			11
FR12			12
FR13			13
FR14			14
FR15			15
FR16			16
FR17			17
FR18			18
TER - FR19			19
TER - 01			20
TER - 02			21
03			22
04			23
05			24
06			25
07			26
08			27
09			28
10			29
11			30
12			31

10 B-14
*

2004 APR 22 PM 11:42

WESTMONTAIN

Relinquished By: (Person)

Non-Responsive

Date: 4/19/09

Received at EMSL By:

Date:

Received at EMSL By:

Date:

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

③ The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

* FOR KAL - and sample 1 sample (TER FR 19) 5/14/04 9 AM

Lead Chain Ver 2001 v STLC.doc



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

Asbestos

EMSL Rep:

Your Company Name: Thomas Science, Inc.
Street: 3744 Lawrence Drive

Box #: Box
City/State: Naperville, IL Zip: 60564

Phone Results to:

Name:

Telephone #:

Project:

Name/Number:

EMSL-Bill to:

Street:

Box #:

City/State:

Zip:

Third Party Billing requires written authorization
from third party

Same as mail to

Fax Results to:

as Order #:

Non-Responsive

Non-Responsive

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

*TEM AIR, 3 hours, 6 hour. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-230-3675 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.). Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Grav metric) <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC/WIPE <input type="checkbox"/> ASTM D 5755-95 <small>comparative method</small>
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	OTHER <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica	

NY 198.4 SAMPLES ACCEPTED
FOR ANALYSIS BY
EMSL ANALYTICAL INC.

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)
TER-A01B		

Client Sample # (s) TER-A01B - TER-A03B Total Samples #: 3

Relinquished: Non-Responsive Date: 4/29/04 Time: AM

Received: Non-Responsive Date: Time:

05/04

1

APPENDIX D

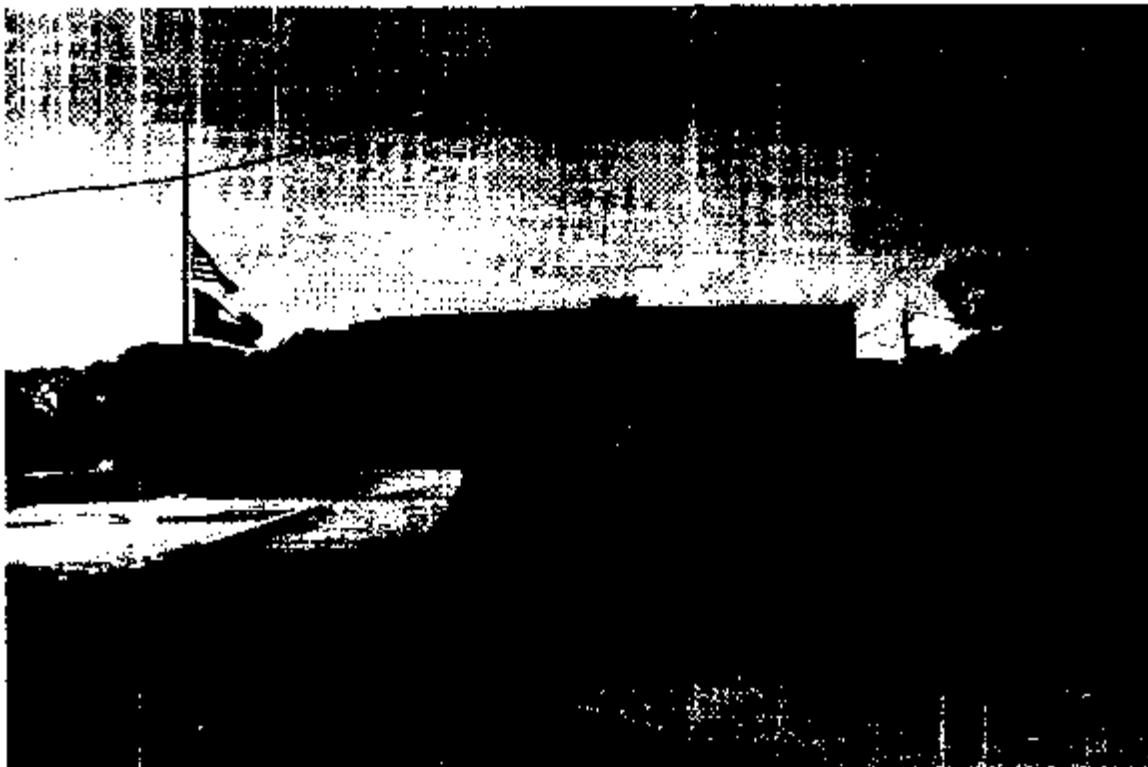


Photo #1: Armory front entrance.



Photo #2: East side of the armory.

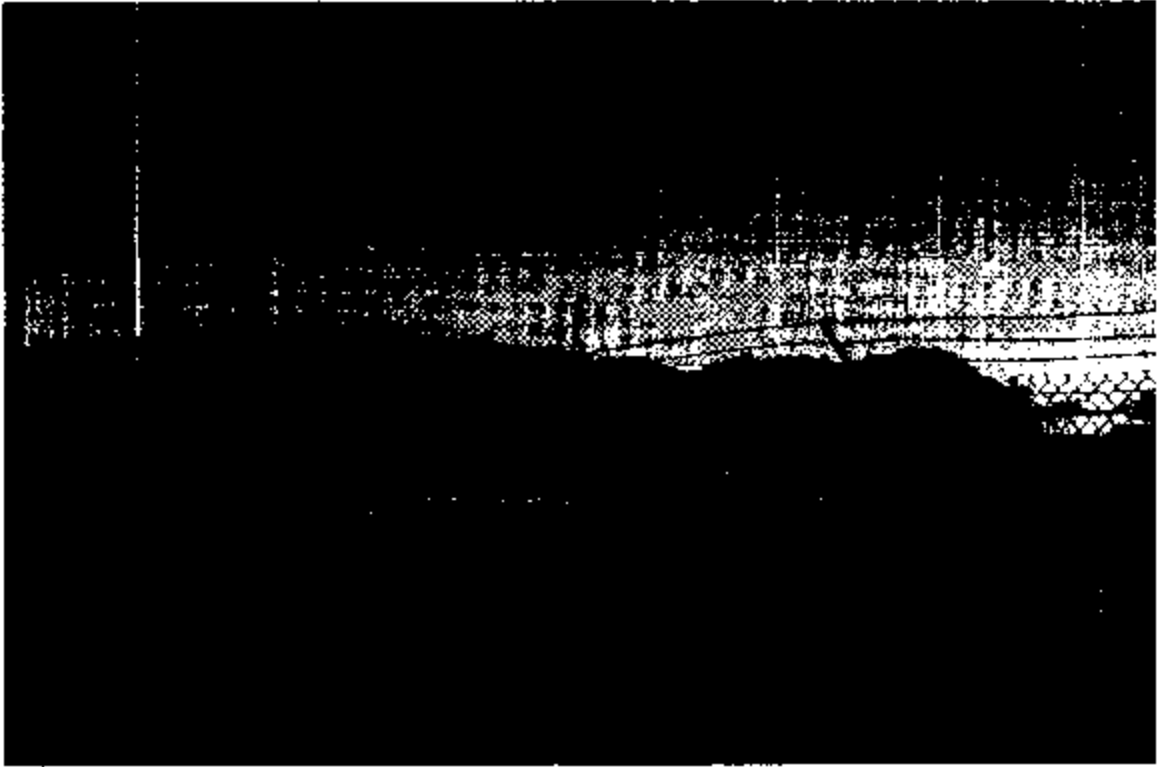


Photo #3: South west corner of the armory showing the outside of the firing range.

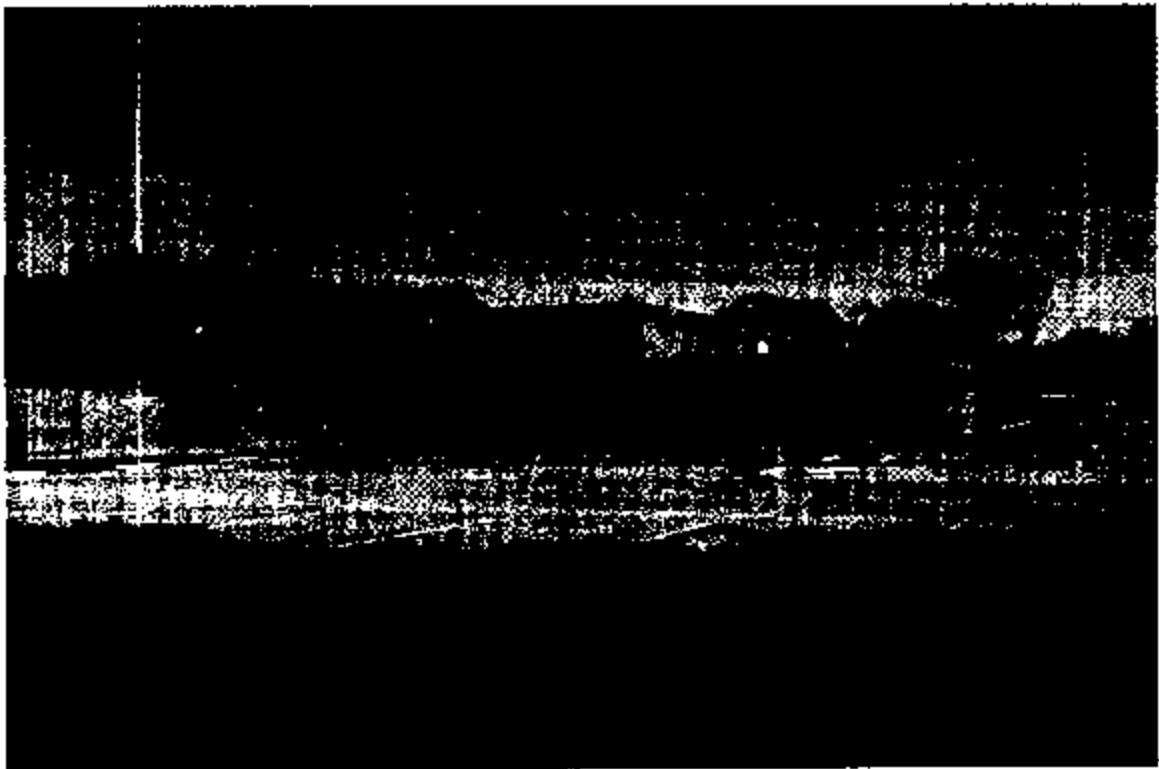


Photo #4: North side of the armory.



Photo #5: Drill hall facing east.

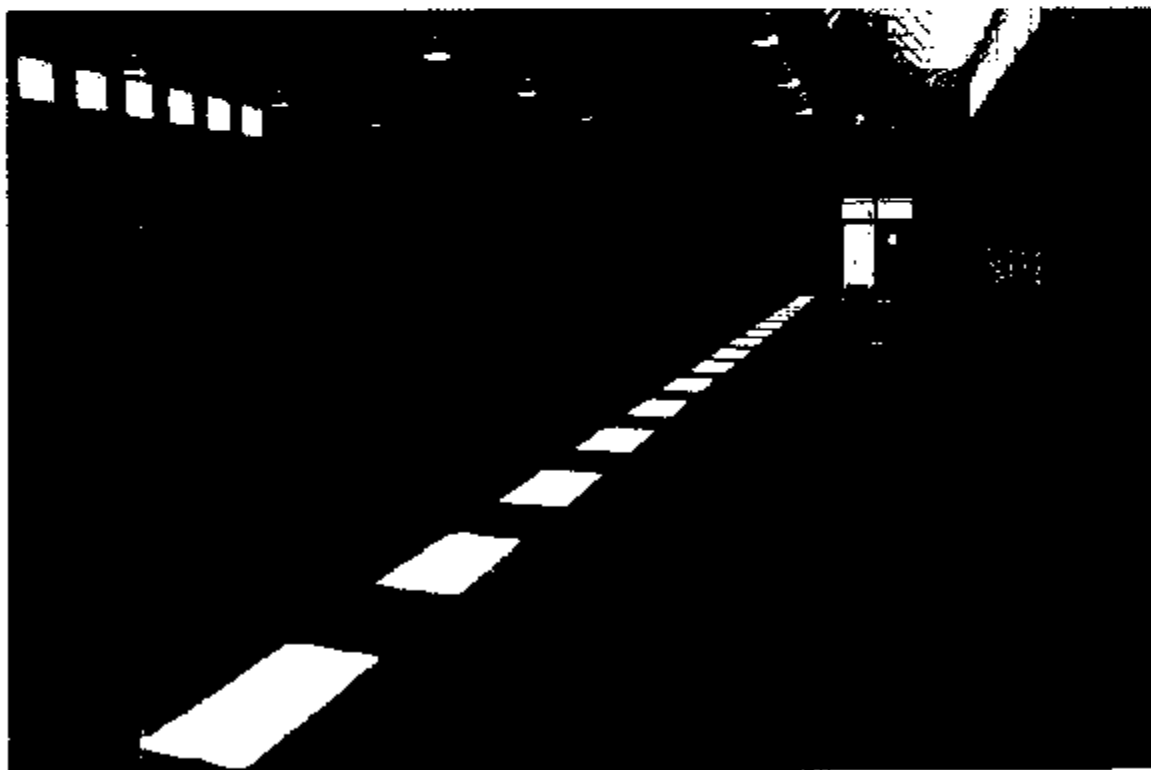
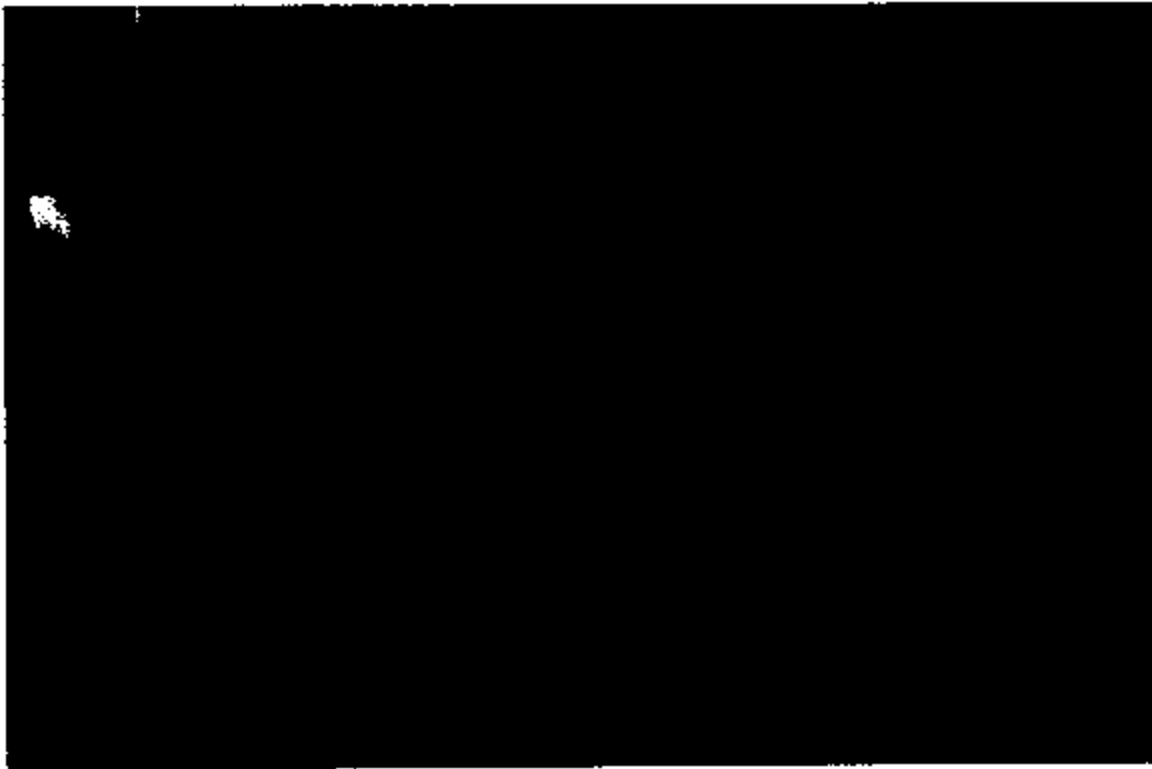


Photo #6: Drill hall facing west.



Photo#7: Indoor firing range facing bullet stop.

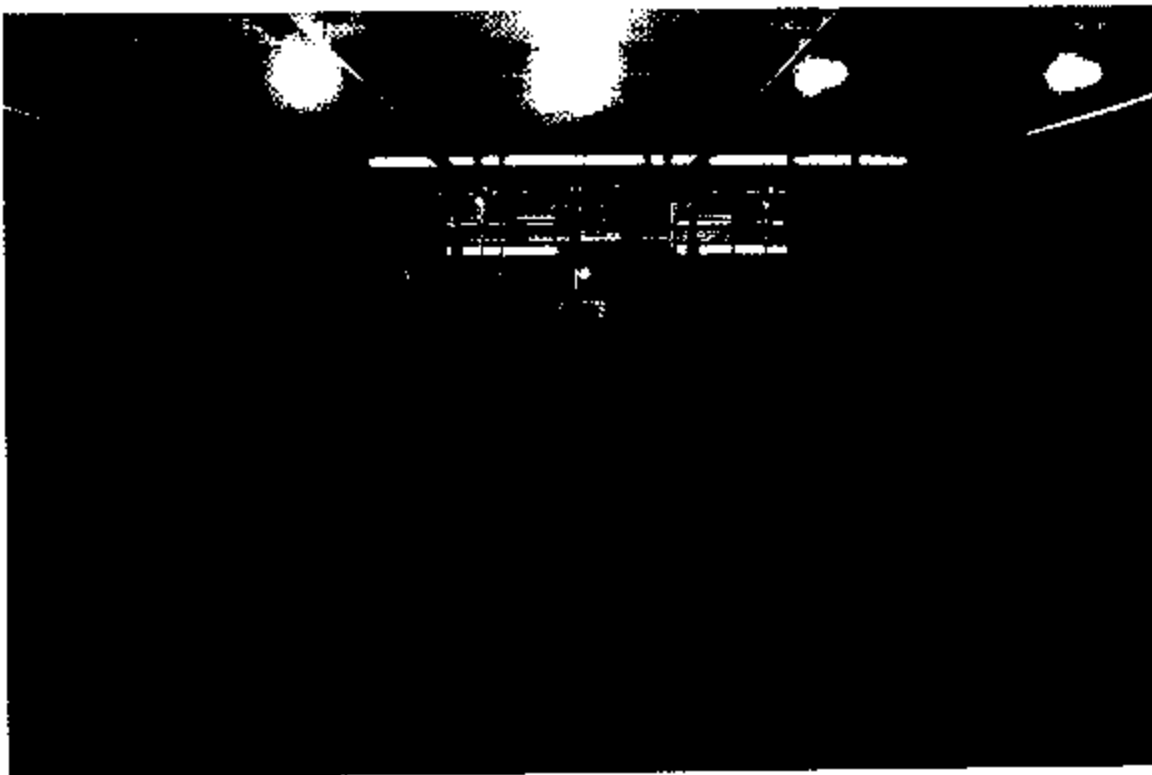


Photo #8: Indoor firing range facing firing line.

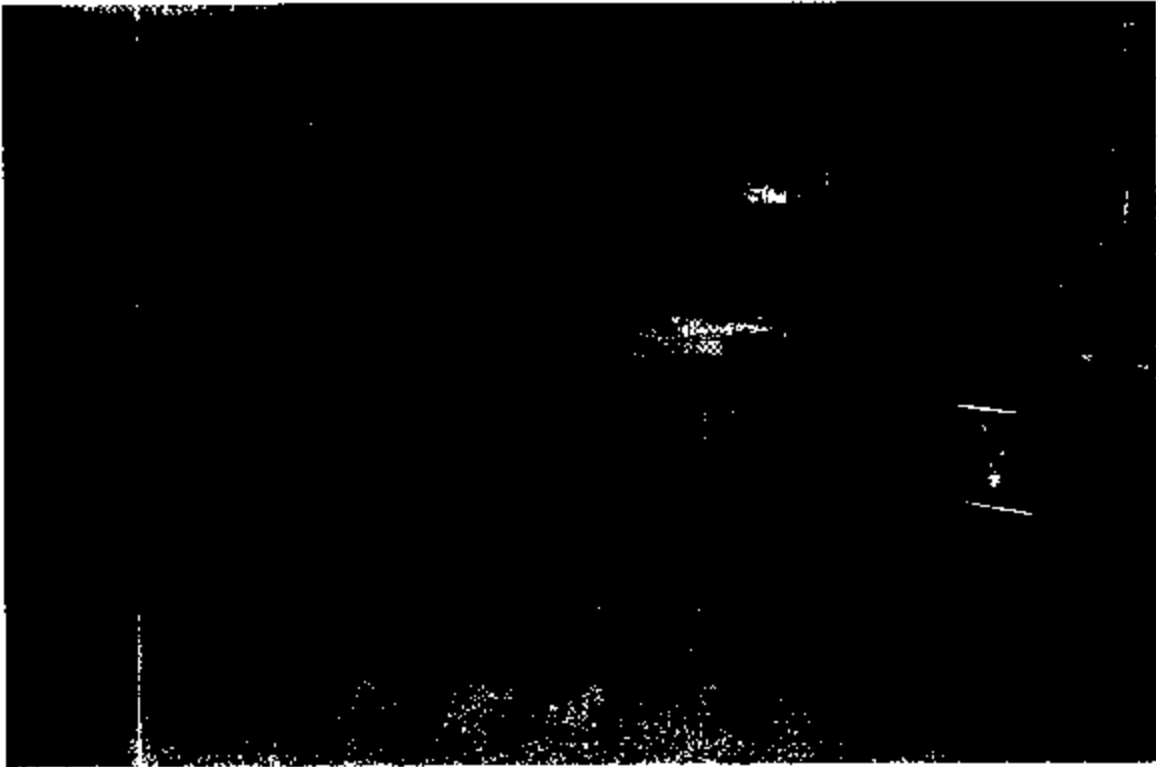


Photo #9: Armory's kitchen showing the stove.



Photo #10: Armory's forced air furnace showing the wooden air plenum.

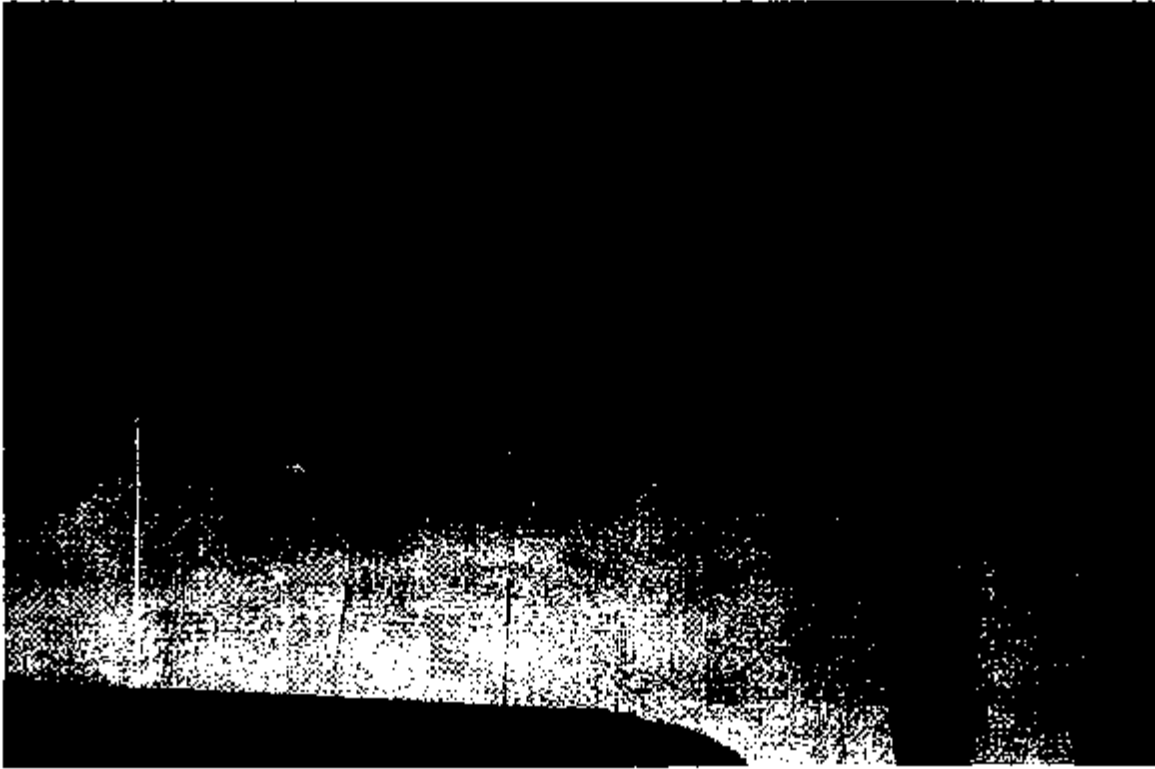


Photo #11: Water damage showing the stained ceiling tiles.

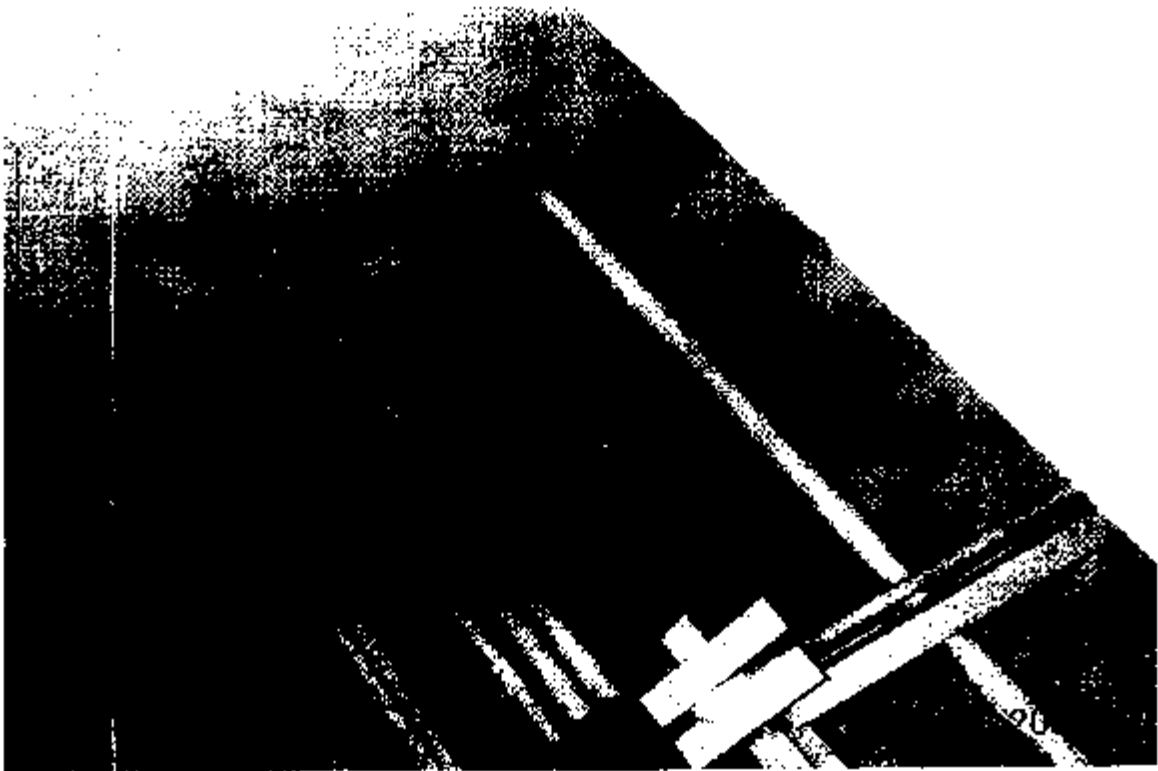


Photo #12: Water heater exhaust pipe has a 8 inch gap between the ceiling and the duct.

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

June 25, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 15, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, **Non-Responsive** survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.I., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.I, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Victoria Armory, Corpus Christi Armory, Eagle Pass Armory, Laredo Armory, Columbus Armory and El Campo Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Victoria Armory
106 E Mockingbird Lane
Victoria, Texas

Prepared for:

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

Non-Responsive

June 15, 2004

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Recommendations.....	Page 6

Appendices

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

Victoria Armory

Survey Date: 24 March 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Victoria Armory on 24 March 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
Armory Lead Wipe Samples	<10 to 47 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	15 to 70 footcandles	No action.
HVAC/IAQ	No issues observed or documented.	No action.

Victoria Armory

Survey Date: 24 March 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Victoria Armory in Victoria, Texas on 24 March 2004

BACKGROUND:

Introduction. At the request of [Non-Responsive] of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Victoria Armory in Victoria, Texas. [Non-Responsive] Industrial Hygiene Technician for the Texas Army National Guard and [Non-Responsive] contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 24 March 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory, which was built in 1959 and was renovated in 1995, houses Company B and the 141 Infantry. The building is a two-story structure and consists of administrative office areas, a kitchen, classrooms, a library, a drill hall, and a supply room. No indoor firing range is in this armory. One full time employees work at this armory. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Eight wipe samples were collected from various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
VIC01	Top of ice machine in kitchen.	17.0
VIC02	Top of window ledge for dirty dishes return window	47.0
VIC03	Drill hall floor by roll top floor.	<10.0
VIC04	Drill hall floor by supply room.	<10.0
VIC05	Drill hall floor by kitchen.	<10.0
VIC06	Top of the soda machine in the drill hall	39.0
VIC07	Supply diffuser in administrative office	<10.0
VIC08	Field Blank	33.0

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

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas and classrooms. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
VICB01	12x12 inch floor tile.	None.
VICB02	Baseboard and mastic	None.

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 15 foot-candles to 70 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	40 – 60
Classrooms.	55 – 65
Supply Rooms.	15 – 20
Drill Hall.	15 – 20
Hallway.	20 – 60
Kitchen.	50 – 70

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of five individual furnace forced air units. The common return air plenum is located underneath each unit and is constructed of wooden plywood. No water leaks signs were observed in the mechanical closets. However, the presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor air. All condensate water should be isolated from the wood on the return air plenum. Consideration should be given to replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

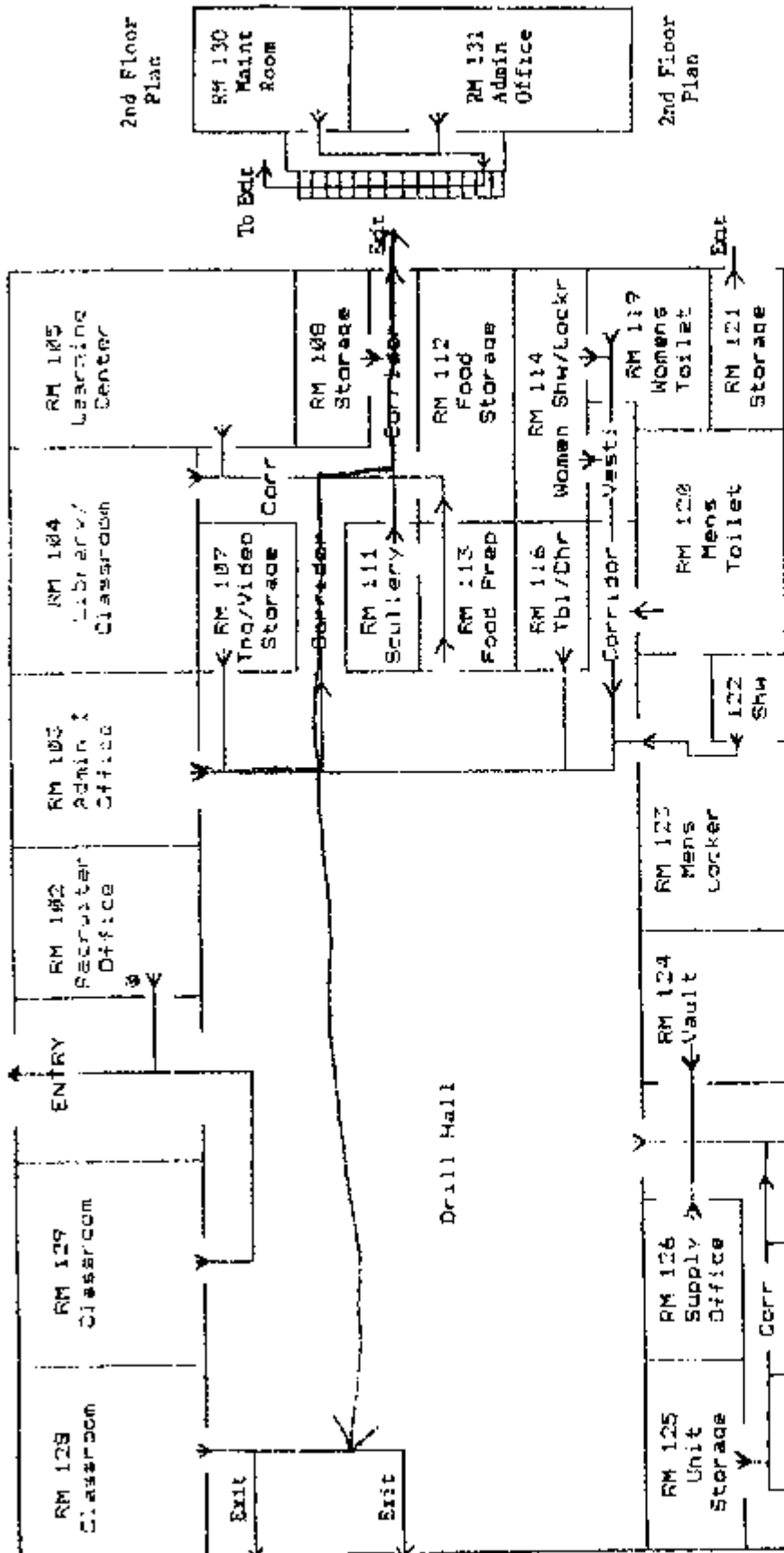
Recommendation:

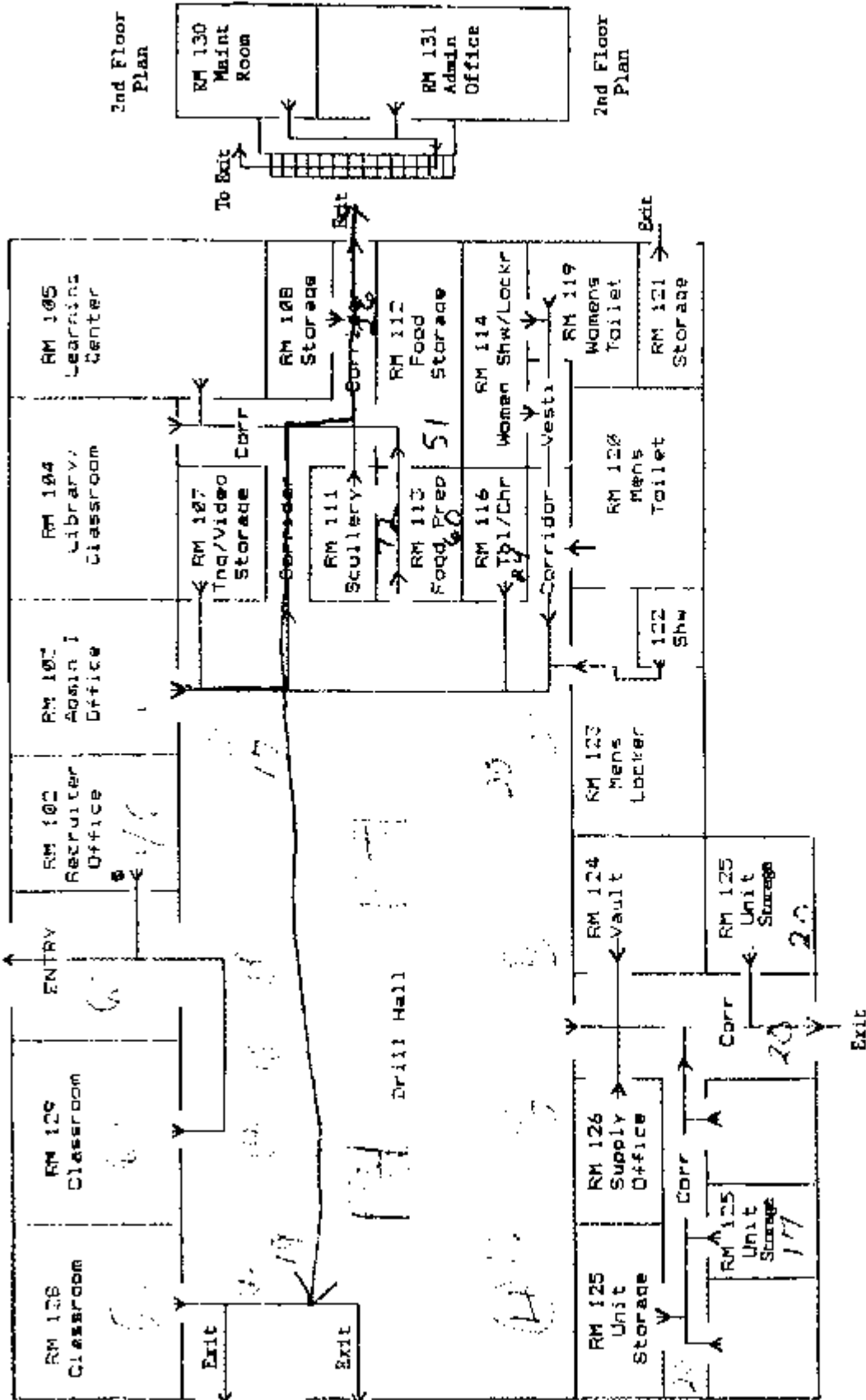
None.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A





BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4100 Fax: (856) 456-9551 Email: ekaufman@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: T580

Customer PO:

Received: 03/30/04 10:13 AM

Fax:

EMSL Order: 200403341

Project: Victoria, TX

EMSL Proj:

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

Client Sample Description		Lab ID	Analyzed	Area Sampled	Lead Concentration
VIC01	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	4/13/04	n/a	17.0 µg/wipe
VIC02		0002	4/13/04	n/a	47.0 µg/wipe
VIC03		0003	4/13/04	n/a	<10.0 µg/wipe
VIC04		0004	4/13/04	n/a	<10.0 µg/wipe
VIC05		0005	4/13/04	n/a	<10.0 µg/wipe
VIC06		0006	4/13/04	n/a	39.0 µg/wipe
VIC07		0007	4/13/04	n/a	<10.0 µg/wipe
VIC08		0008	4/13/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

ACCREDITATION: NJ-NELAP: 04853; AHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 4/14/04 9:25:09 AM

Page 4 of 1

EMSL Analytical, Inc.

1001 Lakeside Ave., TV-2000, NJ 08108

Phone: (201) 835-4700 Fax: (201) 835-4360 Email: sales@EMSL.com

EMSL

Attn:

Non-Responsive

Customer ID: TS90

Customer PO:

Received: 03/30/04 8:00 AM

Fax:

EMSL Order: 040405519

Project:

EMSL Proj:

Analysis Date: 4/8/2004

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
VICB01 (040405519-001)		White Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
VICB02 (040405519-002)		Brown Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected

Non-Responsive

Due to magnification capabilities inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test result relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL. Version: (NVLAP # 01048-0) NY ELAP 10072

THIS IS THE LAST PAGE OF THE REPORT.

1

APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

Date: 3/26/04 EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences Inc. EMSL-Bill to: _____
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville / IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: Name **Non-Responsive**
 Fax Results to: (Name) Kyle Kanar Fax #: _____

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	TAT
Lead in Wipe*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% ---	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air**	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* <input checked="" type="checkbox"/> -ASTM <input type="checkbox"/> -non ASTM	SW846-7420 / HUD Appendix 14.2 Digest or SW846-6010B	Flame Atomic Absorption ICP	10 ug/wipe 3.0 ug/wipe	
ICP Lead**	SW846-1411 / 7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)	
STLC Lead (contaminant)	CA Title 22, subchapter 1 SW846-7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)	
Lead in Air**	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil -				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

TAT (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** --- Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume: L Area: in ²	LAB #
<u>VIC01</u>	<u>Victoria, TX</u>		<u>63391</u>
<u>VIC02</u>			

Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 or STLC doc

LEAD

Date: _____

C-2
FOIA Requested Record #J-15-0085 (TX)
Released by National Guard Bureau
Page 1518 of 1757



EMSL Analytical, Inc.
Revised 07/07/99

EMSL Rep:

Your Company Name:

Street:

Box #:

City/State:

Phone Results to:

Name:

Telephone #:

Project:

Name/Number:

TAMMER SCIENCES

KAL KAWAR

3744 Lawrence Drive

Naperville, IL Zip: 60564

EMSL-Bill to:

Street:

Box #:

City/State:

Box Results to:

Name:

Telephone #:

Purchase Order #:

Third Party Billing requires written authorization from third party

Same

Non-Responsive

Non-Responsive

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

*EM AIR 3 hours, 6 hour. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-235-5775 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote.

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II FOR ANALYSIS BY EMSL ANALYTICAL INC.	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 quantitative method
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	XRD <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica	
OTHER <input type="checkbox"/>		

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)
<i>VIC B01</i>		
<i>VIC B02</i>		

(Test Sample # (s))

Relinquished:

Received:

Total Samples #:

Non-Responsive

1/26/04

Time:

PM

3/30

Time:

8AM

APPENDIX D



Photo #1: Armory front entrance. Note the armory was hosting a mesh fund raiser on the day of the survey.



Photo #2: Outside the armory's drill hall.



Photo #3: North side of the armory.



Photo #4: West side of the armory.



Photo #5: Southwest corner of armory.



Photo #6: Drill hall facing south.



Photo #7: Drill hall facing north.



Photo #8: Armory's kitchen.

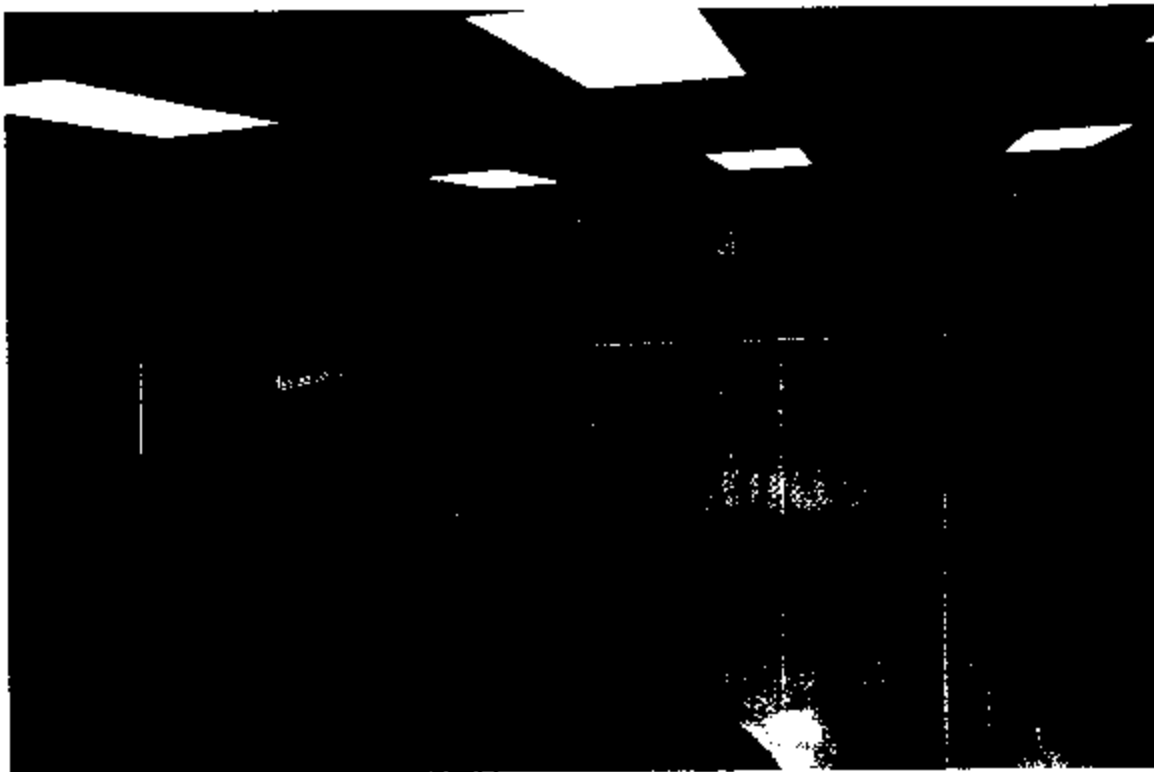


Photo #9: Classroom in the Armory.

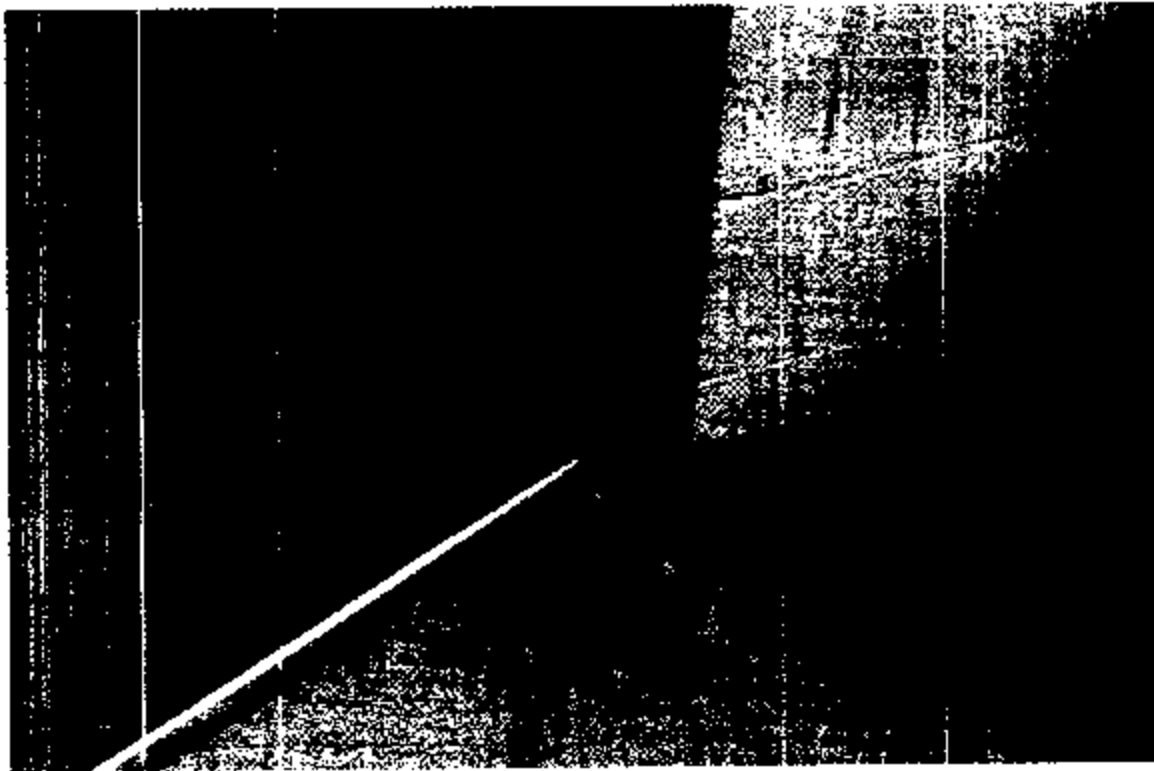


Photo #10 Floor tiles were bulk sample was collected.

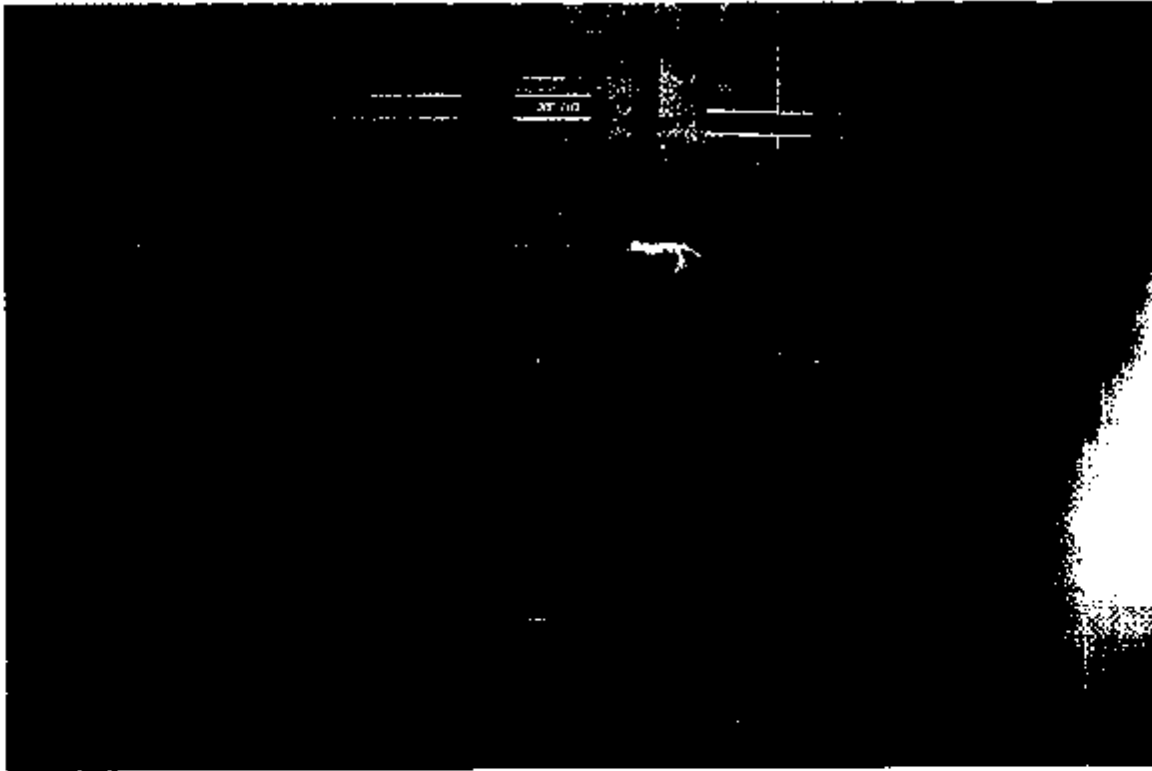


Photo #11: Furnace units showing the wooden common return plenum

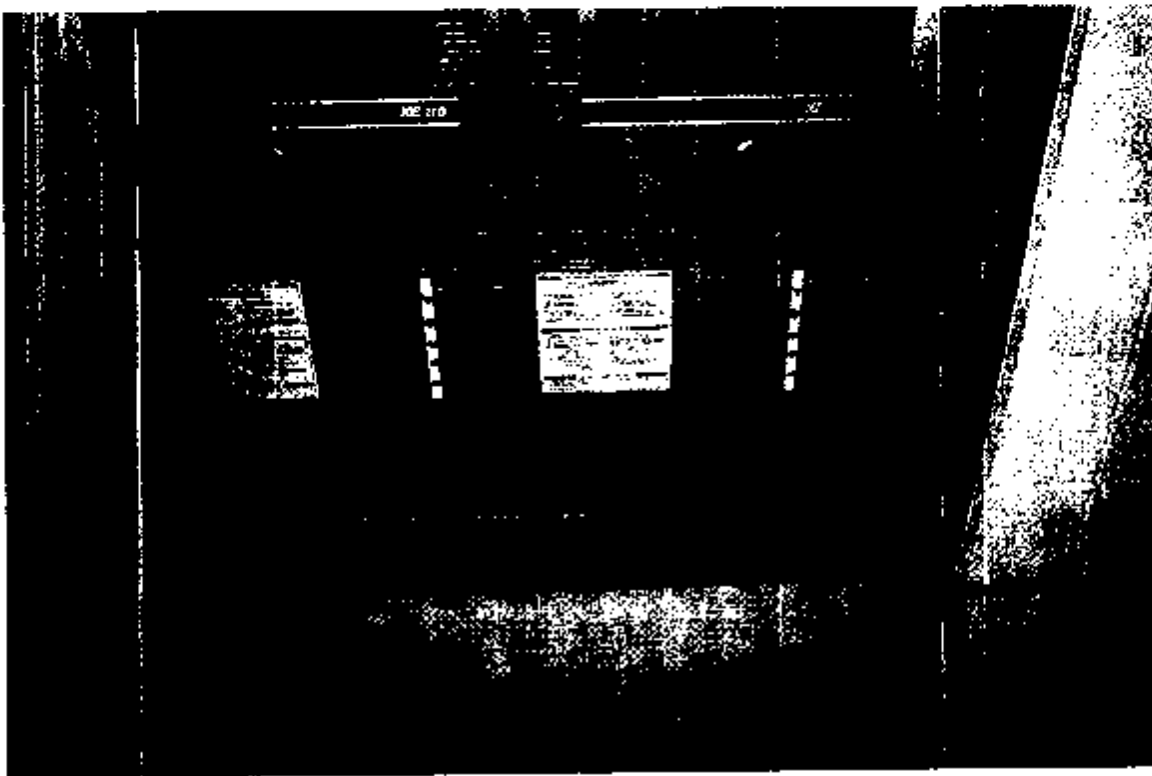


Photo #12: Furnace units showing the wooden common return plenum

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.
- b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Waco Armory
2120 North New Road
Waco, Texas

Prepared for:

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

By

Non-Responsive

July 9, 2004

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Heating Ventilating and Air Conditioning (HVAC).....	Page 5
Recommendations.....	Page 6

Appendices

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

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Waco Armory on 3 June 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 780 microgram per square foot.	No action.
Armory Lead Wipe Samples	<10 to 48 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	1 to 60 footcandles	No action.
HVAC/IAQ	No issues were found.	No action.

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Waco Armory in Waco, Texas on 3 June 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Waco Armory in Waco, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 3 June 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses the Headquarter of the 1-124 Cavalry. The building is a two-story structure and consists of an administrative office area, a kitchen, classrooms, a drill hall, supply rooms, storage rooms, an exercise room, and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Twenty nine wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
WAC 01	Top of serving line in kitchen	<10.0
WAC 02	Top of coffee maker in drill hall.	48.0
WAC 03	Supply diffuser in Sgt. Arnold's office.	30.0
WAC 04	Supply diffuser in squadron administrative office	15.0
WAC 05	Top of filing cabinet in squadron administrative office	<10.0
WAC 06	Drill hall floor by supply room/vault.	30.0
WAC 07	Drill hall floor in center.	13.0
WAC 08	Drill hall floor diagonally opposite to supply room/vault.	22.0
WAC 09	Top of the soda machine in the drill hall.	48.0
WAC 10	Top of desk in classroom #8 in new addition	<10.0
WAC 11	Top of stereo in exercise room	24.0
WAC 12	IFR back wall (facing wall) upper left.	<10.0
WAC 13	IFR back wall (facing wall) middle.	<10.0
WAC 14	IFR back wall (facing wall) lower right.	<10.0
WAC 15	IFR left wall (facing range) upper left (facing wall).	<10.0
WAC 16	IFR left wall (facing range) middle (facing wall).	<10.0
WAC 17	IFR left wall (facing range) lower right (facing wall).	<10.0
WAC 18	IFR right wall (facing range) upper left (facing wall).	<10.0
WAC 19	IFR right wall (facing range) middle (facing wall).	<10.0
WAC 20	IFR right wall (facing range) lower right (facing wall).	<10.0
WAC 21	IFR ceiling left side (facing range) top of bullet deflector.	<10.0
WAC 22	IFR ceiling middle of the range.	<10.0
WAC 23	IFR ceiling right side (facing range) by firing line.	<10.0
WAC 24	IFR floor to the left facing the range.	100.0
WAC 25	IFR floor middle of range.	110.0
WAC 26	IFR floor to the right of the bullet trap.	150.0
WAC 27	IFR bullet Stop upper right facing stop.	190.0
WAC 28	IFR bullet Stop middle.	780.0
WAC 29	IFR bullet Stop lower left facing stop.	85.0

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. The laboratory report and chain of custody forms are attached in Appendices B and C. The only elevated sample was taken from the top of the bullet stop. No further action is required.

Waco Armory

Survey Date: 03 June 2004

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x2 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. Fiber glass thermal insulation was also noted throughout the armory. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
WAC A01	12x12 inch floor tile.	None.
WAC A02	2x2 foot ceiling tile.	None.
WAC A03	Baseboard.	None.

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

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified. However, readings were collected in some areas to document the levels. As expected, noise levels were well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA, as indicated in the table below.

Area	Reading in decibels dBA
S4/SS St Arnold Office.	40 – 50
Drill Hall.	50 – 60
Troop A Supply Room.	40 – 50
Squadron HQ Administrative Office.	45 – 55
Front Lobby.	40 – 50
Staff Section 2 nd Floor Offices.	35 – 40
Troop B Orderly Room.	40 – 50
Classroom #8 in new addition.	40 – 50
Locker Room.	50 – 60
Exercise Room.	40 – 50
A176 Engineering Supply Room.	45 – 60
Troop B Supply Room.	45 – 55
Troop B Vault.	55 – 65
Kitchen.	50 – 60

Illumination Survey Lighting levels throughout the Armory ranged between 1 foot-candle to 60 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
S4/SSst Arnold Office.	50 – 60
Drill Hall.	20 – 30
Troup A Supply Room.	1 – 20
Squadron HQ Administrative Office.	40 – 60
Front Lobby.	45 – 55
Staff Section 2 nd Floor Offices.	40 – 60
Troop B Orderly Room.	30 – 50
Classroom #8 in new addition.	50 – 60
Locker Room.	10 – 20
Exercise Room.	30 – 40
A176 Engineering Supply Room.	10 – 20
Troop B Supply Room.	10 – 20
Troop B Vault.	10 – 15
Kitchen.	45 – 55

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of a number of air handling units located in mechanical rooms. The units have outside makeup air capabilities. No other complaints of indoor air quality issues were documented or communicated with the POC.

Waco Armory

Survey Date: 03 June 2004

Recommendation:

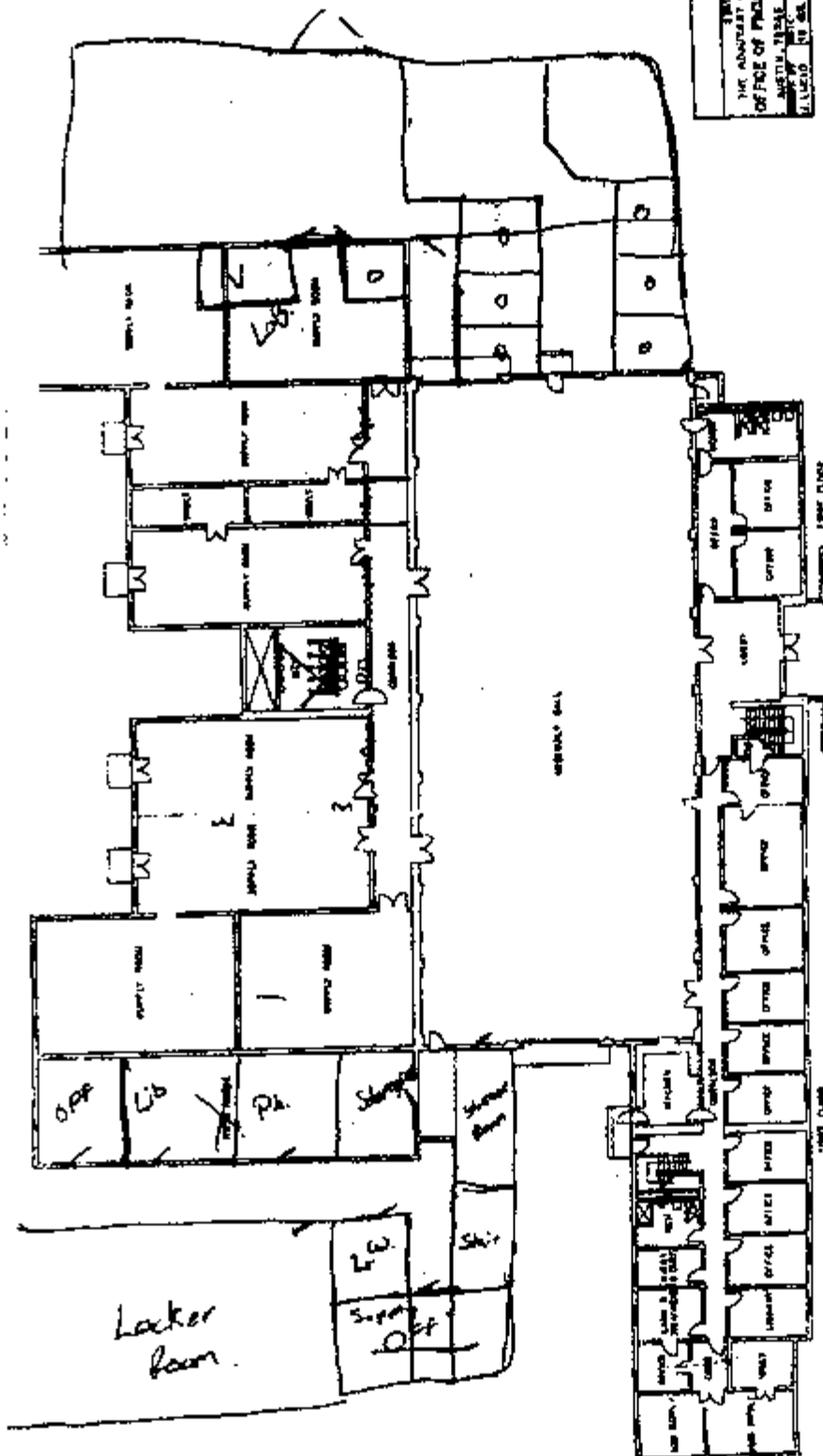
None.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

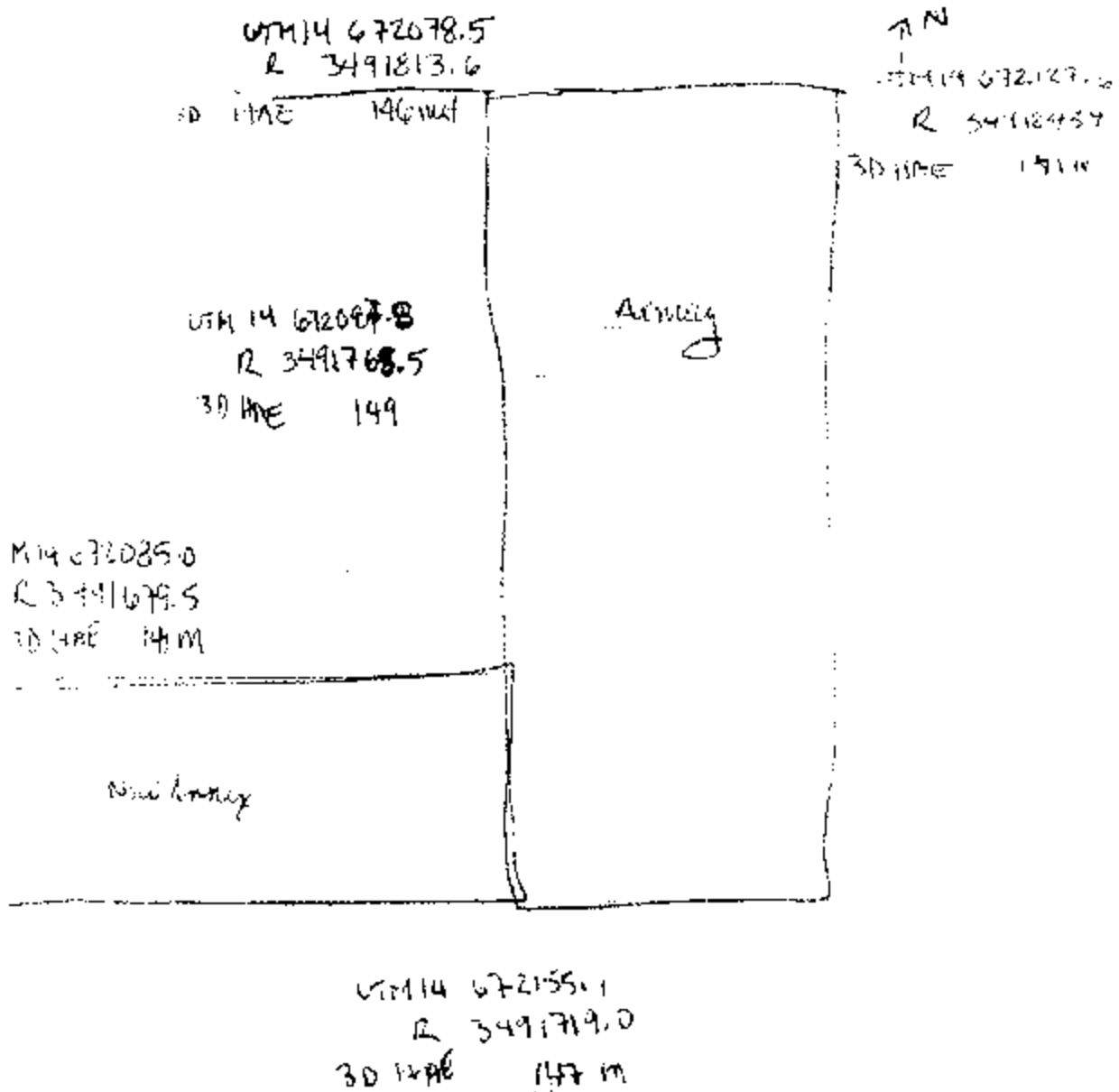
BEST AVAILABLE COPY

APPENDIX A



Asbestos

12x12 floor tiles similar throughout among them
 2x2 ceiling tiles
 Base board
 thermal insulation - fiber glass in new addition



APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08106

Phone: (656) 658-4800 Fax: (656) 658-6551 Email: skauflinger@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:20 PM

Fax:

EMSL Order: 200406802

Project:

EMSL Proj:

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

Client Sample Description		Lab ID	Analysed	Area Sampled	Lead Concentration
WAC 01	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	6/21/04	n/a	<10.0 µg/wipe
WAC 02		0002	6/21/04	n/a	48.0 µg/wipe
WAC 03		0003	6/21/04	n/a	30.0 µg/wipe
WAC 04		0004	6/21/04	n/a	15.0 µg/wipe
WAC 05		0005	6/21/04	n/a	<10.0 µg/wipe
WAC 06		0006	6/21/04	n/a	30.0 µg/wipe
WAC 07		0007	6/21/04	n/a	13.0 µg/wipe
WAC 08		0008	6/21/04	n/a	22.0 µg/wipe
WAC 09		0009	6/21/04	n/a	48.0 µg/wipe
WAC 10		0010	6/21/04	n/a	<10.0 µg/wipe
WAC 11		0011	6/21/04	n/a	24.0 µg/wipe
WAC 12		0012	6/21/04	n/a	<10.0 µg/wipe
WAC 13		0013	6/21/04	n/a	<10.0 µg/wipe
WAC 14		0014	6/21/04	n/a	<10.0 µg/wipe
WAC 15		0015	6/21/04	n/a	<10.0 µg/wipe
WAC 16		0016	6/21/04	n/a	<10.0 µg/wipe
WAC 17		0017	6/21/04	n/a	<10.0 µg/wipe
WAC 18		0018	6/21/04	n/a	<10.0 µg/wipe
WAC 19		0019	6/21/04	n/a	<10.0 µg/wipe
WAC 20		0020	6/21/04	n/a	<10.0 µg/wipe
WAC 21		0021	6/21/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the ABIA, unless specifically indicated otherwise in the comments section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NEELAP: 04033, ABIA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:43:00 PM

EMSL Analytical

3 Cooper St., Westmont, NJ 08106

Phone: (856) 858-4900 Fax: (856) 858-6551 Email: skaufman@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:20 PM

Fax:

EMSL Order: 200408802

Project: Waco

EMSL Proj:

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

Client Sample Description	Lab ID	Analysis	Area Sampled	Lead Concentration
WAC 22	0022	6/21/04	n/a	<10.0 µg/wipe
WAC 23	0023	6/21/04	n/a	<10.0 µg/wipe
WAC 24	0024	6/21/04	n/a	100.0 µg/wipe
WAC 25	0025	6/21/04	n/a	110.0 µg/wipe
WAC 25	0026	6/21/04	n/a	150.0 µg/wipe
WAC 27	0027	6/21/04	n/a	190.0 µg/wipe
WAC 28	0028	6/21/04	n/a	780.0 µg/wipe
WAC 29	0029	6/21/04	n/a	65.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the EPA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04853, ALTA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:43:08 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 868-4860 Fax: (856) 868-4860 Email: sales@EMSL.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 12:50 PM

Fax:

EMSL Order: 040410163

Project:

EMSL Proj:

Analysis Date: 6/16/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
WAC01 040410163-0001		White Non-Fibrous Heterogeneous	Dissolved		100% Non-Fibrous (other)	None Detected
WAC02 040410163-0002		Gray/White Fibrous Heterogeneous	Teased	40% Cellulose 40% Glass	20% Non-fibrous (other)	None Detected
WAC03 040410163-0003		Brown Non-Fibrous Heterogeneous	Ashed		100% Non-Fibrous (other)	None Detected

Non-Responsive

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

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

PLM

THIS IS THE LAST PAGE OF THE REPORT

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APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: Same as lead to
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: (Name) Non-Responsive Telephone: _____
 Fax Results to: (Name) Non-Responsive Fax #: _____

MATRIX	METHOD	INSTRUMENT	REL. (Accepting Limit)
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% ±
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil
Lead Soil ±	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil
Lead in Air ***	NIOSH 7082 Mod. or NIOSH 7300 Mod.	Flame Atomic Absorption ICP	4 ug/filter 3.0 ug/filter
Lead in Wipe* List Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / RUD Appendix 14.2 Digest. <input type="checkbox"/> -non ASTM or SW846-6010B	Flame Atomic Absorption ICP	10 ug/wipe 3.0 ug/wipe
ICP Lead **	SW846-1311 / 7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)
STLC Lead (California) #	CA Title 22 80901.06 / SW846-7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil
Lead Soil ±			
Lead in Drinking Water (check state Certification Requirements)	EPA 219.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g

T/T (Turnaround) - Same day, 24 hr, 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 *, **, ***, ****, ±, --, # Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume: L Area: in ²	LAB #
WAC01 - WAC29	WACO		065421-29

Relinquished By: (Person) Non-Responsive

Date: 6/5/04

Received at EMSL By: _____

Date: 6/7/07

Received at EMSL By: _____

Date: _____

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 - v STLC.doc

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tommy's Science, Inc.

EMSL-Bill to:

Same as send to

Street:

Street:

Box #:

Box #:

City/State:

City/State:

Phone Results to:

Fax Results to:

Name:

Name:

Telephone #:

Fax #:

Project:

Purchase Order:

Name/Number:

MATRIX

TURNAROUND

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

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

PCM - Air

- ☐ NIOSH 7400
☐ OSHA
☐ Other:

TEM AIR

- ☐ AHERA
☐ NIOSH 7402
☐ EPA Level II

TEM WATER

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

PLM Bulk

- ☒ EPA 600/3-93/116

TEM BULK/misc

- ☐ Drop Mount (Qualitative)

TEM MICROVAC / WIPE

- ☐ ASTM D 5755-95
☐ Quantitative method

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

- ☐ Chatfield
☐ TEM NOB (Gravimetric) NY 198.4

XRD

- ☐ Asbestos
☐ Silica

SEM Air or Bulk

- ☐ Qualitative
☐ Quantitative

SAMPLES ACCEPTED

FOR ANALYSIS BY

EMSL ANALYTICAL INC.

OTHER

- ☐

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s)

WAC 001WAC 003Total Samples #: 3

Relinquished:

Time: AM

Received:

Time:

Non-Responsive

APPENDIX D



Photo #1: Armory front entrance.

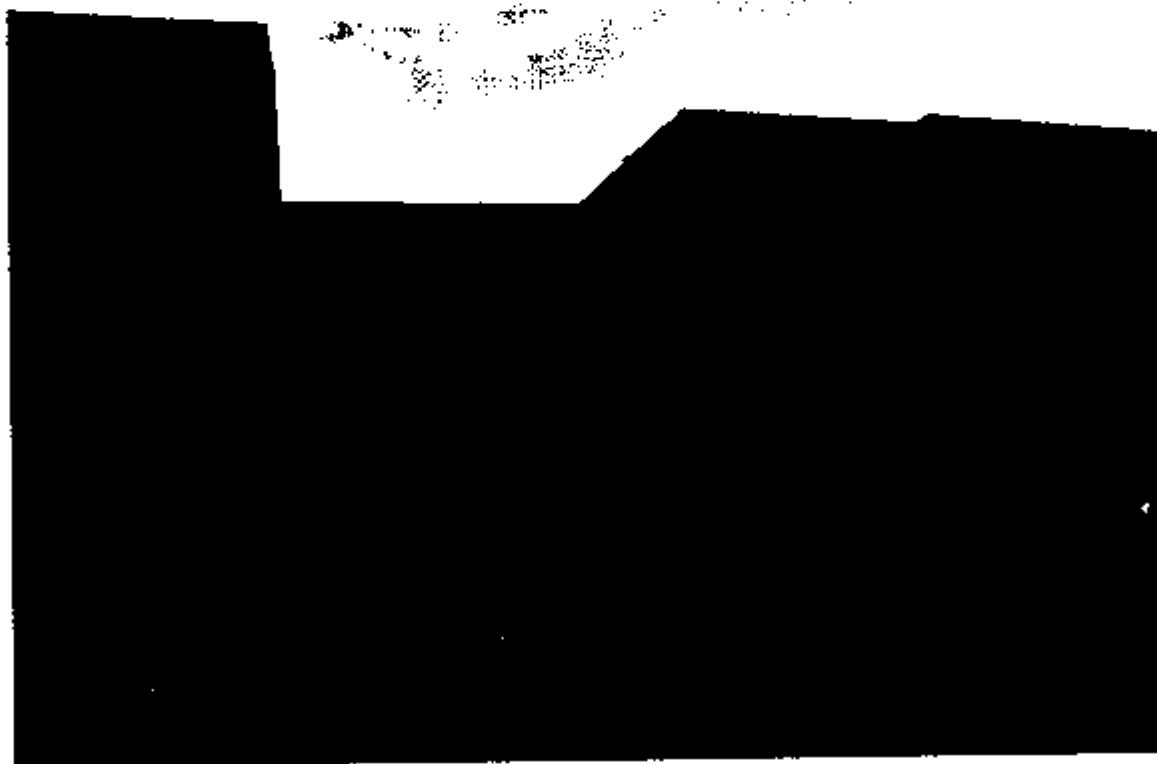


Photo #2: South side of the armory showing the link between the armory and the new annex.



Photo #3: north side of the armory.

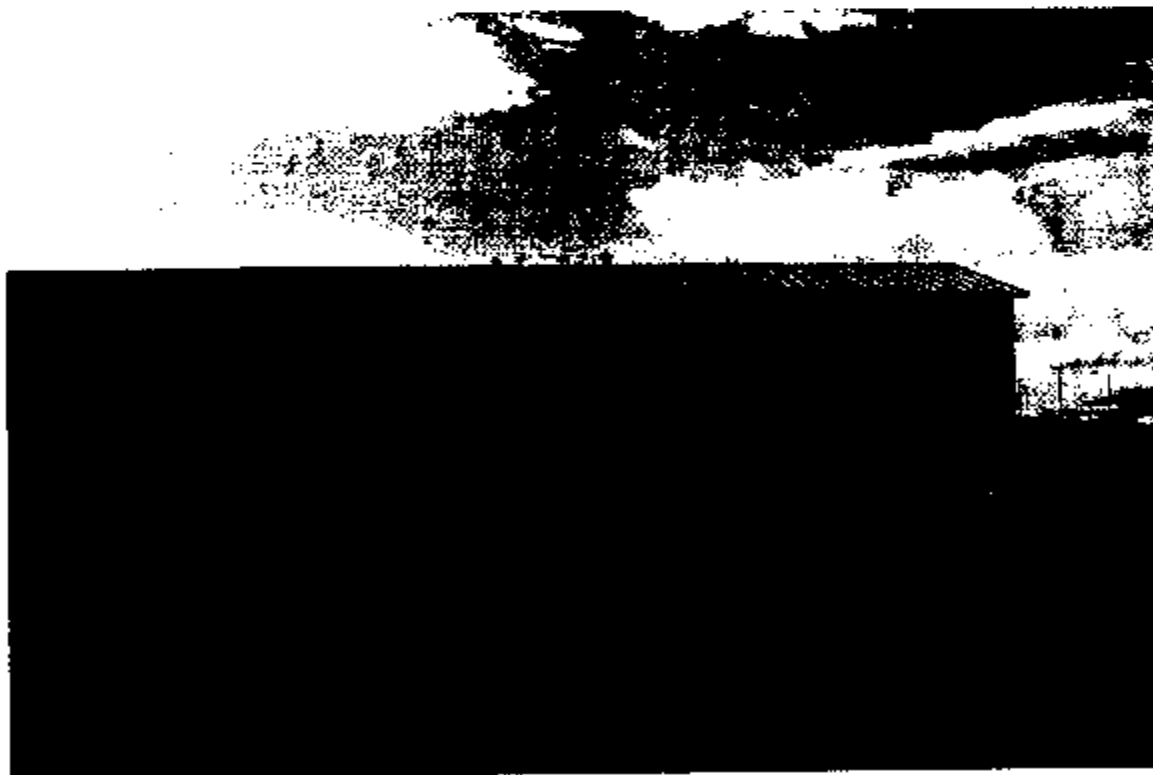


Photo #4: The new annex of the armory.



Photo #5: The south side of the annex.

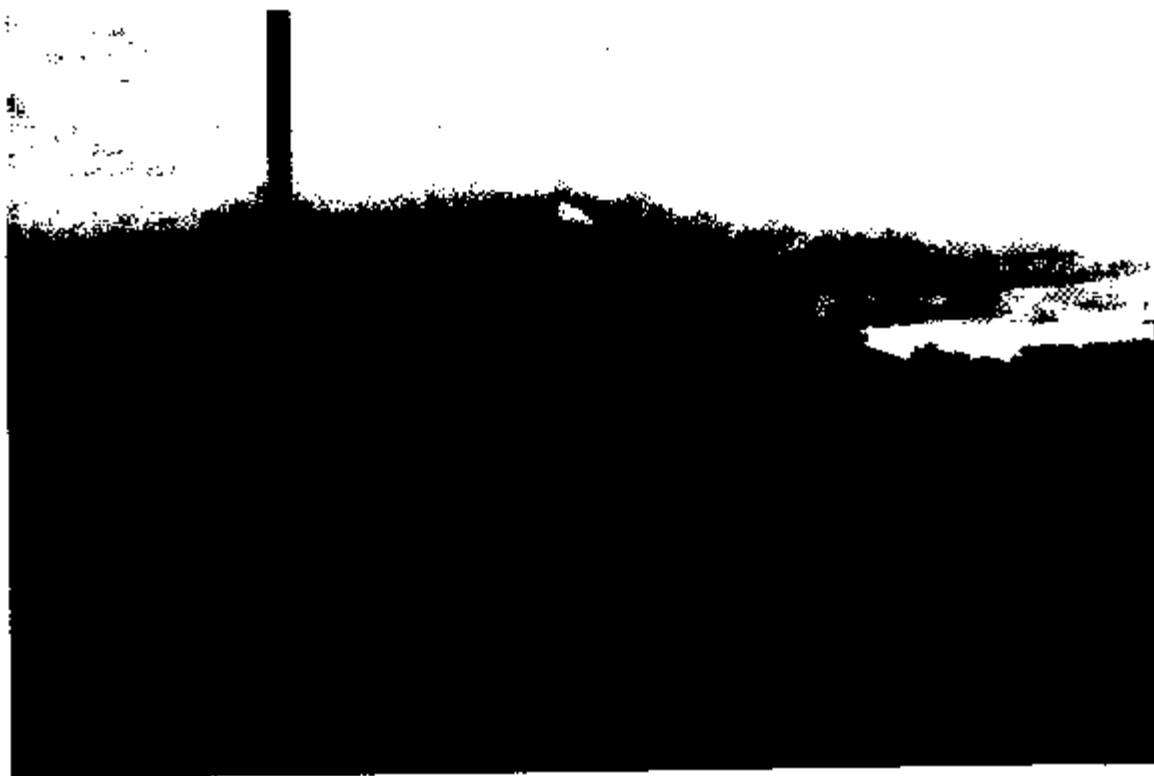


Photo #6: The west side of the armory.

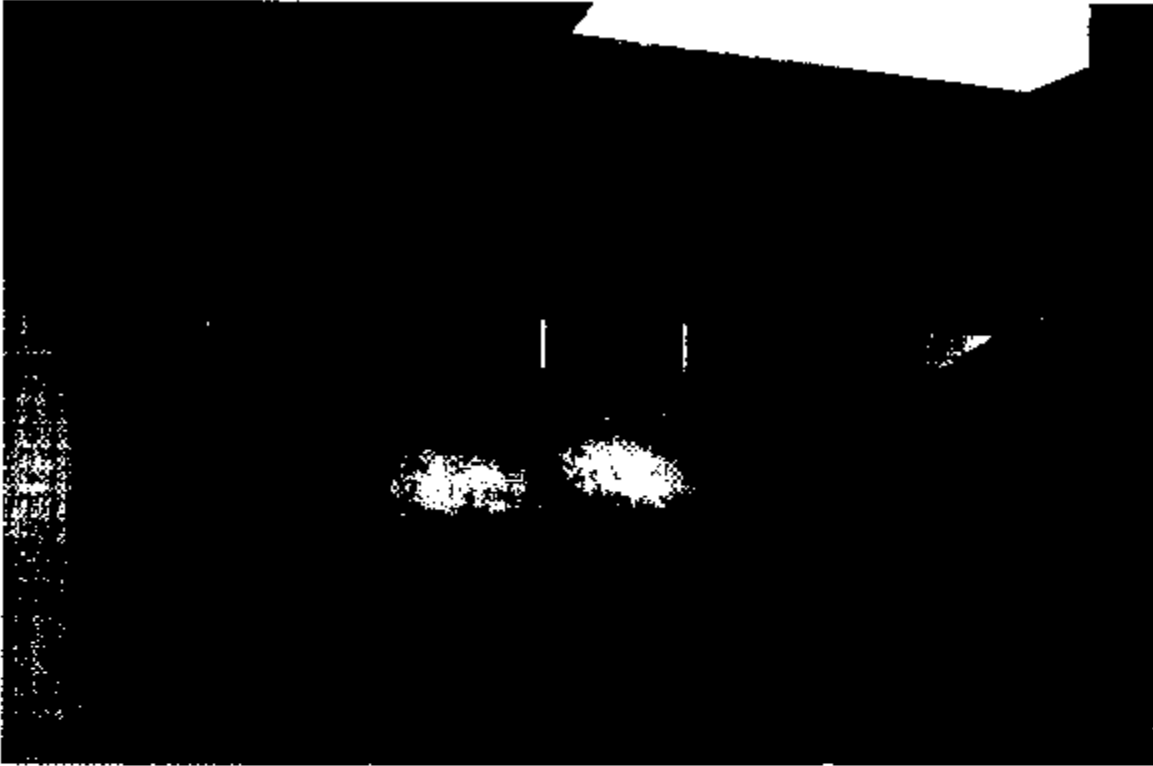


Photo #7: Indoor firing range facing the bullet trap.



Photo #8: Indoor firing range facing the firing line.



Photo #9: Drill hall facing south.



Photo#10: Armory's classroom#8.

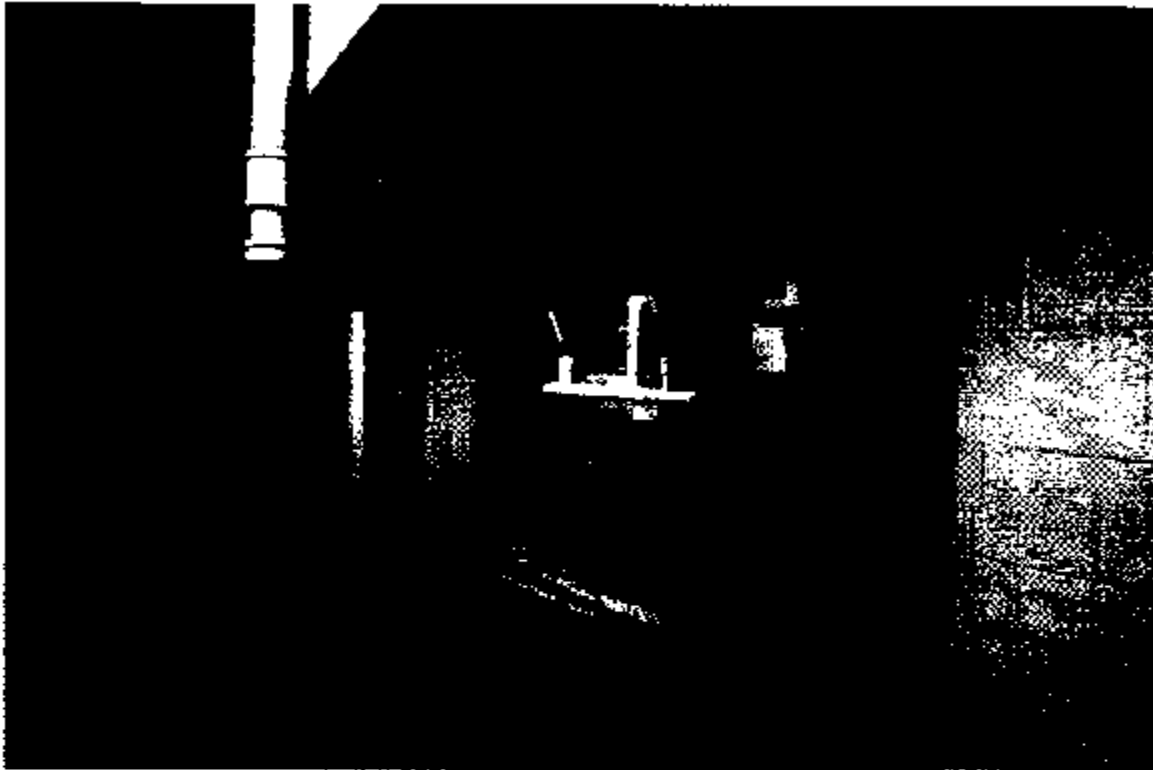


Photo #11: Mechanical room in the new annex.



Photo #12: Typical ceiling tiles in the armory's administration offices.



DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

NGB-ARS-IHSE (40-5f)

21 April 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: HQ 1-124th CAV
Waco Armory 2120 North New Road Waco, TX 76707

Thru **Non-Responsive** Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Building 10,
Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, HQ 1-124th CAV Waco Armory 2120 North New Road Waco, TX 76707

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 11-34, 15 February 1990, The Army Respiratory Protection Program.
- d. AR 385-10, 29 February 2000, Army Safety Program.
- f. TB MED 503, The Army Industrial Hygiene Program, 30 October 2000.
- g. Title 29 Code of Federal regulation (CFR), 1989 rev, Part 1910.94 (c) (6) Table G-10, Ventilation.
- h. Industrial Ventilation, 25th, 2004, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- i. Title 29 Code of Federal Regulation (CFR), Part 1910.1025 Lead.
- k. Title 40 Code of Federal Regulation (CFR), Part 745.227.

2. General.

- a. In accordance to the JFTX-H-OH Industrial Hygiene Implementation Plan of 2007, a follow-up industrial hygiene survey was performed at the Waco Armory, 2120 North New Road, Waco, TX 76707. The purpose of the survey was to perform a follow-up industrial hygiene survey to evaluate potential health hazards present in the building.
- b. The Point of Contact during the survey was **Non-Responsive**
- c. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 18 March 2009.

3. General.

- a. **Site Description.** The Waco Armory; a two-story brick over cinder block structure with Central HVAC was built in 1958 and renovated in 1994. The facility houses several training rooms and classrooms, administrative office areas, and a supply room with storage and vault. Ten full time employees work at the Armory supporting 270 M-Day Soldiers. The armory has Rooftop Central HVAC with interior units mounted on wooden plenum inside mechanical closets. The POC has sent request for various repairs to be made throughout the armory which are addressed in the survey. A copy of the floor layout and photos are included in Appendix A.
- b. **Scope of Work.** The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. **Methodology** Lead wipe samples were collected from various surfaces throughout the building. The samples were collected accordance to instructions published by Region South National Guard Bureau, which required the use of Ghost wipes or unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to the laboratory for analysis. Area Illumination readings were collected using an EXTECH 401025 light meter Serial Number Q168802. Illumination readings were taken on work surfaces and approximately four feet from the floor.

4. Findings.

- a. **Lead Wipe Samples:** Wipe samples for lead dust were collected from various in the prior survey dated 06 March 2007. Elevated Lead dust contamination was found in supply areas and in the locked indoor range as listed in the prior survey. Access to the locked range is limited to facilities commission and industrial hygiene personnel only. Due to non-remediation, no areas was sampled or tested during current survey. During the out brief, site personnel were encouraged to follow recommendations listed in the survey to reduce lead exposures prevent further cross contamination.

The US Environmental Protection Agency (EPA), under a new standard issued in 2000, considers lead dust as a hazard if levels are greater than 40 micrograms of lead in dust per square foot on floors; 250 micrograms of lead in dust per square foot on interior window sills and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. This standard is a major effort by the EPA to identify dangerous levels of lead in paint, dust and soil in order to protect children from lead poisoning. The National Guard Bureau recommends a limit of 200 micrograms per square foot for surface contamination. Deteriorated Paint surfaces that contain lead levels at or above 0.06 % by weight or 600 (ppm) are considered a hazard. The laboratory report and chain of custody forms are attached in Appendices A and B.

The contaminated areas as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-18.

- b. **Asbestos Suspect Building Material:** 12 by 12 inch floor tiles were identified as potentially containing asbestos. A bulk samples were collected randomly from the identified materials during the prior survey dated 06 March 2007. No ACBM were tested or noted during current survey
- c. **Noise Survey:** No noise Hazardous areas were identified or recorded on the day of the survey.
- d. **Illumination Survey** Lighting levels throughout the Armory ranged between 0 foot-candle to 58 foot-candles. Specific readings were as follows:

Waco Armory	Reading in Foot-candles
Indoor Firing Range	0-25
Classrooms	15-45
Office Areas	10-58
Kitchen	14-45
Hallways and Lobby	11-27
Drill Hall	15-46
Supply and Storage	5-52
Locker Rooms	9-20
Latrines	2-8

Many of the recorded readings are not within the Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Areas with low light readings have burnt out bulbs or fixtures are in need of repair. Replacing light bulbs with higher wattage will increase lighting levels. Replacing broken light fixtures and or lights and or cleaning them should improve the lighting levels. The POC also has request for additional exterior lighting around the armory, within the motor pool and repairs for down line to the back security light.

- e. **Heating Ventilating and Air Conditioning (HVAC):** The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory building consisted of various residential use Central HVAC with units mounted on wooden plenum inside mechanical closets and local ceiling mounted heating units. The system is capable to deliver outside makeup air to the occupied space. The supply room areas are equipped with a roof mounted exhaust system that works but whose vents do not open. The areas do not have AC and the heating units are working. The Drill hall fans are leaking and evidence of prior leaks were found in recruiting Offices. The HVAC for the upstairs classroom does is in operable. Evidence of rodent infestation was observed in upstairs main mechanical closet. Various HVAC issues have been documented or communicated with the POC and have been forwarded to the State Facilities Commission. .

5. Recommendations.

- a. Evidence of Lead contaminated surfaces was found as listed in the prior 06 March 2007 report dated. Monitor contaminated areas and contact your local facilities commission for cleaning of contaminated areas. DO NOT DISTURB or HAVE SOLDIERS ATTEMPT TO CLEAN THE CONTAMINATED AREAS. (RAC 3)
- b. Have facilities clean and decontaminate lead contaminated surfaces per NG PAM 385-18. (RAC 3)
- c. To prevent lead dust cross-contamination, practice good housekeeping by washing hands after vehicle maintenance, handling and cleaning weapons and after leaving supply areas. (RAC 2)
- d. Repair and or replace broken light fixtures to improve luminescence in areas with low light readings, repair down line and add additional exterior lighting at Flag Pole per POC request. (RAC 3)
- e. To reduce further damage and maintain overall indoor air quality, document and monitor roof leaks and contact your local facilities commission for roof repair. POC has requested the replacement of drop ceiling tile in the physical fitness room and new equipment for the facility. (RA C 3)
- f. Request pest control services to ensure rodent infestation is eradicated. (RAC 2)
- g. Ventilate all occupied areas by repairing all exhaust vents and ensuring vents in latrines and supply rooms are within design guide and ventilation standards. Balance HVAC system to eliminate hot and cold spots and reduce excess humidity in occupied areas. (RAC 2)
- h. Due to geographic location, include the addition of a local HVAC system in all latrines and supply rooms. (RAC 2)

6. If additional information is needed about this report, please contact Louis Scott, SGT, IHT, Texas Army

Non-Responsive

CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Appendix A

Photographs and Floor Layout.

Waco Armory

			
Waco Armory (Front View)	Classroom	Kitchen	Drill Hall
			
Storage / Locker Room	IFR Facing Firing Lanes	IFR Facing Bullet Stop	

BEST AVAILABLE COPY

WEIGHT
EQUIPMENT
NEEDED

H2 com
+
MSDS ARE IN PLACE
updating in process

Non-Responsive

HQ 124 (A1)

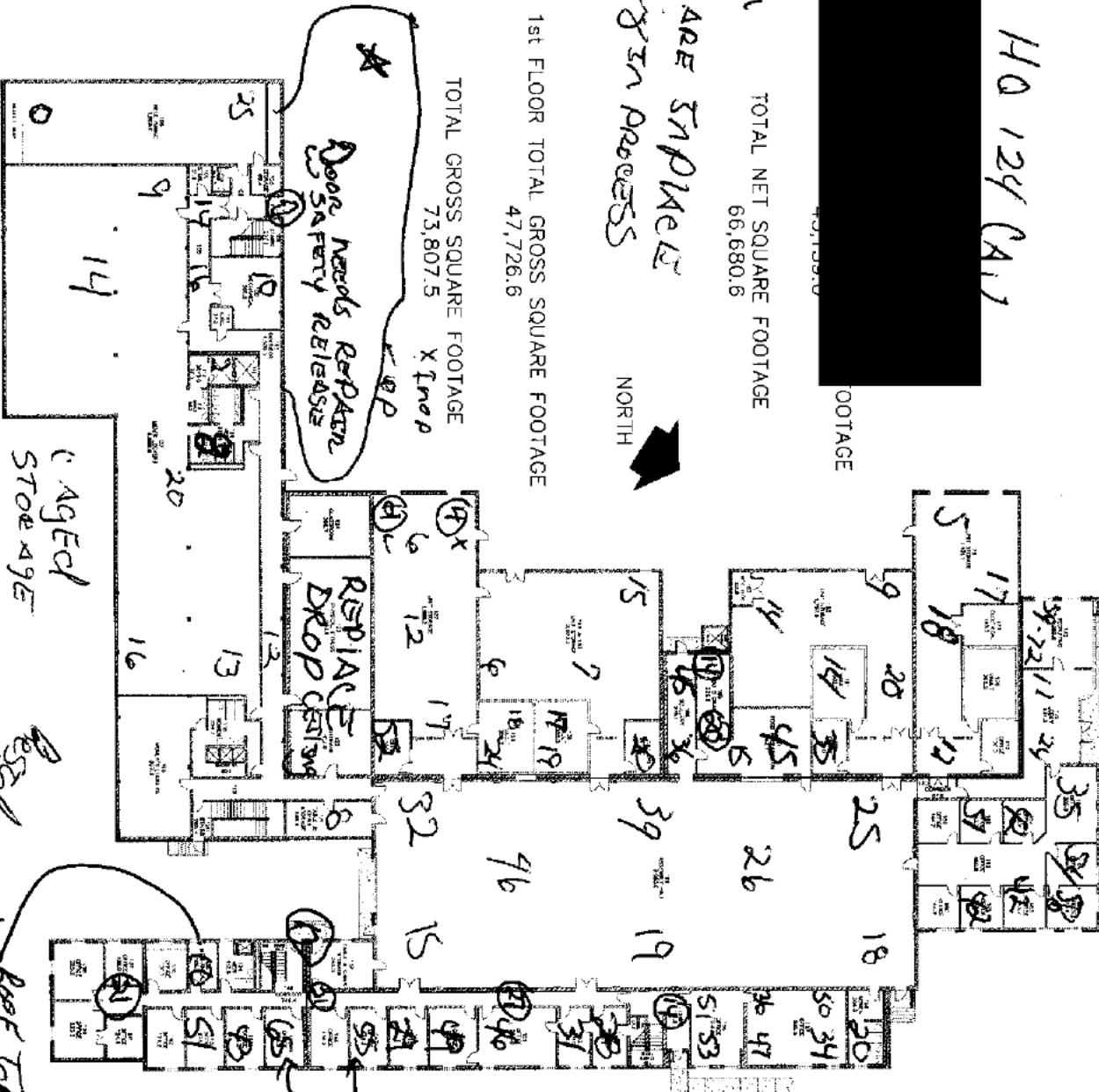
TOTAL NET SQUARE FOOTAGE
66,680.6

1st FLOOR TOTAL GROSS SQUARE FOOTAGE
47,726.6

TOTAL GROSS SQUARE FOOTAGE
73,807.5



Door needs repair
to safety release



FEDERAL BUREAU OF INVESTIGATION	
WASHINGTON, D.C. 20535	
MAINTENANCE	
1st FLOOR PLAN	
SHEET 1 OF 1	

23,521.6

6b, 680.6

25,080.9

SS SOLA

Now

Now

2 units
2 units


16. even AD

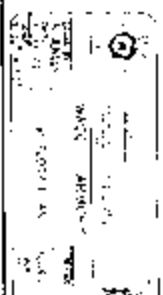
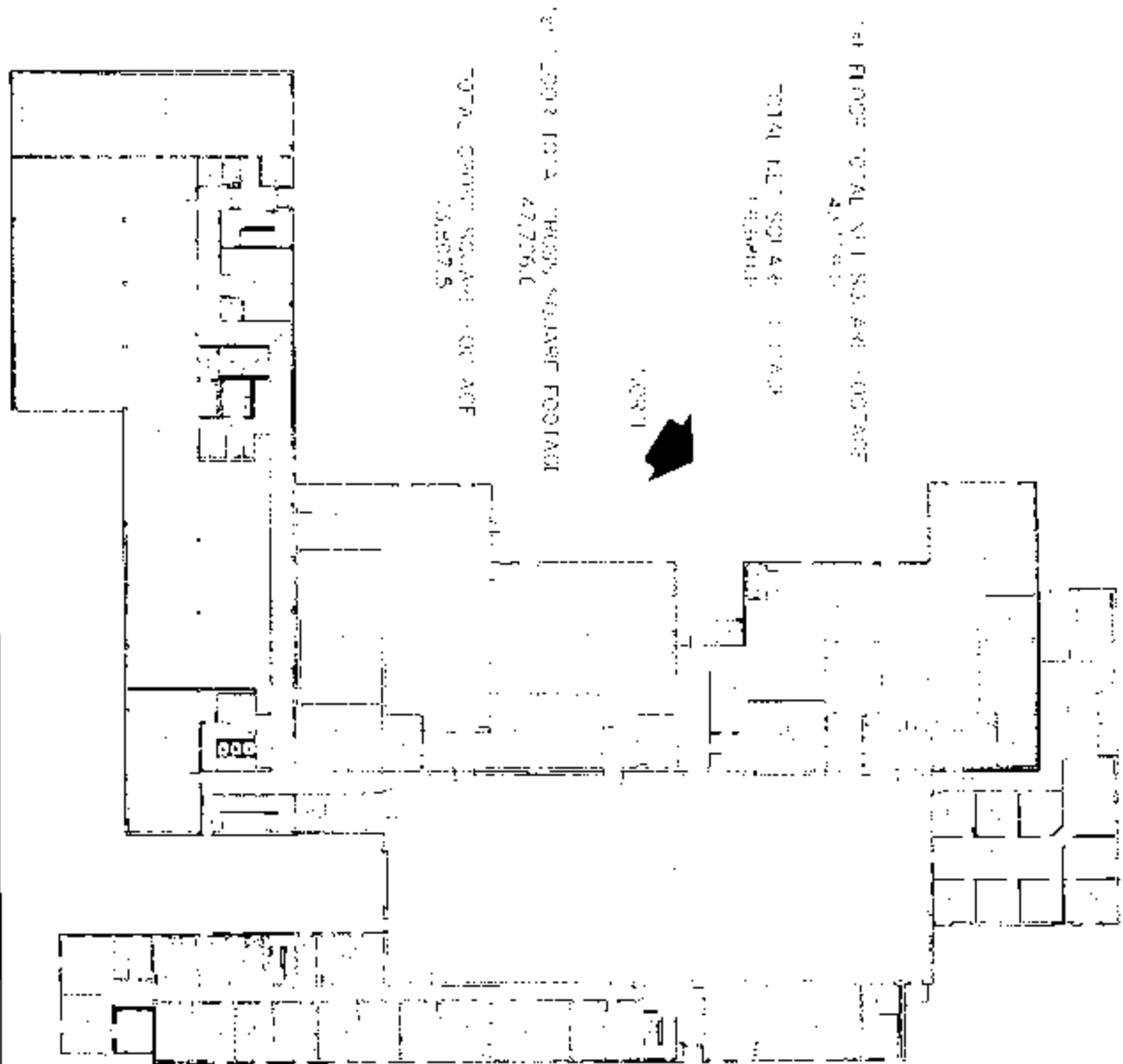
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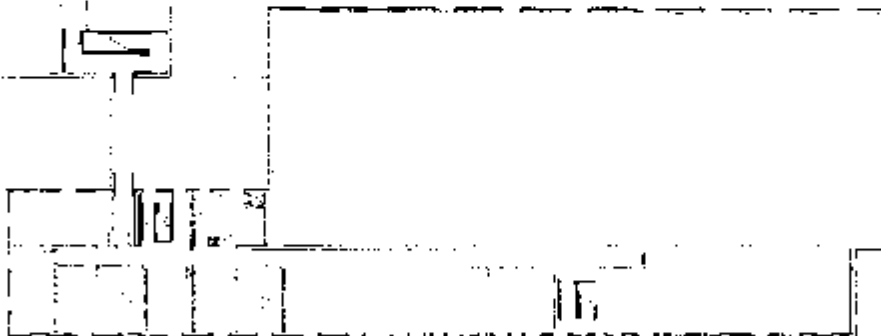


1016 N. T. SQUARE
RENO, NV 89505

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2015

WILEY
BY ORDER OF THE BOARD OF DIRECTORS
JAN 19 1997





DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

ARNG-CSG

March 23, 2015

MEMORANDUM Adjutant General TX ARNG, ATTN: **Non-Responsive** Facility Supervisor,
TX ARNG Waxahachie Armory, 628 N. Grand Ave, Waxahachie, TX 75165.

SUBJECT: Transmittal of Industrial Hygiene Survey Report of TXARNG Waxahachie
Armory, Waxahachie, Texas

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 19 August 1998.
- c. Title 29, Code of Federal Regulations (CFR), 2009 rev., part 1910, Occupational Safety and Health Standards.
- d. Title 29 CFR, General Industry, revised 1996 rev. Part 1940
- e. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 25 May 2007
- f. AR 385-10, the Army Safety Program, 23 August 2007.
- g. AR 11-34, 15 February 1990, the Army Respiratory Protection Program.
- h. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, 12 September 2008.
- i. TB MED 503, the Army Industrial Hygiene Program, 30 October 2000.
- j. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- k. Industrial Ventilation, 26th rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- l. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

2. General. At the request the Safety & Occupational Health Office an Industrial Hygiene Service was put together to conduct an IH Survey of the TX ARNG Waxahachie Armory, Waxahachie, Texas

3. Findings. All sampling data and field survey forms, industrial hygiene sampling and survey findings of the report are enclosed (See ENCL 1). Operations of very short duration were not sampled due to the requirements of the sampling method. If the operation changes or if the length of the operation is increased, contact this office to schedule sampling if it is deemed needed then.

SUBJECT: Transmittal of Industrial Hygiene IH Survey Report Waxahachie Armory, Waxahachie, Texas

4. Recommendations.

- a. Follow all recommendations made in the report enclosed, requesting industrial hygiene (IH) services where needed to complete the recommendations
- b. Data sheets and data collected will serve as an update of the baseline for the Industrial Hygiene Master Plan (IHMP) for FY2015. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY2016 IHMP.
- c. Use the report to help in correcting all deficiencies noted.
- d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present visits, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- e. Contact the State Occupational Health Office, for any medical Surveillance that may be needed.
- f. To execute your responsibilities in correcting all deficiencies, coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

5. The present report addressed to the local facility commanders was divided in such a way that personal data can be detached and kept by the OHM or blocked when forwarding these reports to other entities within the appropriate offices of TX ARNG. If additional information is needed

Non-Responsive

CF: ARNG

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

Deputy State Army Surgeon, **Non-Responsive** JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Industrial Hygiene Survey
30 June, 2014
Texas Army National Guard
628 N. Grand Ave., Waxahachie, TX 75165



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

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EXECUTIVE SUMMARY:

An Industrial Hygiene Survey was conducted at the National Guard armory in Waxahachie, TX on 30 June, 2014 as part of the Texas Army National Guard Occupational Health Program. The survey consisted of conducting lead wipe sampling 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 potential health hazards that may be present.

TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Lead Dust sampling results	Lead in dust was detected in the supply room and weapons vault. The amounts did not exceed EPA or NGB limits. See Table 1.	Recommend to clean the weapons racks and floor in the weapons vault and the supply room floor per NG PAM 420-15. See Recommendations.
Large gaps/cracks in drill hall area	Large gaps under outside doors and between the drill hall floor and adjacent walls have created a serious pest problem.	Recommend having the drill hall floors and walls evaluated and professionally sealed. See Recommendations.

30 June, 2014

MEMORANDUM FOR: **Non-Responsive** Executive Officer, 449th SIG CO, TX ARNG, 628 N. Grand Ave., Waxahachie, TX 75165

SUBJECT: Industrial Hygiene Survey for the Waxahachie TX Armory

INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, an Industrial Hygiene Survey was performed by **Non-Responsive** of Pinnacle IH, at the Waxahachie TX armory, on 30 June, 2014. The purpose of this survey was to perform a health hazards assessment. The POC for this survey was **Non-Responsive**

The armory was reportedly built around 1957. It houses office areas, classroom, latrines, locker room, gym, drill hall, kitchen, supply room, weapons vault, and storage cages. It was reported an old IFR was remodeled in 2012. As part of the remodeling work, the IFR was converted to office space, storage, and a gym. Outside there is a rather large Motor Pool area, with a decommissioned vehicle wash bay and an old maintenance building that is now used to store landscaping equipment and the Flammables cabinet. There are also five Conex units outside that store section equipment. Two units occupy the armory; the 449th Sig Co and the DFW Medical Response Group. Three full-time guard troops are assigned to the armory daily. Drills are held monthly, and weapons are taken to the range semi-annually.

METHODOLOGY

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

- Extech Foot Candle / Lux Meter, model 407026.
 - 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.
 - 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 POC and/or other staff.

SURVEY FINDINGS

BUILDING CONDITION

During informal interviews conducted with personnel during a walkthrough of the building the following information was provided regarding the condition of the building:

Prior to the installation of a water filtration unit, the water had a very bad taste. During the IFR renovation in 2012 the roof was patched. It seems to be stable now. Water can pool against the building for quite some time after it rains. This causes mosquito problems in the building. The HVAC units on the roof have trouble keeping the building at a consistent temperature. FTS does not change the HVAC filters very often. They do not have spare filters on site. There are large gaps under the outside doors. In the drill hall large gaps have appeared between the drill hall floor and the adjacent walls. These gaps are large enough for frogs to come through them and enter the drill hall. These gaps have resulted in a serious pest problem. There is not sufficient landscaping equipment to keep the grass cut to desired heights. This has also added to the mosquito problems.

Personnel have made efforts to seal some of these gaps between the drill hall floor and walls, in an attempt to remediate the pest problem. There were no mold or mildew issues reported or observed during the survey. There were no visible signs of moisture damage to ceiling tiles, walls, or floors. Latrines and locker rooms were neat and clean. It was reported that the kitchen is used periodically, and that the equipment is in good condition. The kitchen had excellent lighting. It was also noted that during the IFR renovation in 2012 some material containing asbestos was removed.

MOTOR POOL

There is a small motor pool area in the back of the facility, with a decommissioned vehicle maintenance shop and wash bay. It was reported that only minor vehicle maintenance is performed at the armory, and that vehicles are not left running inside for lengthy periods.

PERSONNEL

Three full-time guard troops work at the facility daily. 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. The previous complaint about the bad taste of the water was remediated by the installation of a water filtration system. Employees work a ten-hour day. It was stated that employees are generally in good spirits, with no chronic sicknesses or other health issues affecting the staff as a group. It was reported that personnel are not asked to perform heavy lifting. A forklift is available for tasks involving heavy lifting.

MSDS

The supply sergeant is responsible for the MSDS inventory for the armory. The inventory is very small, consisting mostly of oil, brake fluid, and antifreeze. Products are stored in a yellow metal cabinet located in the old maintenance building outside. A review of the MSDS binder was conducted during the survey, and compared to the inventory in the cabinet.

LEAD WIPE SURVEY

Reportedly, weapons are cleaned in the drill hall primarily, near the supply room, and on tables in the classroom. Samples for lead in dust were taken from the drill hall, kitchen, classroom, remodeled IFR, supply room, and weapons vault. Positive samples were found in the weapons vault and supply room. For the supply room, the levels of lead were below the EPA limits of 40 micrograms per square foot of lead in dust where children, pregnant women, or people of child-bearing age occupy the area. Areas such as weapons vaults fall under the NGB recommended limits of 200 micrograms per square foot for lead in dust. The one positive sample in the weapons vault was far below the NGB specified limit. See Table 1 for details.

CONVERTED IFR

It was reported that this IFR was remodeled approximately two years ago, and is now a gym and several offices. Lead wipe sampling was conducted in these areas, and the lab results were negative for the presence of lead. See Table 1.

ILLUMINATION SURVEY

Light readings were measured throughout the facility. Results of the survey showed light measurements meeting or exceeding IES (Illuminating Engineering Society) and ANSI RP7-1991 guidelines throughout most areas of the facility occupied by NG personnel. Refer to Table 2 for survey results and areas below recommendations.

DRILL HALL

Monthly drills are held in the drill hall. Personnel reported that the drill hall is used weekly by the Police Young Explorers group. The drill hall is rented three or four times per year beyond that. Final weapons cleanings are performed in the drill hall, near the supply room, reportedly. Lead sampling was performed in the drill hall and was negative. The drill hall appeared to be clean, and in good condition. Lighting exceeded IES guidelines. There was a large stand-alone fan for cooling, and appeared to be several heaters mounted near the ceiling.

SUPPLY ROOMS

There is one supply room and weapons vault in this facility. A walkthrough with the supply sergeant determined that there were no flammable or hazardous materials in the cages or cabinets in this area. Light levels were sufficient, and the area appeared to be neat and clean. Lead wipe sampling was positive for one sample, but below EPA limits. Hazardous chemicals are managed by the supply sergeant, and were stored in a metal cabinet located in a decommissioned maintenance building.

NOISE

Personnel did not report any loud, persistent noises that caused them concern. The loudest noise seemed to be coming from a large fan in the drill hall. A noise meter showed the noise level at both the intake out output sides of the fan at 73dba, which is well below industry standards.

HVAC SYSTEM

The HVAC units were said to be located on the roof. There were three smaller units on the side of the building as well. During the survey one of the rooftop HVAC units was heard cycling on and off from inside the building. This was reported to the POC. NGB personnel stated that FTS was responsible for HVAC maintenance, including changing the filters. They said that the filters were on the roof and had not been changed for quite some time. There were complaints that the HVAC units have trouble keeping the building at a consistent temperature.

TABLE 1 (LEAD WIPE TEST RESULTS)

SAMPLE LOCATION	Surveyor's Field No	RESULT $\mu\text{g}/\text{ft}^2$
Drill Hall	JPR377	BRL
Drill Hall	JPR378	BRL
Drill Hall	JPR379	BRL
Drill Hall	JPR380	BRL
Drill Hall Blank	JPR381	BRL
Classroom	JPR382	BRL
Classroom	JPR383	BRL
Classroom	JPR384	BRL
Classroom	JPR385	BRL
Classroom	JPR386	BRL
Classroom	JPR387	BRL
Classroom	JPR388	BRL
Weapons Vault	JPR389	39
Weapons Vault	JPR390	82
Weapons Vault	JPR391	36
Weapons Vault	JPR392	BRL
Weapons Vault Blank	JPR393	BRL
Supply Room	JPR394	BRL
Supply Room	JPR395	BRL
Supply Room	JPR396	BRL
Supply Room	JPR397	BRL
Supply Room	JPR398	28
Remodeled IFR	JPR399	BRL
Remodeled IFR	JPR400	BRL
Remodeled IFR	JPR401	BRL
Remodeled IFR	JPR402	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 Below the Reporting Limit.

TABLE 2 (ILLUMINATION TEST RESULTS)

Location	Light Reading (foot candles)	IES Recommendations (foot candles)
Classroom 102B – (natural light)	55 Avg	30-100
Drill Hall – (natural light)	40 Avg	10-20
*Lobby – Bad Light (not sure if fixture or ballast)	25 Avg	10-20
Orderly Rm 105 (windows blinds were closed)	55 Avg	50-100
*Office in room 105	40 Avg	50-100
*Office – Adjacent to Rm 105 (with blinds open)	35 Avg	50-100
Hallway adjacent to Orderly Rm	35 Avg	10-20
Medical Brigade Office – Used for storage (blinds closed)	22 Avg	10-20
Conference Rm 1007	35 Avg	30-100
HVAC closet - Rm 1005	15 Avg	10-20
Kitchen area	60 Avg	20-80
Janitor closet – Rm 1005	35 Avg	10-20
Computer Network Equip Closet	60 Avg	10-20
Hallway to Latrines	30 Avg	10-20
Female Latrine	50 Avg	20-50
Male Latrine	55 Avg	20-50
Gym	32 Avg	20-30
Room 131 Office	25 Avg	50-100
Room 132 Office (Blinds closed)	35 Avg	50-100
Room 130 Retention Office (not used every day)	25 Avg	20-50
Weapons Vault	45 Avg	20-50
Supply Room	35 Avg	20-50
Supply Room Office	50 Avg	50-100
*Outside Flamm Cab and storage bldg. Lights not working	6 Avg	10-20
Recruiter Office	58 Avg	50-100
Room 133 Storage	10 Avg	10-20

*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 weapons vault, and the supply room floor using the wet method described in NG PAM 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges. (RAC 2)
- Ensure that weapon maintenance and cleaning is performed away from the drill hall or other common areas. Practice good personal hygiene by washing hands after handling weapons and ammunition, and cleaning tables or floors where weapons have been placed. (RAC3)
- 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)
- Recommend having the gaps between the drill hall floors and walls and under the exterior doors evaluated and professionally sealed. (RAC3)
- Replace the light fixture bulbs and/or ballasts in areas with illumination levels below IES recommendations. (RAC3)
- Work orders should be submitted to FTS, to evaluate the HVAC units and perform required maintenance. (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: 24-Sep-14

Lab Order:	1409G51	LEAD ON WIPES (N°082) N°082
Client:	Pinnacle IH	
Project:	Waxahachie, TX Armory	
Matrix:	Wipe	
Date Received:	9/17/2014 3:30:00 PM	

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1409G51-001A	FRJ77-DRILL HALL	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-002A	FRJ78-DRILL HALL	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-003A	FRJ79-DRILL HALL	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-004A	FRJ80-DRILL HALL	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-005A	FRJ81-DRILL HALL BLANK	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-006A	FRJ82-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-007A	FRJ83-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-008A	FRJ84-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-009A	FRJ85-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-010A	FRJ86-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-011A	FRJ87-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-012A	FRJ88-CLASSROOM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-013A	FRJ89-VAULT	BE	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-014A	FRJ90-VAULT	BE	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-015A	FRJ91-VAULT	BE	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-016A	FRJ92-VAULT	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-017A	FRJ93-VAULT BLANK	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-018A	FRJ94-SUPPLY RM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-019A	FRJ95-SUPPLY RM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-020A	FRJ96-SUPPLY RM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-021A	FRJ97-SUPPLY RM	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-022A	FRJ98-SUPPLY RM	BE	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-023A	FRJ99-REMODELED FR	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-024A	FR400-REMODELED FR	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-025A	FR401-REMODELED FR	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-026A	FR402-REMODELED FR	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-027A	FR403-KITCHEN	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-028A	FR404-KITCHEN	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-029A	FR405-KITCHEN	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS
1409G51-030A	FR406-REMODELED FR	BEL	ug/dL	20	1		06/30/2014	06/19/2014	JS

Qualifiers: BEL = Not Detected at the Reporting Limit
BE = Below Detected at the Reporting Method Blank
Results are blank controls when applicable

DF = Degrees of Freedom

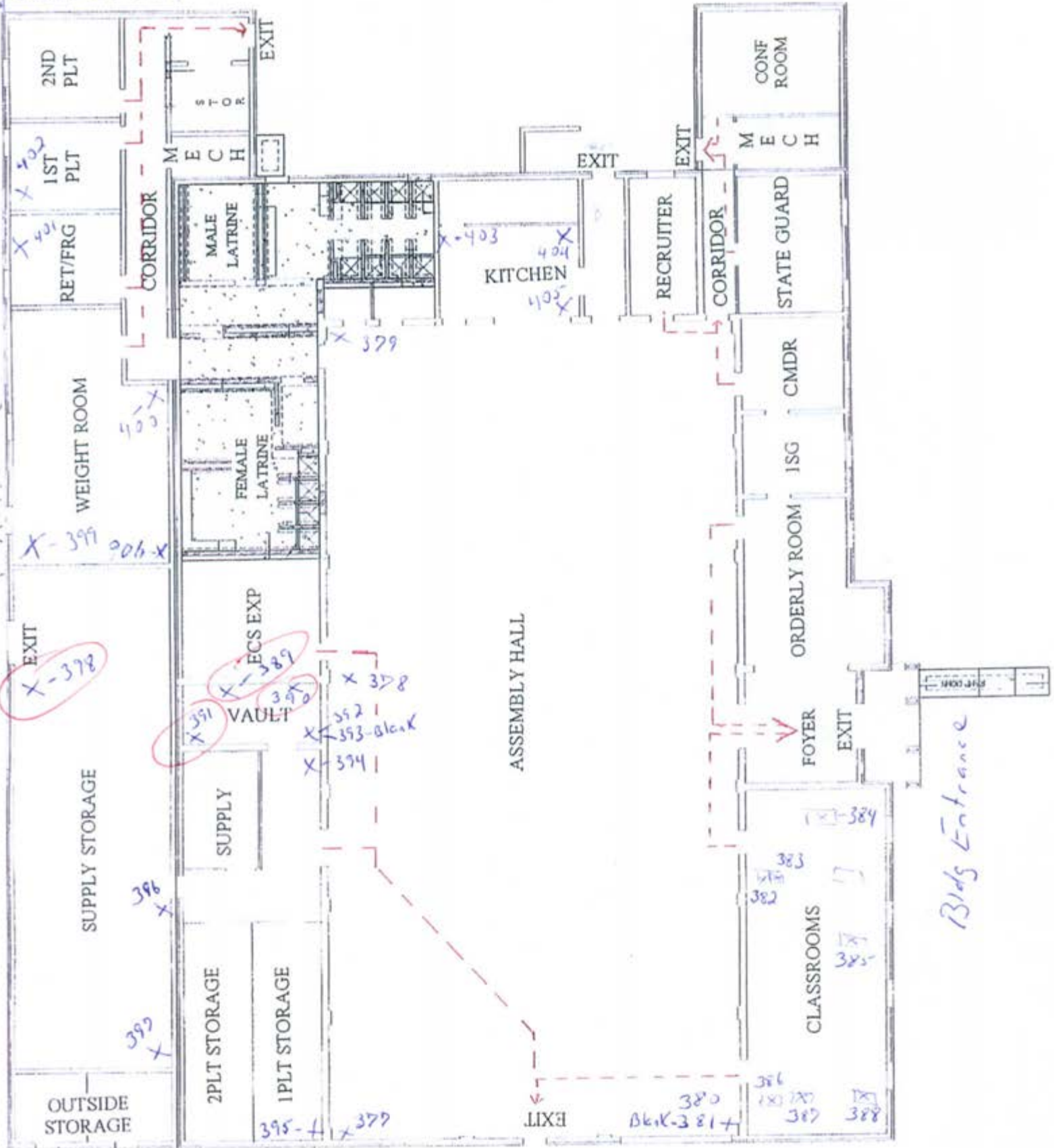
Page 6 of 7

APPENDIX B

Drawing of Sampled Areas

<Old IFR>

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APPENDIX C

Photographs of Areas Sampled for Lead in Dust

JPR392-393 Weapons Vault



JPR389-391 Weapons Vault



JPR394 Supply Room



JPR395 Supply Room



JPR399 Gym (Converted IFR)



JPR400 Gym (Converted IFR)



JPR382-383 Classroom



JPR384 Classroom



JPR403 Kitchen



JPR404-405 Kitchen



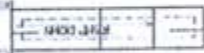
JPR379 Drill Hall



JPR378 Drill Hall



APPENDIX D DRAWING OF FACILITY



APPENDIX E PHOTOS OF FACILITY

Bldg Front



Drill Hall



Former Vehicle Maint Bays



Motor Pool



Storage



Flammable/Hazardous Chemicals



APPENDIX F HHIM Forms

*SEE PRIVACY ACT STATEMENT ON REVERSE.

(For use of this form, see BEST AVAILABLE COPY.)

SECTION 1. DEMOGRAPHIC DATA

Waxahachie TX
 a. APLC 48000 b. INSTALLATION Armory c. BLDG/RM NUMBER 0001, N/A
 d. LOCATION/CODE Admin, AA e. OPERATION/CODE Admin, ADD f. DESCRIPTION
 General Admin duties such as computer work, phone calls,
 paperwork, filing, occasional heavy lifting
 g. MACOM/CODE Nat Guard, AFG h. FPMACOM CODE Other, XX i. SUPERVISOR
 j. TELEPHONE/AUTOVON NUMBER Non-Responsive k. RAC l. FREQUENCY (Hrs Per Day) 8
 m. NO CIV(S) 2 n. NO MIL o. NO CONTRACTOR(S) 2 p. NO LOC(S) 1 q. NO OTHER 0

SECTION 2. IH STAFFING DATA

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

SECTION 3. SURVEY DATA

a. SURVEY DATE 30 June, 2014 b. EVALUATOR (INITIALS) Non-Responsive

c. CONTROLS PRESENT	d. EVALUATION	e. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
Lighting Office		FC	50-100	Adequate
Lighting Storage		FC	20-50	Adequate
Lighting Hallway		FC	10-20	Adequate

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

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	R/A
DISPOSABLE			1
FACE AIR PURIFYING			1
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/SPLASH	1	MUFFS	1	APRONS	1	HARD HATS	1
OIL	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
WET 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		
INBC AGENTS	1								

SECTION 4. HAZARD INVENTORY DATA

a. CAS CODE	b. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
7439-92-1	Lead Particulates	3	No
00-Listing	Heavy Lifting	3	No
00-VD	Eye or Hand Strain - Extended Computer Work	3	No
00-Stress	Weekly PT Training	3	No
00-Eye haz	Eye Hazards related to poor lighting	3	No

SECTION 5. SAMPLING DATA

a. HAZARD	b. SAMPLE TYPE	c. RESULTS	d.
Lead in Dust	Wipe	See Report	

SECTION 6. PERSONNEL DATA

a. LAST NAME	b. FIRST NAME	c. MI	d. SEX	e. SSN
Non-Responsive				

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

- 1) There were no complaints of health issues from personnel.
- 2) Lighting and ventilation were adequate.
- 3) The facility was neat and clean throughout.

PRIVACY ACT STATEMENT

TITLE 5 U.S. Code, Section 301; 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 and this information is to provide histories of exposure for any given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure of this information may result in the loss of certain benefits.
 Posted to NGB FOIA Reading Room
 May, 2018
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 Signature

Non-Responsive

15-0085 (TX)
 Guard Bureau
 1589 of 1757

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

*SEE PRIVACY ACT STATEMENT ON REVERSE.

(For use of this form, see I BEST AVAILABLE COPY.)

SECTION 1.

DEMOGRAPHIC DATA

APLOC 48000 d. INSTALLATION Waxahachie TX c. BLDG/RM NUMBER 0001, Supply Rm
 LOCATION/CODE Supply Area SA e. OPERATION/CODE Warehouse, WAH f. DESCRIPTION
Heavy Lifting, Falling objects, working in cages and storage rooms,
working in weapons vaults, working with hazardous chemicals
 MACOM/CODE Nat Guard, NG g. SUPERVISOR Other, XX
 TELEPHONE/AUTOVON NUMBER Non-Responsive h. RAC _____ i. FREQUENCY (Hrs Per Day) _____
 j. NO CIV(S) 0 k. NO MIL 3 l. NO CONTRACTOR(S) 0 m. NO LOC(S) 1 n. NO OTHER 0

SECTION 2.

IH STAFFING DATA

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

SECTION 3.

SURVEY DATA

a. SURVEY DATE 30 June, 2014 b. EVALUATOR (INITIALS) Non-Responsive

CONTROLS PRESENT	g. EVALUATION	e. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
Lighting Office		FC	50-100	Adequate
Lighting Storage		FC	20-50	Adequate
Lighting Vault		FC	10-20	Adequate

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

1. RESPIRATOR MANUFACTURER NIOSH TC NO R/A
 DISPOSABLE _____
 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 SHCS	/
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
NBC AGENTS	/								

SECTION 4.

HAZARD INVENTORY DATA

CAS CODE	d. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
439-92-1	Lead Particulates	2	No
0-Lifting	Heavy Lifting	3	No
0-Falling	Falling Objects	3	No
0-Eye haz	Eye hazards relating to poor lighting	3	No
0-Stress	Weekly PT Training	3	No

SECTION 5. SAMPLING DATA

a. HAZARD	b. SAMPLE TYPE	c. RESULTS	d.
Lead in Dust	Wipe	See Report	

SECTION 6. PERSONNEL DATA

1. LAST NAME	2. FIRST NAME	3. MIDDLE NAME	4. SSN
Non-Responsive			

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

- 1) No complaints of health issues from personnel.
- 2) Lighting and ventilation were adequate.
- 3) The facility was neat and clean throughout.

PRIVACY ACT STATEMENT

Title 5 U.S. Code, Section 301; 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 loss of certain benefits.

Posted to NGB FOIA Reading Room
May, 2018

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Signature

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35 (TX)
Bureau
of 1757

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Kileen Armory, Temple Armory, Brenham Armory Brenham Armory, and Bryan Armory, TX.

- b. Non-Responsive Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l., to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Waxahachie Armory, Corsicana Armory, Mexia Armory, Waco Armory, Gatesville Armory, Killeen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially it this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Waxahachie Armory
628 Grand Avenue
Waxahachie, Texas

Prepared for:

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

By
Non-Responsive

July 8, 2004

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

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Waxahachie Armory on 01 June 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 43,000 microgram per square foot.	Do not use the firing range space until it is cleaned and decontaminated properly.
Armory Lead Wipe Samples	<10 to 53 microgram per square foot.	No action.
Asbestos Bulk Samples	No Suspect asbestos containing material identified.	No action.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 90 footcandles	No action.
HVAC/IAQ	No issues were found.	No action.

Waxahachie Armory

Survey Date: 01 June 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Waxahachie Armory in Waxahachie, Texas on 01 June 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Waxahachie Armory in Waxahachie, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 01 June 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses Company A and the 249 Signal. The building, which was built in 1957, is a one-story structure and consists of an administrative office area, a kitchen, classrooms, a drill hall, a supply room, and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Twenty nine wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
WAX-01	Top of serving line in kitchen	18.0
WAX-02	Top of microwave oven in kitchen.	10.0
WAX-03	Supply diffuser in administrative office (Sgt. Phipps Office)	<10.0
WAX-04	Top of router in the administrative office	<10.0
WAX-05	Return air grill in the administrator office	14.0
WAX-06	Drill hall floor in center.	28.0
WAX-07	Drill hall floor by supply room	12.0
WAX-08	Drill hall floor diagonally opposite the floor sample by supply	36.0
WAX-09	Top of the soda machine in the drill hall	53.0
WAX-10	Top of table in the classroom	<10.0
WAX-11	IFR back wall (facing range) upper left	330.0
WAX-12	IFR back wall (facing range) middle	180.0
WAX-13	IFR back wall (facing range) lower right	76.0
WAX-14	IFR left wall (facing trap) upper left (facing wall)	15.0
WAX-15	IFR left wall (facing trap) middle (facing wall)	130.0
WAX-16	IFR left wall (facing trap) bottom right (facing wall)	960.0
WAX-17	IFR right wall (facing trap) upper right (facing wall)	70.0
WAX-18	IFR right wall (facing trap) middle (facing wall)	580.0
WAX-19	IFR right wall (facing trap) lower left (facing wall)	<10.0
WAX-20	IFR top of heat shield by firing line	2,200.0
WAX-21	IFR ceiling surface in the middle of the range	<10.0
WAX-22	IFR ceiling surface by the bullet trap left side (facing trap)	<10.0
WAX-23	IFR floor to the right of the observation area	6,200.0
WAX-24	IFR floor middle of range	18,000.0
WAX-25	IFR floor to the left of the bullet trap	39,000.0
WAX-26	IFR bullet Stop upper left	43,000.0
WAX-27	IFR bullet Stop middle	40,000.0
WAX-28	IFR bullet Stop lower right	39,000.0
WAX-29	Field Blank	26.0

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

The indoor firing range as indicated by the wipe sampling results should be properly cleaned and decontaminated in accordance to the instructions found in NG PAM 385-15.

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
WAX A01	12x12 inch floor tile.	None.
WAX A01	12x12 inch floor tile mastic.	None.
WAX A02	Baseboard	None.
WAX A03	2x4 foot ceiling tile	None.

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

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified. However, readings were collected in some areas to document the levels. As expected, noise levels were well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA, as indicated in the table below.

Area	Reading in decibels dBA
Administrative Offices.	50 – 60
Classrooms.	50 – 55
Drill Hall.	50 – 60
Kitchen.	50 – 55

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 90 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	40 – 90
Supply Room.	10 – 30
Drill Hall.	20 – 40
Classroom.	40 – 80
Kitchen.	30 – 50

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of a forced air furnace unit. Outside makeup air capabilities is available in the furnace room. The common return air plenum is located underneath the unit and is constructed of wooden plywood. No water leaks signs were observed in the mechanical closets. However, the presence of water and wood will provide an opportunity for a microbiological growth source within this common plenum. Given the right conditions these sources can contribute negatively to the quality of the indoor air. All condensate water should be isolated from the wood on the return air plenum. Consideration should be given to replace the wood with a metal structure. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

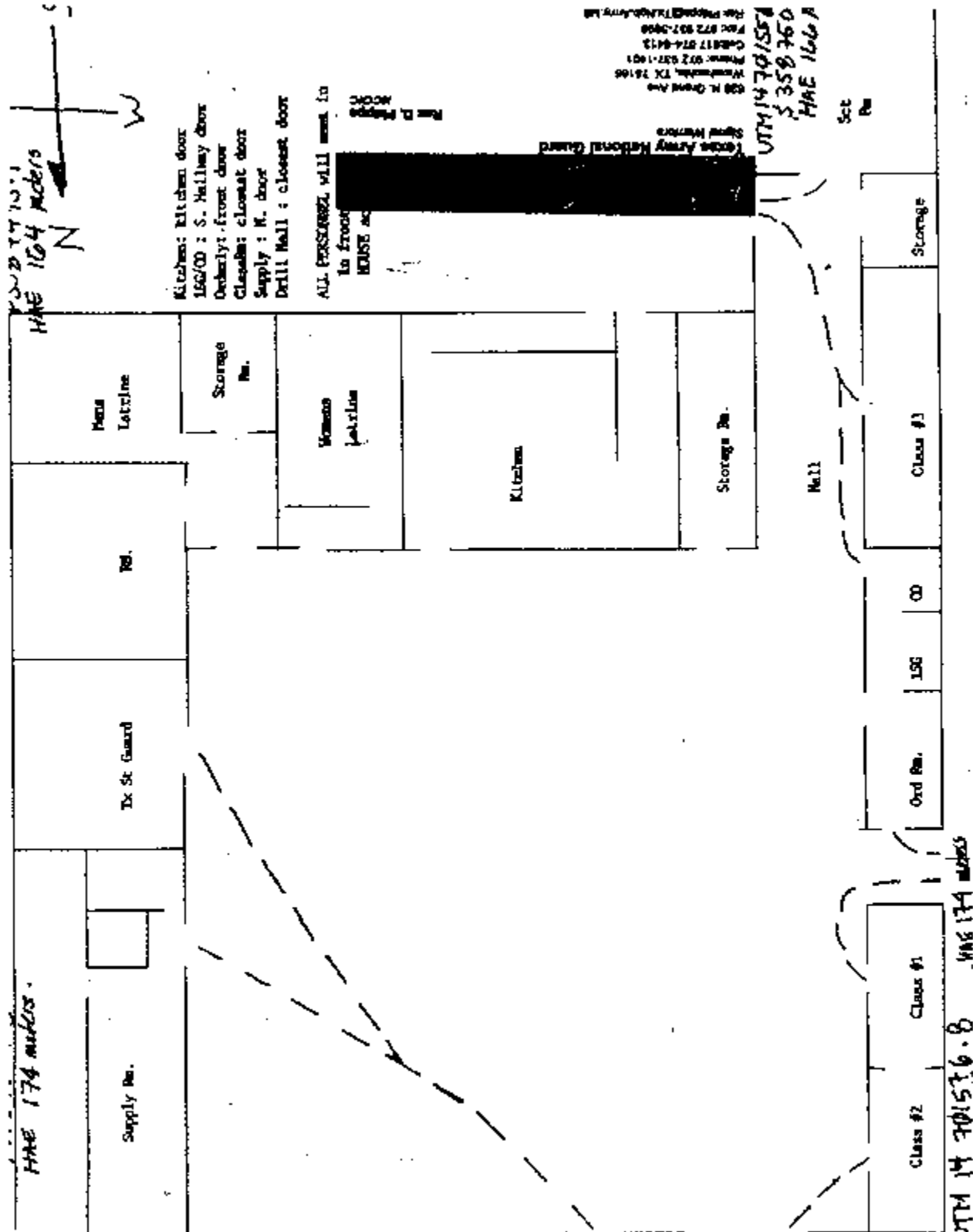
Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

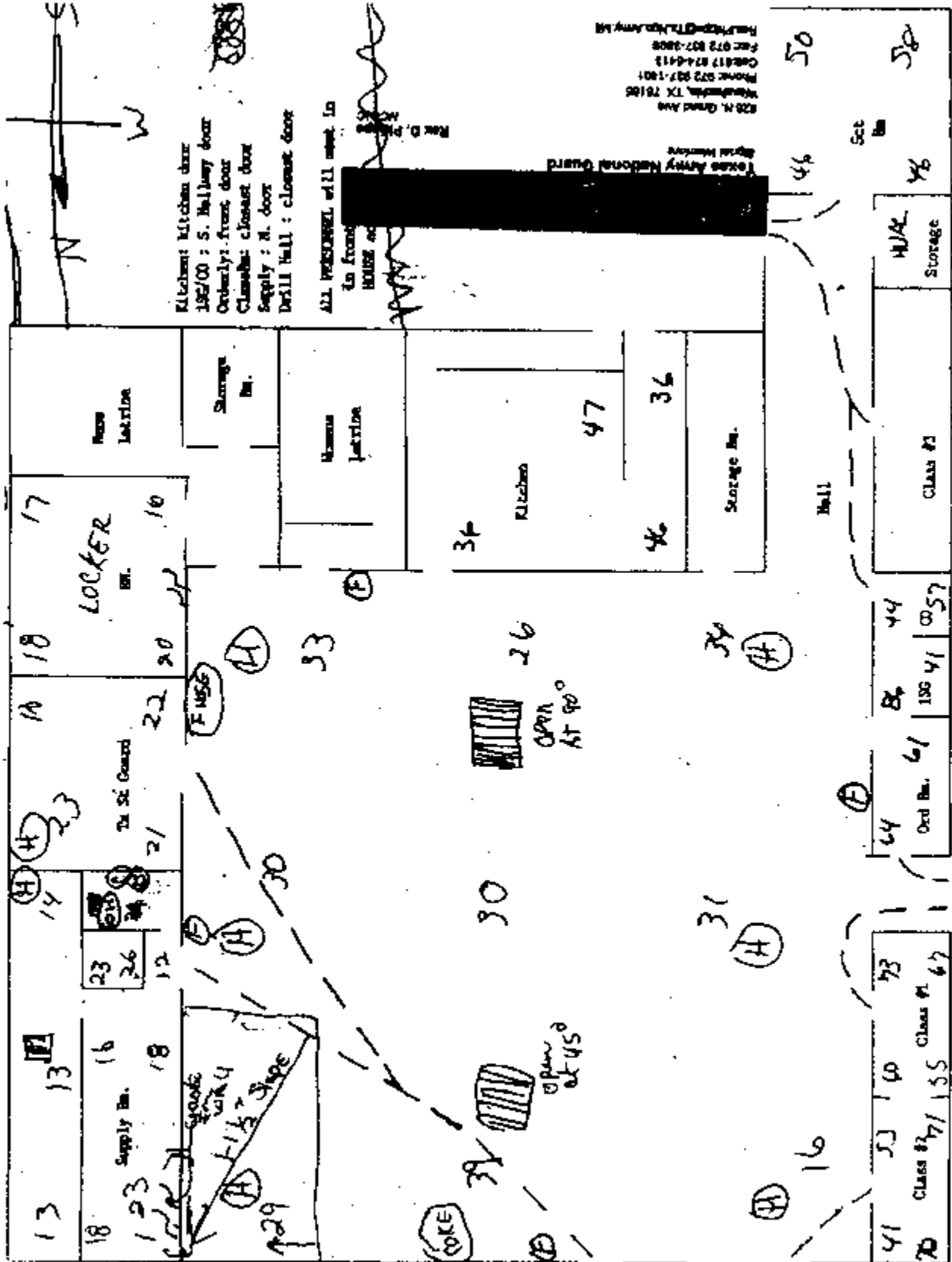
Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

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APPENDIX A





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APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-0581 Email: slaufman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 05/07/04 1:18 PM

Fax:

EMSL Order: 200406799

Project:

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
WAX 01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NELAP accreditation program	0001	6/21/04	n/a	18.0 µg/wipe
WAX 02	0002	6/21/04	n/a	10.0 µg/wipe
WAX 03	0003	6/21/04	n/a	<10.0 µg/wipe
WAX 04	0004	6/21/04	n/a	<10.0 µg/wipe
WAX 05	0005	6/21/04	n/a	14.0 µg/wipe
WAX 06	0006	6/21/04	n/a	28.0 µg/wipe
WAX 07	0007	6/21/04	n/a	12.0 µg/wipe
WAX 08	0008	6/21/04	n/a	36.0 µg/wipe
WAX 09	0009	6/21/04	n/a	53.0 µg/wipe
WAX 10	0010	6/21/04	n/a	<10.0 µg/wipe
WAX 11	0011	6/21/04	n/a	330.0 µg/wipe
WAX 12	0012	6/21/04	n/a	180.0 µg/wipe
WAX 13	0013	6/21/04	n/a	76.0 µg/wipe
WAX 14	0014	6/21/04	n/a	15.0 µg/wipe
WAX 15	0015	6/21/04	n/a	130.0 µg/wipe
WAX 16	0016	6/21/04	n/a	960.0 µg/wipe
WAX 17	0017	6/21/04	n/a	70.0 µg/wipe
WAX 18	0018	6/21/04	n/a	580.0 µg/wipe
WAX 19	0019	6/21/04	n/a	<10.0 µg/wipe
WAX 20	0020	6/21/04	n/a	2200.0 µg/wipe
WAX 21	0021	6/21/04	n/a	<10.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the APLA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04653, APLA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:56:30 PM

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-9651 Email: info@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:18 PM

Fax:

EMSL Order: 200406798

Project: Wadsworth

EMSL Proj:

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

Client Sample Description	Lab ID	Analysed	Area Sampled	Lead Concentration
WAX 22	0022	n/a	n/a	<10.0 µg/wipe
WAX 23	0023	n/a	n/a	6200.0 µg/wipe
WAX 24	0024	n/a	n/a	18000.0 µg/wipe
WAX 25	0025	n/a	n/a	39000.0 µg/wipe
WAX 26	0026	n/a	n/a	43000.0 µg/wipe
WAX 27	0027	n/a	n/a	40000.0 µg/wipe
WAX 28	0028	n/a	n/a	39000.0 µg/wipe
WAX 29	0029	n/a	n/a	26.0 µg/wipe

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those AAs listed. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NEELAP: 04663, AHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:58:37 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 858-4800 Fax: (856) 858-4850 Email: sales@EMSL.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 06/07/04 1:04 PM

Fax:

EMSL Order: 040410195

Project:

EMSL Proj:

Analysis Date: 5/18/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
WAX A01-Tile 040410195-0001		Gray Non-Fibrous Heterogeneous	Dissolved		100% Non-fibrous (other)	None Detected
WAX A01-Mastic 040410195-0004		Black Non-Fibrous Heterogeneous	Dissolved	10% Cellulose	90% Non-fibrous (other)	None Detected
WAX A02 040410195-0002		Brown Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected
WAX A03 040410195-0003		Gray/White Fibrous Heterogeneous	Teased	40% Cellulose 40% Glass	20% Non-fibrous (other)	None Detected

Non-Responsive

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL Westmont (NYLAP #101048-0), NY GLAP 10872

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APPENDIX C

20766799

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences Inc. EMSL-Bill to: Same as mail to
 Street: 5749 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: Name **Non-Responsive** Telephone **Non-Responsive**
 Fax Results to: (Name) _____ Fax #: _____

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)	LAB
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% →	
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
Lead Soil +	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wipe* List Wipe Type	<input checked="" type="checkbox"/> ASTM SW846-7420 / HUD Appendix 14.2 Digest.	Flame Atomic Absorption	10 ug/wipe	Retention
	<input type="checkbox"/> non ASTM or SW846-6010B	ICP	3.0 ug/wipe	
ICP Lead**	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
STLC Lead (California)*	CA Title 22 06801.06 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or SW846-6010B	ICP	0.1 mg/l (ppm)	
Lead in Air****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil	
Lead Soil +				
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)	
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g	

Turnaround - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 * ** *** **** + ++ * Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume, L Area, in ²	LAB #
WAX#1 - WAX#29	WAXHACHIE		06799-124

Relinquished By: (Person) _____

Received at EMSL By: _____

Received at EMSL By: _____

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain (Nov 2001) x STLC.doc



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

RECEIVED

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tommasi Sciences, Inc.

EMSL-Bill to:

Same as mail to

Street:

Street:

Box #:

Box #:

City/State:

City/State:

Phone Results to:

Fax Results to:

Name:

Name:

Telephone #:

Fax #:

Project:

Purchase Order #:

Name/Number:

Non-Responsive

Non-Responsive

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

*EM Air, 3 hours, 6 hour. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-330-3475 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 quantitative method
SEM Air or Bulk <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative		

SAMPLES ACCEPTED
FOR ANALYSIS BY
EMSL ANALYTICAL INC.

RECEIVED
ASBESTOS
SIGMA
JUN 7 PM
Hd L - NRC

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)

Client Sample # (s)

Total Samples #: 3

Relinquished:

Date:

6/5/04

Time:

AM

Received:

Date:

Time:

Pratt Mail

Non-Responsive

APPENDIX D



Photo #1: Armory front entrance.



Photo #2: North side of the armory.



Photo #3: North east corner of the armory.



Photo #4: South side of the armory.

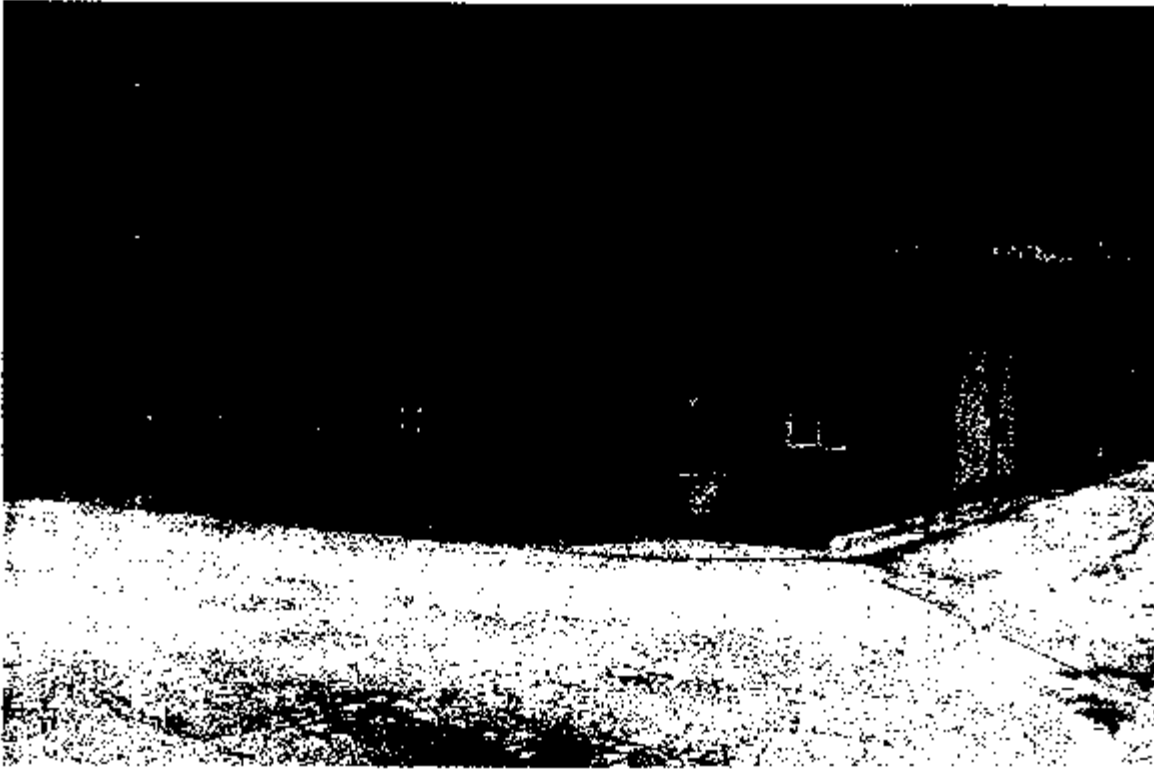


Photo #5: South west side of the armory.



Photo #6: Indoor firing range facing the bullet trap.

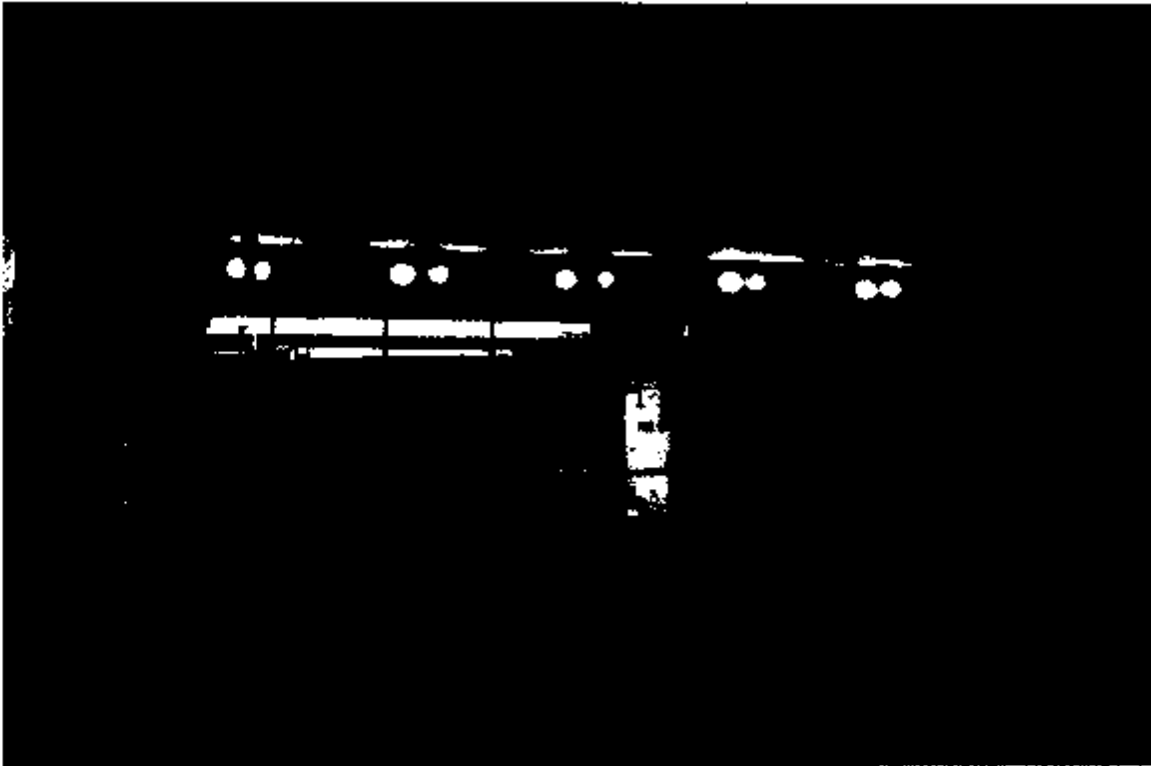


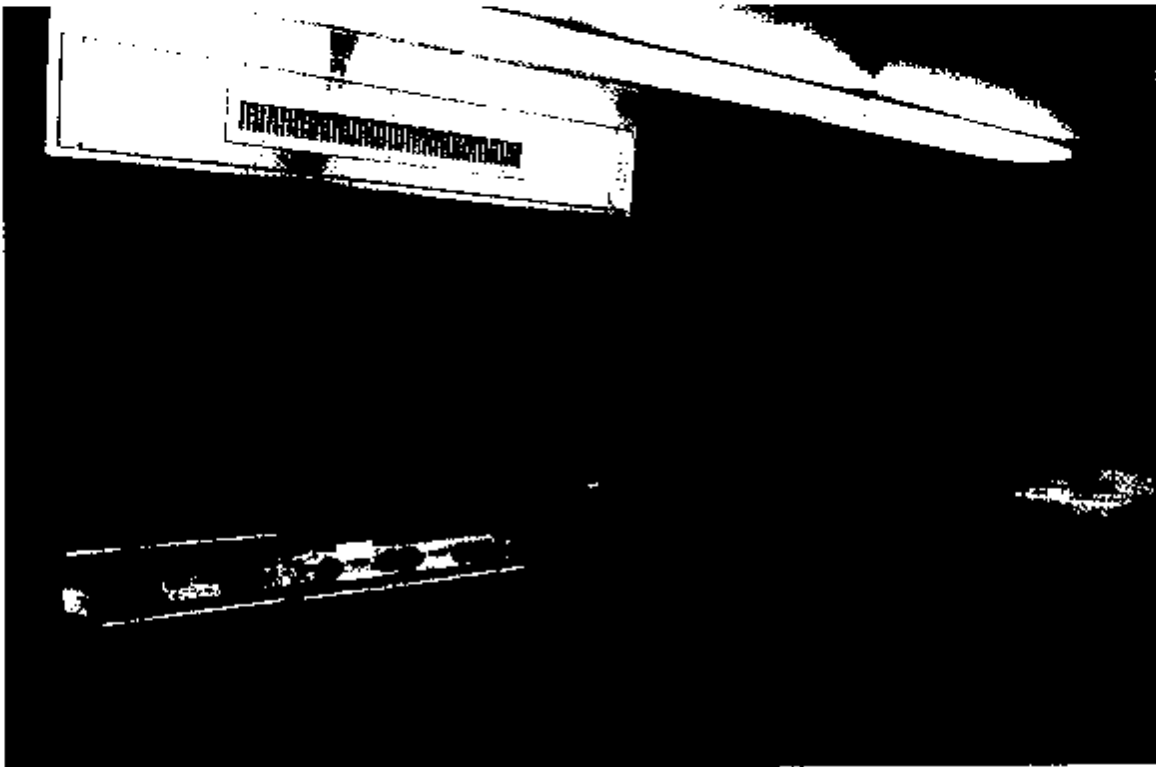
Photo #7: Indoor firing range facing the firing line.



Photo #8: Drill hall facing north.



Photo #9: Drill hall facing south.



Photo#10: Armory's kitchen showing the stove.

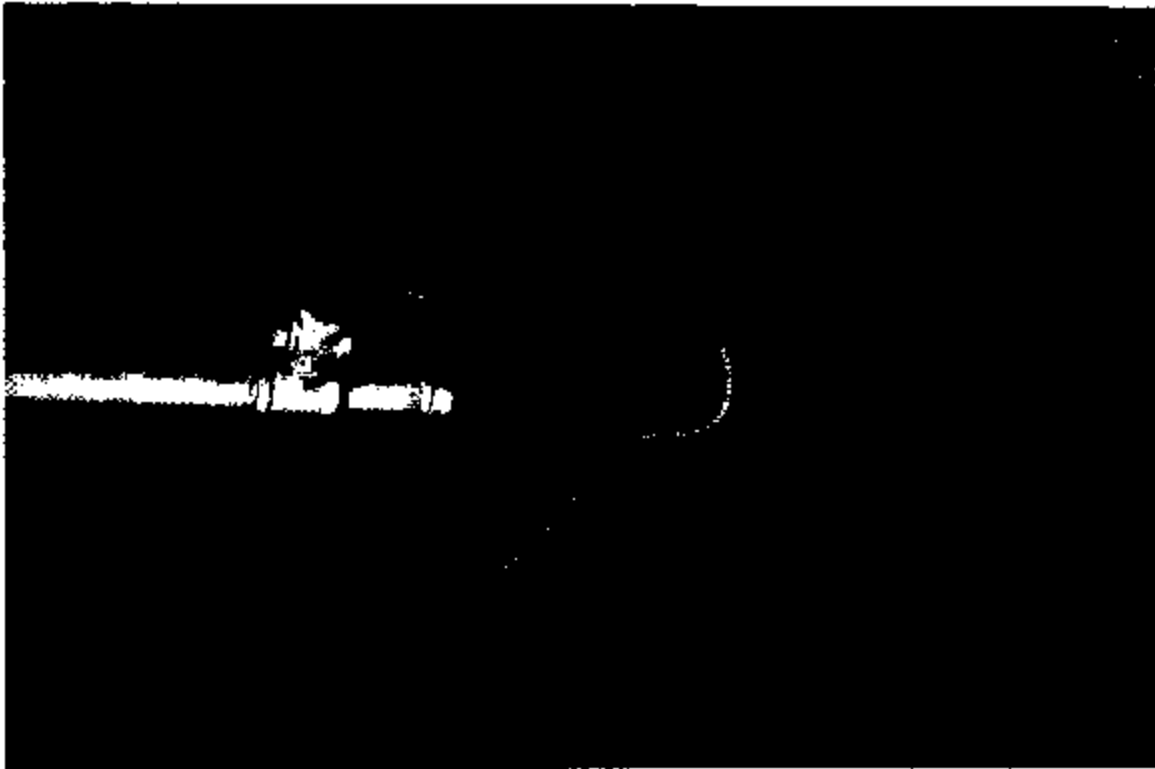


Photo #11: The Armory's forced air furnace

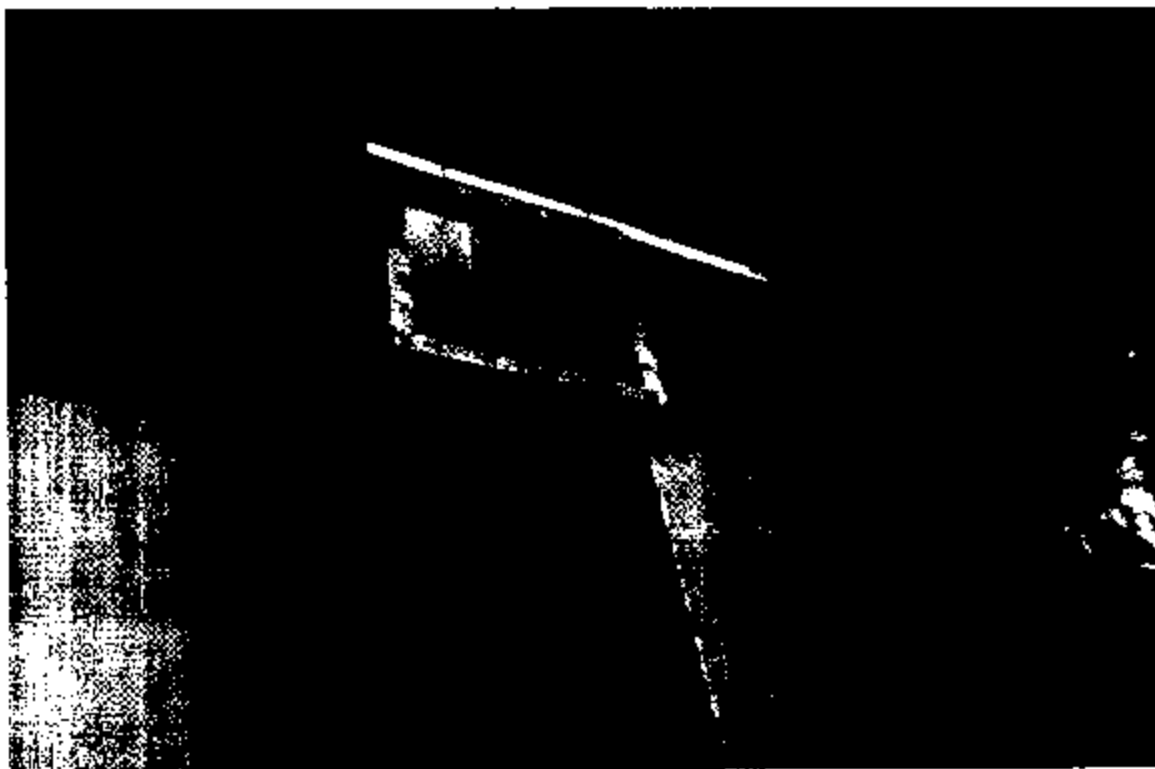


Photo #12: Outside makeup air inlet in furnace room.



Photo #13: The Armory's classrooms.

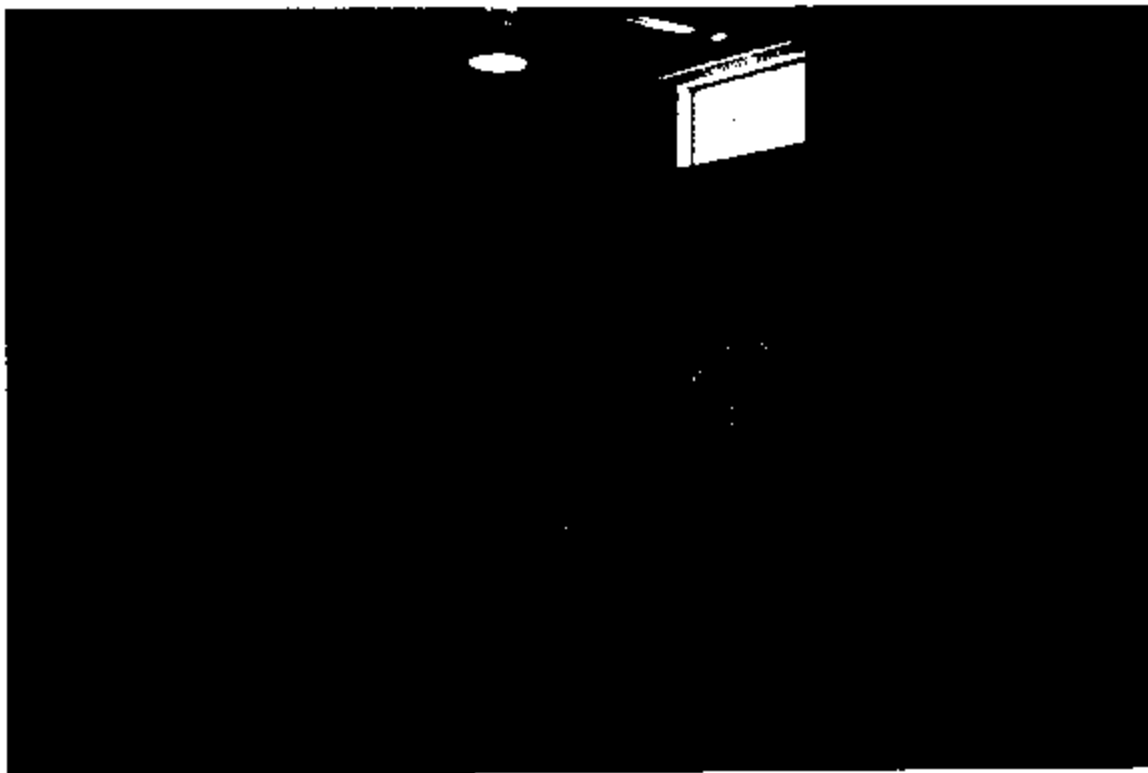


Photo #14: A structural crack found in the armory's drill hall northeast side.



BEST AVAILABLE COPY
DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

ARNG-CSG-P (40-5f)

February 1, 2011

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN: Supervisor, Weslaco Army National Guard Armory, Weslaco, Texas.

Non-Responsive

Through [Redacted] State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78703-5218.

Non-Responsive

SUBJECT: Transmittal of IH Survey of TX ARNG Weslaco Armory, Weslaco, TX.

1. References.

- a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1998.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.
- d. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.
- f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.
- g. DA PAM 40-501, 10 December 1998, Hearing Conservation.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- j. USAEHA TG-141, January 2007, Guidelines for Air Sampling and Bulk sample Collection.
- k. Title 29, Code of Federal Regulations (CFR), 2004 rev., part 1910, Occupational Safety and Health Standards.

2. General. At the request of TX ARNG Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling at of TX ARNG Weslaco Armory, Weslaco, TX.

February 1, 2011

SUBJECT: Transmittal of IH Survey of TX ARNG Weslaco Armory, Weslaco, TX.

3. Findings. The information that follows is based on the findings of the survey performed. All HHIM field survey forms, industrial hygiene sampling and survey findings of the report are enclosed (See ENCL 1). Operations of very short duration were not sampled due to the requirements of the sampling method. If the operation changes or if the length of the operation is increased, contact this office to schedule sampling if it is deemed needed.
4. Recommendations. Follow the recommendations made in the enclosed report, requesting industrial hygiene (IH) services where needed to complete the recommendations.
 - a. The recommendations given in the comments section of the HHIM data sheets and data collected will serve as an update of the baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY2011. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY2012 IHIP.
 - b. Have all HHIM data entered into the HHIM computer module.
 - c. Use the report to help in correcting all deficiencies noted.
 - d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present visits, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - e. Contact the State Occupational Health Office for any medical Surveillance that may be needed.
 - f. To execute your responsibilities in correcting all deficiencies, coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
5. The present report addressed to the local facility commanders was divided in such a way that personal data can be detached and kept by the OHM or blocked when forwarding these reports to other entities within the appropriate offices of TX ARNG. If additional

Non-Responsive

CF:

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

NEA

Non-Responsive

ENVIRONMENTAL ASSOCIATES, INC

Pho

Non-Responsive

January 8, 2011

Non-Responsive

RE: Contract between Region South Industrial Hygiene Office
and Nichols Environmental Associates, Inc.
Industrial Hygiene Survey

Dear

Non-Responsive

In accordance with the requirements of the above reference, Non-Responsive
Environmental Associates, Inc. (NEA) is pleased to submit this report.

This submittal incorporates the requirements of the Industrial Hygiene Contract
and interview information collected. The survey and sampling were performed
diligently and in accordance with industry regulations, guidelines, and good
management standards. The information is complete and accurate to the best of
our knowledge.

If you have any questions or comments regarding the report, please contact me.

Non-Responsive

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7.3 HAZCOM, Chemical Inventory, MSDS & General Observations		4
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10.0 PHOTOGRAPHS		5
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APPENDIX A: Building Diagram, Summary of Illumination Measurements

APPENDIX B: Firing Range Sample Placement Diagram, Chain of Custody Forms, Lab Sample Results & Sample Photographs

APPENDIX C: Occupant Health and Comfort Questionnaire, Facility Information Form, Health Hazard Information Module, Photographs & References

NEA**Non-Responsive****ENVIRONMENTAL ASSOCIATES, INC.**

1.0 EXECUTIVE SUMMARY

Laboratory lead wipe sample results in the inactive IFR indicated lead concentrations above the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft². The local facilities commission responsible for maintenance should be contacted to facilitate decontamination and cleaning of the IRF.

Ensure that during follow-up industrial hygiene surveys, full cooperation and access is provided IH personnel to assist in resolving employee concerns and providing your activity with comprehensive information for compliance with federal regulations. Numerous written and verbal attempts were made to obtain information critical to the survey without success.

2.0 BACKGROUND

Non-Responsive

Environmental Associates, Inc. (NEA) was contracted by the National Guard Region South Industrial Hygiene Office to conduct an Industrial Hygiene Initial Baseline Survey of the Weslaco Army National Guard Armory, HQ 3rd BN 141st, Weslaco, Texas 78596-0922. The survey was conducted on December 7th and 9th, 2010 by Paul Nichols, Certified Hazard Control (CHCM).

Weslaco Army National Guard Armory is the head quarters for A/3-141st (Brownville, Texas), B (-)/3-141st (Laredo, Texas) and D/3-141st (Houston, Texas). The armory is responsible for administration, readiness and personnel support. The armory is used for drills on weekends. On weekends armory personnel perform within their Military Occupational Specialty.

The baseline survey included conducting illumination studies, lead wipe samples, Health Hazard Information Modules (HHIMs), Hazard Communication Program, Petroleum Oil & Lubricant (POL) procedures, Facility Information Form (FIF) and Occupant Health and Comfort Questionnaires (OHCQ).

3.0 SITE DESCRIPTION

Weslaco Army National Guard Armory, HQ 3rd BN 141st, is located in a commercial area at 1100 Vo-Tech Drive in Weslaco, Texas 78596-0922. The armory was built in approximately 1996. The armory contains the usual and customary offices, class rooms, vehicle maintenance bay, drill hall, kitchen, storage, supply, recreation room, and men/women latrines, etc. There are currently twenty (20) full-time employees assigned.

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4.0 SCOPE of WORK

The industrial hygiene (IH) survey conducted at Weslaco Army National Guard Armory included an illumination survey of the entire facility and lead wipe samples of the inactive indoor firing range (IFR) and drill hall. A review of the Hazard Communication Program (Haz Com) was made, to include Material Safety Data Sheets (MSDS's), personal protective equipment (PPE), completion of Health Hazard Information Modules (HHIMs) and inspection of the flammable/non-flammable storage cabinets. A review of the Facility Information Form (FIF) was completed. However, the Occupant Health and Comfort Questionnaire (OHCQ) which addresses questions or concerns of the employees was never completed.

The OHCQs were submitted to CPT Eric Zepeda for distribution to employees. The OHCQs were not completed (see paragraph 8.00).

5.0 IH SURVEY PERSONNEL AND POINTS OF CONTACTS

Non-Responsive Environmental Associates, Incorporated, was responsible for this survey. Weslaco points of contacts (POCs) and coordinators were **Non-Responsive** and **Non-Responsive** Weslaco Armory and **Non-Responsive** Occupational Health.

6.0 SURVEY METHODOLOGY

A walk-thru survey was conducted of the Armory, IFR, offices, and storage areas. Employees were interviewed, and the FIF was reviewed. Sampling and evaluation strategies were developed from information obtained from the POCs, FIF, and a walk-thru. Procedures and strategies were designed for the purpose of collecting lead wipe samples, and conducting a lighting survey. The POC was charged with providing NEA detailed information about the process and the flow of operations for each area. All tests and procedures were conducted in accordance with usual and customary, generally accepted, IH protocol.

7.0 FINDINGS

7.1 Illumination Survey

Illumination readings were obtained with an Extech Model 407026 Heavy Duty Light Meter, Serial # Z118558, with a National Institute of Standards and Technology (NIST) traceable calibration. Illumination readings were recorded in foot-candles (FCS) and the Extech light meter was programmed for the type of illumination present. Illumination readings were taken in offices, classrooms,

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vehicle maintenance bay (IFR), drill hall, vault, kitchen, storage, supply, recreation room, and men/women latrines

Illumination Parameters FCS

Office/ Admin = 70	Physical Fitness = 5	Class RM = 70
Supply = 20	Vault = 20	Drill Hall = 50
Latrines = 20	Library = 70	Kitchen = 50

The over lighting was very good. The average reading in the classrooms was 38-43 FCS. The other areas met or exceeded the guidelines. A building diagram and summary of illumination measurements and Army National Guard DG 415 Design Guide Lighting Standards are included in Appendix A.

7.2 Industrial Hygiene Lead Wipe Sampling

Eighteen lead dust surface samples were collected from representative areas of the IFR and drill hall using Environmental Express Ghost Wipes™ and 12 inch by 12 inch templates. The entire area was wiped using an "S" configured motion. The Ghost™ Wipe was then folded in half, and the area was again wiped in a direction 90° to the first using an "S" motion. The wipe was folded again and the perimeter of the area was wiped. The wipe was then placed into a plastic bag and sealed. In addition, a clean wipe was placed in a resealable plastic bag and submitted as a blank sample for analysis. The samples were sent to Analytical Environmental Services, Inc., an American Industrial Hygiene Certified Laboratory, for chemical analysis. The samples were submitted using the Chain of Custody Procedure where they were individually processed and given a unique number.

One sample was above the recommended NGB guidelines of 200ug/ft² (Reference e). An indoor firing range sample placement diagram, Chain of Custody Forms, laboratory sample results, and photographs are included in Appendix B.

A table denoting sample locations, field numbers, and lead results is outlined below.

Lead Wipe Sample Locations, Field Numbers & Results

Sample Number	Sample Location	Results (µg/ft²)
Wes-1	Drill Hall Floor	BRL
Wes-2	Drill Hall Floor	BRL
Wes-3	Drill Hall Floor	BRL
Wes-4	Drill Hall Floor	BRL

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Wes-5	Drill Hall Floor	BRL
Blank	Drill Hall	BRL
Wes-6	Left Rear Floor	65
Wes-7	Right Rear Floor	152
Wes-8	Left Front Floor	41
Wes-9	Right Front Floor	48
Wes-10	Center Floor	242
Wes-11	Left Rear Wall Lower	BRL
Wes-12	Left Rear Wall Upper	BRL
Wes-13	Left Wall Center	BRL
Wes-14	Right Wall Center	BRL
Wes-15	Left Front Wall Upper	BRL
Wes-16	Right Front Wall Upper	BRL
Wes-17	Back Center Floor	111
Wes-18	Center Back Wall	BRL
Blank		

BRL=Below Reportable Limits

7.3 HAZCOM, Chemical Inventory, MSDS Review, and General Observations

Reportedly, no chemicals are used at this facility.

8.0 OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE (OHCQ) & FACILITY INFORMATION FORM (FIF)

The OHCQs were submitted to **Non-Responsive** for distribution to employees. The OHCQs were not completed. I requested this information to be completed via email prior to my arrival. I made repeated request for this information during my two day survey, all to no avail. Additionally, I requested this information via email and phone calls after the survey. By refusing to provide this information, it was difficult to follow-up on previous employee complaints identified in the last IH survey (April 2007). A request was also made for a roster of employees and the last 4 digits of employees SS# to incorporate on the HHIMs for submission to occupational health; this information was never provided.

The completed FIF and a blank OHCQ are included in Appendix C.

NEA

Non-Responsive

ENVIRONMENTAL ASSOCIATES, INC.**9.0 HEALTH HAZARD INFORMATION MODULE (HHIM)**

The HHIM Field Survey Forms were completed for operations surveyed. A roster of employees, controls/protective measures, and potential health hazards for specific operations were identified. The HHIM Field Survey Forms are included in Appendix C.

10.0 PHOTOGRAPHS

Site photographs are included in Appendix C.

11.0 REFERENCES

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

12.0 LIMITATIONS

Variation of the work environment is an inherent part of sampling and evaluations. This report reflects conditions, operations, and practices observed and reported at the time of the survey. Changes in operating conditions, materials used, and work practices can alter the environment and the outcome of this type of survey.

13.0 RECOMMENDATIONS

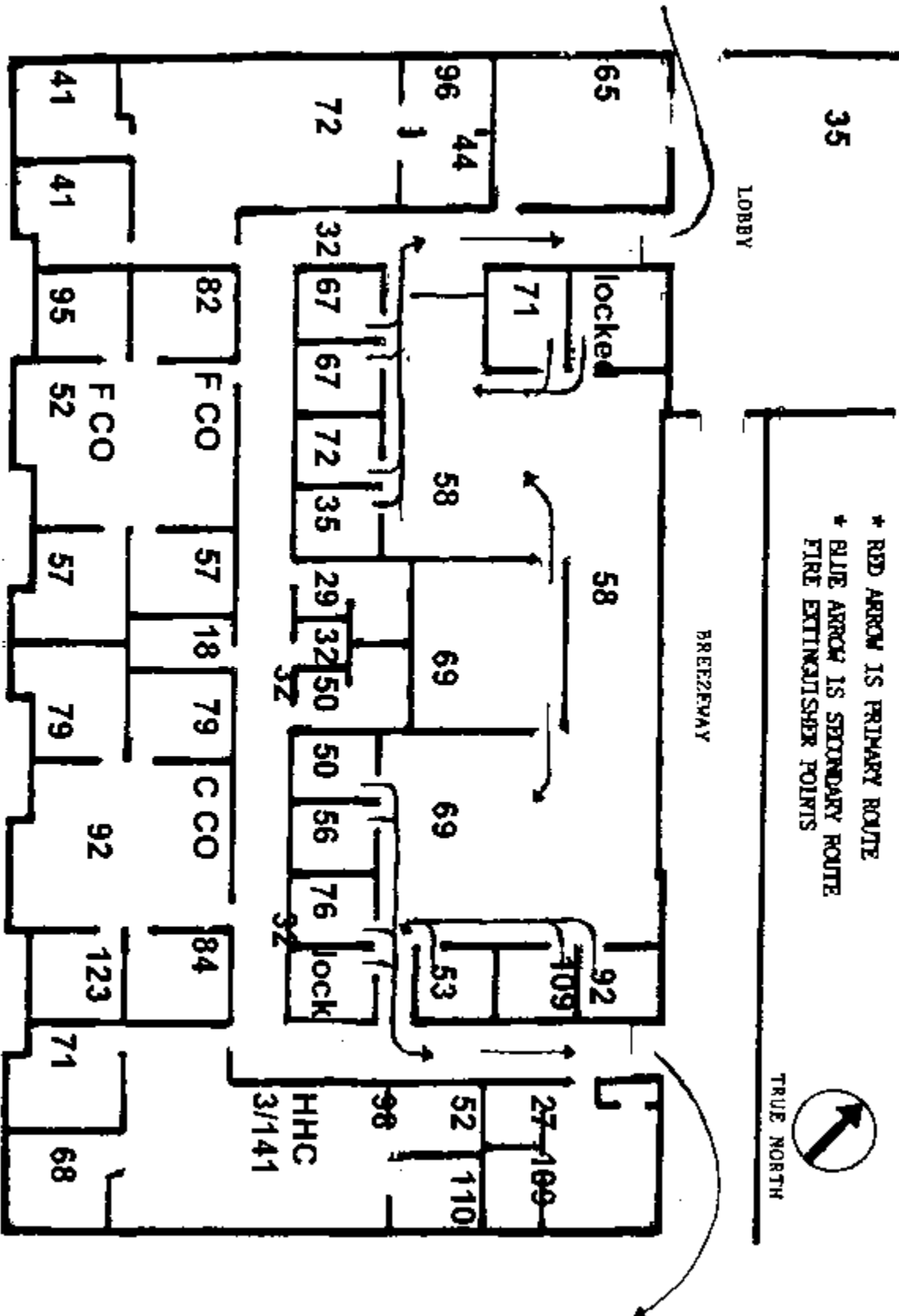
a. Laboratory lead wipe sample results in the inactive IFR indicated lead concentrations above the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft². The local facilities commission responsible for maintenance should be contacted to facilitate decontamination and cleaning of the IFR. (RAC 2)

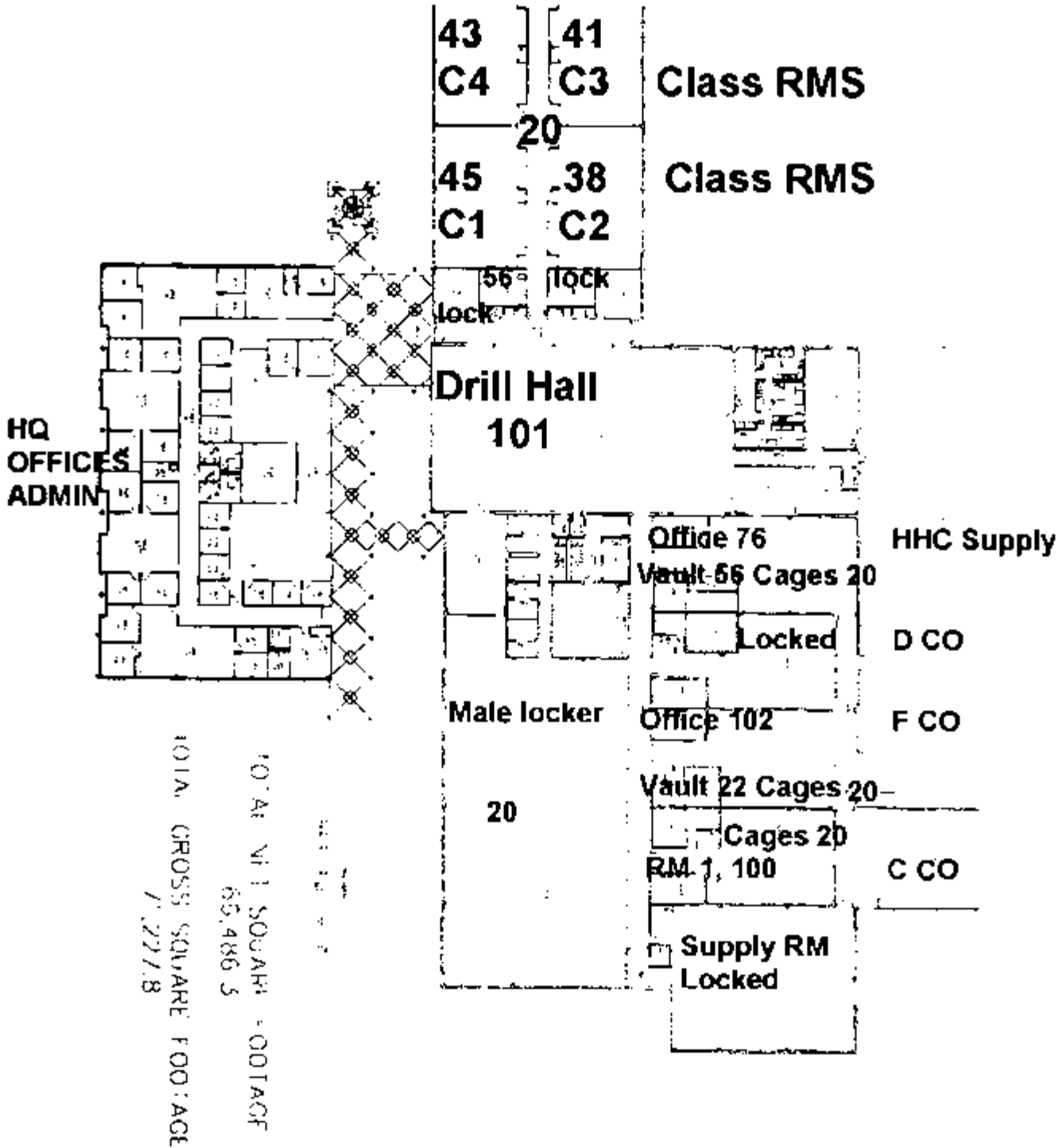
b. Ensure that during follow-up industrial hygiene surveys, full cooperation and access is provided IH personnel to assist in resolving employee concerns and providing your activity with comprehensive information for compliance with federal regulations. Numerous written and verbal attempts were made to obtain information critical to the survey, without success. (RAC 2)

APPENDIX A

Building Diagram & Summary of Illumination Measurements & NGB Design Guide Lighting Standards

Building Diagram & Summary of Illumination Measurements (HQ, OFFICES ADMIN)





Building Diagram & Summary of Illumination Measurements ^{Footcandles (FCS)}

DATE ISSUED		ADJUTANT GENERAL'S DEPARTMENT		
BY		OFFICE OF FACILITIES AND ENGINEERING		
CAMP MAHRY P.O. BOX 5218		AUSTIN, TEXAS 78761-5218		
(512) 465-5071		FAX (512) 465-5141		
SCALE	1/8" = 1'	SHEET NO.		
DATE	1/6/81	DRAWN BY		
CHECKED BY	A. JENSEN	APPROVED BY		
5:00 PM		6:00 PM		

Table 8
DG 415-2 Lighting Standards

DG 415-2
01 MARCH 2005

Table 8. Electrical Requirements

	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
Office Areas				
1	General Supervisor	70 FC, FL	1 duplex per wall	1
2	Supervisor	70 FC, FL	1 duplex per wall	1
3	Production Controller	70 FC, FL	1 duplex per wall	1
4	Inspection and Library	70 FC, FL	1 duplex per 10 LF of wall	1
5	Automation Clerk	70 FC, FL	1 duplex per 10 LF of wall	1
6	Common IT Space	70 FC, FL	1 duplex per 10 LF of wall	2
7	IT Support Activities	70 FC, FL	1 duplex per 10 LF of wall	2
8	Classroom	70 FC, FL	1 duplex per 10 LF of wall	
Personnel Areas				
1	Toilet/Shower	40 FC, FL	1 duplex GFCI per 2 sinks	
2	Locker Room	40 FC, FL	1 duplex GFCI	
3	Break Area	30 FC, FL	1 duplex per 10 LF of wall	
4	Physical Fitness Area	50 FC, FL	1 duplex per 12 LF of wall	2
Work Areas				
1	Tool Room	50 FC, FL	1 duplex per 20 LF of wall	
2	Supply Room	30 FC, FL	1 duplex per 20 LF of wall	
3	Battery Room	30 FC, FL	explosion proof	4
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
5	Instrument Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
6	Small Arms Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
7	Small Arms Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
8	Vault (Small Arms)	20 FC, FL	1 duplex	
9	Vault (CBT Vehicle Arms)	20 FC, FL	1 duplex	
10	Injector Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
11	Fuel and Ignition Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
12	Bill Storage/Issue	20 FC, FL	1 duplex per 20 LF of wall	
13	Machine Shop	50 FC, FL	1 duplex per 10 LF of wall	2
14	Carpenter Shop	50 FC, FL	1 duplex per 10 LF of wall	2
15	Lumber Storage Shed	10 FC, FL	none	

Table B
DC 415-2 Lighting Standards

DC 415-2
01 MARCH 2005

Table A. Electrical Requirements

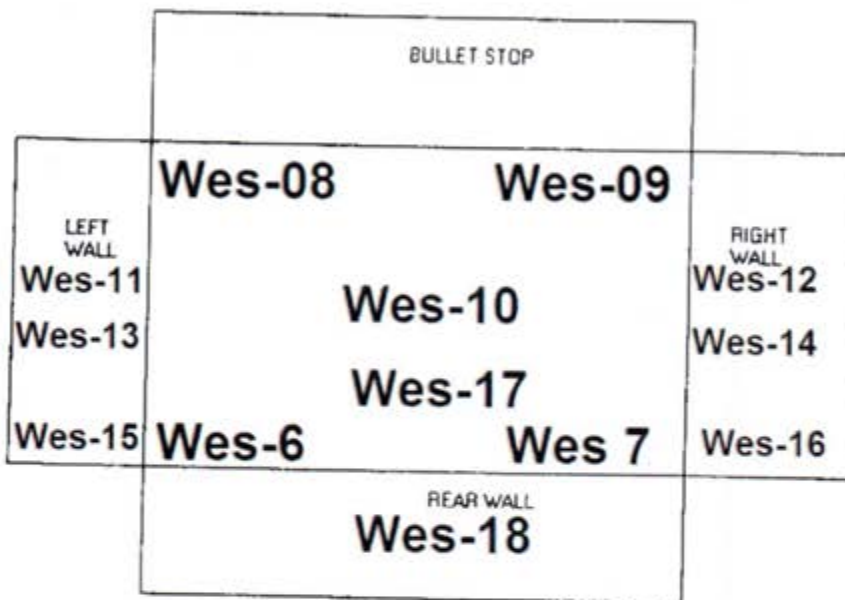
	FUNCTIONAL AREA	LIGHTING	OUTLETS	NOTES
Office Areas				
1	General Supervisor	70 FC, FL	1 duplex per wall	1
2	Supervisor	70 FC, FL	1 duplex per wall	1
3	Production Controller	70 FC, FL	1 duplex per wall	1
4	Inspection and Library	70 FC, FL	1 duplex per 10 LF of wall	1
5	Automation Class	70 FC, FL	1 duplex per 10 LF of wall	1
6	Common IT Space	70 FC, FL	1 duplex per 10 LF of wall	2
7	IT Support Activities	70 FC, FL	1 duplex per 10 LF of wall	2
8	Classroom	70 FC, FL	1 duplex per 10 LF of wall	
Personnel Areas				
1	Toilet/Shower	40 FC, FL	1 duplex GFCI per 2 sinks	
2	Locker Room	40 FC, FL	1 duplex GFCI	
3	Break Area	30 FC, FL	1 duplex per 10 LF of wall	
4	Physical Fitness Area	50 FC, FL	1 duplex per 12 LF of wall	2
Work Areas				
1	Tool Room	50 FC, FL	1 duplex per 20 LF of wall	
2	Supply Room	30 FC, FL	1 duplex per 20 LF of wall	
3	Battery Room	30 FC, FL	explosion proof	1
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
5	Insurgent Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
6	Small Arms Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
7	Small Arms Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
8	Vault (Small Arms)	20 FC, FL	1 duplex	
9	Vault (CBT Vehicle Arms)	20 FC, FL	1 duplex	
10	Injector Test Room	70 FC, FL	1 duplex per 2 LF of workbench	2
11	Fuel and Ignition Repair Shop	70 FC, FL	1 duplex per 2 LF of workbench	2
12	BN Storage/Issue	20 FC, FL	1 duplex per 20 LF of wall	
13	Machine Shop	50 FC, FL	1 duplex per 10 LF of wall	2
14	Carpenter Shop	50 FC, FL	1 duplex per 10 LF of wall	2
15	Lumber Storage Shed	10 FC, FL	none	

APPENDIX B

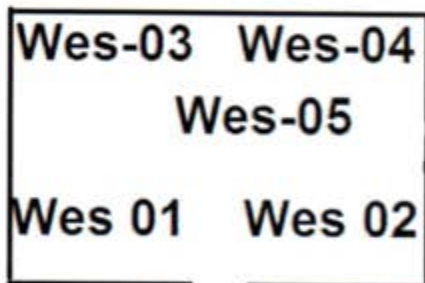
IFR Sample Placement Diagram, Chain of Custody Forms, Lab Sample Results & Sample Photographs

Weslaco Armory

INDOOR FIRING RANGE SAMPLE PLACEMENT DIAGRAM



Drill Hall





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 21, 2010

Non-Responsive

Non-Responsive

RE:

Dear **Non-Responsive**

Order No: 1012C49

Analytical Environmental Services, Inc. received 20 samples on December 15, 2010 9:45 am for the analyses presented in following report.

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

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

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

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

Non-Responsive

Analytical Environmental Services, Inc

Date: 21-Dec-10

Lab Order: 1012C49

Client: Non-Responsive Environmental Associates, Inc.

Project:

LEAD ON WIPES (N9100/7082)

Matrix: Wipe

N7082

Date Received: 12/15/2010 9:45:00 AM

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1012C49-001A	WES-01	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-002A	WES-02	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-003A	WES-03	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-004A	WES-04	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-005A	WES-05	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-006A	WES-00 BLANK	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-007A	WES-06	65	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-008A	WES-07	152	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-009A	WES-08	41	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-010A	WES-09	48	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-011A	WES-10	242	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-012A	WES-11	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-013A	WES-12	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-014A	WES-13	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-015A	WES-14	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-016A	WES-15	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-017A	WES-16	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-018A	WES-17	111	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-019A	WES-18	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
1012C49-020A	BLANK	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY

Qualifiers: BRL - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

Results are blank corrected where applicable



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
2784 Presidential Parkway, Atlanta, GA 30340-3710
TEL: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

1012044

Date: 12/17/10 Page 1 of 2

Client: 1108 East Dolphin Drive
Oak Island, NC 28465

Project: [Redacted]

[Redacted]

Sample ID

Date: 12/17/10 Time: 11:30

Substrate: [Redacted]

ANALYSIS REQUESTED

LEAD

Visit our website
www.aesatlanta.com
to check on the status of
your results, place home
orders, etc.

REMARKS

Sample ID	Date	Time	Substrate	Analysis Requested	Remarks
1108-01	12/17/10	11:30	[Redacted]	[Redacted]	[Redacted]
1108-02					
1108-03					
1108-04					
1108-05					
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1108-100					

1108-00 BLANK

DATE TIME: 12/17/10 11:30

PROJECT NAME: [Redacted]

RECEIPT

[Redacted]

PROJECT A

SEND REMARK TO

INVOICE TO

510 Plaza Dr., Suite 100
GA 30349

GA 30349

[Redacted]

ANALYST: [Redacted]
LABORATORY: [Redacted]
EQUIPMENT: [Redacted]
METHOD: [Redacted]
REMARKS: [Redacted]

Please Fax or Email Results ASAP

ANALYTICAL ENVIRONMENTAL SERVICES INC.
 2005 Presidential Parkway Atlanta GA 30326-3706
 TEL: (770) 457-8177 / 1-800-1-FREE (800) 971-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

DATE: 2/19/10 PAGE 1 OF 2

ANALYSIS REQUESTED

LEAD

RESERVATION (See Notes)

REMARKS

DATE/TIME

PROJECT NAME

PROJECT LOCATION

CLIENT ADDRESS

SEND REPORT TO

INVOICE TO

510 Plaza Dr., Su

GA 30349

DATE/TIME

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510 Plaza Dr., Su

GA 30349

DATE/TIME

PROJECT NAME

PROJECT LOCATION

CLIENT ADDRESS

SEND REPORT TO

INVOICE

Analytical Environmental Services, Inc.

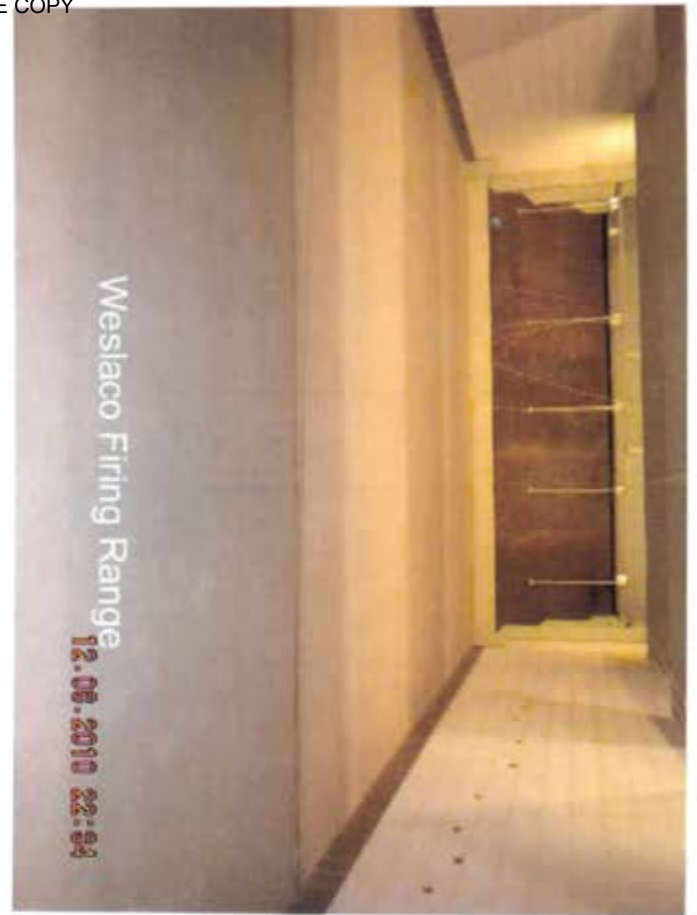
Sample/Cooler Receipt Checklist

Client GIA ArmyWork Order Number 1012C49**Non-Responsive**Checklist completed by
Sign [Redacted]Date 12-15-10Carrier name: FedEx ☒ UPS ☐ Courier ☐ Client ☐ US Mail ☐ Other ☐Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒Container/Temp Blank temperature in compliance? ^{22.2-15-10} (4°C±2)* Yes ☒ No ☐Cooler #1 Ambient Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐Chain of custody present? Yes ☒ No ☐Chain of custody signed when relinquished and received? Yes ☒ No ☐Chain of custody agrees with sample labels? Yes ☒ No ☐Samples in proper container/bottle? Yes ☒ No ☐Sample containers intact? Yes ☒ No ☐Sufficient sample volume for indicated test? Yes ☒ No ☐All samples received within holding time? Yes ☒ No ☐Was TAT marked on the COC? Yes ☒ No ☐Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒Adjusted? ☐ Checked by ☐Sample Condition: Good ☒ Other(Explain) ☐(For diffusive samples or AIHA lead) Is a known blank included? Yes ☒ No ☐

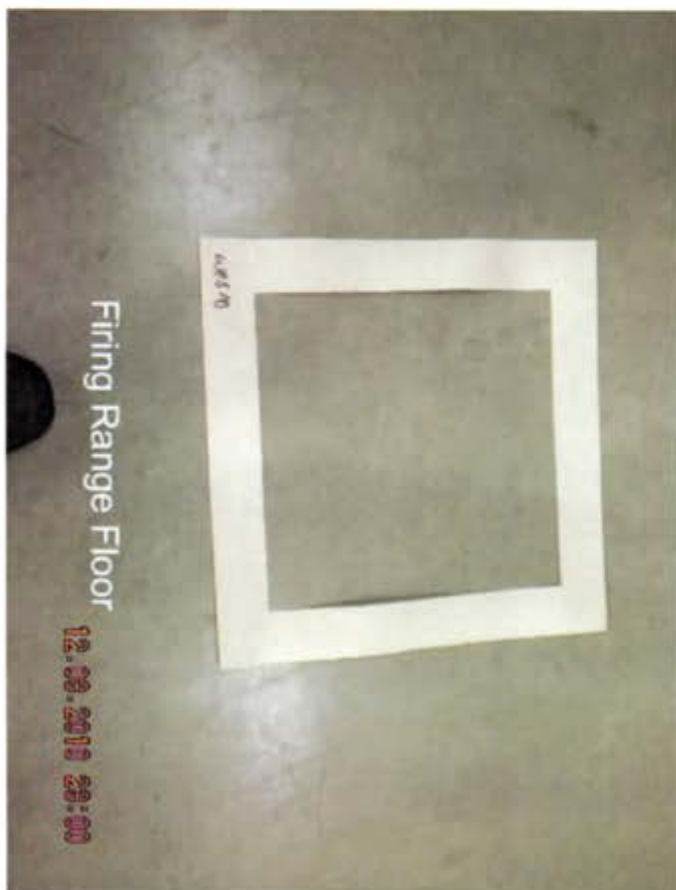
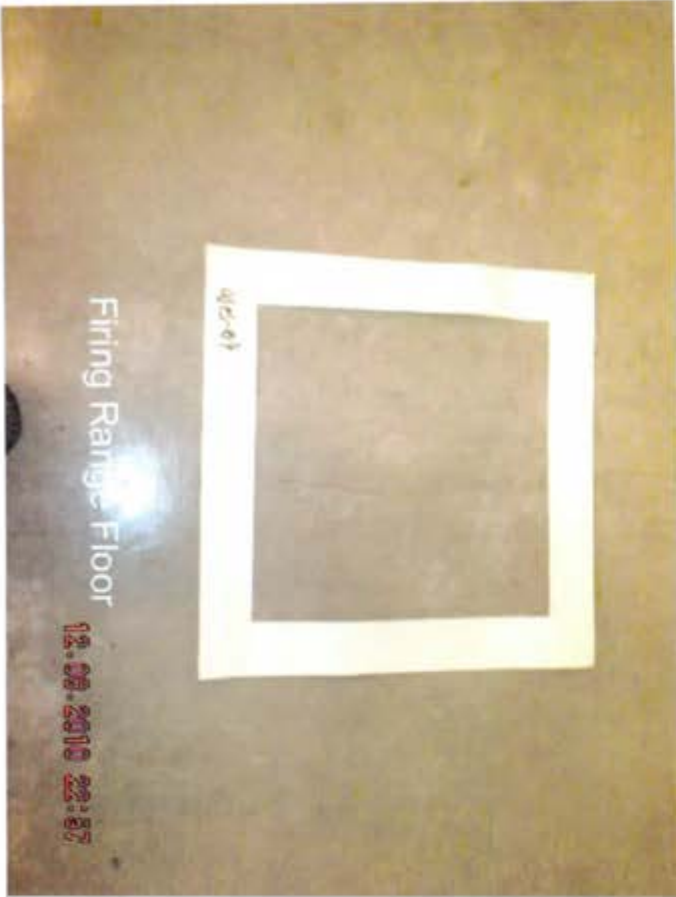
See Case Narrative for resolution of the Non-Conformance.

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

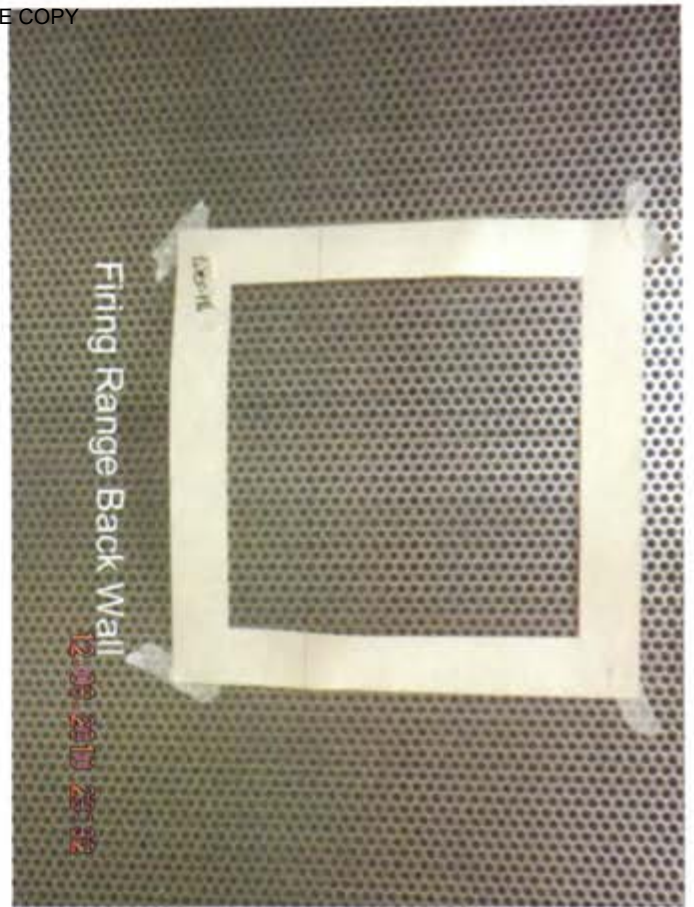
\\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler Receipt Checklist



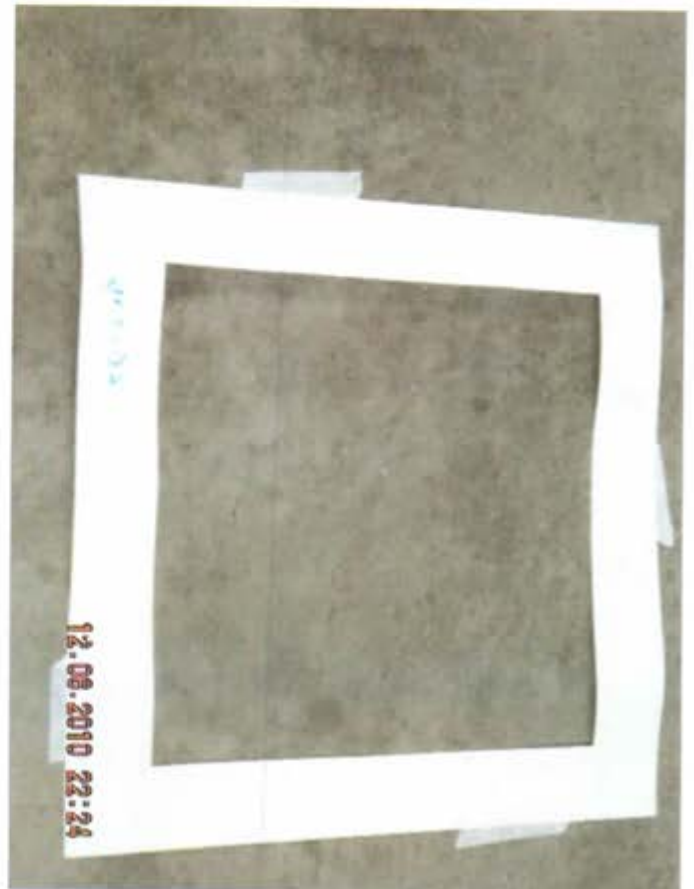












APPENDIX C

Facility Information Form, Health and Comfort Questionnaires, Health Hazard Information Module, Photographs & References

BEST AVAILABLE COPY
Facility Information Form

State: Texas
 Facility: 3-131 IN
 Facility Address: 1100 Vo Tech Dr, Weslaco, TX 78596

Date Prepared Non-Responsive
 Supervisor: [Redacted]

Phone#: Non-Responsive Fax #: N/A

Work Schedule (Days of the Week, Time of Open and Close)

General Information	
Number of Maintenance Bays:	1
Number of Exhaust Extensions:	0
Total Number of Personnel:	20
Number of Maintenance Personnel:	0
Number of Administrative Personnel:	20
Approximate area of facility (ft ²)	5000ft ²
Approximate Date/ Construction	1996

Firing Range inactive

Operations		
	Yes (if Yes, How Many Hours per Day on Average)	No
Abrasive Blasting (List Type)		No
Aerosol Can Painting		No
Air Compressors (How many?)		No
Armament		No
Aviation Life Support Equipment		No
Avionics		No
Battery Shop or Storage?		No
Brake/Clutch Repair and/or Replacement		No
Calibration of Equipment		No
Canvas Repair		No
Carpentry Shop		No
Grinding, buffing, polishing, sanding		No
Hazardous Materials/POL Handling		No
Electronics Repair		No
Pneumatic Tool Operation		No
Respirators use/purpose		No
Solvent Tank Use (How Many)		No
Spray Paint Booth		No
Sheet Metal Working		No
Small Arms Repair		No
Soldering		No
Supply/Warehouse	8	
Testing and Tuning of Engines		No
Welding (List Types)		No
Other Noise sources		No

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

ARLOC 48000

INSTALLATION

BLDG/ 5 RMNO.

Weslaco Armory, 1100 Vo-Tech Drive, Weslaco, Texas 78596

LOCATION/CODE AA

OPERATION/CODE ADO
Computer/Admin/Office

SURVEY DATE: 12/07/10, Evaluator:

Non-Responsive

WACOM/CODE

National Guard Bureau/NG

SUBMACOM/CODE

ARNG

Non-Responsive

Non-Responsive

UNIT/ORGANIZATION

Weslaco Armory

RAC

4

FREQUENCY (hrs/day)

HRS/DAY

1-8 hours/per day

NO. CIV(S)

0

NO. MIL

20

NO. CONTRACTORS

0

NO. LOC(S)0

NO. OTHER

0

SECTION 2 FACILITY DATA

LAB HOODS

0

VAPOR DEGREASERS

0

SPRAY BOOTHS

0

MAINTENANCE BAYS

4WORKING BAYS

OPEN SURFACE TANKS

0

VENTILATION UNITS

SECTION 3 SURVEY DATA

CONTROLS PRESENT

EVALUATION

UNIT CODE

CONTROLS REQUIRED

STATUS

Video Display Terminal

Admin & Techs use
computers

Lighting

50-75

FCS

50-75

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

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

EYES/FACE	R/U	HEARING	R/U	BODY	R/U	HEAD/FIT	R/U
CHEMICAL SPLASH	/	(CANAL CAPS	x/x	JAPRONS	/	(COLD WEATHER BOOTS/HATS	

BEST AVAILABLE COPY

FULL FACE SHIELD	/	EARPLUGS	X/x	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	X/x
SAFETY/IMPACT	/	MUFFS	/	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	DUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NCN-CONDUCTIVE SHOES	/
	/	MFF/EARPLUG W/TIME LIMIT	X/x	SAFETY BELT/HARNES	/		/

SECTION 4 HAZARD INVENTORY DATA

[illegible]

SECTIONS: PERSONNEL DATA

[illegible]

SECTIONS: COMMENTS

1. Computers are used in the shop and admin office.

ARLOC 48000		INSTALLATION Weslaco Armory, 1100 Vo-Tech Drive, Weslaco Texas 78596		BLDG/5 RMNO.	
LOCATION/CODE AA			OPERATION/CODE Indoor Firing Range/IFR		
SURVEY DATE: 12/08/10, Evaluator			Non-Responsive		
WACOM/CODE National Guard Bureau/NG		SUBMACOM/CODE ARNG		Non-Responsive	
Non-Responsive		UNIT/ORGANIZATION Armory		RAC 2 FREQUENCY (hrs/day) HRS/DAY Inactive	
NO. CIV(S) 0	NO. MIL 20	NO. CONTRACTORS 0	NO. LOC(S)0	NO. OTHER 0	
SECTION 2 FACILITY DATA					
LAB HOODS 0		VAPOR DEGREASERS 0		SPRAY BOOTHS 0	
MAINTENANCE BAYS		OPEN SURFACE TANKS 0		VENTILATION UNITS 1	
SECTION 3 SURVEY DATA					
CONTROLS PRESENT		EVALUATION		UNIT CODE	
Exhaust Ventilation		Lead contamination		Decontamination	
PERSONAL PROTECTIVE EQUIPMENT (R= REQUIRED; U = UTILIZED)					
GLOVES	R/U	RESPIRATOR	NIOSH TC NO.	MANUFACTURER	R/U
ACID	/U	AIR LINE			/
COLD SURFACES	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL		1/2 FACE AIR PURIFYING			/no
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	R/U	(CANAL CAPS)	/	APRON R/U	/	(COLD WEATHER BOOTS/HATS)	

FULL FACE SHIELD	X/X	EARPLUGS	X	COLD WEATHER CLOTHING	/	HARD HATS	/
CHEMICAL/SAFETY	/	HELMETS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SAFETY/IMPACT	/	MUFFS	/X	FULL BODY SUIT	/	SAFETY/CONDUCTIVE SHOES	/
WELDING HELMET	/	MUFF/EARPLUG COMBO	/	HEAT REFLECTIVE VEST/SUIT	/	SAFETY/NON-CONDUCTIVE SHOES	/
		MUFF/EARPLUG W/TIME LIMIT	/	SAFETY BELT/HARNES	/		/

SECTION 4 HAZARD INVENTORY DATA			
CAS CODE	HAZARD DESCRIPTION	PAC	EPC
		3	A
7664-93-9	Sulfuric Acid	3	A
1309-60-0	Lead oxide	3	A
PONOLSECO	Noise Continuous	2	A
POLIFTING	Heavy Lifting	2	A
POEYEHAZARD	Eye Hazard	3	A
POFOOTHAZARD	Foot Hazard	2	A
7440-31-3	Tin	3	A
1439-92-1	Lead	3	A

SECTION 5 PERSONNEL DATA					
LAST NAME	FIRST NAME	MI	SEX	SSN	CATEGORY
Names Attached				Not provided	

SECTION 6 COMMENTS	

1. Firing range inactive.

UNIT	Duty Position
HQ 3-141 IN	OIC
	NCOIC, OPNS SGT
	S1, SR PERS NCO
	S1, SIDPERS Clerk
	S1, Admin Asst
	S4, BN Supply Sgt
	NET Fielding/Equippt
	Retention NCO
HHC(-) 3-141 IN	Readiness NCO
	Unit XO
	Training NCO
	Admin Asst
	Supply Sgt
A/3-141IN	Readiness NCO
	Unit OIC
	Unit NCOIC
	Supply Sgt
B(-)/3-141IN	Readiness NCO
	Admin Asst
	Supply Sgt
C/3-141IN	Readiness NCO
	Unit XO
	Admin Asst
	Supply Sgt
D/3-141 IN	Readiness NCO
	Supply Sgt
	Unit AO
F Co/ 536BSB	Readiness NCO
	Supply Sgt
	Unit AO
Recruiters	Recruiter
	Recruiter
	Admin Asst
	Recruiter AO
FRG	
FMS #25	
ID Section	NCOIC

Non-Responsive

Non-Responsive

OCCUPANT HEALTH AND COMFORT QUESTIONNAIRE

Indoor Air Quality Survey (NO NAMES)

Date:

1. Location of Facility

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

3. Gender: Male Female
Age: Under 25 25-34 35-44 45-54 55 and over

4. Do you:

Smoke?

Have hay fever/pollen allergies?

Have skin allergies/dermatitis?

Have a cold/flu?

Have sinus problems?

Have other allergies?

Wear contact lenses?

Operate video display terminals?

Take medication for asthma, allergies, sinus, lung or immune problems?

Yes	No
Yes	No
Yes	No
Yes	No
Yes	No
Yes	No
Yes	No
Yes	No
Yes	No

5. Do any of your work activities produce dust or odor? Yes No

Describe:

6. Office characteristics:

Number of persons sharing same room/work area Number of windows in room/work area.....

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

Poor		Average		Excellent
1	2	3	4	5

Please rate room temperature:

Poor		Average		Excellent
1	2	3	4	5

7. How many years or months have you worked:

In this room/area? ____ In this building? ____

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

Have you seen a doctor for any or all of these symptoms? Yes No

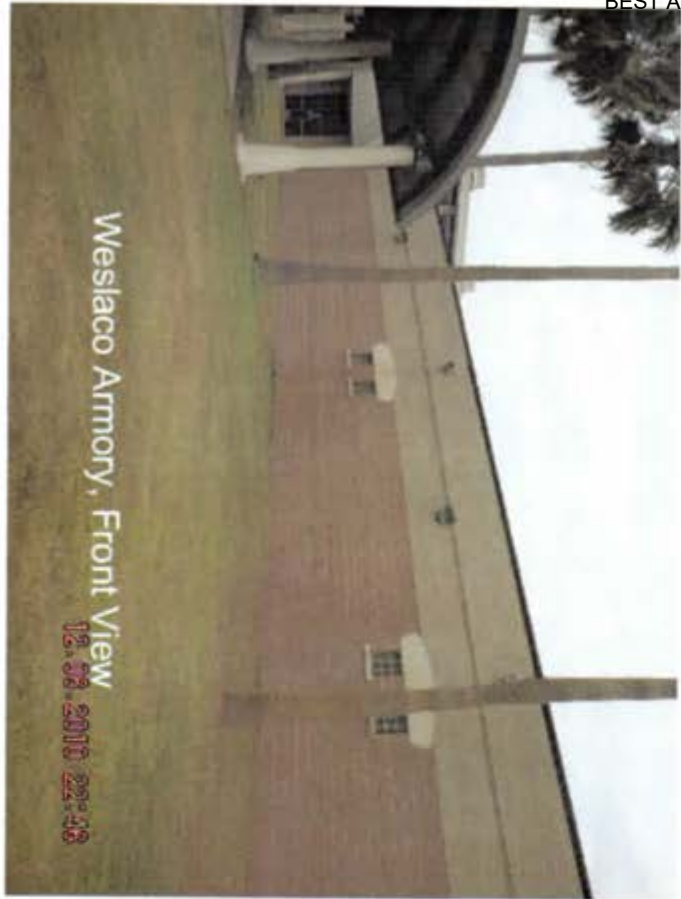
If yes, did your doctor relate this to your work, and if so, what were the diagnosis and recommended treatment?
When do symptoms disappear?

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



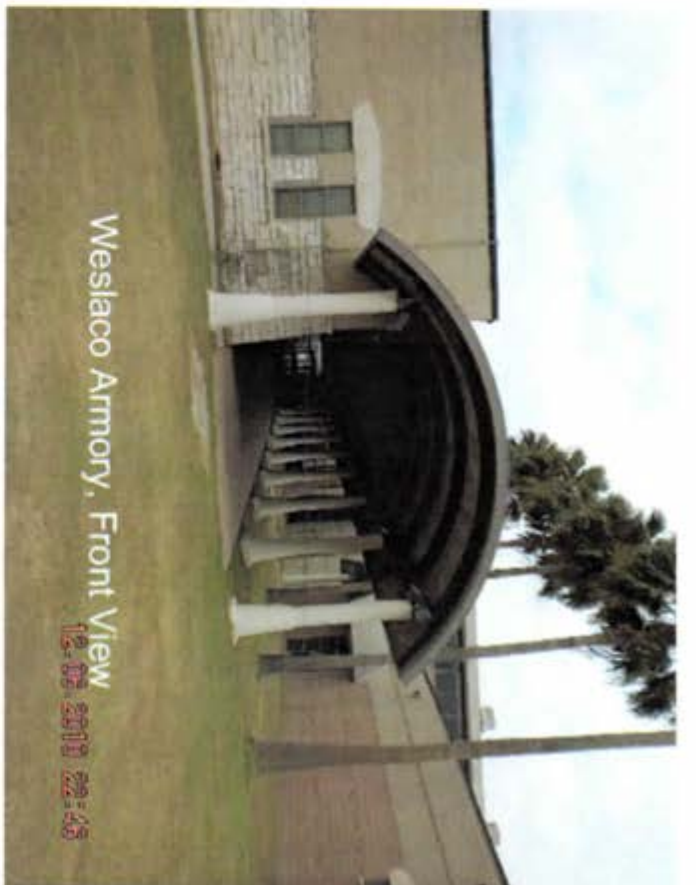
Weslaco Armory, Front View

12-08-2010 22:43



Weslaco Armory, Front View

12-08-2010 22:43



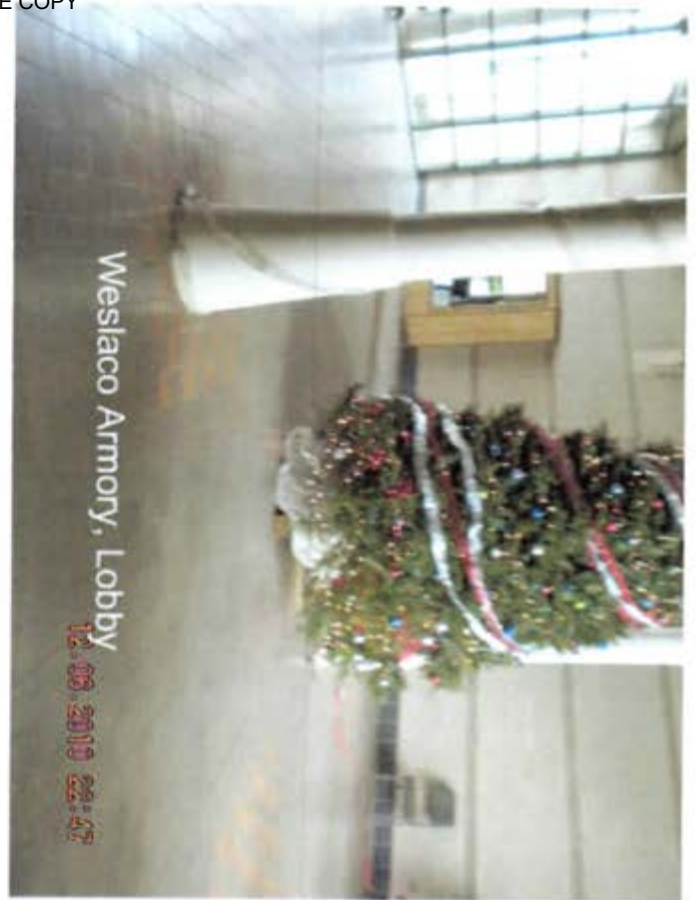
Weslaco Armory, Front View

12-08-2010 22:45



Weslaco Armory

12-08-2010 22:48







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REFERENCES

- a. Department of Defense Instruction 6035.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 22 July 2005.
- c. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, October 1988.
- d. AR 385-10, The Army Safety Program, 29 February 2000.
- e. National Guard Pam 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges, 3 November 2006.
- f. NGR 385-15, Policy and Responsibilities, Evaluation and Operation of Army National Guard Indoor Firing Ranges, 3 November 2006.
- g. DA PAM 40-503, The Army Industrial Hygiene Program, 30 October 2000.
- h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio.
- j. Title 29, Code of Federal Regulations (CFR), 2001 rev., part 1910, Occupational Safety and Health Standards.

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

December 17, 2003

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Westlaco Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Amarillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report dated 20 October 2003, Industrial Hygiene Survey, LAE Consulting, Severn, MD. 21144

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Amarillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

b. The surveys were conducted by Non-Responsive of LEA Consulting, 1218 Scattered Pines Ct., Severn, MD.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Wellington Armory and Weslaco Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- f. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

Non-Responsive

NGB-AVN-SI

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.
State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

LAE Consulting

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

16 October 2003

MEMORANDUM FOR: Battalion Headquarters 3/141st Infantry, ATTN: CPT Edward Delatejera, 1100 VoTech Drive, Weslaco, Texas 78596-9022

SUBJECT: Industrial Hygiene Survey of Weslaco National Guard Armory, Weslaco, Texas

1. References.

- a. Title 29, Code of Federal Regulations (CFR) Part 1910, Occupational Safety and Health Administration (OSHA).
- b. AR 40-5, Preventive Medicine, 15 October 1990.
- c. AR 385-10, 23 May 1988, Army Safety Program.
- d. TB MED 503, The Army Industrial Hygiene Program.
- e. Title 29 CFR, Part 1910.1200, The Hazard Communication Standard.
- f. Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. Industrial Ventilation, 22nd Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- i. National Institute for Occupational Safety and Health (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- j. Title 40, Code of Federal Regulations (CFR) Part 745, Lead, Identification of Dangerous Levels of Lead: Final rule.

SUBJECT: Industrial Hygiene Survey of Weslaco National Guard Armory, Weslaco, Texas

2. Purpose. The purpose of this survey was to conduct a baseline Industrial Hygiene survey of the Weslaco NG Armory. The facility was visually examined and the Building Custodian was interviewed for historical information related to the building and the operations performed. A diagram of the building can be found in Enclosure 1. Laboratory results of Lead wipe samples at Enclosure 2. Photographs of the facility can be found in Enclosure 3. Health Hazard Inventories can be found in Enclosure 4.

3. 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 Weslaco National Guard Armory, Weslaco, Texas on 7 October 2003.

4. Facility Description. This facility currently houses HQ 3/141st Infantry. The Armory has twenty full time soldiers. The soldiers perform administrative duties Monday through Friday between 0700 and 1700 hours. The Armory is utilized for drills on the weekend. The facility houses administrative areas, Supply Room, and an Arms Room and a drill hall.

5. Findings.

a. Four supply rooms are located within the Armory. Charlie Company's supply room was surveyed. The supply room has seven metal cages that store Communications and Nuclear, Biological and Chemical equipment. Radioactive warning signs were posted in areas storing radioactive containing material. The flammable storage cabinet for this Company is located outside the rear of the supply room on the loading dock. The cabinet contained containers of liquid in unmarked and/or labeled containers. The liquid may be Cleaners, Lubricant, and protectant (CLP) used on and for weapons. Material Safety Data Sheets could not be located.

b. A water leak was seen in the hallway of the classroom area. The Armory is planning to install a new roof.

c. A survey was performed on the lighting within the Armory. Lighting was measured in foot-candles (FC). All areas measured were above the recommended 50 FC stated in reference h except: Battalion recruiter's office 29.9 FC;.

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

Page 2

SUBJECT: Industrial Hygiene Survey of Weslaco National Guard Armory, Weslaco, Texas

d. A deactivated Indoor Firing Range is located within the Armory. It is said that the range has never been fired in. The range is still intact. The five-lane range is divided into stations by dividers. Two exhaust ventilation units are located in the ceiling at the pit. The supply ventilation (4 Tubes) is located in the observation room behind the firing line. The room is very dirty and bird-nesting material is released when the exhaust is turned on. The observation room is separated from the range by a metal perforated wall. A weapon practice simulator and its associated equipment are stored in the range. The range was deactivated in 1996. Fifteen Lead wipe samples and one blank sample was taken (Table 1).

TABLE 1

Sample Number	Sample Location	Results
1	Bullet stop lane #3	34000 ug/ft ²
2	Right deflector on bullet stop	190 ug/ft ²
3	Left wall 6 feet up	41 ug/ft ²
4	Floor 4 feet in front of pit	290 ug/ft ²
5	4 feet up right wall	<12 ug/ft ²
6	Center behind weapons simulator	210 ug/ft ²
7	Folding table near simulator	41 ug/ft ²
8	Left wall 6 feet from lane 1	<12 ug/ft ²
9	Acoustic material of fire line2	<12 ug/ft ²
10	Firing side of observation room Lane 2-3	<12 ug/ft ²
11	Floor 2 feet outside range entrance	<12 ug/ft ²
12	Observation room wall	<12 ug/ft ²
13	C Co Supply room weapons issue counter	39 ug/ft ²
14	Drill hall floor	<12 ug/ft ²
15	Kitchen, table at serving area	<12 ug/ft ²
16	Blank	<12 ug/ft ²

LAR Consulting
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Telephone (410) 551-2717

Page 3

SUBJECT: Industrial Hygiene Survey of Weslaco National Guard Armory, Weslaco, Texas

6. Recommendations.

- a. Place CLP in the original container. If it must be transferred to another container, label the container with the name of the chemical. Produce a Chemical Inventory for the chemicals that are utilized by the Armory. Contact your supply channels to obtain Material Safety Data Sheets for the chemicals on your inventory. Place MSDSs in a location that accessible and known to all Armory personnel (i.e. a wall on the Drill Hall floor) Suggest all Armory personnel obtain education on Hazard Communication. Contact the Texas Occupational Safety and Health Office for assistant on training requirements.
- b. Recommend contacting a roofing company to inspect and/or repair areas of the roof that are leaking. If funds are available, consider a new roof for the Armory.
- c. Consider purchasing supplemental lighting such as desk lamps and a floor lamp. If monies are available, recommend upgrading the lighting fixtures in the areas below 50 FC to meet the required 50 FC recommended [IES/ANSI RP1-1993].
- d. Recommend that the Texas Safety and Occupational Health office review the Lead wipe sample results of this facility to determine if the range was properly decontaminated. If sample results are greater than or equal to 40 ug/ft² consider decontamination of the range.

7. Technical Assistance. For technical assistance, regarding information found in this

Non-Responsive

4. Lead Wipe Results

CF: Texas Army National Guard, Safety Occupational Health Office,

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

Page 4

BEST AVAILABLE COPY

Who Slaves Army

(410) 551-2717 (410) 551-7215 Fax

FIRE EMERGENCY EVACUATION PLAN

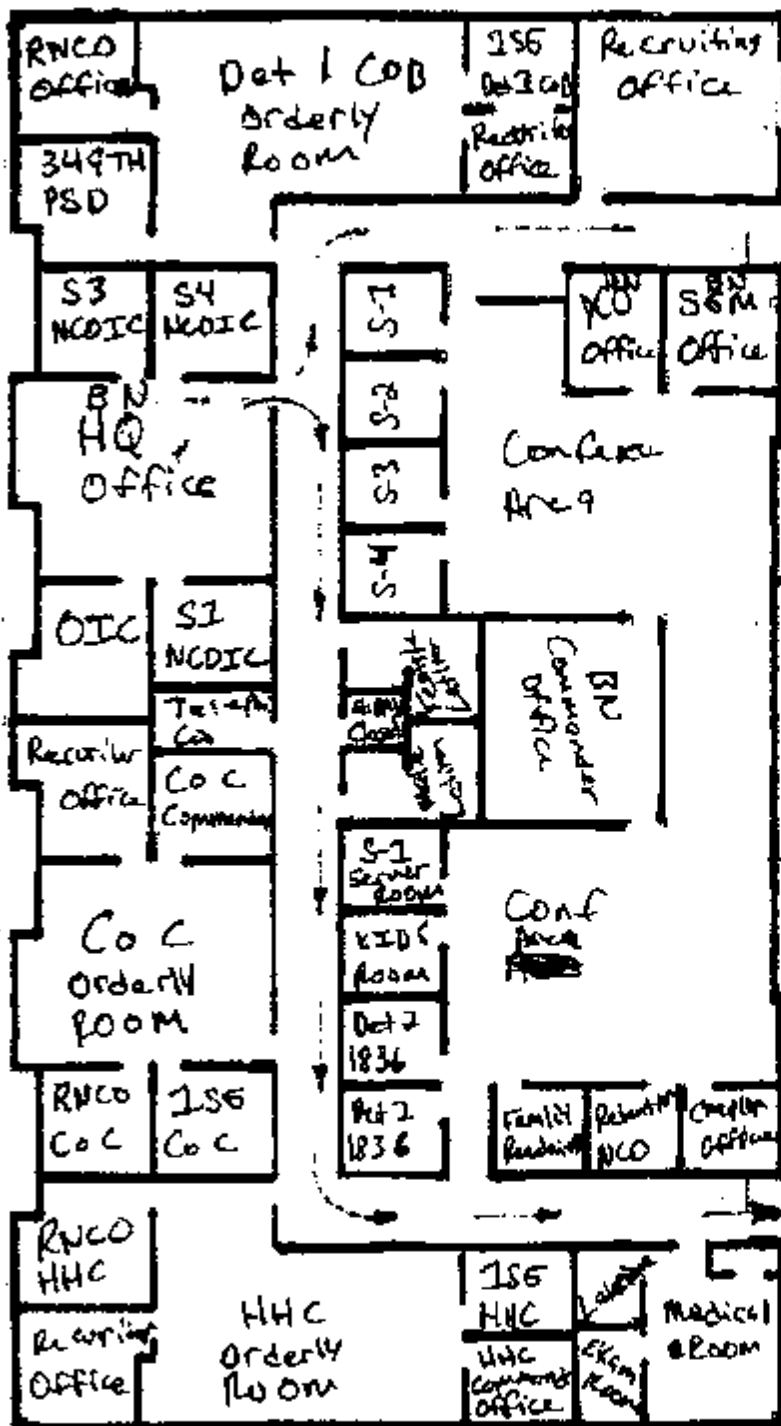
PARKING LOT IS DESIGNATED ASSEMBLY AREA

* RED ARROW IS PRIMARY ROUTE

* BLUE ARROW IS SECONDARY ROUTE

THE EXTINGUISHED POINTS

TRUE NORTH



CERTIFICATE OF ANALYSIS

Client: LAF Consulting
Address: 1218 Scattered Pine Court
Sewern, Maryland 21144

Job Name: National Guard Armory
Job Location: Weisaco, TX
Job Number: Not Provided
P.O. Number: Not Provided

Chain Of Custody: 114865
Date Analyzed: 10/16/2003
Person Submitting: [Redacted]
Report Date: 10-Oct-03

Attention: [Redacted]

Summary of Atomic Absorption Analysis for Lead

AMA Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (L)	Area Wiped (ft ²)	Reporting Limit	Final Result	Comments
0403033	1	Flame	Wipe	****	1,000	12.00 ug/ft ²	34000 ug/ft ²	
0403034	2	Flame	Wipe	****	1,000	12.00 ug/ft ²	190 ug/ft ²	
0403035	3	Flame	Wipe	****	1,000	12.00 ug/ft ²	41 ug/ft ²	
0403036	4	Flame	Wipe	****	1,000	12.00 ug/ft ²	290 ug/ft ²	
0403037	5	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403038	6	Flame	Wipe	****	1,000	12.00 ug/ft ²	210 ug/ft ²	
0403039	7	Flame	Wipe	****	1,000	12.00 ug/ft ²	41 ug/ft ²	
0403040	8	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403041	9	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403042	10	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403043	11	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403044	12	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403045	13	Flame	Wipe	****	1,000	12.00 ug/ft ²	39 ug/ft ²	
0403046	14	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403047	15	Flame	Wipe	****	1,000	12.00 ug/ft ²	12 ug/ft ²	
0403048	16	Flame	Wipe Blank	****	N/A	12.00 ug	12 ug	

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples.

CERTIFICATE OF ANALYSIS

Client: LAEC Consulting
Address: 1218 Scattered Pine Court
Sewern, Maryland 21144
Attention: [Redacted]

Job Name: National Guard Armory
Job Location: Westaco, TX
Job Number: Not Provided
P.O. Number: Not Provided
Chain of Custody: 114865
Date Analyzed: 10/16/2003
Person Submitting: [Redacted]
Report Date: 16-Oct-03

Summary of Atomic Absorption Analysis for Lead

AMA Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (L)	Area Wiped (ft ²)	Reporting Limit	Final Result	Comments
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Analysis Method for Flame: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7420; Water: SM-3111B
Analysis Method For Furnace: Air, Wipes, Paints, and Soil/Solids : EPA 600/R-93/200(M)-7421; Water: SM-3113B
N/A = Not Applicable mg/Kg = parts per million (ppm) by weight mg/L = parts per million (ppm)
%Pb = percent lead by weight ug = micrograms ug/L = parts per billion (ppb)
Note: All results have two significant digits. Any additional digits shown should not be considered when interpreting the result.

Analyst	Non-Responsive	Technical Manager	Non-Responsive
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This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples.



Up and down range views of
the deactivated indoor firing range





View of Hazardous Material storage cabinet



View of water leak in the classroom hallway ceiling



View of Lead wipe sample location #1



View of Lead wipe sample location #2



View of Lead wipe sample location #3



View of Lead wipe sample location #4



View of Lead wipe sample location #5



View of Lead wipe sample location #6



View of Lead wipe sample location #7



View of Lead wipe sample location #8



View of Lead wipe sample location #9



View of Lead wipe sample location #10



View of Lead wipe sample location #11



View of Lead wipe sample location #12



View of Lead wipe sample location #13



View of Lead wipe sample location #14



View of Lead wipe sample location #15

HEALTH HAZARD INFORMATION MODULE: INDUSTRIAL HYGIENE SURVEY

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

ARLOC	INSTALLATION Weslaco N6 Armory TEXAS WESLACO, TX		BLDG/RM NO. 1100 YO Tech DR WESLACO, TX 78596-900	
LOCATION/CODE AA	OPERATION/CODE A20			
SURVEY DATE 700003	EVALUATOR LAE Consulting		Non-Responsive	
MACOM/CODE	SUBMACOM/CODE			
Non-Responsive	UNIT/ORGANIZATION HQ 3/141 Int BN		RAC 4	8 hrs
	IL	NO. CONTRACTORS	NO. LOC(S)	NO. OTHER

SECTION 2: FACILITY DATA

LAB HOODS	VAPOR DEGREASERS	SPRAY BOOTHS
MAINTENANCE BAYS	OPEN SURFACE TANKS	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	/	ABRASIZE BLASTING HOOD			/
HOT SURFACES	/	DISPOSABLE			/
NBC AGENTS	/	FULL FACE AIR PURIFYING			/
OIL	/	1/2 FACE AIR PURIFYING			/
SOLVENTS	/	1/4 FACE AIR PURIFYING			/
SURGICAL GLOVES	/	SELF CONTAINED			/

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

■

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Q. 10

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR, ADJUTANT GENERAL TX ARNG, ATTN.: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program. 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLVs) for 2001, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio

j. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

b. **Non-Responsive** Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
- g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl

as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Wichita Falls Armory
3701 Armory Road
Wichita Falls, Texas

Prepared for:

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

By

Non-Responsive

June 24, 2004

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Wichita Falls Armory

Survey Date: 13 April 2004

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Wichita Falls Armory on 13 April 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
Armory Lead Wipe Samples	<10 to 61 microgram per square foot.	No action.
Asbestos Bulk Samples	Floor tile contained 3% chrysotile	Update the facility asbestos management plan.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 50 footcandles	No action.
HVAC/IAQ	No issues observed or documented.	No action.

Wichita Falls Armory

Survey Date: 13 April 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Wichita Falls Armory in Wichita Falls, Texas on 13 April 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Wichita Falls Armory in Wichita Falls, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 13 April 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses Det. 1 Company B and the 949 Spt. The building is a one-story structure and consists of an administrative office area, a kitchen, an orderly office, classrooms, a museum, a drill hall, and a supply room. No indoor firing range was found at this armory. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

Wichita Falls Armory

Survey Date: 13 April 2004

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Twelve wipe samples were collected from various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
BSP01	Top of refrigerator in kitchen.	<10.0
BSP02	Top of serving line between kitchen and drill hall	<10.0
BSP03	Supply diffuser in administrative office	22.0
BSP04	Return air grill in the administrator office	61.0
BSP05	Top of a cabinet in the administrative office	<10.0
BSP06	Drill hall floor by supply room	<10.0
BSP07	Drill hall floor diagonally opposite the floor sample by supply	<10.0
BSP08	Drill hall floor in center.	<10.0
BSP09	Top of the soda machine in the drill hall	19.0
BSP10	Top of a surface in the classroom	<10.0
BSP11	Top of a random surface in the armory	30.0
BSP12	Field Blank	<10.0

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

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
WF A01B	2x4 foot ceiling tile in drill hall and exercise room	None.
WF A02B	12x12 inch floor tile.	3% Chrysotile.
WF A03B	Baseboard	None.

The facility asbestos management plan should be updated to include the floor tiles. The laboratory report and chain of custody forms are attached in Appendices B and C.

Wichita Falls Armory

Survey Date: 13 April 2004

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 50 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	20 – 40
Orderly Room.	20 – 50
Supply Room.	10 – 20
Drill Hall.	25 – 35
Classroom.	10 – 20
Kitchen.	20 – 35

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

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of a forced air furnace unit. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

Update the facility asbestos management plan to include the tile mastic.

Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A

BEST AVAILABLE COPY

APPENDIX B

EMSL Analytical

3 Cooper St., Westmont, NJ 08108

Phone: (958) 858-4600 Fax: (958) 858-8551 Email: akauffman@emsl.com

EMSL

Attn:

Non-Responsive

Customer ID: TS60

Customer PO:

Received: 04/22/04 1:43 PM

Fax:

EMSL Order: 200404880

Project: Wichita Falls

EMSL Proj:

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

Client Sample Description		Lab ID	Analyzed	Area Sampled	Lead Concentration
WF-01	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/6/04	144 in ²	<10.0 µg/ft ²
WF-02		0002	5/6/04	144 in ²	<10.0 µg/ft ²
WF-03		0003	5/6/04	144 in ²	22.0 µg/ft ²
WF-04		0004	5/6/04	144 in ²	61.0 µg/ft ²
WF-05		0005	5/6/04	144 in ²	<10.0 µg/ft ²
WF-06		0006	5/6/04	144 in ²	<10.0 µg/ft ²
WF-07		0007	5/6/04	144 in ²	<10.0 µg/ft ²
WF-08		0008	5/6/04	144 in ²	<10.0 µg/ft ²
WF-09		0009	5/6/04	144 in ²	19.0 µg/ft ²
WF-10		0010	5/6/04	144 in ²	<10.0 µg/ft ²
WF-11		0011	5/6/04	144 in ²	30.0 µg/ft ²
WF-12		0012	5/6/04	144 in ²	<10.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AHA, unless specifically indicated otherwise in the comment section. The test results contained within this report meet the requirements of NELAP unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04863, AHA Environmental Lead Laboratory Approval Program: 100184

Printed: 4/23/04 4:03:58 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (856) 658-4000 Fax: (856) 658-4000 Email: esl@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 12:30 PM

Fax:

EMSL Order: 040407151

Project:

EMSL Proj:

Analysis Date: 4/30/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
WF-A01B 040407151-0001		Gray Fibrous Heterogeneous	Teased	80% Cellulose 20% Glass	20% Non-fibrous (other)	None Detected
WF-A02B 040407151-0002		Tan Non-Fibrous Heterogeneous	Dissolved		97% Non-fibrous (other)	3% Chrysotile
WF-A03B 040407151-0003		Brown Non-Fibrous Heterogeneous	Ashed		100% Non-fibrous (other)	None Detected

Non-Responsive

Due to magnification limitations inherent in PLM, asbestos fibers in concentrations below the resolution capability of PLM may not be detected. Samples reported as 0% or None Detected may require additional testing by TEM to confirm asbestos quantities. The above test report releases only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAP unless otherwise noted. Analysis performed by EMSL Westmont (NELAP #121048-0), NY ELAP 10072.

PLM 1

THIS IS THE LAST PAGE OF THE REPORT

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APPENDIX C

200404880

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O. #: _____
 Company Name: Tanner Sciences Inc. EMSL-Bill to: Same as mail to.
 Street: 3744 Lawrence Drive Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Phone Results to: (Name) Non-Responsive Telephone: _____
 Fax Results to: (Name) Non-Responsive Fax #: _____

MATRIX	METHOD	INSTRUMENT	RL (Reporting Limit)
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% +-
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter
	or NIOSH 7300 Mod.	ICP	3.0 ug/filter
Lead in Wipes* List Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest. <input type="checkbox"/> -non ASTM or SW846-6010B	Flame Atomic Absorption ICP	10 ug/wipe 3.0 ug/wipe
TCLP Lead **	SW846-1311/ 7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)
STLC Lead (California) *	CA Title 22 6261.125 / SW846-7420 or SW846-6010B	Flame Atomic Absorption ICP	0.4 mg/l (ppm) 0.1 mg/l (ppm)
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil
Lead Soil -			
Lead in Drinking Water (check state Certification Requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm)
Total Dust	NIOSH 0500-0600	Gravimetric Reduction	0.0001g

T/T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days
 *, **, ***, ****, +, ++, # Please Refer to Price Quote
 * If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume L Area, in ²	LAB #
WF-01	Wichita Falls	144	04880-1
WF-02			

@ Relinquished By: (Person)

Non-Responsive

Date: 4/15/04

Received at EMSL By:

Date:

Received at EMSL By:

Date: 4/20/04

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

② The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chip: Nov 2001 or STLC.doc



EMSL Analytical, Inc.
Revised 07/01/99

CHAIN OF CUSTODY

SENSITIVE

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Company Name: Tommy Sciences Inc

EMSL-Bill to:

Same as mail to

Street:

Street:

Box #:

Box #:

City/State:

City/State:

Zip:

Phone Results to:

Fax Results to:

Name:

Name:

Telephone #:

Fax #:

Project:

Purchase Order #:

Name/Number:

Non-Responsive

Non-Responsive

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

TEM AIR, 3 hours, 6 hour. Please call ahead to schedule. There is a premium charge for 3 hour int, please call 1-800-236-3673 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m Mon - Fri.), Please Refer to Price Quote

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other:	TEM AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	TEM WATER <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water
PLM - Bulk <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NY 198.1 <input type="checkbox"/> Other:	TEM BULK/misc <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM NOB (Gravimetric) NY 198.4	TEM MICROVAC / WIPE <input type="checkbox"/> ASTM D 5755-95 <small>quantitative method</small> XRD <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica OTHER <input type="checkbox"/>

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)
WF-A01B		

Client Sample # (s) WF-A01B - WF-A03B Total Samples #: 3

Refined/ashed: Non-Responsive Date: 4/19/04 Time: AM

Received: Non-Responsive Date: Time:

US Mail

1

APPENDIX D



Photo #1: Armory front entrance.

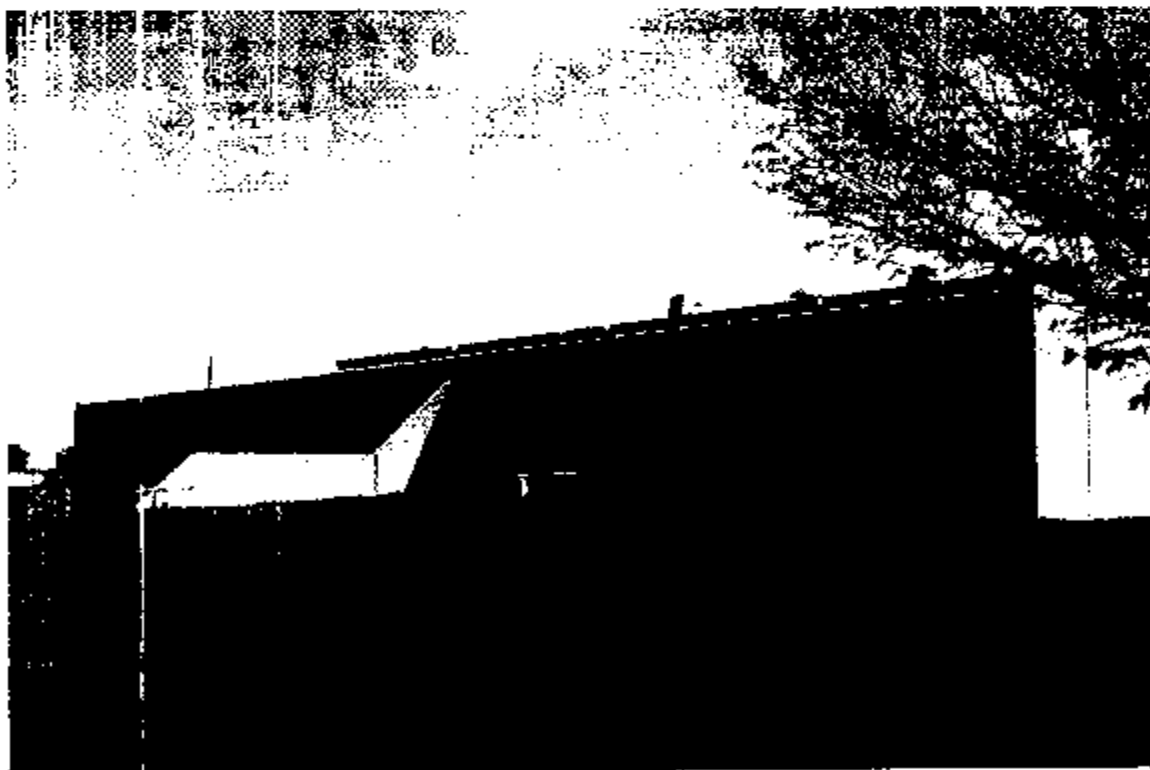


Photo #2: North side of the armory.



Photo #3: North east corner of the armory.

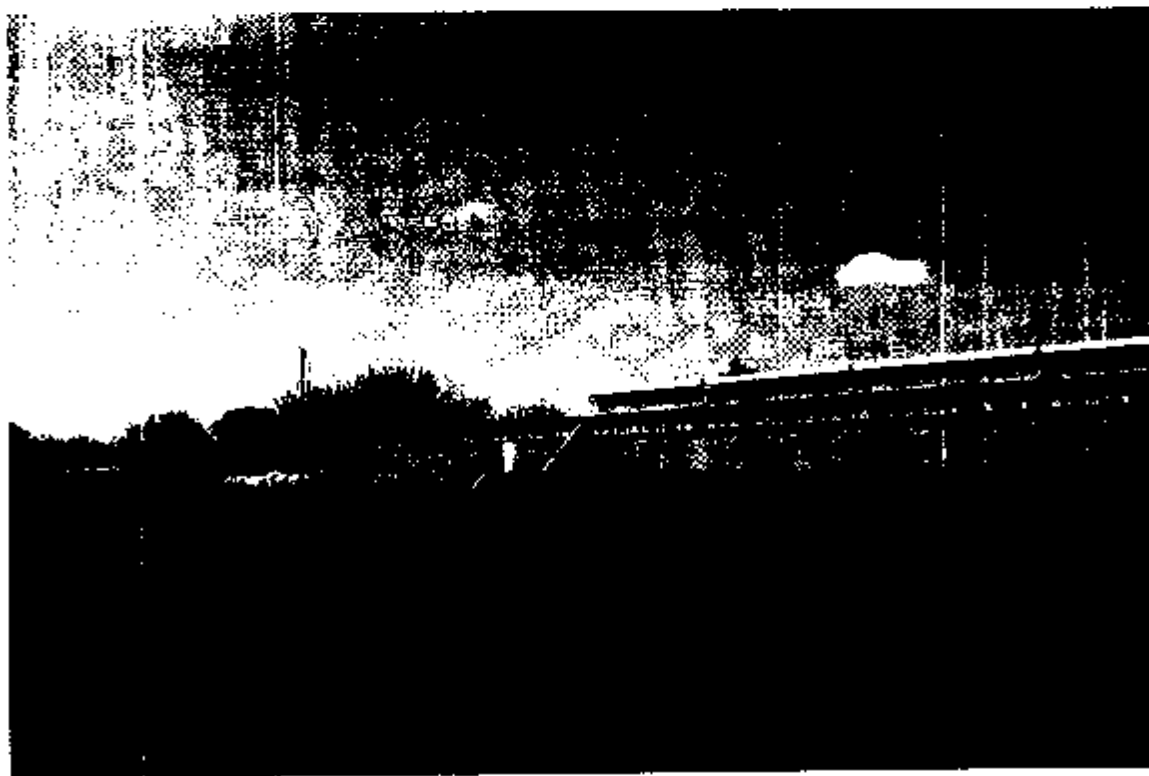


Photo #4: South side of the armory.

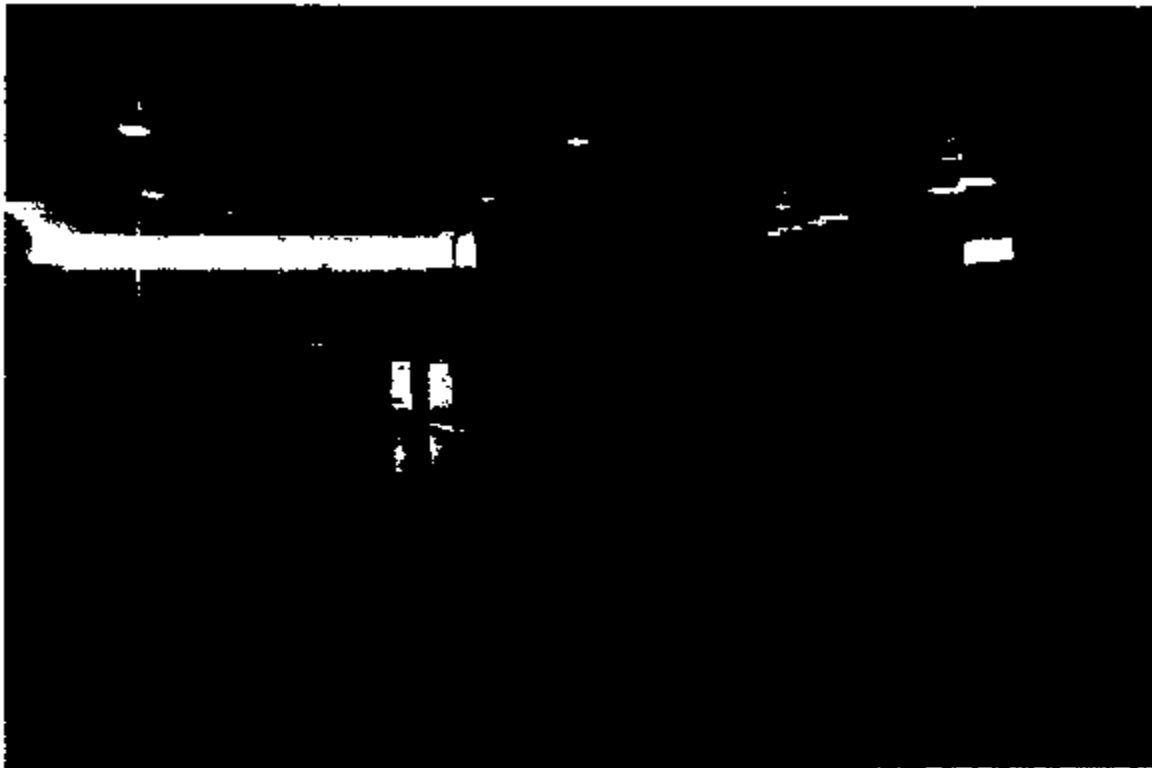


Photo #5: Drill hall facing west.

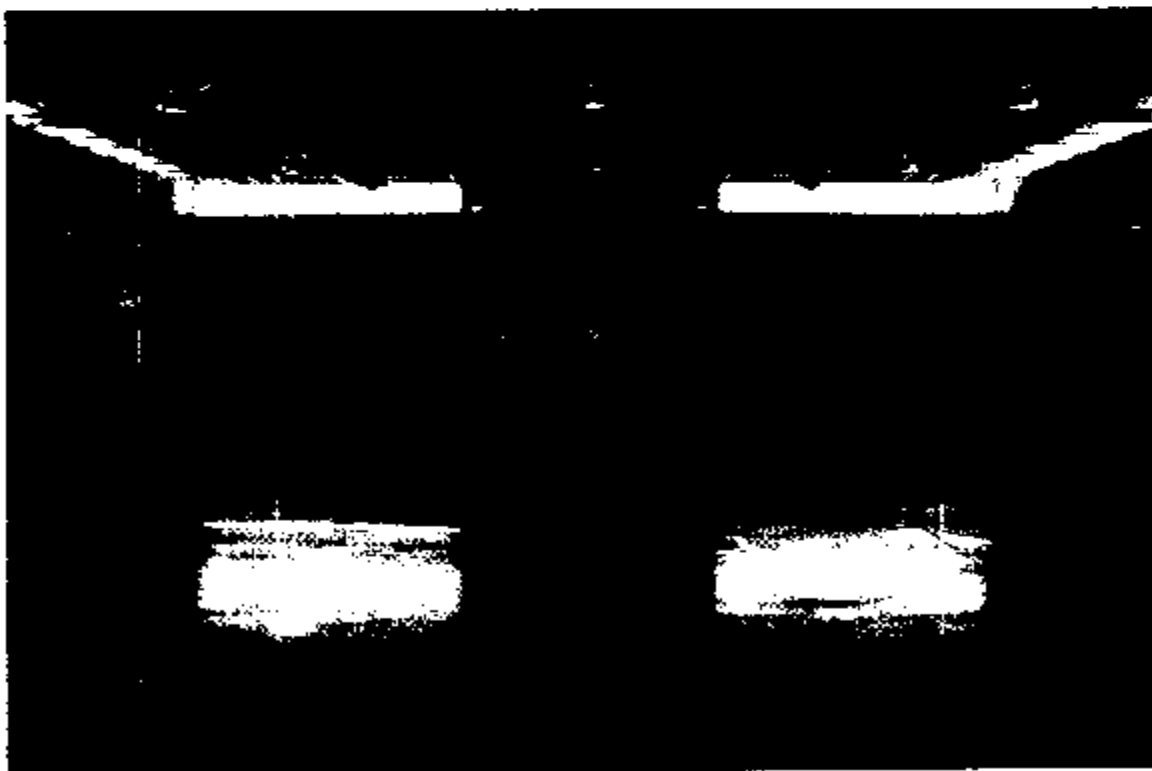
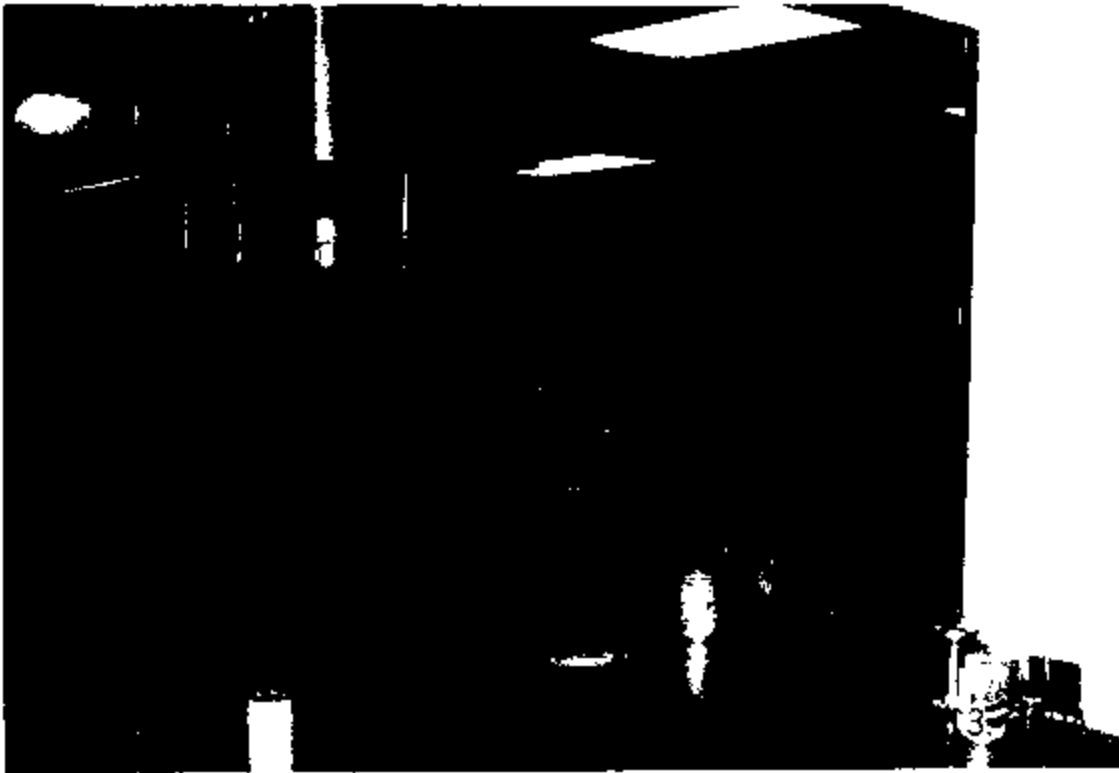


Photo #6: Drill hall facing east.



Photo#7: Armory's kitchen showing the stove.

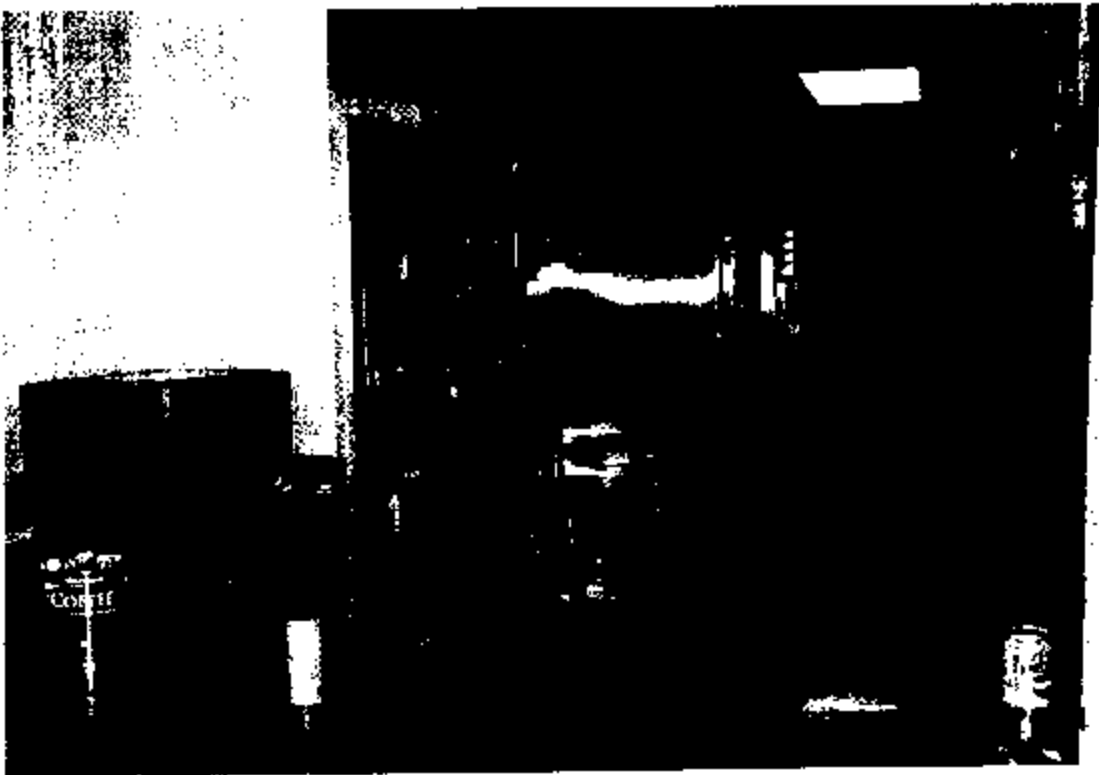


Photo #8: The Armory's kitchen



DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349

ARNG-CSG

March 23, 2015

MEMORANDUM Adjutant General TX ARNG, ATTN: **Non-Responsive** Facility
Supervisor, TX ARNG Wylie Armory, 700 Spring Creek Parkway, Wylie, TX 7508.

SUBJECT: Transmittal of Industrial Hygiene Survey Report of TXARNG Wylie
Armory, Wylie, Texas

1. References.

- a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- b. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 19 August 1998.
- c. Title 29, Code of Federal Regulations (CFR), 2009 rev., part 1910, Occupational Safety and Health Standards.
- d. Title 29 CFR, General Industry, revised 1996 rev. Part 1940
- e. Army Regulation (AR) 40-5, Medical Service, Preventive Medicine, 25 May 2007
- f. AR 385-10, the Army Safety Program, 23 August 2007.
- g. AR 11-34, 15 February 1990, the Army Respiratory Protection Program.
- h. National Guard Regulation (NGR) 385-10, Army National Guard Safety and Occupational Health Program, 12 September 2008.
- i. TB MED 503, the Army Industrial Hygiene Program, 30 October 2000.
- j. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- k. Industrial Ventilation, 26th rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- l. USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.

2. General. At the request the Safety & Occupational Health Office an Industrial Hygiene Service was put together to conduct an IH Survey of the TX ARNG Wylie Armory. Wylie, Texas

3. Findings. All sampling data and field survey forms, industrial hygiene sampling and survey findings of the report are enclosed (See ENCL 1). Operations of very short duration were not sampled due to the requirements of the sampling method. If the operation changes or if the

SUBJECT: Transmittal of Industrial Hygiene IH Survey Report Wylie Armory, Wylie, Texas

length of the operation is increased, contact this office to schedule sampling if it is deemed needed then.

4. Recommendations.

- a. Follow all recommendations made in the report enclosed, requesting industrial hygiene (IH) services where needed to complete the recommendations
- b. Data sheets and data collected will serve as an update of the baseline for the Industrial Hygiene Master Plan (IHMP) for FY2015. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY2016 IHMP.
- c. Use the report to help in correcting all deficiencies noted.
- d. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present visits, especially if this will help eliminate health hazards and reduce medical surveillance cost.
- e. Contact the State Occupational Health Office, for any medical Surveillance that may be needed.
- f. To execute your responsibilities in correcting all deficiencies, coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.

5. The present report addressed to the local facility commanders was divided in such a way that personal data can be detached and kept by the OHM or blocked when forwarding these reports to other entities within the appropriate offices of TX ARNG. If additional information

Non-Responsive

Non-Responsive

CF: ARNG

State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763.

Deputy State Army Surgeon, **Non-Responsive** JFTX-ARM-SS, 3500 West 35th Street, Building 10, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

Industrial Hygiene Survey
2 July, 2014
Texas Army National Guard
700 Spring Creek Pkwy
Wylie, TX. 75098



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

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EXECUTIVE SUMMARY:

An Industrial Hygiene Survey was conducted at the National Guard armory in Wylie, Texas on 2 July, 2014, as part of the Texas Army National Guard Occupational Health Program. The survey consisted of conducting lead wipe sampling 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 potential health hazards that may be present.

TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
Lead Dust sampling.	Lead in dust was detected in both weapons vaults and the maintenance bay. All positive samples were well below NGB guidelines. See Table 1.	Recommend to clean the areas where lead was present using the wet method described in NG PAM 420-15. See Recommendations.
MSDS	Could not locate the MSDS inventory at the time of the survey.	Recommend to create an inventory roll up sheet and MSDS binder. See Recommendations.
Moisture in renovated IFR areas.	POC reported standing water against building foundation after rain. Damaged floor tiles have been removed. Walls appear to have moisture damage present.	It was reported that facilities is working to remediate this issue. Recommend to follow up with them, and report new damage when it is observed.

MEMORANDUM FOR: **Non-Responsive** Executive Officer, HHT 3-124 CAV, TX ARNG, 700 Spring Creek Pkwy, Wylie, TX. 75098

SUBJECT: Industrial Hygiene Survey for the Wylie, TX Armory.

INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, an Industrial Hygiene Survey was performed by **Non-Responsive** of Pinnacle IH, at the Wylie TX armory. The purpose of this survey was to perform a health hazards assessment. The POC for this survey was **Non-Responsive**. The armory was built 1982, and renovated in 2012, and houses several office areas, classrooms, conference rooms, meeting areas, kitchen, drill hall, pubs room, two supply rooms, two weapons vaults, maintenance bay, and latrines. As part of the renovation, the IFR was converted to new office areas. Outside there is a Motor Pool area and vehicle wash bay. An FMS shop is located just behind the armory. The HHT 3-124 CAV unit is assigned to this armory. Ten full-time military troops work at the facility daily. There are a total of 94 M-day troops that drill here monthly.

METHODOLOGY

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

- Extech Foot Candle / Lux Meter, model 407026. S/N Q638262
 - 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 KOL070045
 - 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 POC and/or other staff.

SURVEY FINDINGS

BUILDING CONDITION

The building is reported as structurally sound, with no roof leaks. In 2005 the roof was replaced. The only chronic issue reported is a persistent moisture problem in the foundation of the renovated IFR area. The POC stated that the north side of the building has water that pools up next to the foundation after a hard rain. Damaged floor tiles have been removed from the new office areas. One wall appeared to have moisture damage near the floor at the time of the survey. Mold may be present behind this wall. The POC stated that the facilities group is working to remediate the issue. He also stated that all carpets were removed and replaced with floor tile during the last renovation. The rest of the building appeared to have no moisture issues. Lighting and ventilation was excellent overall. Latrines and locker rooms were neat and clean. Conference rooms were neat and clean. It was also reported that the kitchen is not used here, and that the gas has been turned off.

PERSONNEL

There are ten military personnel assigned to this armory full-time. Most employees work a 10-hour day. Through interviews with the readiness officer, there were no specific reports of excessive noise, eye strain, muscle strain, repetitive motion issues, back strain, or ergonomic issues. It was also stated that there are no concerns with water or air quality, and that employees are generally in good spirits. Regarding health issues that employees are concerned about, the POC stated the following: "Main concern is sitting for long periods of time on the computers (lower back issues, prostate issues)". It was reported that at times heavy lifting is involved for certain personnel, and that no forklift is used at the armory.

MSDS

The supply sergeant for the HHT is SSG Thibodeaux. SSG Thibodeaux is also responsible for the MSDS inventory. The hazardous chemical inventory is very small, and is stored in a yellow, metal cabinet marked "Flammable". The cabinet is stored in the maintenance bay. Much of the POL is kept at the FMS shop behind the armory. The MSDS inventory was reviewed during the survey. A printed inventory was not available at the time of the survey, and an MSDS binder could not be located. Advised POC to put together a printed inventory and affix to the cabinet, and another printed inventory in an MSDS binder. See Recommendations.

LEAD WIPE SURVEY

The POC stated that weapons are taken to the range two times per year, and that final weapon cleanings are performed in the drill hall, on covered tables. The tables are wiped down afterwards. There is a dip tank on site for weapon cleaning, but it was reported that it had never been used. Samples for lead in dust were taken from the drill hall, kitchen, maintenance bay, converted IFR, supply rooms, and weapons vaults. The samples that tested positive for lead were taken from the two weapons vaults and the maintenance bay. The NGB recommended limit of 200 micrograms per square foot for lead in dust applies to these areas. The positive samples were far below this limit. See Table 1. The vaults should not present

lead in dust contamination since weapons should be cleaned before returning them to their racks. It is recommended to use the wet cleaning method described in NG PAM 420-15 to clean the vault floor and weapons racks. See Recommendations below.

CONVERTED IFR

During the renovation in 2012 the IFR was converted to office and meeting areas. Lead wipe samples were taken throughout these areas, and no lead in dust was detected. See Table 1. It was reported that moisture may be seeping into the foundation of this area and causing damage to floor tiles and walls. The facilities group has removed damaged tiles, and is reported to be working to remediate the problem.

ILLUMINATION SURVEY

Light readings were measured throughout the facility. Results of the survey showed light measurements exceeding IES (Illuminating Engineering Society) and ANSI RP7-1991 guidelines throughout most areas of the facility. Refer to Table 2 for survey results.

DRILL HALL

M-day drills are conducted monthly in the drill hall. Personnel reported that civic groups use the drill hall approximately 6 times per year. It appeared to be very clean during the survey. Personnel reported that in the drill hall no vehicle maintenance is performed, no forklift is used, and that vehicles are not left running for lengthy periods. Illumination levels exceeded IES guidelines.

SUPPLY ROOMS

There are two supply rooms and weapons vaults in this armory. One supply room is unused. Light levels exceeded IES guidelines in both supply rooms and vaults. The supply sergeant reported no flammable or hazardous materials in the cages or cabinets in these areas. Lead in dust sampling was positive in the HHT vault and the unused vault. Though, all positive samples in these areas were well below NGB recommended limits.

HVAC SYSTEM

The building facilities group handles the maintenance of the HVAC system, including changing the monthly filters. The POC stated that the new HVAC units in the renovated IFR areas "keep having problems". All other areas of the armory are reported to adequate HVAC.

TABLE 1 (LEAD WIPE TEST RESULTS)

SAMPLE LOCATION	Surveyor's Field No	RESULT $\mu\text{g}/\text{ft}^2$
Drill Hall	JPR448	BRL
Drill Hall	JPR449	BRL
Drill Hall	JPR450	BRL
Drill Hall	JPR451	BRL
Drill Hall Blank	JPR452	BRL
Kitchen	JPR453	BRL
Kitchen	JPR454	BRL
Kitchen	JPR455	BRL
Maint Bay	JPR456	28
Maint Bay	JPR457	BRL
Maint Bay	JPR458	BRL
HHT Vault	JPR459	BRL
HHT Vault	JPR460	30
HHT Vault	JPR461	BRL
HHT Vault	JPR462	26
HHT Vault Blank	JPR463	BRL
HHT Supply Room	JPR464	BRL
HHT Supply Room	JPR465	BRL
HHT Supply Room	JPR466	BRL
Unused Supply Room	JPR467	BRL
Unused Supply Room	JPR468	BRL
Unused Weapons Vault	JPR469	61
Unused Weapons Vault	JPR470	75
Unused Weapons Vault	JPR471	41
Remodeled IFR	JPR472	BRL
Remodeled IFR	JPR473	BRL
Remodeled IFR	JPR474	BRL
Remodeled IFR	JPR475	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 Below the Reporting Limit.

TABLE 2 (ILLUMINATION TEST RESULTS)

Location	Light Reading (foot candles)	IES Recommendations (foot candles)
Male Latrine	70 Avg	20-50
Female Latrine	50 Avg	20-50
Room 119 Main Entrance Foyer and Hallway	Avg	10-20
Storage Closet Near Latrines	40 Avg	10-20
HHT Orderly Room	70 Avg	50-100
Hallway off Main Foyer	30 Avg	10-20
Room 160 Storage Closet	45 Avg	10-20
Renovated IFR areas (offices, meeting room, etc)	50+ Avg	50-100
Upstairs Mechanical Room	50 Avg	10-20
Break Room	Avg	20-50
Upstairs Classroom #2	50 Avg	30-100
*Upstairs Family Support Office (infrequent use)	25 Avg	50-100
Upstairs Conf Room	30 Avg	30-100
*Upstairs Publications Room	20 Avg	30-70
Room 200 Upstairs Mechanical Room	50 Avg	10-20
Room 103 Squadron Commander Office	Avg	50-100
Room 109 Gym	35 Avg	20-30
Room 131 Cleaning Closet	35 Avg	10-20
Unused Supply Room Office	65 Avg	50-100
Unused Supply Room	25 Avg	20-50
Unused Weapons Vault	50 Avg	20-50
HHT Weapons Vault	50 Avg	20-50
HHT Supply Room Office	70 Avg	20-50
HHT Supply Room	35 Avg	20-50
Locker Room off Drill Hall	30 Avg	20-50
Drill Hall	55 Avg	10-20
Kitchen	80 Avg	20-80
Room 128 Water Heater Closet	50 Avg	10-20
Storage Area off Maint Shop Hallway	50 Avg	10-20
Hallway to Maint Shop	20 Avg	10-20
Office space off Maint Shop	60 Avg	20-50
Storage area off Maint Shop	35 Avg	50-100
Decommissioned Maint Shop	60 Avg	20-50
Decommissioned Maint Shop Latrine	35 Avg	20-50
Decommissioned Maint Shop Office	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 and the floors in the unused vault and maintenance bay using the wet method described in NG PAM 420-15, Guidelines and Procedures for Rehabilitation and Conversion of Indoor Firing Ranges. (RAC 2)
- Ensure that weapon maintenance and cleaning is performed away from the drill hall or other common areas. Practice good personal hygiene by washing hands after handling weapons and ammunition, and cleaning tables or floors where weapons have been placed. (RAC3)
- Advised POC to put together a printed MSDS inventory and affix to the cabinet, and another printed inventory in an MSDS binder. 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 MSDS inventory, and update the inventory when new materials arrive and old ones are replaced. Ensure that troops have knowledge of the location of the MSDS binder, and are enrolled in annual Hazard Communication training. (RAC3)
- Replace the light fixture bulbs and/or ballasts in areas with illumination levels below IES recommendations. (RAC3)
- Continue to follow up with the facilities group to ensure the moisture problem in the renovated IFR section of the building is remediated. (RAC 3)

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 for Lead

Analytical Environmental Services, Inc

Date: 24-Sep-14

Lab Order:	1409G53	LEAD ON WIPES (N*062)
Chest:	Pinnacle IH	N*062
Project:	Wylie TX Armory	
Matrix:	Wipe	
Date Received:	9/17/2014 3:30:00 PM	

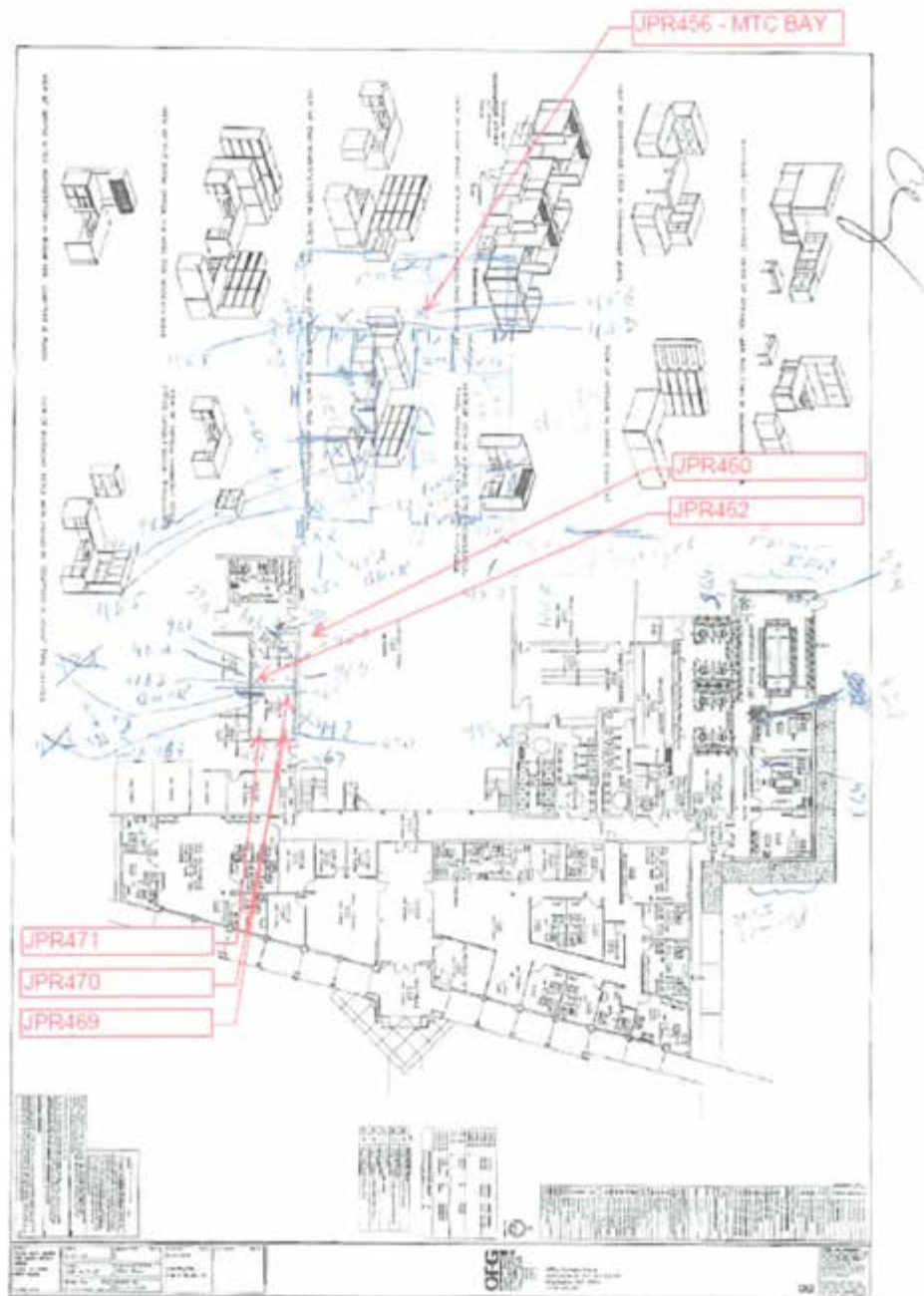
Laboratory ID	Chest Sample ID	Result	Units	Reporting Limit	DF	Qual	Date Collected	Date Analyzed	Analyst
1409G53-001A	PPA40-DRILL HALL	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-002A	PPA40-DRILL HALL	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-003A	PPA50-DRILL HALL	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-004A	PPA51-DRILL HALL	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-005A	PPA51-DRILL HALL BLANK	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-006A	PPA53-KITCHEN	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-007A	PPA54-KITCHEN	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-008A	PPA55-KITCHEN	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-009A	PPA56-MTC BAY	21	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-010A	PPA57-MTC BAY	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-011A	PPA58-MTC BAY	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-012A	PPA59-VAULT HMT	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-013A	PPA60-VAULT HMT	30	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-014A	PPA61-VAULT HMT	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-015A	PPA62-VAULT HMT	26	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-016A	PPA63-VAULT HMT BLANK	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-017A	PPA64-SUPPLY RM HMT	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-018A	PPA65-SUPPLY RM HMT	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-019A	PPA66-SUPPLY RM HMT	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-020A	PPA67-SUPPLY RM UNTOUED	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-021A	PPA68-SUPPLY RM UNTOUED	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-022A	PPA69-VAULT UNTOUED	61	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-023A	PPA70-VAULT UNTOUED	71	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-024A	PPA71-VAULT UNTOUED	41	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-025A	PPA72-REMODELED OFR	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-026A	PPA73-REMODELED OFR	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-027A	PPA74-REMODELED OFR	891	ug/dl	20	1		07/02/2014	08/22/2014	JS
1409G53-028A	PPA75-REMODELED OFR	891	ug/dl	20	1		07/02/2014	08/22/2014	JS

Qualifiers: BSL - Not Detected in the Reporting Limit
N - Not Detected in the associated Method Blank
Results are blank unless otherwise specified

DF - Degrees of Freedom

Page 5 of 6

APPENDIX B
Drawing of Sampled Areas
RED samples indicate Lead in Dust



APPENDIX C

Photographs of Areas Sampled for Lead in Dust

JPR460 HHT Weapons Vault



JPR462 HHT Weapons Vault



JPR469 Unused Weapons Vault



JPR470 Unused Weapons Vault



JPR471 Unused Weapons Vault



JPR456 Maint Bay (Storage)



JPR474 Conf Room (Converted IFR)



JPR473 Office (Converted IFR)



JPR455 Kitchen



JPR453 Kitchen



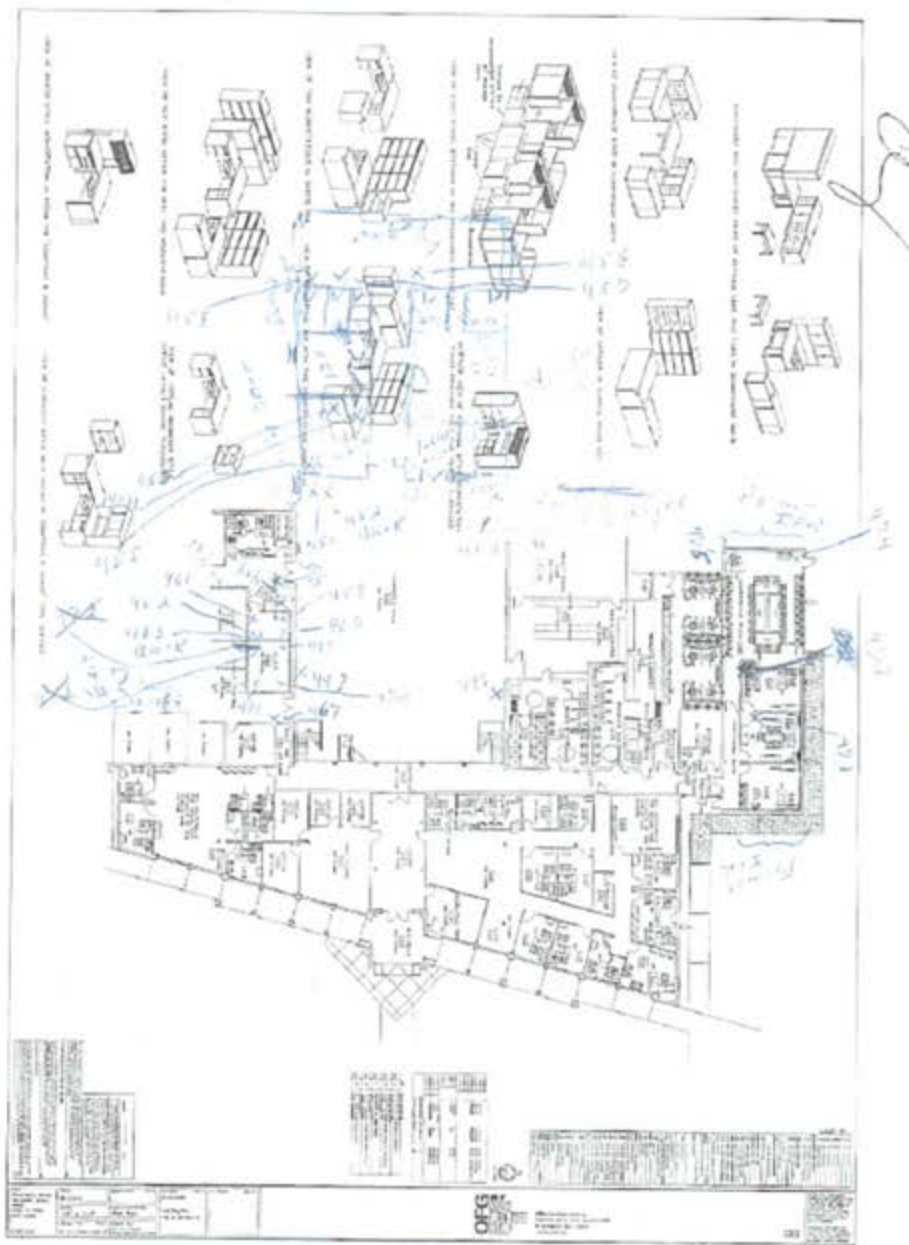
JPR450 Drill Hall



JPR451 Drill Hall



APPENDIX D DRAWING OF FACILITY



APPENDIX E PHOTOS OF FACILITY

Bldg Front



Bldg Rear View



Offices



Water-damaged Tile in converted IFR



Water-damaged wall in converted IFR



Drill Hall



Kitchen



Flammable/Hazardous Chemicals



Wash Bay



Gym



HHT Supply Room



Maint Bay (Storage)



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

a. AFLOC 48000 b. INSTALLATION Wylie TX Armory BLDG/RM NUMBER 2001, Supply Rm
c. LOCATION/CODE Supply Area, SA d. OPERATION/CODE Warehouse, WAH e. DESCRIPTION
Heavy Lifting, Falling Objects, Working in cages, working in weapons vaults, working with hazardous chemicals
f. MACOM/CODE Nat Guard g. SUPERVISOR Non-Responsive
h. TELEPHONE/AUTOVON NUMBER Non-Responsive i. FREQUENCY (Hrs Per Day) 10
j. NO CIV(S) 2 k. NO MIL 1 l. NO CONTRACTOR(S) 2 m. NO LOC(S) 2 n. NO OTHER 2

SECTION 2. IH STAFFING DATA

a. LAB HOODS _____ b. VAPOR DECREASES _____ c. MAINTENANCE BAYS _____ d. SPRAY BOOTHS _____
e. OPEN SURFACE TANKS _____ f. VENTILATION UNITS _____

SECTION 3. SURVEY DATA

a. SURVEY DATE 2 July, 2014 b. EVALUATOR (INITIALS) Non-Responsive

c. CONTROLS PRESENT	d. EVALUATION	e. UNIT CODE	f. CONTROLS REQUIRED	g. STATUS
Lighting Office		FC	50-100	Adequate
Lighting Storage		FC	20-50	Adequate
Lighting Vault		FC	10-20	Adequate

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

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	R/A
DISPOSABLE			
FACE AIR PURIFYING			
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	/	EAREPLUGS	/	COVERALLS	/	IMPERMEABLE BOOTS	/
SOLVENTS	/	CHEMICAL/SAFETY	/	CANAL CAPS	/	FULL BODY SUIT	/	SAFETY CONDUCT SHOES	/
WET SURFACES	/	FULL FACE SHIELD	/	HELMETS	/	SAFETY BELT/HARNES	/	SAFETY/CONDUCT- TIVE SHOES	/
COLD SURFACES	/	WELDING HELMET	/			HEAT REFLECT VEST/SUIT	/		
FLAMMABLE AGENTS	/								

SECTION 4. HAZARD INVENTORY DATA

a. CAS CODE	b. HAZARD DESCRIPTION	c. PAC or EPC	d. MEDICAL SURVEILLANCE RECOMMENDED (Y/N/S/B/NUI)
2439-92-1	Lead Particulates	3	No
PD-Lifting	Heavy Lifting	3	No
PD-Falling	Falling Objects	3	No
PD-Eye Haz	Eye Hazards related to power lighting	3	No
PD-Stress	Weekly PT training	3	No

2 July, 2014

SECTION 5. SAMPLING DATA

a. HAZARD	b. SAMPLE TYPE	c. RESULTS	d.
Lead in Dust	Wipe	See Report	

SECTION 6. PERSONNEL DATA

Non-Responsive

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

- 1) There were no complaints of health issues by personnel.
- 2) Lighting was excellent.
- 3) Armory was neat and clean overall.

PRIVACY ACT STATEMENT

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

Disclosure of your Social Security Number is not mandatory; however, nondisclosure of

Signature

Non-Responsive

2 July, 2014

HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

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

SECTION 1. DEMOGRAPHIC DATA

1. APLC 48000 B. INSTALLATION Wylie TX Armory C. BLDG/RM NUMBER 0001, N/A
 2. LOCATION/CODE Admin, RA 3. OPERATION/CODE Admin, RA 4. DESCRIPTION
 General Admin duties such as computer work, phone calls, paperwork,
 filing, occasional heavy lifting
 5. MACOM/CODE Nat Guard, N/A 6. SUPERVISOR Other, XX Non-Responsive
 7. TELEPHONE/AUTOVON NUMBER Non-Responsive 8. FREQUENCY (hrs Per Mo) 10
 9. NO CIVIL 0 10. NO MIL 10 11. NO CONTRACTOR(S) 0 12. NO LOC(S) 1 13. NO OTHER 0

SECTION 2. IH STAFFING DATA

1. LAB HOODS 0 2. VAPOR DEGREASERS 0 3. MAINTENANCE BAYS 0 4. SPRAY BOOTHS 0
 5. OPEN SURFACE TANKS 0 6. VENTILATION UNITS 0

SECTION 3. SURVEY DATA

1. SURVEY DATE 2 July, 2014 2. EVALUATOR (INITIALS) Non-Responsive

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

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

1. RESPIRATOR	MANUFACTURER	NIOSH TC NO	R/A
DISPOSABLE			1
FACE AIR PURIFYING			1
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/SLASH	1	MUFFS	1	APRONS	1	HARD HATS	1
OIL	1	SAFETY/IMPACT	1	EARRINGS	1	COVERALLS	1	IMPERMEABLE BOOTS	1
SOLVENTS	1	CHEMICAL/SAFETY	1	CANAL CAPS	1	FULL BODY SUIT	1	SAFETY CONDUCT SHOES	1
WET SURFACES	1	FULL FACE SHIELD	1	HELMETS	1	SAFETY BELT/HARNES	1	SAFETY/NONCONDUCTIVE SHOES	1
WELD SURFACES	1	WELDING HELMET	1			HEAT REFLECT SUIT	1		
NBC AGENTS	1								

SECTION 4. HAZARD INVENTORY DATA

1. CAS CODE	2. HAZARD DESCRIPTION	3. PAC or EPC	4. MEDICAL SURVEILLANCE RECOMMENDED (YES or NO)
7439-92-1	Lead Particulates	3	No
PO-Lifting	Heavy Lifting	3	No
PO-VIS	Eye or Hand Strain - Extended Computer Work	3	No
PO-Stress	Weekly PT Training	3	No
PO-Eyes	Eyes Hazards related to page lighting	3	No

2 July, 2014

SECTION 5. SAMPLING DATA

A. HAZARD	B. SAMPLE TYPE	C. RESULTS	D.
Lead in Dust	Wipe	See Report	

SECTION 6. PERSONNEL DATA

Non-Responsive

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

- 1) There were no complaints of health issues by personnel.
- 2) Lighting was excellent
- 3) Armory was neat and clean overall

PRIVACY ACT STATEMENT

Title 5 U.S. Code, Section 301; Executive Order 9397 authorizes the use of your Social Security Number as a identifier of this information is to identify and monitor data relating each U.S. civilian employee exposed to a hazardous workplace. This information is to provide history of exposure for any given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in a less effective workplace. Signature

Non-Responsive

**DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
REGIONAL INDUSTRIAL HYGIENE OFFICE
AIRPORT PLAZA SUITE 1530
510 PLAZA DRIVE
COLLEGE PARK, GA 30349**

NGB-AVN-SI

July 22, 2004

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN: State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

1. References.

a. Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.

b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.

c. National Guard Regulation (NGR) 385-10, 1988, Army National Guard Safety and Occupational Health Program.

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

e. TB MED 502, Occupational and Environmental Health Respiratory Protection Program, February 1982.

f. DA PAM 40-503, 30 October 2000, The Army Industrial Hygiene Program.

g. DA PAM 40-501, 10 December 1998, Hearing Conservation.

h. Threshold Limit Values and Biological Exposure Indices (TLV's) for 2001. American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.

i. Industrial Ventilation, 23rd Edition. American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.

j. USAEHA TG-141, November 1997 Guidelines for Air Sampling and Bulk sample Collection

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.

l. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

2. General.

- a. At the request of the TX ARNG Safety and Occupational Health Office, an Industrial Hygiene Service was put together to conduct Health Hazard Information module (HHIM) Field surveys and industrial hygiene sampling of the Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- b. Non-Responsive Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.

3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)

4. Recommendations.

- a. Follow all recommendations made in reference 1.l., requesting industrial hygiene (IH) services where needed to complete the recommendations.
- b. Conduct an air sampling survey in the areas in and around those identified with elevated lead dust levels in page 3 Of reference 1.l, to ensure that the lead dust present is not airborne and that employees in these areas are not exposed above the action level where applicable.
- c. Control water infiltration in the armory and/or replace or repair damaged surfaces or components (ceiling and floor tiles). Building conditions that present IAQ concerns or problems not only exacerbates normally minor health issues but also tend to promote or accelerate building deterioration.
- d. The recommendations given in the comment section and data collected will serve as a baseline for the Industrial Hygiene Implementation Plan (IHIP) for FY-03. A follow up operation and hazard specific air sampling survey based on the enclosed findings will be included in the FY-04 IHIP.

NGB-AVN-SI

SUBJECT: Transmittal of the Survey Reports for Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- e. Consider additional Industrial Hygiene services to monitor operations that were not looked at or surveyed during the present survey, especially if this will help eliminate health hazards and reduce medical surveillance cost.
 - f. To execute your responsibilities in correcting all deficiencies and meeting all standards coordinate with the Occupational Health Nurse and the Occupational Safety and Health Office for technical guidance.
 - g. Give special consideration to cleaning light fixtures, increasing the wattage and painting walls a lighter color when upgrading the lighting in the facility.
5. If additional information is needed about the industrial hygiene survey or air sample

Non-Responsive

CF:

NBG-AVN-SH

State Occupational Health Office, P. O. BOX 5218, Austin, TX 78763-5218.

State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

Encl
as

Industrial Hygiene Baseline Survey Report
For
Texas Army National Guard
(TXARNG)

At
Wylie Armory
700 North Spring Creek Parkway
Wylie, Texas

Prepared for:

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

Non-Responsive

June 25, 2004

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Appendices

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

Executive Summary

An initial baseline industrial hygiene survey was conducted at the Wylie Armory on 14 April 2004 as part of the Texas Army National Guard Occupational Health Program to identify potential health hazards in the workplace. The survey consisted of collecting lead wipe samples and bulk asbestos samples, conducting an illumination survey, a noise survey, and an evaluation of the Heating Ventilation and Air Conditioning System (HVAC) as it relates to indoor air quality.

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

Topic	Summary of Findings	Recommendations
IFR Lead Wipe Sample Results	<10 to 70 microgram per square foot.	No action.
Armory Lead Wipe Samples	<10 to 18 microgram per square foot.	No action.
Asbestos Bulk Samples	Floor tiles contained 3%Chrysotile.	Update the asbestos building management plan to include the floor tiles.
Noise Survey	No excessive noise source was identified.	No action.
Illumination Survey	10 to 60 footcandles	No action.
HVAC/IAQ	Water leaks observed on supply ducts.	Repair leaks and replace damaged materials.

Wylie Armory

Survey Date: 14 April 2004

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Wylie Armory in Wylie, Texas on 14 April 2004

BACKGROUND:

Introduction. At the request of **Non-Responsive** of the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Wylie Armory in Wylie, Texas. **Non-Responsive** Industrial Hygiene Technician for the Texas Army National Guard and **Non-Responsive** contract Industrial Hygienist, Tammer Sciences, Inc. conducted the survey on 14 April 2004. The purpose of the survey was to perform an initial baseline industrial hygiene survey to identify potential health hazards present at the armory, specifically lead contamination from the indoor firing range.

Site Description. The armory houses the headquarters of the first of the 112 artillery. The building is a two story structure and consists of administrative office areas, an orderly room, classrooms, a drill hall, supply rooms and an indoor firing range. A copy of the floor layout and photos are included in Appendix A and D, respectively.

Scope of Work. The work included collecting wipe samples for lead, bulk samples for suspect asbestos containing building material, illumination levels, noise readings where necessary, and an evaluation of the ventilation system as it pertains to indoor air quality.

Methodology Lead wipe samples were collected from surfaces in the firing range and in the Armory in accordance to instructions published by Region South National Guard Bureau, which required the use of unscented baby wipes to wipe one square foot of surface. Samples were then placed in a sealed plastic bag and sent for analysis to EMSL laboratory, which is an American Industrial Hygiene Association (AIHA) Accredited laboratory. Asbestos bulk samples were collected from suspect building materials that were grouped based on similarity of composition. Bulk sample collection was minimally destructive and samples were collected from inconspicuous areas. Bulk samples were also collected from suspect friable and damaged building material. Each bulk sample was placed in a sealed bag and sent to EMSL laboratory for analysis. Noise readings were collected using a noise level meter in areas where a noise source was identified. All noise measurements were area readings. Illumination readings were collected using a Western Schlumberger light meter Serial 8384. Illumination readings were taken on work surfaces such as desks or approximately four feet from the floor.

FINDINGS and DISCUSSION:

The Point of Contact during the survey was **Non-Responsive**

Lead Wipe Samples: Thirty wipe samples were collected from the indoor firing range and various areas of the armory as listed in the table below.

Sample Number	Sample Location	Micrograms of lead (ug) per square foot
WY FR01	IFR bullet Stop lower left	<10.0
WY FR02	IFR bullet Stop middle	<10.0
WY FR03	IFR bullet Stop upper right	<10.0
WY FR04	IFR right wall (facing trap) upper right (facing wall)	<10.0
WY FR05	IFR right wall (facing trap) middle (facing wall)	<10.0
WY FR06	IFR right wall (facing trap) lower left (facing wall)	<10.0
WY FR07	IFR left wall (facing trap) bottom right (facing wall)	10.0
WY FR08	IFR left wall (facing trap) middle (facing wall)	<10.0
WY FR09	IFR left wall (facing trap) upper left (facing wall)	70.0
WY FR10	IFR ceiling surface to the right of the observation deck (facing trap)	62.0
WY FR11	IFR ceiling surface in the middle of the range	<10.0
WY FR12	IFR ceiling surface by the bullet trap left side (facing trap)	<10.0
WY FR13	IFR floor to the left of the bullet trap	10.0
WY FR14	IFR floor middle of range	10.0
WY FR15	IFR floor to the right of the observation area	<10.0
WY FR16	IFR back wall (facing wall) lower right	<10.0
WY FR17	IFR back wall (facing wall) middle	<10.0
WY FR18	IFR back wall (facing wall) upper left	<10.0
WY 01	Top of refrigerator in kitchen.	<10.0
WY 02	Top of serving line between kitchen and drill hall	<10.0
WY 03	Supply diffuser in administrative office	12.0
WY 04	Return air grill in the administrator office	15.0
WY 05	Top of a cabinet in the administrative office	<10.0
WY 06	Drill hall floor by supply room	<10.0
WY 07	Drill hall floor diagonally opposite the floor sample by supply	<10.0
WY 08	Drill hall floor in center.	18.0
WY 09	Top of the soda machine in the drill hall	<10.0
WY 10	Top of a surface in the classroom	<10.0
WY 11	Top of a random surface in the armory	<10.0
WY 12	Field Blank	<10.0

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

Wylie Armory

Survey Date: 14 April 2004

Asbestos Suspect Building Material: Typical building materials identified in the Armory consisted of two types of 12 by 12 inches floor tiles, 2x4 feet ceiling tiles, and Baseboard in the administrative office areas, classrooms, and library. Cement floors, cinder block walls, and corrugated steel deck in the drill hall, supply, and storage areas. Bulk samples were collected from typical suspect materials. The table below lists the samples collected and the results:

Sample #	Description	% Asbestos Type
WY A01B	2x4 foot ceiling tile in drill hall and exercise room	None.
WY A02B	Type one 12x12 inch floor tile.	None.
WY A03B	Type two 12x12 inch floor tile.	3% Chrysotile
WY A03B	Mastic from 12x12 inch floor tile.	None.
WY A04B	Baseboard.	None.

The asbestos building management plan should be updated to include the floor tiles. The laboratory report and chain of custody forms are attached in Appendices B and C.

Noise Survey: Based on observations during the walkthrough baseline survey, no sources of excessive noise were identified and therefore no area noise readings were collected. Noise levels are likely to be well below the Occupational Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Army recommended limit of 85 dBA.

Illumination Survey Lighting levels throughout the Armory ranged between 10 foot-candles to 60 foot-candles. Illumination levels are noted on the floor layout in Appendix A. Illumination ranges for each area are listed in the Table below:

Area	Reading in Foot-candles
Administrative Offices.	30 - 60
Classrooms	30 - 50
Supply Rooms.	10 - 40
Drill Hall.	30 - 60
Storage	20 - 25
Kitchen.	20 - 55

The Army Design Guide (DG415-2) minimum illumination level of 50 foot-candle for office area and 20 foot-candles for parts storage/supply. The American National Standard Institute (ANSI) recommends a minimum illumination level of 50 to 100 foot-candles for office work, 20 to 50 for general lighting. Luminance depends on various factors including the task to be performed, the age of the individual, and the

surroundings. Luminance of 50 to 100 foot-candles is recommended for performance of visual tasks of medium contrast or small size such as reading pencil handwriting and poorly printed or reproduced material. Depending on the type of display, background luminance of 30 to 60 foot-candles is recommended for VDT work. Replacing light bulbs with higher wattage will increase lighting levels. Replacing burnt out light bulbs and cleaning the light fixture should improve the lighting levels.

Heating Ventilating and Air Conditioning (HVAC) The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of hot water circulating system with cooling capabilities. Water stains were observed on duct work in the classrooms. The presence of water and wood will provide an opportunity for a microbiological growth source. Given the right conditions these sources can contribute negatively to the quality of the indoor air. Consideration should be given to repair these leaks and replacing all water damaged insulation. No other complaints of indoor air quality issues were documented or communicated with the POC.

Recommendation:

1. Update the building asbestos management plan to include the floor tiles.
2. Repair water leaks observed on the supply air ducts and replace all water damaged material like insulation.

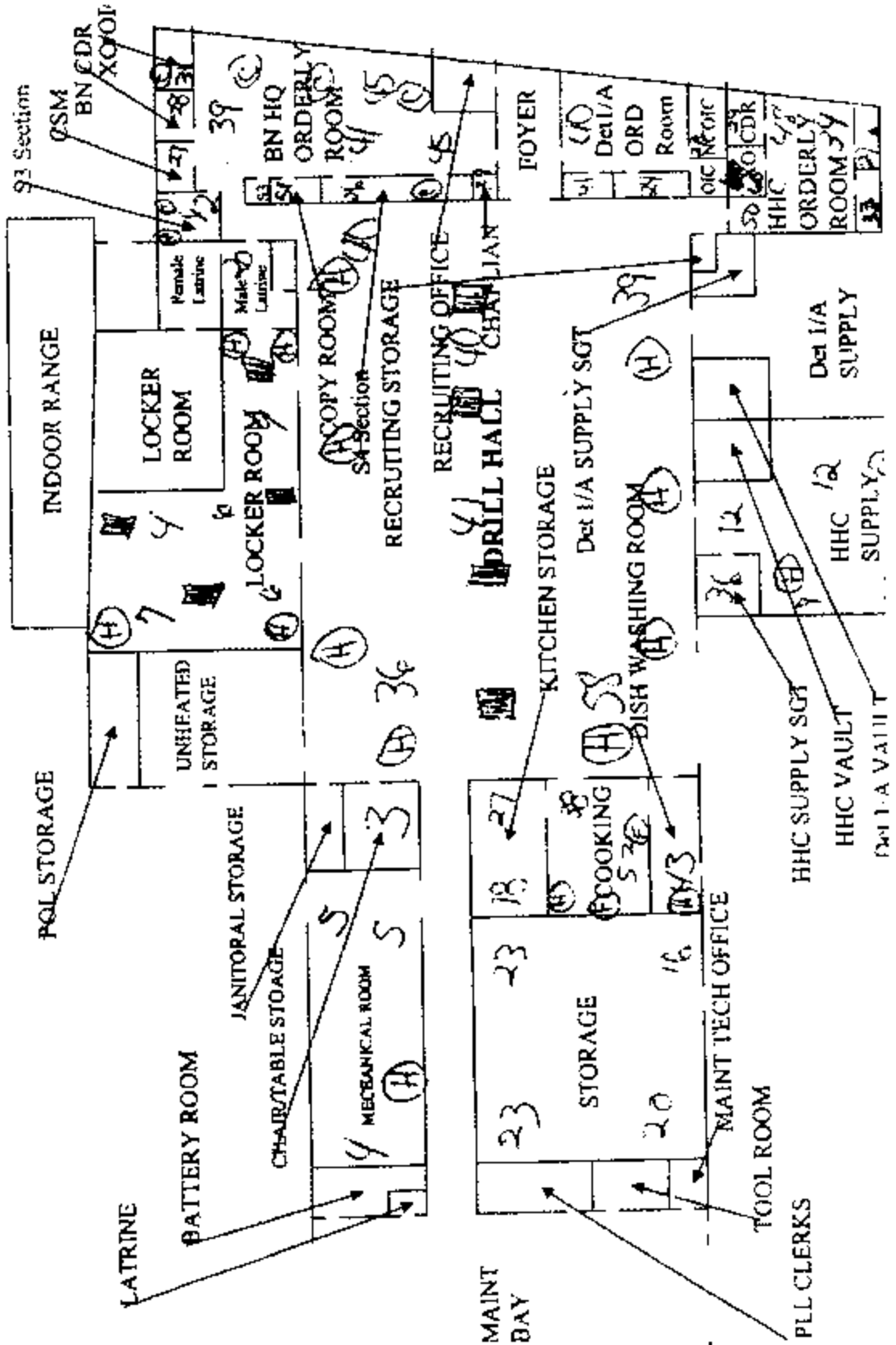
Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

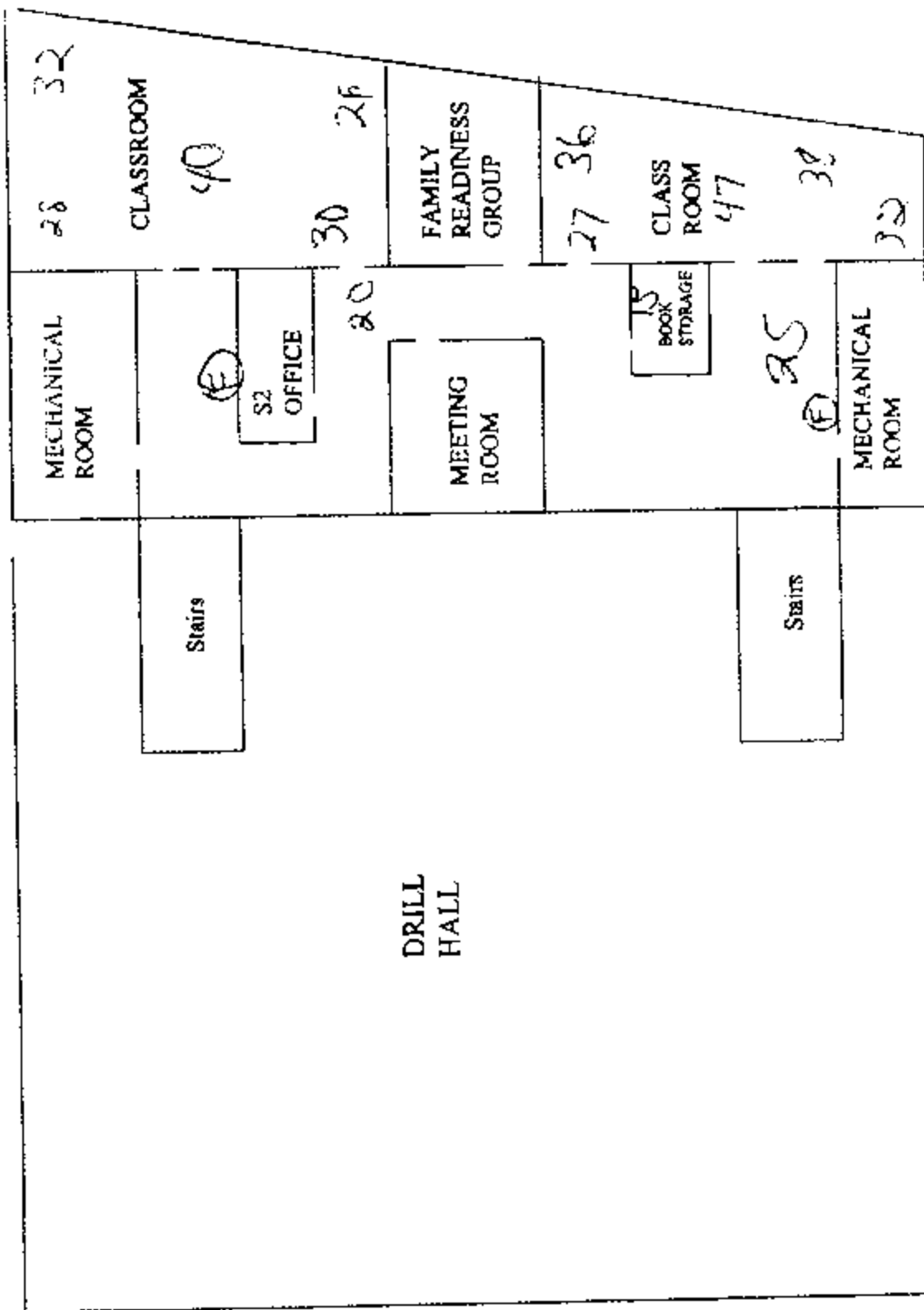
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APPENDIX A

WYLIE ARMORY First Floor



WYLIE ARMORY Second Floor



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APPENDIX B

EMSL Analytical

9 Cooper St., Westmont, NJ 08108

Phone: (856) 658-4800 Fax: (856) 658-8851 Email: alsuffman@emsl.com**EMSL**

Attn:

Non-Responsive

Customer ID: T580

Customer PO:

Received: 04/22/04 1:41 PM

Fax:

EMSL Order: 200404876

Project: WY18, TX

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
WY FR01 Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR02	0002	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR03	0003	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR04	0004	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR05	0005	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR06	0006	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR07	0007	5/7/04	144 in ²	10.0 µg/ft ²
WY FR08	0008	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR09	0009	5/7/04	144 in ²	70.0 µg/ft ²
WY FR10	0010	5/7/04	144 in ²	62.0 µg/ft ²
WY FR11	0011	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR12	0012	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR13	0013	5/7/04	144 in ²	10.0 µg/ft ²
WY FR14	0014	5/7/04	144 in ²	10.0 µg/ft ²
WY FR15	0015	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR16	0016	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR17	0017	5/7/04	144 in ²	<10.0 µg/ft ²
WY FR18	0018	5/7/04	144 in ²	<10.0 µg/ft ²
WY 01	0019	5/7/04	144 in ²	<10.0 µg/ft ²
WY 02	0020	5/7/04	144 in ²	<10.0 µg/ft ²
WY 03	0021	5/7/04	144 in ²	12.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the EPA for lead wipe sampling. The test results contained within this report meet the requirements of NELAP unless otherwise noted. The report relates only to those items tested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-NELAP: 04653, AHA Environmental Lead Laboratory Approval Program: 100194

Printed: 4/22/04 12:13:21 PM

EMSL Analytical

3 Cooper St., Westmont, NJ 09108

Phone: (856) 858-4800 Fax: (856) 858-9481 Email: akaufman@emsanal.com

EMSL

Attn:

Non-Responsive

Customer ID: TS80

Customer PO:

Received: 04/22/04 1:41 PM

Fax:

EMSL Order: 200404876

Project: Wynn, TX

EMSL Proj:

Lead in Wipes by Flame AAS (SW 848, 7420)

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Analysed</i>	<i>Area Sampled</i>	<i>Lead Concentration</i>
WY 04	0022	5/7/04	144 in ²	15.0 µg/ft ²
WY 05	0023	5/7/04	144 in ²	<10.0 µg/ft ²
WY 06	0024	5/7/04	144 in ²	<10.0 µg/ft ²
WY 07	0025	5/7/04	144 in ²	<10.0 µg/ft ²
WY 08	0026	5/7/04	144 in ²	18.0 µg/ft ²
WY 09	0027	5/7/04	144 in ²	<10.0 µg/ft ²
WY 10	0028	5/7/04	144 in ²	<10.0 µg/ft ²
WY 11	0029	5/7/04	144 in ²	<10.0 µg/ft ²
WY 12	0030	5/7/04	144 in ²	<10.0 µg/ft ²

Non-Responsive

The QC data associated with the sample results included in this report meet the recovery and precision requirements of NELAP. The test results contained within this report meet the requirements of NELAP unless otherwise noted. The report is only to show results as received. If otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NJ-HEAP: 04853, AS1A Environmental Lead Laboratory Approval Program: 100194

Printed: 04/22/04 12:13:32 PM

EMSL Analytical, Inc.

187 Haddon Ave., Westmont, NJ 08108

Phone: (856) 358-4300 Fax: (856) 358-4960 Email: es@egs.com**EMSL**

Attn:

Non-Responsive

Fax:

Project:

Customer ID: TS80

Customer PO:

Received: 04/22/04 12:28 PM

EMSL Order: 040407139

EMSL Proj:

Analysis Date: 4/29/04

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

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
WY-A01B 040407139-0001	Wylie, TX	Tan/White Fibrous Heterogeneous	Crushed	15% Cellulose 35% Min. Wool	50% Non-fibrous (other)	None Detected
WY-A02B-Tile 040407139-0002	Wylie, TX	Gray Non-Fibrous Heterogeneous	Dissolved No matrix	<1% Cellulose 3% Wollastonite	97% Non-fibrous (other)	None Detected
WY-A03B-Tile 040407139-0003	Wylie, TX	Gray Non-Fibrous Heterogeneous	Dissolved	2% Cellulose	95% Non-fibrous (other)	3% Chrysotile
WY-A03B-Mastic 040407139-0005	Wylie, TX	Tan Non-Fibrous Homogeneous	Dissolved	3% Cellulose 2% Glass	95% Non-fibrous (other)	None Detected
WY-A04B-Cove- base 040407139-0004	Wylie, TX	Gray Non-Fibrous Heterogeneous	Dissolved No matrix	2% Cellulose	98% Non-fibrous (other)	None Detected

Non-Responsive

Due to the inherent limitations of the EPA 600/R-93/116 method, asbestos identification is based on the visual appearance of the sample. The above test report relates only to the sample tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This test results contained within this report meet the requirements of NELAP unless otherwise noted.

Analysis performed by EMSL, Westmont, NJ (NELAP #101048-0), NY ELAP 10572

APPENDIX C

EMSL ANALYTICAL

CHAIN OF CUSTODY

LEAD

Date: _____ EMSL Representative: _____ Project Name/No.: _____ P.O.#: _____
 Company Name: Tanner Sciences, Inc. EMSL-Bill to: Same as mail to
 Street: 3744 Lawrence Drive Street: _____
 Box #: _____ Box #: _____
 City/State: Naperville IL Zip: 60564 City/State: _____ Zip: _____
 Please Results to: Name Non-Responsive Telephone: _____
 Fax Results to: (Name) _____ Fax: _____

MATRIX	INSTR	Limit
Lead Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Flame Atomic Absorption 0.01% +-
Lead Wastewater	SW846-7420	Flame Atomic Absorption 0.4 mg/l water 40 mg/kg (ppm) soil
Lead Soil -	or SW846-6010B	ICP 0.1 mg/l water 10 mg/kg (ppm) soil
Lead in Air***	NIOSH 7082 Mod.	Flame Atomic Absorption 4 ug/filter
	or NIOSH 7300 Mod.	ICP 3.0 ug/filter
Lead in Wipe* Use Wipe Type	<input checked="" type="checkbox"/> -ASTM SW846-7420 / HUD Appendix 14.2 Digest	Flame Atomic Absorption 10 ug/wipe
	<input type="checkbox"/> -con ASTM or SW846-6010B	ICP 3.0 ug/wipe
ICLIP Lead **	SW846-1311 / 7420	Flame Atomic Absorption 0.4 mg/l (ppm)
	or SW846-6010B	ICP 0.1 mg/l (ppm)
STLC Lead (California)	CA Title 22 (626.1126 / SW846-7420 or SW846-6010B)	Flame Atomic Absorption 0.4 mg/l (ppm) ICP 0.1 mg/l (ppm)
Lead in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption 0.03 ug/filter
Lead Wastewater	SW846-7421	Graphite Furnace Atomic Absorption 0.003 mg/l (ppm) water 0.3 mg/kg (ppm) soil
Lead Soil -		
Lead in Drinking Water (check state certification requirements)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption 0.003 mg/l (ppm)
Lead in Dust	NIOSH 0500-0600	Gravimetric Reduction 0.0001g

T/T (Turnaround) - Same day, 24 hr - 1 Day, 2 Days, 3 Days, 4 Days, 5 Days, 6-10 Days

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

* If no box is checked, non-ASTM is assumed

SAMPLE #	LOCATION	Air volume / Area in ²	LAB #
WY FRO1	Wylie, TX	144	64976
WY FRO2			

(1) Relinquished By: (Person)

Received at EMSL By:

Received at EMSL By:

Date: 4/19/04

Date:

Date: 4/22/04

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

(2) The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2001 v STLC.doc

EMSL ANALYTICAL

CHAIN OF CUSTODY

20404876

LEAD

SAMPLE #	LOCATION	Air volume, L Area, in ²	LA3#
WY FR03			24376 S
FR04			7
FR05			6
FR06			7
FR07			8
FR08			7
FR09			10
FR10			11
FR11			12
FR12			13
FR13			14
FR14			15
FR15			16
FR16			17
FR17			18
FR18			2004 APR 22 PM 11:42
WY 01			WESTMONT. ILL
WY 02			15
WY 03			16
WY 04			17
WY 05			18
WY 06			19
WY 07			20
WY 08			21
WY 09			22
WY 10			23
WY 11			24
WY 12			25

Relinquished By: (Person)

Received at EMSL By:

Received at EMSL By:

Date: 4/19/04

Date: 5/12/05

Date:

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

The individual signing and relinquishing these samples to the laboratory attests to the accuracy of the information reported on this chain of custody.

Lead Chain Nov 2003 v STLC.doc



EMSL Analytical, Inc.
Revised 07/07/99

CHAIN OF CUSTODY

RMS00003

EMSL Rep:

Third Party Billing requires written authorization
from third party

Your Company Name: Tanner Services Inc.

EMSL-Bill to:

Same as bill to

Street:

Street:

Box #:

Box #:

City/State:

City/State:

Phone Results to:

Phone Results to:

Name:

Name:

Telephone #:

Telephone #:

Project:

Purchase Order:

Name/Number:

MATRIX

TURNAROUND

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

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3 hour test, please call 1-800-220-3575 for price prior to sending samples. You will be asked to sign and authorization form for this service. 12 hours (must arrive by 11:00 a.m. Mon - Fri.). Please Refer to Price Quote

PCM - Air

- ☐ NIOSH 7400
☐ OSHA
☐ Other:

TEM AIR

- ☐ AHERA
☐ NIOSH 7402
☐ EPA Level II

TEM WATER

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

PLM Bulk

- ☒ EPA 600/R-93/116
☐ EPA Point Count
☐ NY Stratified Point Count
☐ PLM NOB (Gravimetric) NY 198.1
☐ Other:

TEM BULK/misc

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

TEM MICROVAC / WIPE

- ☐ ASTM D 5755-95
quantitative method

SEM Air or Bulk

- ☐ Qualitative
☐ Quantitative

XRD

- ☐ Asbestos
☐ Silica

OTHER:

SAMPLE NUMBER	LOCATION	VOLUME (If Applicable)
WY-A01B	Wylie, TX	
WY-A04B		

Client Sample # (s)

WY-A01BWY-A04B

Total Samples #:

4

Relinquished:

Non-Responsive4/19/04

Time:

AM

Received:

Non-Responsive

Time:

EMSL ANALYTICAL INC.

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APPENDIX D



Photo #1: Armory front entrance.

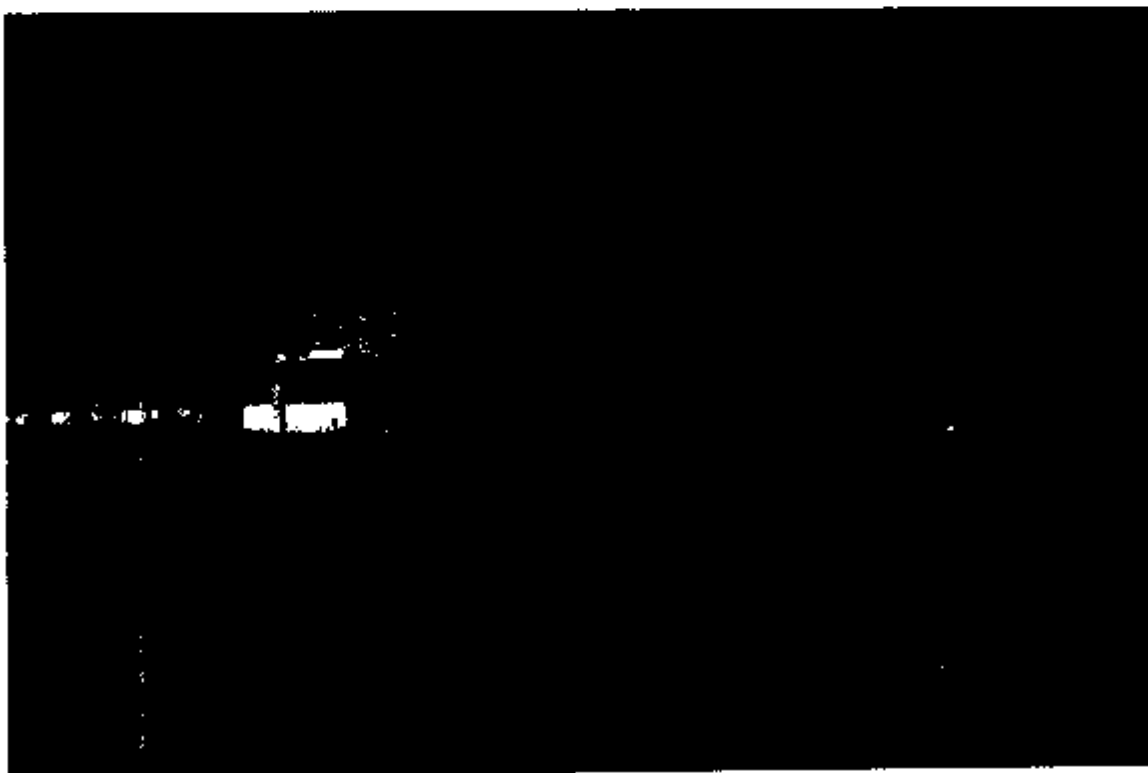


Photo #2: East side of the armory.

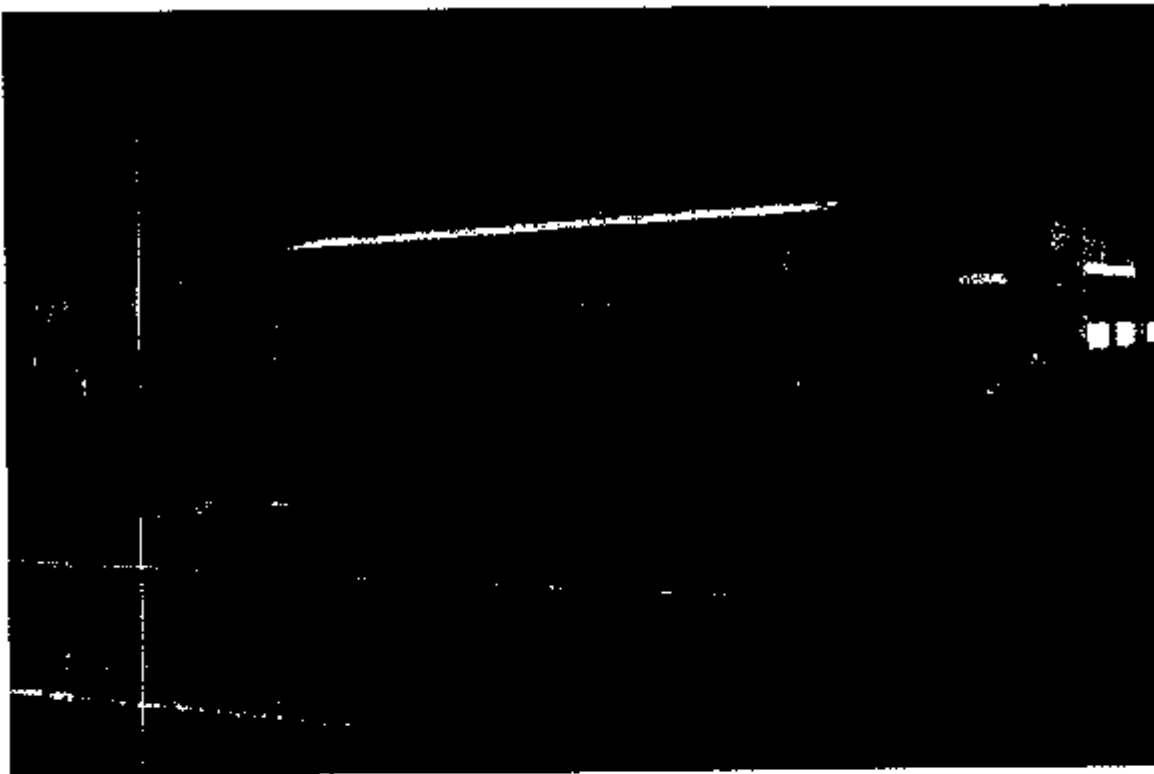


Photo #3: South west corner of the armory.



Photo #4: North side of the armory.



Photo #5: Drill hall facing northst.

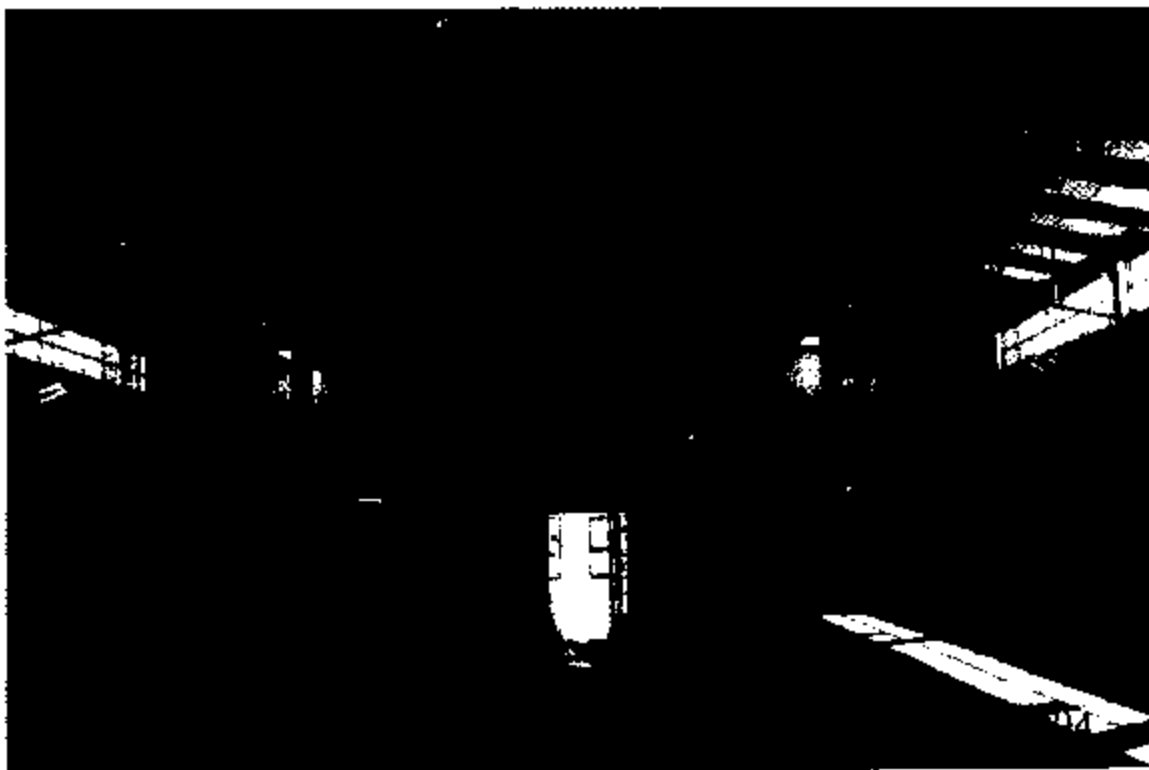


Photo #6: Drill hall facing south.

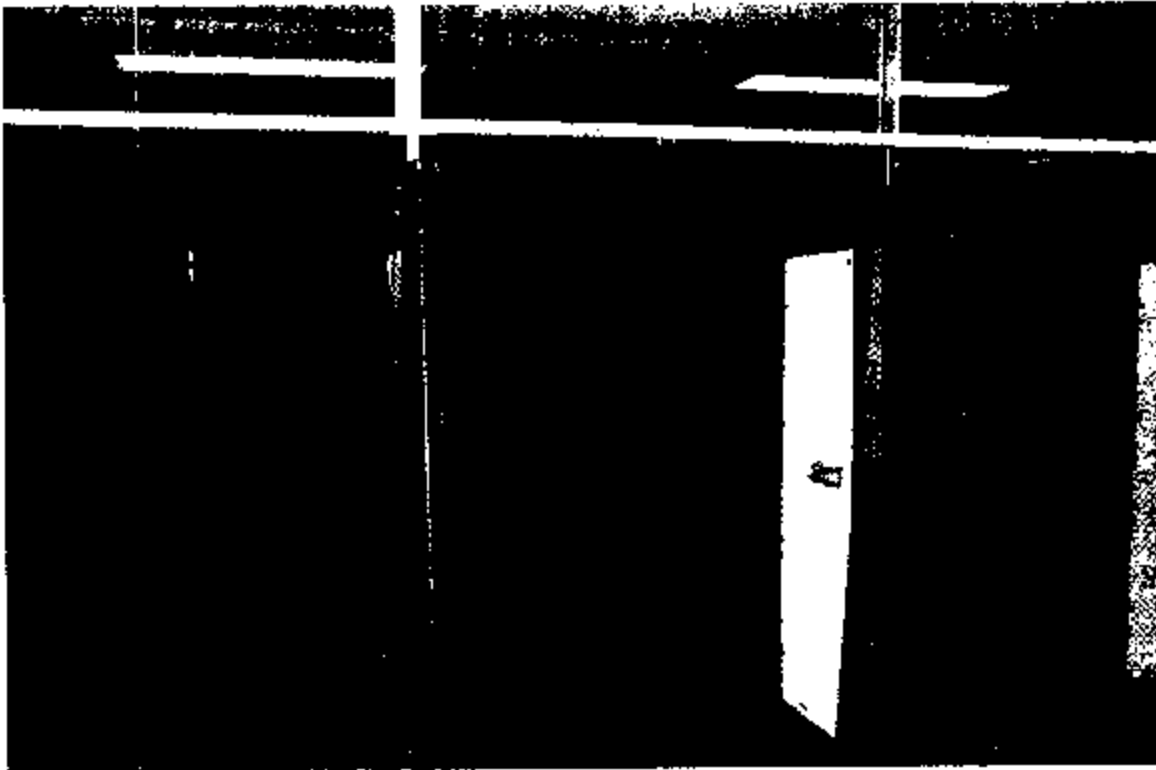


Photo #7: Indoor firing range facing bullet stop.

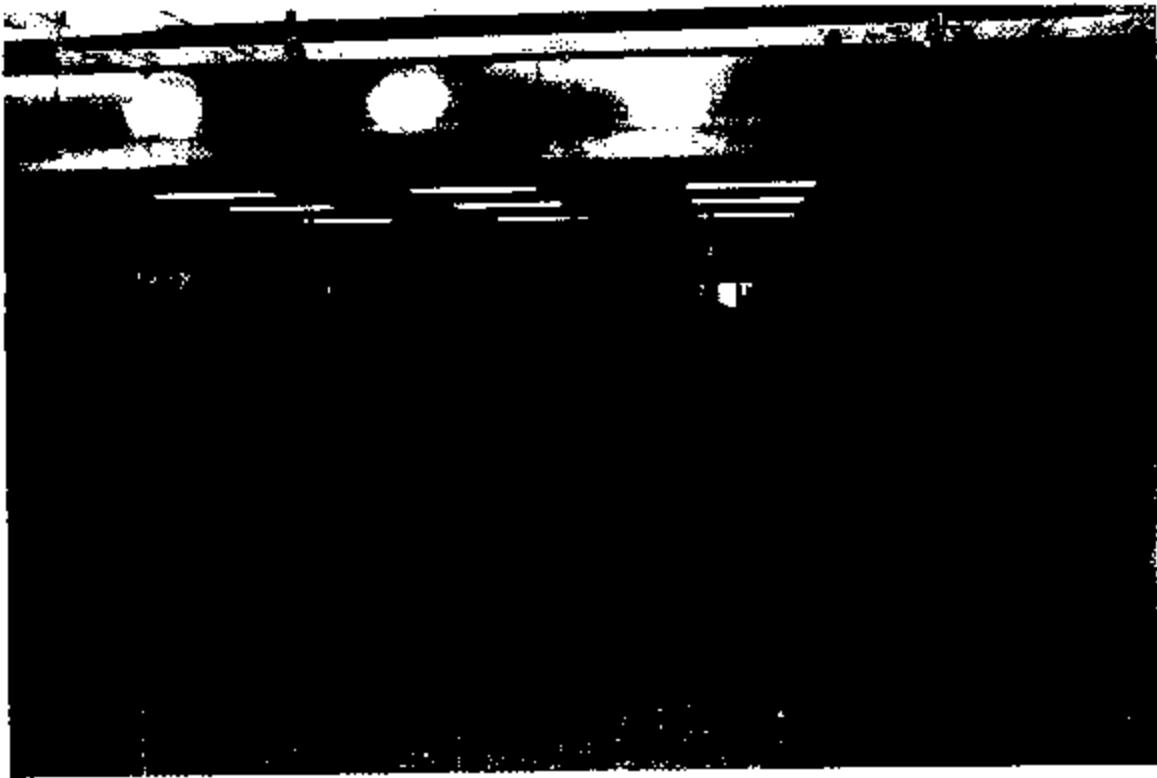


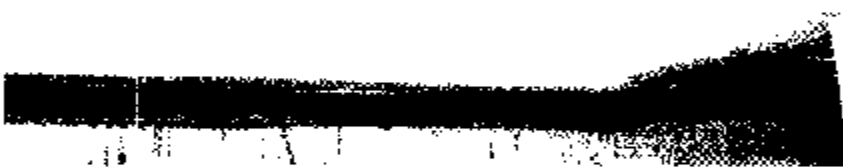
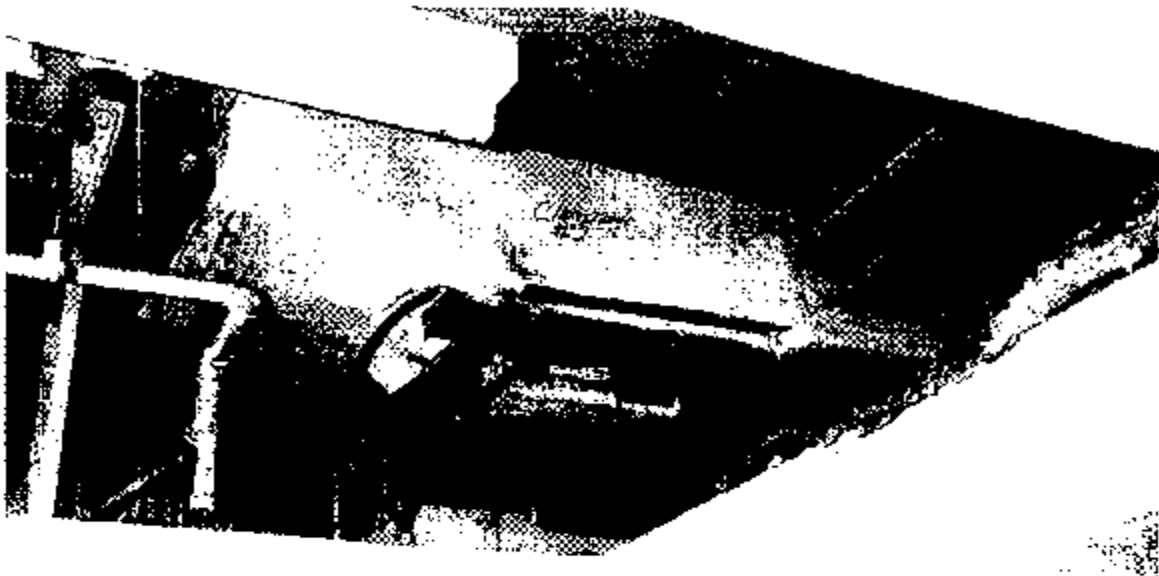
Photo #8: Indoor firing range facing firing line.



Photo #9: Armory's kitchen showing the sink.



Photo #10: Armory's water boiler.



4. 14. 2004

Photo #11: Water leaks on the ventilation ducts.



Photo #12: Water leaks on the ventilation ducts.