

Photo 1: In ing Armory Front Entrance.

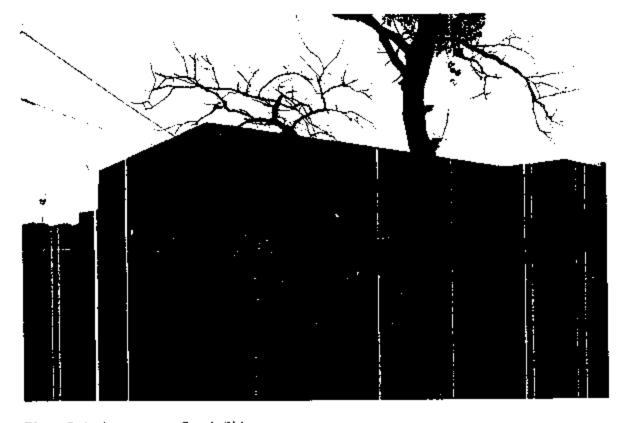


Photo 2: In ring Armory South Side.



Photo 3: Almory North Side.

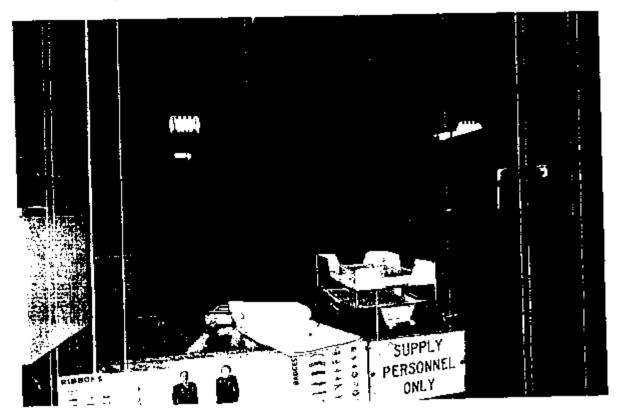


Photo 4: Inside the converted firing range.

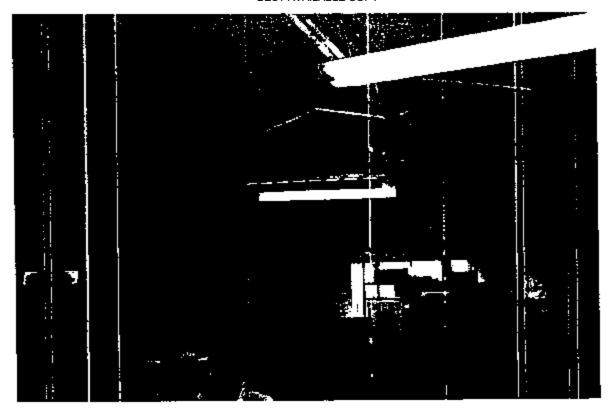


Photo 5: Another side of the converted indoor firing range.

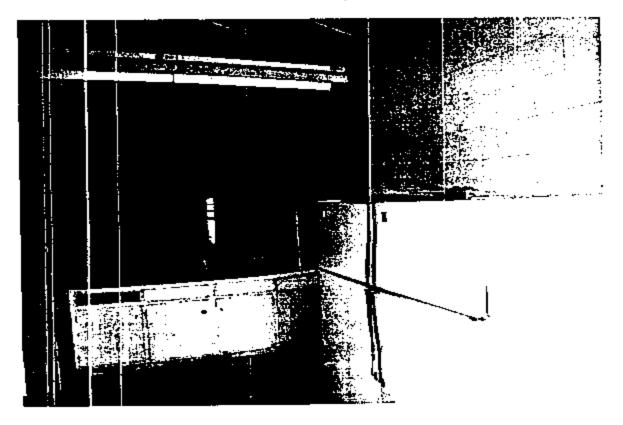


Photo 6: Almory Kitchen.

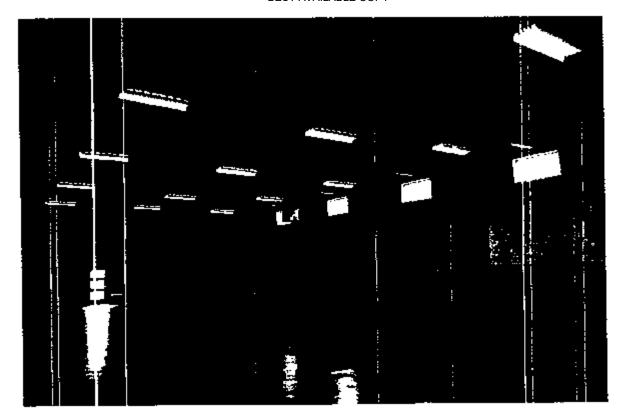


Photo 7: A mory drill or assembly hall...

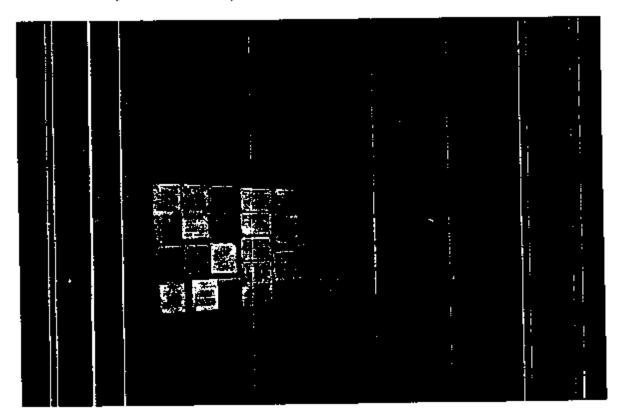


Photo 8: The bulletin board in the drill hall where a wipe sample was collected.

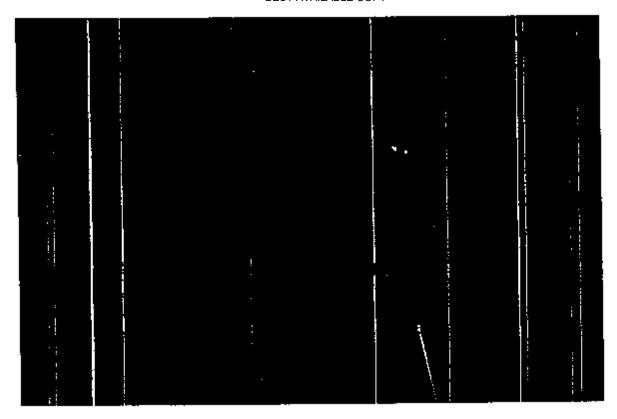


Photo 9: Insulated pipe in the drill hall.



Photo 10: Another photo of the drill hall.

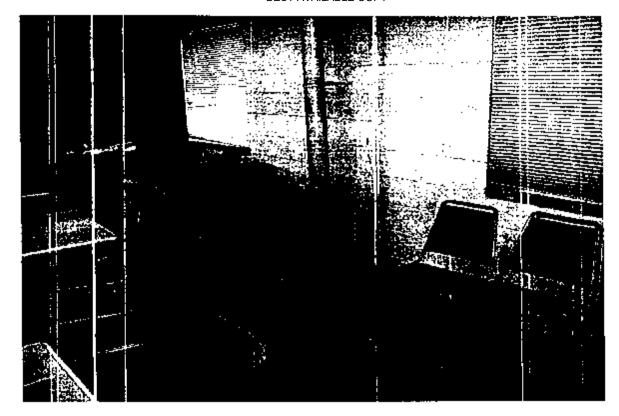


Photo 11: Phote of the individual heating unit found in the training room.

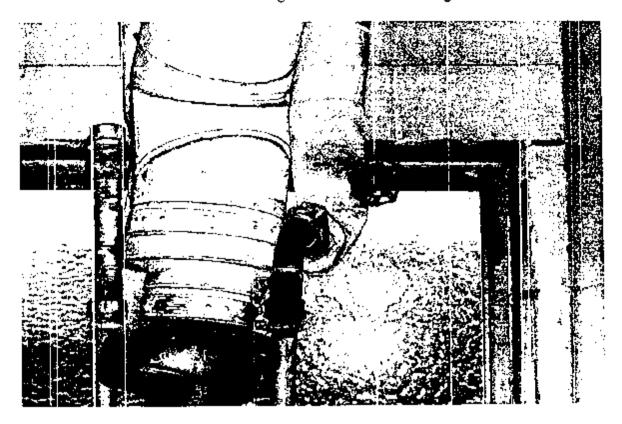


Photo 12: Thermal pipe insulation found on the hot water system.

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 difficul: to remove effectively. Whenever possible, ongoing and daily cleaning of leaded dust during lead hazard control projects is recommended. Ongoing and daily cleaning is also necessary to minimize worker exposures. Cleaning is the process of removing visible debris and dust particles too small to be seen by the naked eye. Removal of lead hazards in a space will not make the space safe unless excessive levels of leaded dust are also removed. This is true regardless of whether the dust was present before or generated by the lead hazard control process itself. Improper cleaning can increase the cost of a project considerably because additional cleaning and clearance sampling will be necessary. A visibly clean surface may contain high and unacceptable levels of dust particles and require special cleaning procedures. However, cleaning and clearance can be achieved routinely if care and diligence are exercised.
- 2. Difficulties in Cleaning While cleaning is an integral and essential component of any lead hazard control activity, it is also the most likely part of the activity to fail. Several common reasons for this failure include worker inexperience, high dust-producing methods, and deadlines.
- 3. Performance Standard Although the cleaning methods described in this document are feasible and have been shown to be effective in meeting clearance standards, other methods may also be used if they are safe and effective. This performance-oriented approach should stimulate innovation, reduce cost, and ensure safe conditions for both occupants and workers.
- 4. Clearance Standard 200 µg/ft 2 on interior floors and horizontal surfaces (NAVFAC Message 160647Z APR 98), 800 µg/ft 2 for exterior concrete (a HUD interim recommendation and serves as a useful guideline). These levels are based on wipe sampling. Clearance testing determines whether the premises or area are clean enough to be reoccupied as a non-lead work area after the completion of a lead hazard control project. A cleaned area may not be reoccupied until compliance with clearance standards has been established. To prevent delays, final testing and final cleaning activities should be coordinated.
- 5. Worker Inexperience To understand the level of cleanliness required to meet the established clearance standards for hazard control cleanup, new hazard control personnel often require a significant reorientation to cleaning. Many construction workers are used to cleaning up only dust that they can see, not the invisible dust particles that are also important to remove.
- 6. Equipment Needed for Cleaning The following equipment is needed to conduct cleaning: high-efficiency particulate air (HEPA) vacuums and attachments (crevice

- tools), detergent, waterproof gloves, rags, sponges, mops, buckets, 6-mil plastic bags, debris containers, waste water containers, shovels, rakes, water-misting sprayers, and 6-mil polyethylene plastic sheeting (or equivalent).
- 7. Waste Disposal Regulations governing hazardous and non-hazardous waste storage, transportation, and disposal affect both the daily and final cleaning procedures. The hazard control contractor and the disposal contractor should work together to establish formal written procedures, specifying selected containers, storage areas, and debris pickups, to ensure that all relevant regulations are met.
- 8. Containment Because of the difficulty involved in the removal of fine dust, dust generated by hazard control work should be contained to the extent possible to the inside of work areas. Inadequately constructed or maintained containments or poor work practices will result in additional cleaning efforts, due to dust that has leaked out or been tracked out of the work area.
- 9. Pre-cleaning Procedures Pre cleaning (i.e., cleaning conducted before lead hazard control is begun) is necessary only in facilities that are heavily contaminated with debris/paint chips, etc. Pre cleaning involves removing large debris and paint chips, followed by HEPA vacuuming. These steps may be followed by removal of occupant furniture or carpeting (rugs or carpets or any porous item in the firing range is not recommended due to the difficulty in cleaning these items effectively), depending on the worksite preparation. Carpeting (if present) should always be misted before its removal to control the generation of hazardous dust. However, if necessary, owners or project management should be prepared to remove furniture before lead hazard control work begins.
- 10. Basic Cleaning Methods: Wet Wash and Vacuum Cleaning Techniques Because leaded dust adheres tenaciously, especially to rough or porous materials like weathered or worn wood surfaces and masonry surfaces (particularly concrete), workers should be trained in cleaning methods. As a motivator, some contractors have awarded bonuses to workers who pass clearance the first time. The typical cleaning method uses a special vacuum cleaner equipped with a HEPA filter, followed by wet washing with special cleaning agents and rinsing, followed by a final pass with the HEPA vacuum. Although HEPA filtered vacuums and trisodium phosphate (TSP) cleaners have been considered the standard cleaning tools for lead hazard control projects, new research, discussed under the Alternatives Methods section in this document, suggests that other tools and products may also be effective in efficiently cleaning dust while providing adequate worker protection from airborne exposure risks. Some of these innovations may even be superior.
- a. HEPA Vacuuming HEPA vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small particles. These filters can remove particles of 0.3 microns or greater from air with 99.97 percent efficiency or greater. (A micron is 1 millionth of a meter, or about 0.00004 inches.) Some vacuums are equipped with an ultra-low penetration air (ULPA) filter that is

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

- (1) Operating Instructions There are a several manufacturers of HEPA vacuums. Although all HEPA vacuums operate on the same general principle, they may vary considerably with respect to specific procedures, such as how to change the filters. To ensure the proper use of equipment, carefully follow the manufacturer's operating instructions and, if possible, arrange training sessions with the manufacturer's representative. Although HEPA vacuums have the same suction capacity as ordinary vacuums that are comparably sized, their filters are more efficient. Improper cleaning or changing of HEPA filters may reduce the vacuum's suction capability.
- (2) Special Attachments Because the HEPA vacuum will be used to vacuum surfaces other than floors, operators should buy attachments and appropriate tool kits for use on different surfaces such as brushes of various sizes, crevice tools, and angular tools.
- (3) Selecting Appropriate Size(s) HEPA vacuums are available in several sizes, ranging from a small lunch backet-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 ione in the containment area or off-site.
- b. Wet Detergent Wash Several types of detergents have been used to remove leaded dust. Those with a high phosphate content (containing at least 5 percent presidium phosphate also known as TSP) have been found to be effective when used as part of the final cleaning process. TSP detergents are thought to work by coating the surface of dusts with phosphate or polyphosphate groups, which reduces electrostatic interactions with other surfaces and thereby permits easier removal. Because of environmental concerns some states have restricted the use of TSP, and some manufacturers have eliminated phosphates from their household detergents. However, high TSP detergents can usually be found in hardware stores and may be permitted for limited use, such as lead hazard control. Other non-TSP cleaning agents developed specifically for removing leaded dust have also been found to be effective (possibly more effective than TSP) in limited trials by several investigators and may also be safer, since TSP is a skin and eye irritant.\* Manufacturer's Dilution Instructions - Users of cleaning agents for leaded dust removal should follow manufacturer's instructions for the proper use of a product, especially the recommended dilution ratio. Even diluted, trisodium phosphate is a skin irritant and users should wear waterproof gloves. Eye protection should also be worn, and portable eyewash facilities manufacturer's instructions. Failure to do so may cause a reduction in suction power (thus reducing the vacuum's efficiency and effectiveness). Failure to change pre-filters may damage the vacuum motor and will also shorten the service life of the HEPA filter, which is far more expensive than the pre-filters.
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- (1) Proper Wet-Cleaning Procedures At the conclusion of the active lead hazard control process and after the initial HEPA vacuuming, all vacuumed surfaces should be thoroughly and completely washed with a high-phosphate solution or other lead-specific cleaning agent (or equivalent) and rinsed. Select a detergent that does not damage existing surface finishes (TSP may damage some finishes). Work should proceed from ceilings to floors and be sequenced to avoid passing through rooms already cleaned.
- (2) Changing Cleaning Mixture Many manufacturers of cleaners will indicate the surface area that their cleaning mixture will cover. To avoid recontaminating an area by cleaning it with dirty water, users should follow manufacturer-specified surface area limits. However, regardless of manufacturers' recommendations, the cleaning mixture should be changed after its use for each room. As a rule of thumb, 5 gallons should be used to clean no more than 1.000 square feet. Used cleaning mixture is potentially hazardous waste; consult with your local water and sewage utility for directions on its

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

- 11. The HEPA/Wet Wash/HEPA Cycle Typical Procedures The usual cleaning cycle that follows lead hazard control activities is called the HEPA vacuum/wet wash/HEPA cycle and is applied to an entire affected area as follows: First, the area is HEPA vacuumed. Next, the area is washed down. After drying, the area is again HEPA vacuumed. The rationale for this three-pass system is as follows: The first HEPA vacuum removes as much dust and remaining debris as possible. The wet wash further dislodges dust from surfaces. The final HEPA cycle removes any remaining particles dislodged but not removed by the wet wash.
- 12. Single-Pass Wet Wash/HEPA Vacuum Some lead hazard control contractors have roundhead spray cleaner vacuums to be a cost-effective alternative to the three-pass system. Similar to home carpet-cleaning machines, these vacuums simultaneously deliver a solution to the surface and recover the dirty solution. Theoretically, this process combines two of the steps in the HEPA vacuum/wet wash/HEPA cycle into one step. While anecdotal evidence indicates that the spray cleaner wet wash/HEPA is effective for some uses, limitations have been noted in its use for ceilings, vertical surfaces, and hard to reach areas. This device may be used as long as clearance standards are met.
- 13. Sealing Floors Before clearance, all floors without an intact, nonporous coating should be coated. Sealed surfaces are easier to clean and maintain over time than those that are not sealed. Wooden floors should be sealed with a clear polyurethane or epoxy coating. Concrete floors should be sealed with a concrete sealer or other type of epoxy coating. If these floors are already covered by an effective coat of sealant, it may be possible to skip this step. New surfaces should be cleaned with a cleaning solution that is appropriat? for that type of surface.
- 14. Surface Painting or Sealing of Non-floor Surfaces Surfaces, including walls, ceilings, and wood-work, should be coated with an appropriate primer and repainted. Surfaces enclosed with vinyl, aluminum coil stock, and other materials traditionally not repainted are exempt from the painting provision. Coating of walls may not be appropriate if lined with acoustic material to control noise.
- 15. Exterior Cleaning Areas potentially affected by exterior lead hazard control should be protected via a containment system. Because weather can adversely affect the efficacy of exterior containment, the surface plastic of the containment system should be removed at the endow each workday. On a daily basis, as well as during final cleaning, the immediate area should be examined visually to ensure that no debris has escaped containment. Any such debris should be raked or vacuumed and placed in single 6- mil or double 4-mil plastic bags, which should then be sealed and stored along with other contaminated debris. HEPA vacuuming inappropriate for hard exterior surfaces, not for soil.

- 16. Worker Protection Measures Studies indicate that during daily cleaning activities, especially while wet sweeping, workers may be exposed to high levels of airborne dust. Therefore, workers should wear protective clothing and equipment and appropriate respirators if required.
- 17. Maintaining Containment The integrity of the plastic sheeting used in a lead hazard control project must be maintained. During their daily cleaning activities, workers should menitor 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 bazard control supervisor, contractor or owner as a preparatory step before the final clearance examination, it does not replace the independent visual assessment conducted during clearance. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or reclined. Therefore, it is more cost-effective to have the supervisor rather than the clearance examiner perform this initial examination.
- 20. Final Inspection The final clearance evaluation should take place at least 1 hour after the final cleaning. Clearance has three purposes: 1) to ensure that the lead hazard control work incomplete; 2) to detect the presence of leaded dust; and 3) to make sure that all treated surfaces have been repainted or otherwise sealed. Clearance is usually performed after the scalant 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 fir al 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 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.: 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 35<sup>th</sup> 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

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

#### 3. General.

- 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 (AJHA) 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. lliumination 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. <u>Lead Wipe Samples:</u> 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. <u>Asbestos Suspect Building Material:</u> 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 Flazardous areas were identified or recorded on the day of the survey.

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

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

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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.

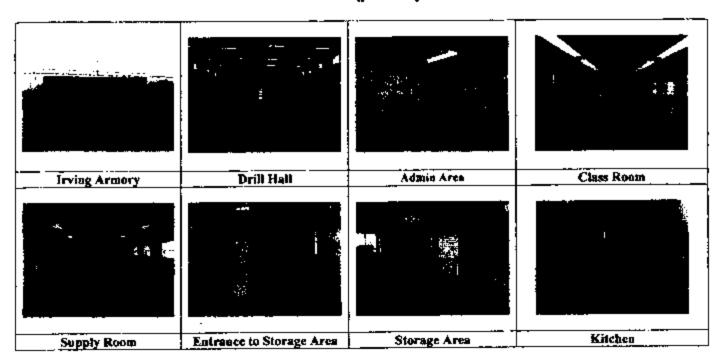
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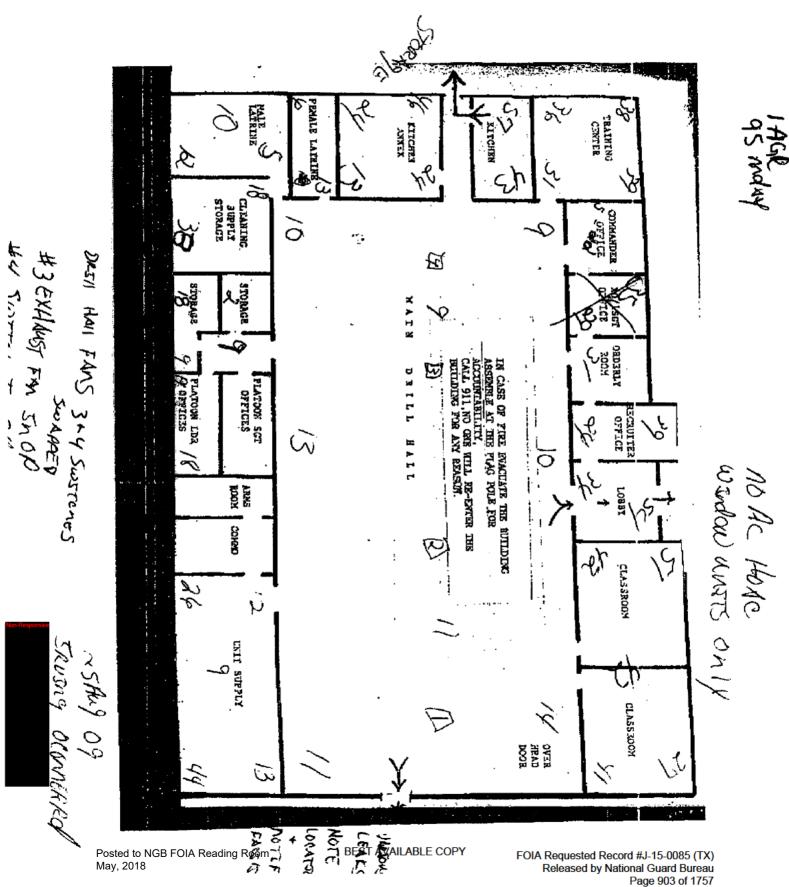
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# Appendix A:

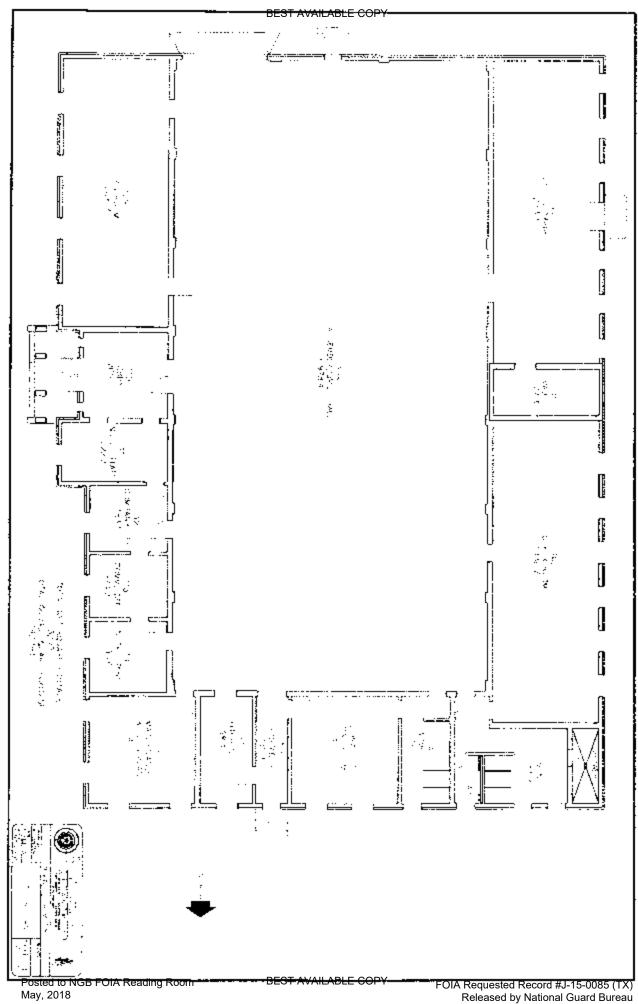
Photographs and Floor Layout.

# Irving Armory





FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 903 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 Big Spring Armory, Snyder Armory, Wylie Armory, Terrell Armory, Wichita Falls Armory, Kaufman Armory, and Greenville Armory, TX.

- 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. T8 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, Obio.
- 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.
- I. 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 0f 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



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



June 25, 2004

### Table of Contents

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Noise Survey	Page 4
Illumination Survey	Page 4
Heating Ventilating and Air Conditioning (HVAC)	Page 4
Recommendations	

# Appendices

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

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/JAQ	No issues observed or documented.	No action.

Survey Date: 14 April 2004

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

#### BACKGROUND:

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 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.

<u>Site Description.</u> 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.

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

<u>Lead Wipe Samples:</u> 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	Baeboard	None.

May, 2018

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.

<u>Noise Survey:</u> 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.

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

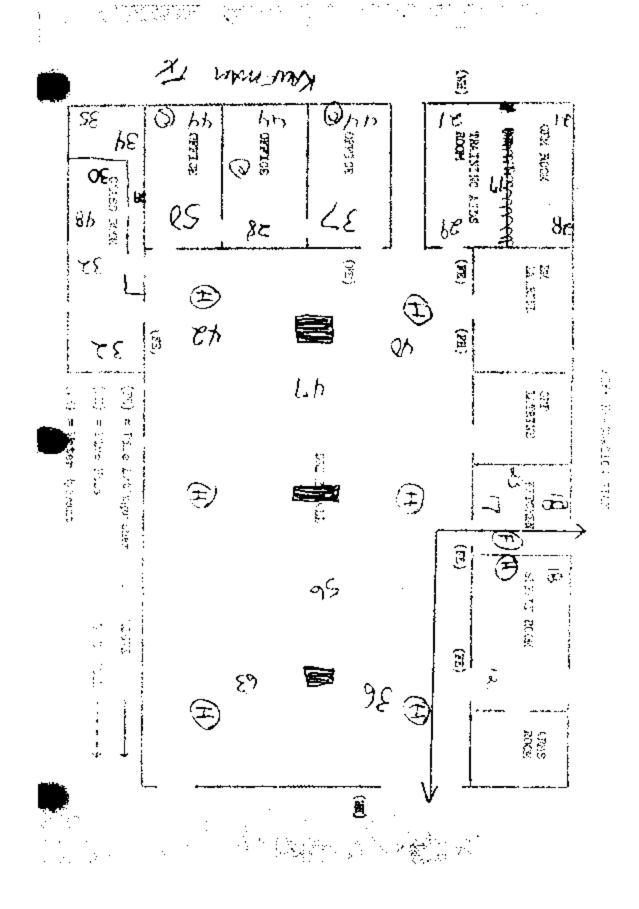
Survey Date: 14 April 2004

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

# Non-Responsive

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APPENDIX A



[-V

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APPENDIX B

#### **EMSL** Analytical

3.Cooper St., Westmorit, NJ 05108

Phone: (856) 858-4390 Fax: (858) 858-4661 Email: skauffman@emat.com



Attn:

Fax:

Project:

Customer 10:

Customer PO:

Received

EMSL Order:

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EMBL Proj:

#### Lead in Wipes by Flame AAS (SW 846, 7429)

Cilent Sample I	Description	Lab ID	Analyzed	Area Sampled	:	 Load Concentration
KA-01	Results for these wipe samples do not meet the EPA standards for sample matrix and and not recognized under the NLLAP accreditation program	.0001	5/6/04	144 in²		.<16.0 µg/ft⁵
KA-02		0002	5/6/04	144 m²		 <10.0 µg/ft²
KA-03		0003	5/6/04	184 W2		<10.0 µg/k²
KA-04		0004	5/6/04	144 in²		<10.0 µg/k²
KA-05		0005	5/6/04	144 m²		<10.0 µg/ft²
K4-06		0006	5/6/04	144 in*		 47.0 µg/ft <sup>8</sup>
KA-07		0007	5/6/04	144 tn²		 <10.0 µg/ft³
KA-08		8000	5/8/04	144 In <sup>a</sup>		<10.0 µg/ft*
KA-99		0009	5/5/04	144 in*		 <10.0 µg/ft*
KA-10		9010	5/6/04	144 in³		<10.0 µg/it²
KA-11		0011	5/8/04	144 in		 <10.0 µg/ℓ <sup>2</sup>
KA-12		0012	5/6/04	144 in'		<10.0 pg/ft*



DITATIONS: NIAMELAP DASS, AMA Environmental Land Laboratory Approval Program: 100194

#### EMSL Analytical, Inc.

107 Haddon Ave., Westment, NJ 06108

Phone: (356) 556-4500 Fax: (\$56) 656-4560 Email: sajoge(SEMS), com



Attn:

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Customer ID: Customer PO: T\$80

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4/29/04

Analysis Date:

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

				Non-Asbestos			
Sample	Location	Appearance	Treatment	% Fibrous	% Non-Fibrous	% Type	
KA-A018 \$46467149-0001		White/Brown Fibrous Heterogeneous	Dissolved Teased	10% Cellulose 45% Min. Wool	45% Non-fibrous (other)	None Detected	
KA-A02B-FT 010407148-0002		Brown Non-Fibrous Homogensous	Desolved		98% Non-fibrous (other)	2% Chrysotile	
KA-A028-Mas 646407119-0004		Black Non-Fibrous Homogeneous	Dissolved		92% Non-fibrous (other)	8% Chrysotile	
KA-A03B 840407149-0003		White/Brown Fibrous Heterogeneous	Dissolved		100% Non-florous (other)	None Datected	



Region isolitables inherent in PLM authertor fibers in dimensions below the resolution consumity of PLM may not be distorted. Semples reported as <1% or none detected additional teating by TEM may not be represented as set in the author of the property of the length series and may not be represented as an artificial. The above per report relates only to the length series and may not be represented as an artificial fibre. Self-La above per property of the length series of the length series and perfect of the length series and the length of the length series are the report of the length series and length series are the reputational series of the length series and length series are the requirements of NELAC unless otherwise noted. ed by EMS: Washnord (NVLAP #101048-0), NY ELAP 10872

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APPENDIX C

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Leed Chip .*	SW846-7420, 3050B Mod. / AOAC (974,02)	Flame Atomic Absorption	C.0114 ++	
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Land Soil	or SW846-6010B	ICP	C.) mg/l water 10 mg/kg (pr m) soil	
1.00 15 A 1974	NIOSH 7082 Med.	Flame Atomic Absorption	4 ug/filter	
Market of the Party	or N(O5H 7300 Mod.	ICP	3.D ug'filter	
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TC.PLso	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (pprn)	
Sharast Burgers	or \$W846-6010B	ICP	0.1 mg/l (ppra)	
STUC Lead (Casserine *	CA Title 22 6580176 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (pprs)	
	or SW 846-6010B	TCP	0.1 mg/l (ppin)	
i.e.d in A r ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	
Leic Was ewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (rpm) water	76
Cod Soil -			6.3 mg/kg (pons) soil	25- 507
Lebel in Directors Wa er (check stare Certification Requirems as)	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg.] (rpm)	2
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CM - Air NIOSH OSHA Other:  PLM - Bell D EPA 60  PLM NO EPA 60  Other:  Other:  Other:  Outline  Outline  Outline  No Outline  Outline  No Outline  Outline  Outline  No Outline  Outline  No Outline	7400  6 0/3-93/116  int Count tified Point Count OB (Grav metric)  r Ealk tive titive  AMPLE NUMBER	TEM AIE AHEI NIOS EPA 1  TEM BUT Drop I TEM 1  SAMPLES FOR ANA EMSL ANA	RA SH 7402 Level II  LK/misc Mount (Qualitative Steld NOB (Gravimetrical) ACCEPTED ALYSIS BY NALYTICAL LOCATION	(NC .	TEM WATER  Was zwate  Drinking V  Water - N  Water - N  Water-NY  TEM MICRO  ASTM D  Guarantee  XRD  Asbestos  Silica  OTHER  VOLUM	Water EPA 100. Y Wastewater Drinking Water TVAE/WIPE 5755595
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CM - Air NIOSH OSHA Other:  PLM - Bell D EPA 60  PLM NO EPA 60  Other:  Other:  Other:  Outline  Outline  Outline  No Outline  Outline  No Outline  Outline  Outline  No Outline  Outline  No Outline	7400  6 0/3-93/116  int Count tified Point Count OB (Grav metric)  r Ealk tive tifive  AMPLE NUMBER  AMPLE NUMBER	TEM AIE AHEI NIOS EPA 1  TEM BU Drop I TEM 1  SAMPLES	RA SH 7402 Level II  LK/misc Mount (Qualitative Steld NOB (Gravimetrical) ACCEPTED ALYSIS BY NALYTICAL LOCATION	(NC .	TEM WATER  Was zwate  Drinking V  Water - N  Water - N  Water-NY  TEM MICRO  ASTM D  Guarantee  XRD  Asbestos  Silica  OTHER  VOLUM	Water EPA 100. Y Wastewater Drinking Water TVAE/WIPE 5755595

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APPENDIX D

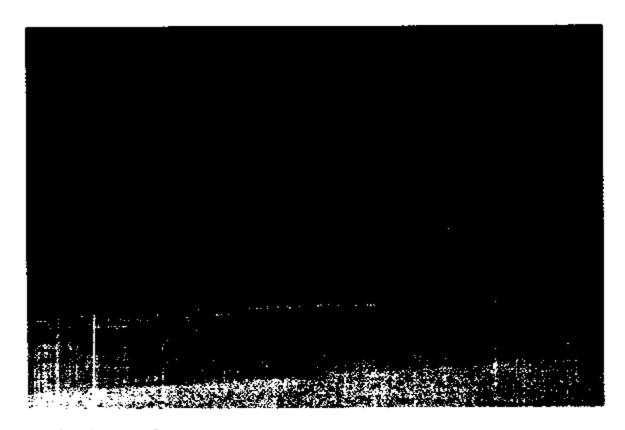


Photo #1: Armory front entrance.



Photo #2: North side of the armory.



Photo #3: North east corner of the armory.

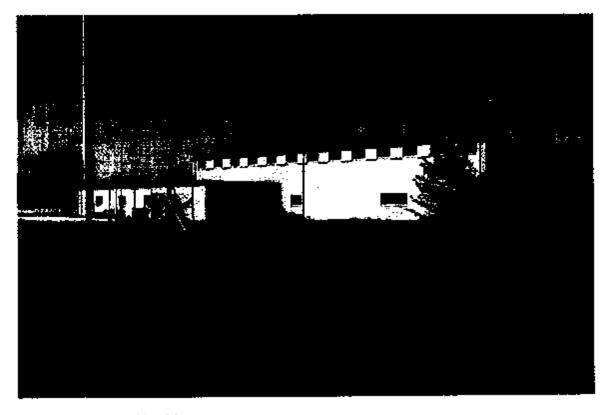


Photo #4: South side of the armory.



Photo #5: Drill hall facing west.



Photo #6: Drill hall facing east.



4, 2004

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

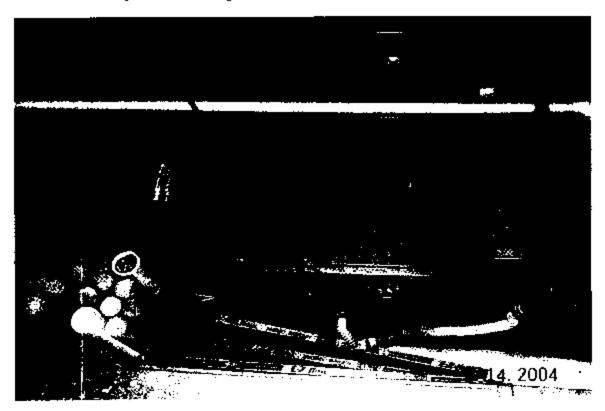


Photo #8: The Armory's forced air furnace

#### 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.

#### References.

- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. Report of October 2003, Industrial Hygiene Survey, Non-Responsive Technical Solutions Fayetteville, GA.

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

#### 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 0f 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 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.



CF:

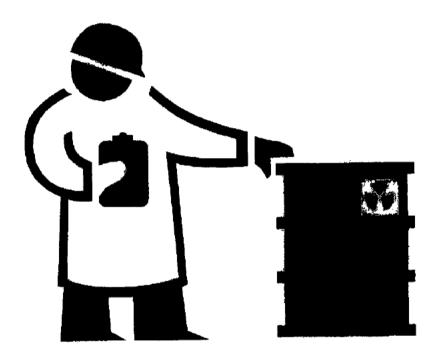
**NBG-AVN-SH** 

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



### Kerrville Armory

411 Meadowview Kerrville, TX 78028-5608

Non-Responsive

#### BEST AVAILABLE COPY TABLE OF CONTENTS

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MEMORANDUM FOR: Texas Army National Guard, ATTN: more responsive mmander, Det. 1
Company A 249 SPT, 411 Meadowview, Kerrville, TX 78028-5608

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

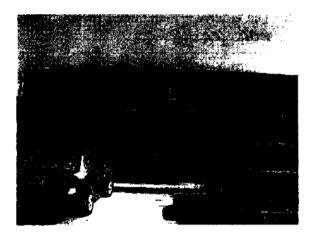
At the request of Non-Responsive

2(6)(11)(11)

ational 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:

FT. 774	K.C.		Non-Responsive
	1	Det. 1 Company A 249 SPT	Non-itesponsive
	2		

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:

I.		To the second second
Building condition / Indoor Air Quality	There were no obvious signs of occupational hazards or concerns.     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 <sup>2</sup>	Continue to follow good hygiene and housekeeping practices.
Asbestos Bulk Samples	No issues	No action
Mumination Survey	22.5 to 159.4 foot-candles	Upgrade lighting measurements as required. Replacing blown or broken lights, painting the walls a fight 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.	Continue to update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.  Personnel responsible for these items should receive annual training in HAZCOM requirements

May, 2018

Ergonomics	Ergonomics canceras in Administrative 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

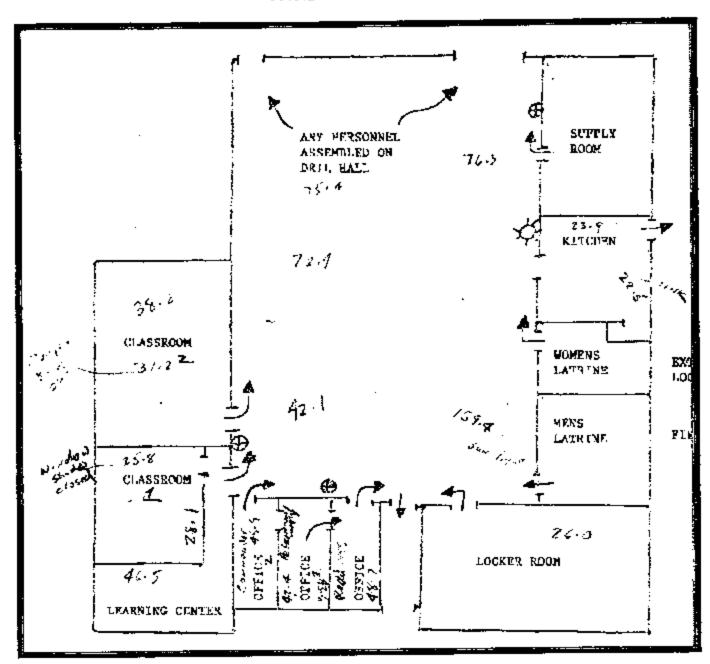
# Non-Responsive

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.

Section 1997 and 1997	for the second second	Jane 1
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		

短线 在外,通历经济

#### FACILITY DIAGRAM:



#### BEST AVAILABLE COPY PERSONNEL DATA:

This facility houses the following full-time personnel:

ASSIVELENTA — RATE — MINING SERVICE — RATE — MINING SERVICE — RATE — MINING SERVICE — MININ	
Non-Responsive	

#### **BUILDING CONDITION:**

#### Walk-through Observations

	in a superior of the contract
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:

The facing leading states and as a	TEN (Presides () ( Presides ()	La La Lagranda (1980)

#### 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:

	Maragar No.		
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		
	<u>T</u>		Ţ.,

#### Ventilation Sample Results:

	Sagis S. A. P. W.	en e	
Portings NCO Office	800	12 V 12	. <u>.</u>
Readiness NCO Office		12 X 12	

#### Lead Wipe Sample Results:

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

	TO SERVICE OF THE SER	A / Database
 -		]]

#### 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:

	a yarangan Marangan	· <del>*</del>		
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.

	等性 <b>的基础区等的</b> 或例如		The State of the S
1-Kerrville	Blank (Administrative Offices,	BRL	Below Reporting Levels
	Kitchen, Drill Hall and HVAC)		1 -
2-Kerrville	Kitchen Counter	BRL	
3-Kerrville	Kitchen Sink area	BRL	

May, 2018

#### DRILL HALL

Personnel officially use the drill half 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 hail area are as follows:

en in tuet en in <del>de</del> n en i <mark>n verkele</mark> n in de en <sup>eer</sup> te in		The state of the s
	1.35	
Outside Supply office	76.3	
Back wali	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 equare foot on bare and carpeted floors is considered dangerous. The following are the sample results:

p. 2	Team For the second		11.5 \$ 1
4-Kerrville	Drill Hall outside Supply Office	BRL	Below Reporting Levels
5-Kerrville	Drill Hall vehicle area by back	BRL	<u> </u>
	door	L	

#### Noise Sample Results:

Noise lavels 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(a)

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:

and the second	4		9-11
<u> </u>	er en	r Selection of	
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 746) lead dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

the state of the state of	and the second of the second		e great and a second
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

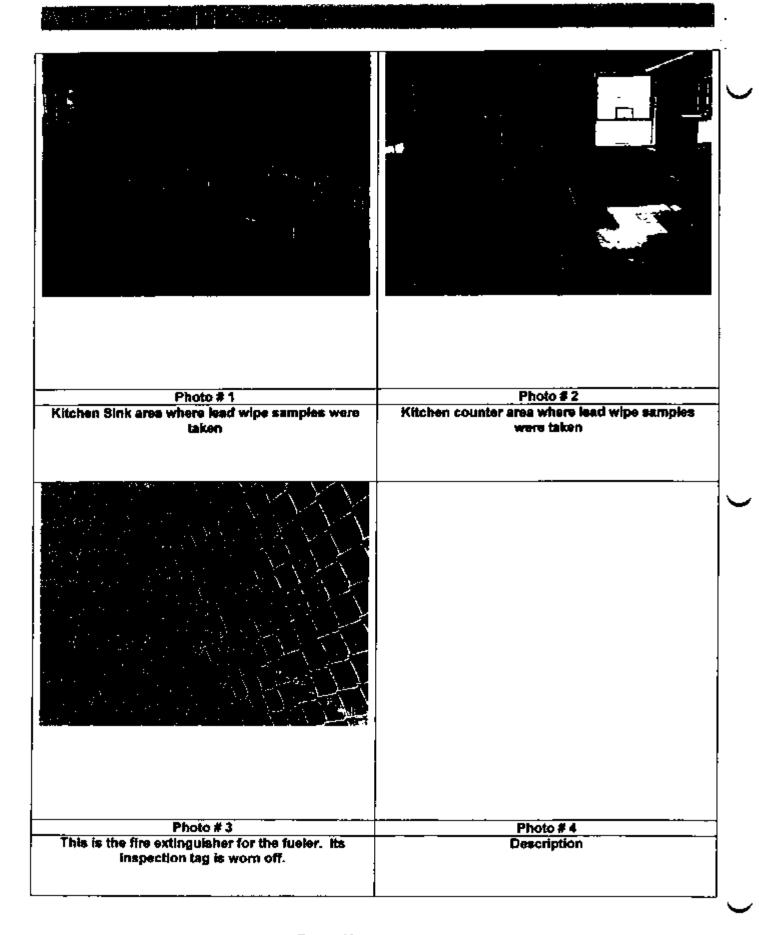
This facility has never had an indoor firing range.

#### **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.

Tarabar and M

- 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 wailboards 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 fingal 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 burnidity, 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 building 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 concents or problems. An emphasis on maintaining neutral postures and proper lifting packetiques should be covered.
- g. Interview technic flows the extension of the principal state of t
- 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.
- Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.
- Portable eyewashes, if available, should be maintained on a regular basis to ensure removal of opportunistic pathogens.



May, 2018

Analytical Environmental Servs, Inc.

Dec. 10/24/2003

TOTAL LEAD IN WIPE SAMPLES N7082

CLIDNT:

Technical Solutions International

Lab Order:

0310641

Project:

Kerryille Armory

Date Received: 10/20/2003 12 5

Project No:

Kerrolla Armor

Matrix

Wipe

PO Xx

Analysi:

898

						<u></u>	
Laboratory	Client Sample	Results	Units	MDL	DF	Date	Dete
D	Ð					Collected	Analyzed
0310641-001A	I-KERRVILLE	BkL	με, Tetal	2 83	1	10/15/2003	10/21/2003
03506-11-002A	2-KERRYTLLE	BRL	µg, Total	2.83	1	10/15/2003	10/21/2003
0010641-003A	*XERRVILLE	BRL	με, Total	2 (3	1	10/15/2003	10/23/2003
0310=41-004A	4XEERVILLE	RBI.	pp, Total	289	1	10/15/2003	10/21/2000
0310o41-003A	<b>EXERGYILLE</b>	SRL	pg. Total	2 83	1	10/15/2003	16/21/2003
0310641-006A	6 KERRVILLE	BRL.	ρ <b>g,</b> Total	2.83	1	10/15/2003	10/21/2003
091064J-007A	7-KERRYDJJE	BRL	pg Tetal	2 93	1	10/15/2003	10/71/700)
(B)(0441-00BA	BUERRVILLE	149	μg, Total	2.83	1	10/15/2003	10/71/2003
0310641-009A	<b>AKERRYILLE</b>	363	pp, Total	2.83	1	10/15/2003	(0/23/2003

MEN. - Method Detection Levil

ND - Not Detected at the Reporting Limit

DF - Dikmon Franc

Page 2 of 2

#### Chemicals on hand as 15 Sep 03

Chemical	Quantity	Container	Remarks
HTH Chlorinator	18@ 5lbs	Bottle	Milvan
Unstabilized Cholorinating granules	Approx 20 lbs	Plastic 100 lbs container	In fast 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 Trint Polyelectrolyte Cationic	11	Bottles	Milvan Cabinet
Coagulant Liquid	10@ 2.5lbs	Bottle	Milyan Cabinet
Citric Acid Anydrous, Technical	29@ 3/4 lbs	Bottles	Milvan Cabinet
Wetting Solution	1@ 21b	Bottle	MilVan Cabinet
N-Amyl Acetae	2@ 1pt	Bottles	Milvan Cabinet
Orhotoldin Solution	1@ 4oz	Bottle	Milvan Cabinet

#### Maintenance Section

Brake Fliud	1/4 Gal		Milyan
Penetration Oil	2@ Ipt		Milvan
Anti-Freeze	5gal	Not full	Milvan
Gear Lube	5gal	Not full	Milvan
Grease, Auto	35 Ibs	Not full	Milvan
Motor Oil 15W/40	1.5 gal	Not full	Milvan
Hydraulic Fluid	2@ 1 gal		
<u>-</u>			

# 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.

- 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. T8 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 Environmental Management Solutions

#### 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)
- 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.

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

- 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



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.

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MEMORANDUM FOR: Company C 144<sup>th</sup> 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.

- 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.
- National Institute for Occupational Health and Safety (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- Industrial ventilation, 22<sup>nd</sup> 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. <u>Purpose</u>. 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. <u>Background</u>. 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 Industrial Hygienist.

4. <u>Facility Description</u>. This facility houses Company C of the 144<sup>th</sup> 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	Administrative offices Orderly Room
Class Rooms (2) Weight 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.

### Findings.

- A. <u>Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room</u> 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. <u>Suspect Asbestos Containing Materials</u>
  - (1) There was no suspect asbestos containing building material identified in this facility. This is consistent with the building having been renovated in 1995.

- 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. <u>Vault</u> The vault is used to store military weapons, radiac meters and night vision goggles. Entry into the vault is limited to 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. <u>Illumination survey</u> 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	ANSI Minimum Requirements	DG 412-2 Minimum Requirements
Non-Responsive	Level (ftc) 57	(ftc) 50 – 100	(ftc) 50
Supply Room Office, Non-Responsive	59	50 – 100	50
Supply Room Onice, Non-Responsiv	32	50-100	50-100
Supply Toom 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.

- F. <u>Drill Floor</u> 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. <u>Kitchen</u> 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 undermeath 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.
- 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.

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

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May, 2018

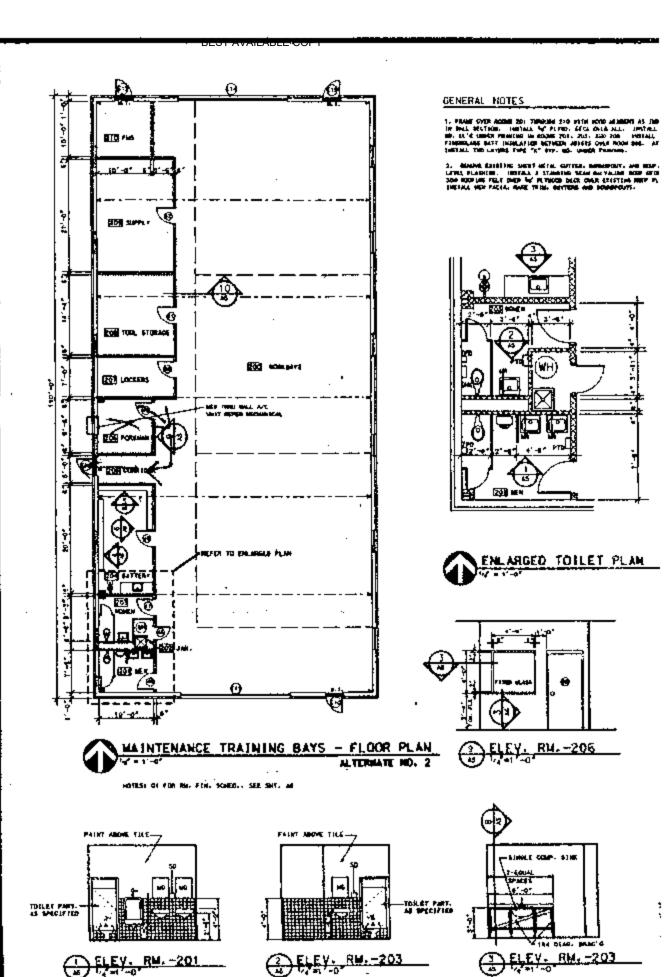
### Recommendations

- 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.

### 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	Orill 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

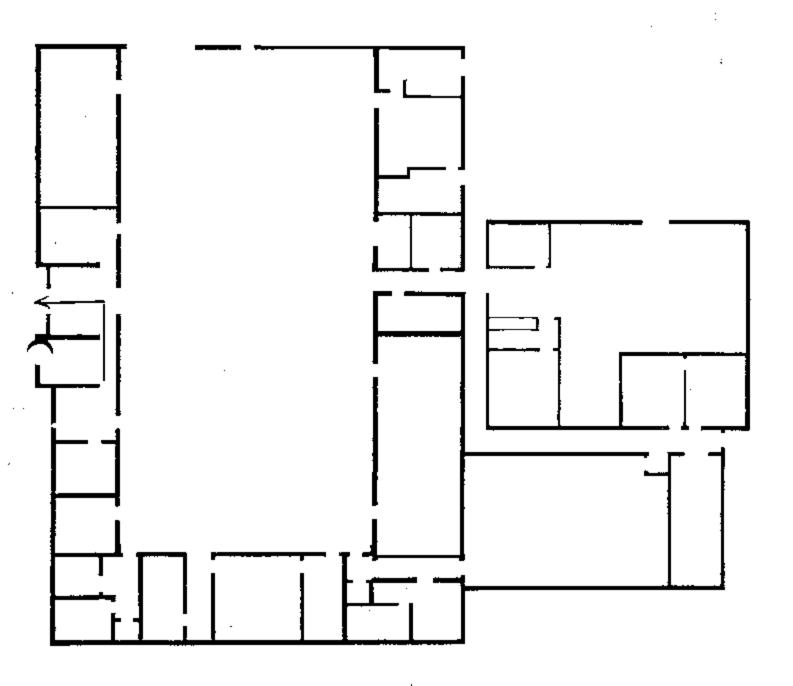
### APPENDIX A



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APPENDIX B

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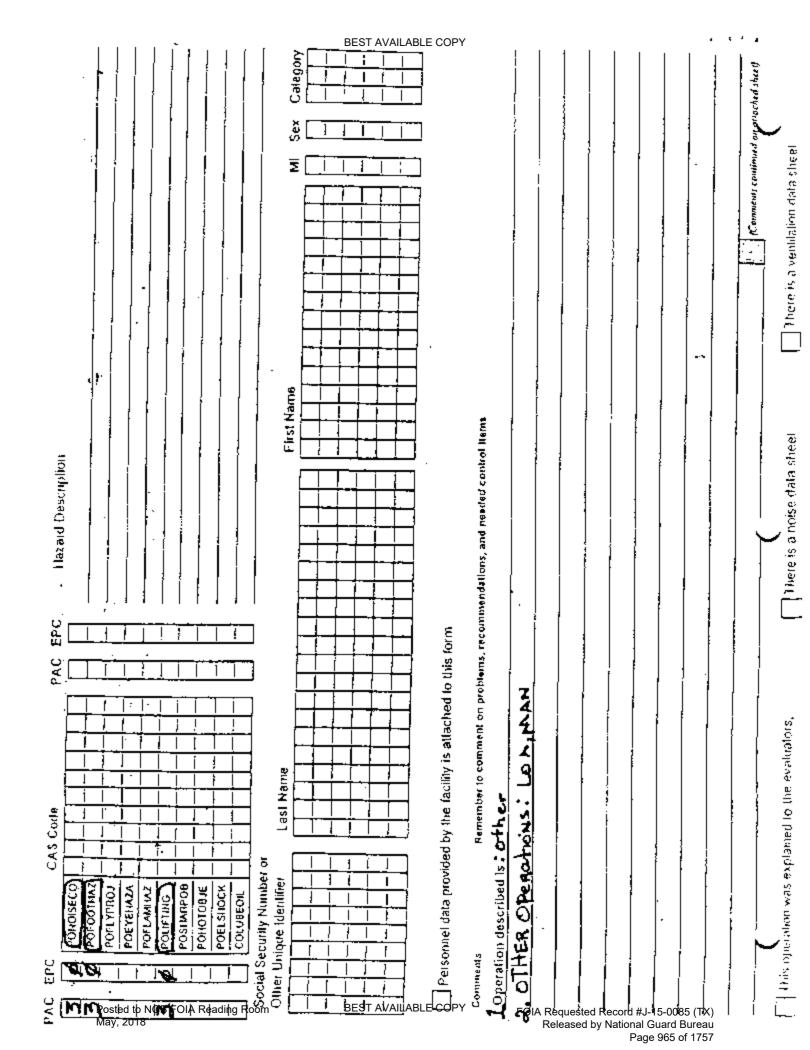
APPENDIX C

other e ►= evaluator's recommendation MEDDAC FIMENDE FORM 609-R Eyes and Face other BEST AVAILABUE welding goggles/glasses Supervisor 🔀 Controls present (if >6, continue in comments)(25) \_ab Hoods Supervisor or Point of Contact Location ARLOC or agreement laser eye protection cheni/safety impact chemical splash welding helmet full face shield surgical gloves safely impact leather/cotton cold surfaces sunglasses NBC agents hol surfaces Operation Vapor Degreasers soivents acid ΜS Installation Z Survey Z Date [O] Telephone Number Hearing Reminders: ergonomics - dermatilis - physical agenis - flammable storage other Si ser Spray Booths other (>85-108dBA steady) earplugs Year Respirator (106-118) mull/earplug comb EYE (permanent) (118 or >) with time limit sbrasive blasting hood Month powered air purifying muffs and earplugs 1/4 face air puritying 1/2 face air puritying full face air purifying helmets w/mults Ö ייי יוואוסטואוAL HYGIENE SURVEY FORM self-contained muffs alone Open Surface Tanks Canal caps Evaluation [25 char max per line] disposable NSG \_ - EYE (portable) airline 1 H Commercial MG MACOM 100 PM æ 1 E \_-SHW - GMV - LEV other Of ter Manufacturer's Description (10 char max) Ventilation Units Sub-MACOM Body special purpose clothing heat reflective vest/suit XX cold weather clothing safety belt/harness full body suit Building Number Frequency (hrs/day) coveralls 009 aprons 事等》 RAC GORE Unit Code UniVOrganization Þ No. CIVs safety shoes (nonconductive) other other Head and Feet Controls Required [25 char max per line] salety shoes (conductive) NIOSH TC# or foreign equiv. [10 char max] cold weather boots/hat RAD ECB EPL RHS SPR WEL ACO ADM DSA DSN LAB LCK impermeable boots No. MI hard hats Contractors Room Number 200 0 No. LOCs **BEST AVAILABLE COPY** Posted to NGB FOIA Reading Room FOIA Requested Record #J-15-0085 (TX)

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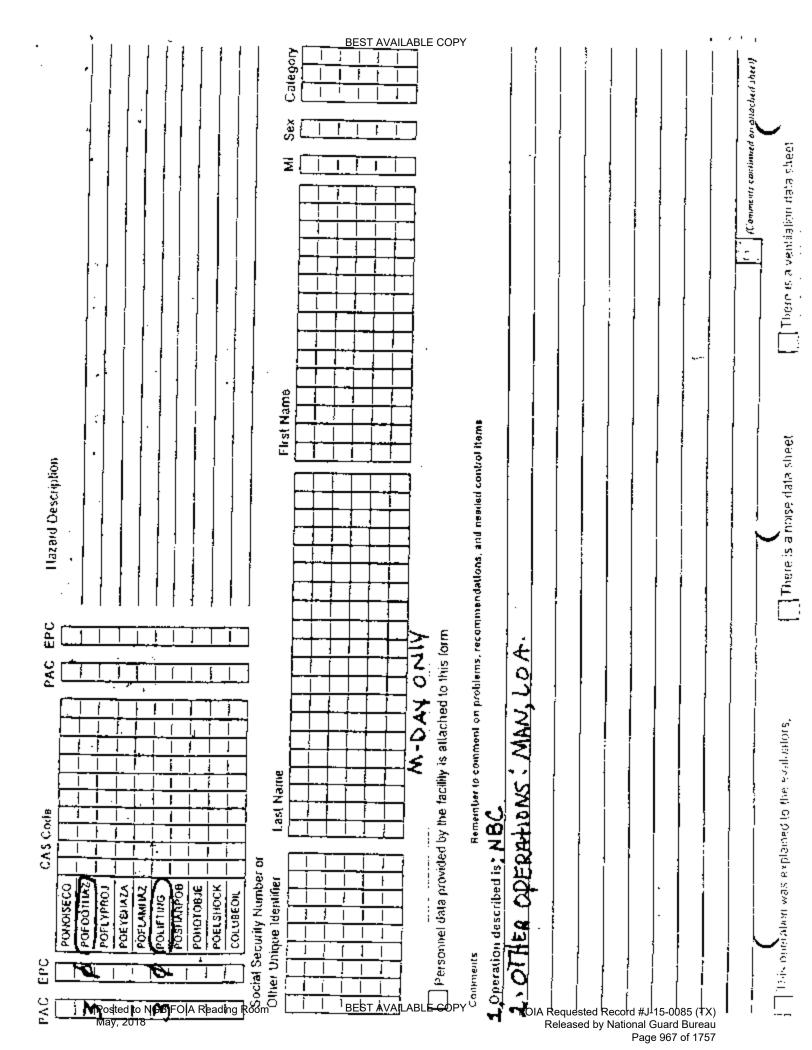


# HHIMS INDUSTRIAL HYGIENE SURVEY FORM

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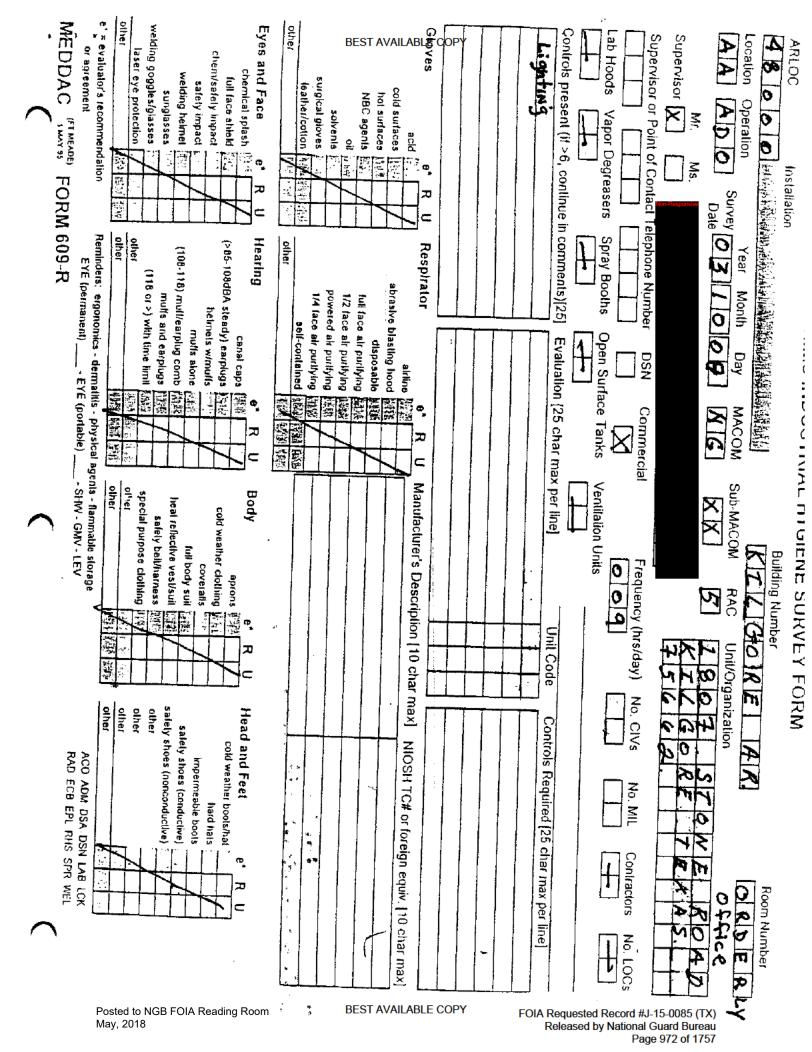
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## HHIMS INDUSTRIAL HYGIENE SURVEY FORM

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APPENDIX D

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HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
WAShington, DC 20310-2500
31 January 1894

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

Satety

### GUIDELINES FOR CONVERTING MODOR FUNKS RANGES TO OTHER USES

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

Applicability. This guidence applies to all persons responsible for the operation of Array National Guard (ARNG) and Air National Guard (ARG) indoor firing ranges. As no regulation/guitigates ean torsees all skrusions that might bries, 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 guidarce is prohibited without prior approval from Chief, National Guard Screen (NGS-AVN-St).

impact on New Manning System. This guidance oper 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 experision date unless sooner super-seded or rescinded.

Suggested Improvements. (The proponent of this publication is the National Guard Bureau, Users are Invited to send comments and suggested imprevements on DA Form 2028 (Rectmmended Changes to Publications and Stank Ferms) directly to Chief, National Goard Bureau, Attn: NGB-AVN-S1, 111 South George Mason Drive, Arlungton, VA 22204-1382,

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

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Personal Protective Equipment	14
Point of Contact	15

Appendices

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- A. Sampling Strategy for Collection of Wipe Samples
- B. Interpretation of Sample Results (Prior to Ceaning)
- C. Imaginetation of Sample Results (After Cleaning)
- D. OSHA Instruction CPL 2-2.208
- E. Where to Pyrchase Sample Media and Comainers
- 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 Receits
- L Supporting Laboratories and Arees Served

### Gigssary

1. Purpose

This pamphlet establishes policy and procedures for conventing indoor tiring ranges to other uses.

2. Reterences

Related publications are listed below.

- DODI 6055.1 (Department of Defense Occupational Salety and Health (OSH) Program).
- b. 48 11-34 (The Army Respiratory Protection Program).
  - AR 49-5 (Preventive Medicine).
- d. NOR (AR) 385-15 (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARNG Indoor Firing Ranges).
- TB MED 502 (Occurational and Environmental Health Replicatory Protection Program).
- f. USAEHA TO 141 (Industrial Hygiene Air Sampüng and Bulk Sampüng Instructions).
  - g. Title 29, Code of Faderal Regulations (CFR) revision, Part 1918 (Occupational Salety and Heath Standards).

at January 1994

NG Part (AR) 385-16/ANGPAM 91-10:

APPEROIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO GLEANING)

5-1 200 microgramming it or LESS. It all sumple results are 200 microgramming it or less, the range can be converted and/or used for any purpose.

b-2 SETWEEN 301 and 200,000 micrograms/ eq.ft.

Range must be deciminated. Coming with dealy by inductions fixed in paragraph 15. Sample rangles will be used to establish a beguine. The baseline aways manua will be used to ensure the 75 percent aduction is echieved.

tion of the complete state of the control of the considered of the control of the

B-I high sample results may exist due to personnel waiting or moving equipment/vehicles over the range suitable causing the lead duet to be "ground" into the substratum. For example, a maintenance activity may have oversprayed paint or spilled solvents onto the autable which would bond with the lead dust. Consult your Regional industrial thygiens Office for specific guidance.

APPENDIX O INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING) "

C-1 goo microgramming it or LESS if all semple results are less than 200 microgramsing it, the range can be convented under used for any parpose after a coat of lead-free lates; paint is applied. The point color must contrast the color of the present substration.

C-2 ABOVE 200 interograms/aq fi
As a minimum, a 75 percent reduction should occur
from your initial sample results or the samples should
be under the 200 microgram/eq fi level. If all sample
results steet this criteria, a contrasting color of leadfree lates paint must be applied before the area is vistized for other purposes. The room can only be used
as a storage erea. Storage of bitchen equipment and
toud is prohibited. The room cannot be used for a
child care or nursery area. If sample results are not

below the 75 percent reduction, a more thorough deaning of the range is required along with resambling will create are met.

- PLEASE NOTE, that it your original wipe temple results were, I.a., 175,000 upon it then you would have to reduce the lead level below 15,125 up/sq ft. This would must the 75 percent radiction crawler, however, this is an enormous amount of leas dust and care should be taken to ensure a heavy coat of paint seats the best dust. It is unto sown at this time whether of not the remaining amount of lead dust will allow the lates paint to adhered to the substratum. If the paint peets talls to the floor and is crushed over a period of time, it will create another resolvable had hazard. If this happens, comtact your Regional Industrial Hygiene Office for guidence. Periodically monitor the convenied range for signs of peeling paint. Paint thips can be enalyzed for lead content. DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRMS RANGE.

APPENDIX E

OCT-24-2003 (FRI) 17:46 USA ENVIRONMENTAL MANAGEME<u>nt</u>

Non-Respons

Y. 804

Rx Date/Time

OCT-23-2003(THU)

BEST AVAILABLE

Non-Responsive

P. 905

18/23/2863 18:15

3019375701

EMSL ANALYTICAL

PAGE 05/12

EMSL Analytical, Inc.

10766 Baltimore Avenue, bellaville, MD 20765

Phone: (381) 057-6700 Fax: (301) 937-6701 Email: behaulteistettemel.com

EMSL

AHN:

Project: Kigore

Non-Responsive

Customer PO: Received:

Customer iD:

USA50B 1446-03W 10/22/03 4/86 PM

EMSL Order;

190305716

EMSL Project ID:

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

Client Sancple D	Neseripsion	Leb ID	Analyzai	Area Sampled	Ess. Concerns	ziem
K-01	Only floor center of	0001	10/23/2003	144 tri*	≪10,8 µ	
K-02	Dritt floor near roll-up door	2002	10/23/2003	144 in²	<10.0 p	<u> </u>
K-03	Drill Roor - ent to wm lavine	0003	10/23/2003	144 lnt	₹10.0 }	
K-04	Kitchen floor @ entrance	0004	10/23/2003	144 in*	12.0 (	
K-05	Blank	0005	10/23/2003	n/s	<10.0 )	J/MP4
K-08	Orderly mr. supply grill	9006	10/25/2003	144 in <sup>1</sup>	16.P )	Bus.

Non-Responsive

Observing him to 19 columns. The CLC data suprish of with the earning casults the intended in this beautiful that the recovery and president reaction reaction when detail in his dy the Al-A. unlar specifically in the appropriate in the appropriate program.

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PS BIRTO

### 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.

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

### 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 0f 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

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



July 9, 2004

### Table of Contents

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Background	Page 2
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Site Description	
Scope of Work	
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Findings & Discussion	
Lead Wipe Samples	Page 3
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Noise Survey	Page 4
Illumination Survey	
Heating Ventilating and Air Conditioning (HVAC)	Page 4
Recommendations	Page 5

### 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 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 (IIVAC) 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:

Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Killeen Armory in Killeen, Texas.

Technician for the Texas Army National Guard and 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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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

<u>Lead Wipe Samples:</u> 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 249th.	<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, einder 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.

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

<u>Illumination Survey</u> 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:

Агеа	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

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

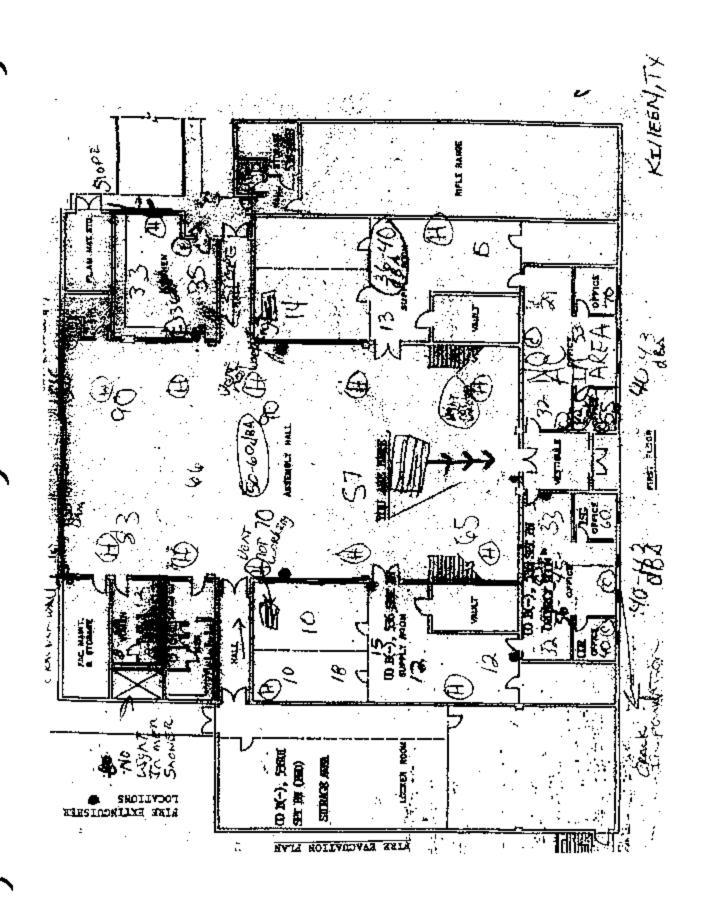
### Recommendation:

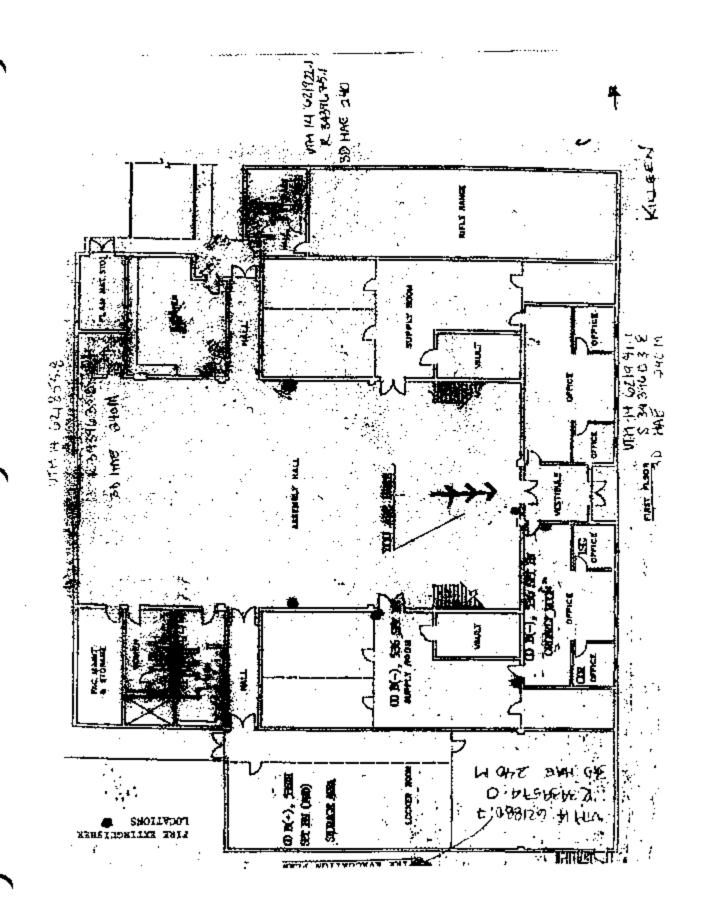
Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

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

### Non-Responsive

APPENDIX A





APPENDIX B

**EMSL Analytical** 

3 Cooper St., Westmont, NJ 08106

Phone: (856) 358-4800 Fax: (854) 858-9551 Email: skauffman@emsl.com

Altn

Fax:

Project: Killeen

Customer (D: T\$80

Customer PO:

06/07/04 1:17 PM

Received: EMSL Order:

200406797

EMSL Proj:

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

Client Sample <b>D</b> e	escription	Lab ID	Analyzed	Arva Sumpled	Lead Concentration
KIL O	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP accreditation program	0001	8/21/04	n/a	<10.0 µg/wipe
K#L 02		0002	8/21/04	n/a	<10.0 µg/wipe
KiL 03		0003	6/21/04	n/e	17.0 µg/wipa
K1L 04		0004	6/21/04	n/a	130.0 уд/жіре
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 ÖB		8000	6/21/04	n/a	14.0 µg/wipe
KiL 09		0009	6/21/04	r/a	63.0 µg/wipe
KIL 10		0010	8/21/04	r/a	220.0 µg/wipe
KIL 11		0011	6/21/04	n/a	140.0 µg/wipe
KIL 12		0012	8/21/04	n/a	14.0 µg/wipe
KIL 13		0013	6/21/04	rva	19.0 µg/wipe
KIL 14		0014	6/21/04	n/a	100.0 µg/wipe
KIL 15		2015	6/21/04	n/a	130.0 µg/wipe
KIL 16		0016	8/21/04	п/а	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
K(L 20		0020	6/21/04	r√a	14000.0 µg/wipe
KIL ⊉1		0021	6/21/04	n/a	770.0 µp/wipe

Non-Responsive

The OC case associated with the sample results included in the report meet the recovery and practicos retruitements associated by the APIA, unless electrically indicated otherwise in the comments section. The text results contained estinit the report meet the requirements of NELAC unless otherwise noted. This report relates only to indee service threat tested. Unless otherwise noted, the results to this report have not been blank contracted.

ACCREDITATIONS: NLFRELAP: 04853, ABIA Environmental Lead Laboratory Applicable Program: 100194

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

# **EMSL Analytical**

3 Cooper St., Westmont, NJ 08108

Phone: (856) 859-4800 Fax: (856) 858-9551 Email: skauffman@emsl.com



Attn:

Fax:

Project: Killeen



Customer ID: TS80

Gustomer PO:

Received: 06/07/04 1:17 PM

EMSL Order:

200496797

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampled	Lead Concentration
Kn. 22	0022	6/21/04	n/a	23.0 µg/wipe
K/L 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	rvs	11000.0 µg/wipe
Kil. 27	0027	8/21/04	n/a	20000.0 µg/wipe
Kil. 28	0028	6/21/04	n/a	9700.0 µg/wipe
KJL 29	0029	6/21/04	n/a	68.0 µg/wipe
Kil. 30	0030	6/21/04	n/a	63.0 µg/wipe



The QC data associated with the sample results included in this report meet the recovery and precision requirements relabblished by the Albis, unless specifically included cheriese in the comment section. The tent results contained within this report meet the requirements of NELAC unless otherwise noted. This report relates only to those imms cested. Unless otherwise noted, the results in this report fairer not been blank corrected.

ACCRESISTATIONS NANELAP: 04553, AINA Environmental Lead Laboratory Additives Program: 100194

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

APPENDIX C

# 260406797

EMSL ANALYTICAL	CHAIN OF	CUSTODY		EAD
Oale EMSL Repress	catative:	Project Name/No.:	P.D.#:	
Comment Name Tammer S	Tammer Sciences Inc			Manual Miller Communication Co
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		Box #:		and the second of the second o
City/States Ningerville I		City/State:Non-R	Zip:	
	n-Respor	neive	tesponsive	
Phone Results to: Name)	II-IXESPUI	15176		
Far Results to: (N uno) MAT RIX	METHOD	INSTRUMENT	RL (Reporting Limit)	[A]
) cad Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Plarne Attentic Absorption	0.01% +	
Lear Wasternates	SW846-7420	Flame Atomic Absorption	0.4 mg/t water 40 mg/kg (pr m) soil	
Lead Self =	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (prm)-soil	
	NIOSH 7082 Mod.	Flame Atomic Absorption	4 e.g/filter	
and in Auren	or NIOSH 7300 Mod.	ICP	3.9 ag/filær	
Land in Wipe* EASTM	9W846-7420 / HUD	Flame Atomic Absorption	10 ug wipe	Rochion
List Wife Type	Appendix 14.2 Discst.	3CP	3.0 ug/wipe	1
non ASTN			0.4 mg/l (ppm)	
fCLP Leng **	SW846-1311/ 7420	Flame Atomic Absorption		
	or SW840-6010B	iCP	0.1 mg/l (pprt)	
STECTED COMMETS	CA Title 22 organize	Flame Atomic Absorption	0.4 mg/l (pres)	
\$11.0 Edge Consumity	SW846-7420 or SW846-6010B	ICP	0.1 mg/l (ppr/)	
	NIOSH 7105 Mod.	Graphite Farnace Atomic	0.03 ug/filter	2
Lead in Air ****	NIOSH 1183 MICA	Absorption		
Loid Westerner	\$W846-7421	Graphite Furnace Atomic	0.003 rag/l (ppm) water	
i		Absorption	0.3 mg/kg (p;mi) soil	1
Lead Sea +			0.003 mg/l (rpm)	
Load in Drinking Weter (check state	EPA 239,2 / 200.9	Graphite Furnace Atomic Absorption	0.005 1081 (1900)	10
Character Character of the Character of	NIOSII 0500-0600		0.0001g	
Total Dust T/ I (Turnaroun	- 247	Gravimetric Reduction Day, 2 Days, 3 Days, 4 Day # Please Refer to Price Qui	s, 5 Days, 0-70 Vily.	
	# If no box is chec	ked, non-ASTM is assumed		£AB#
SA MPLE#		LOCATION	Air volume, L Area, in <sup>2</sup>	[
		EVI- a.e.	711021	01797-1-
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- A Mary Company of the Company of t				

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 wesrt side of the armory due to ground settling.



# DEPARTMENT OF THE ARMY AND THE AIR FORCE NATIONAL GUARD BUREAU REGIONAL INDUSTRIAL HYGIENE OFFICE AIRPORT PLAZA SUITE 1530 510 PLAZA DRIVE

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 536<sup>th</sup> SPT BN, 3006 Gulf Freeway, LaMarque, Texas 77568.

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

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536<sup>th</sup> 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
- Non-Responsive dustrial 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

#### General.

- a. <u>Site Description</u>. 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. <u>Scope of Work.</u> 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.
- e. 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.

#### Findings.

- a. <u>Lead Wipe Samples:</u> 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. <u>Ashestos Suspect Building Material</u>: 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:

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

- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> 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

10 October 2007

SUBJECT: Transmittal of IH Survey, LaMarque Armory Charlie Company 536<sup>th</sup> 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)
- 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)



CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

ENCL.

as

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 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

nvlag

Lab ID# 102082-0

AES Job Number: 0709842

Wednesday, September 19, 2007

Page 1 of 1

Client ID	AES ID	Location	Ast	Asbestos Mineral Percentage			rcent	age	Comments
			СН	AM	CR	AN	TR	AC	
LMQ 971	0709842- 12 	2x12 Floor Tile	ND	ND	ND	ND	ND	ND	
Layer: 1							<u></u>		

Note: CH=chr/sotile, AM=amosite, CR=crocidolite, AC=actinoite, TR=tremolite, AN=anthophylite 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: USAETA TO 141; the proponent is HEHE-10. Return Accress (complete andress including esponsiv NATIONAL GUARD BUREAU REGION SOUTH IH OFFICE 510 PLAZA DRIVE, SUITE 1530 COLLEGE PARK, GA 30349 Sampled installation Project Number Date Snipped 10SEP Associated Air Samples it yes, list sample numbers Yes X No Labei Information Trade Name Siv Hanutacturer Address MSDS Attached iYes Analysis Desired ASBESTOS - PLM اعدا عدا zambie Constituents Oniv No. Results Remarks LM Q97 12X12 FLOOR THE Comments to Lap: Lab Use Oniv Analyst / int the fall Reviewed By Davieden etal lata Recorted Anaceduras Fertormed intents:

AEHA Form 8-R 1 Db: 94

NGB-ARS-IHSE (40-5f)

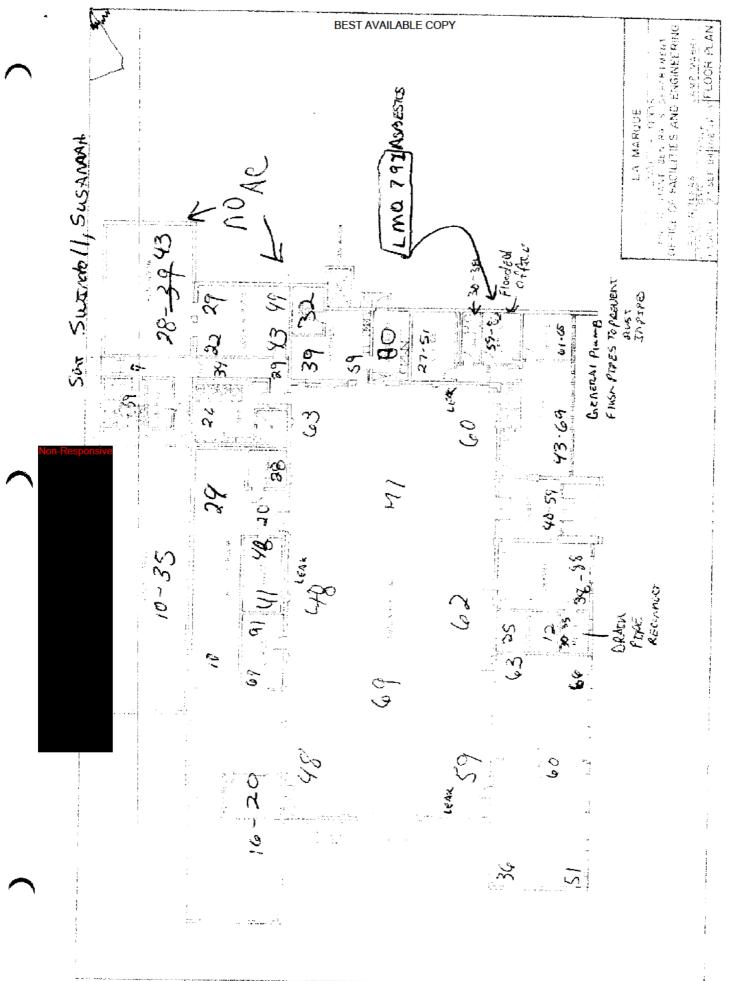
10 October 2007

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

# Appendix C

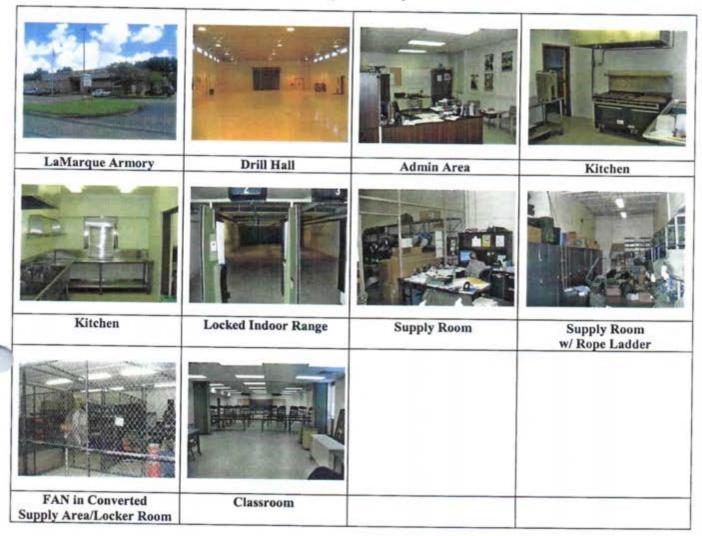
Photographs and Floor Layout.

BEST AVAILABLE COPY



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

# LaMarque 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 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.

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

# 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)
- 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 0f 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.

- 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



June 14, 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 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.

Торіс	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.
НVАСЛАО	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 Hygienest, 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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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



<u>Lead Wipe Samples:</u> 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
LARII	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 dishwater 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, einder 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.

<u>Noise Survey:</u> 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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 2 footcandles 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

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.

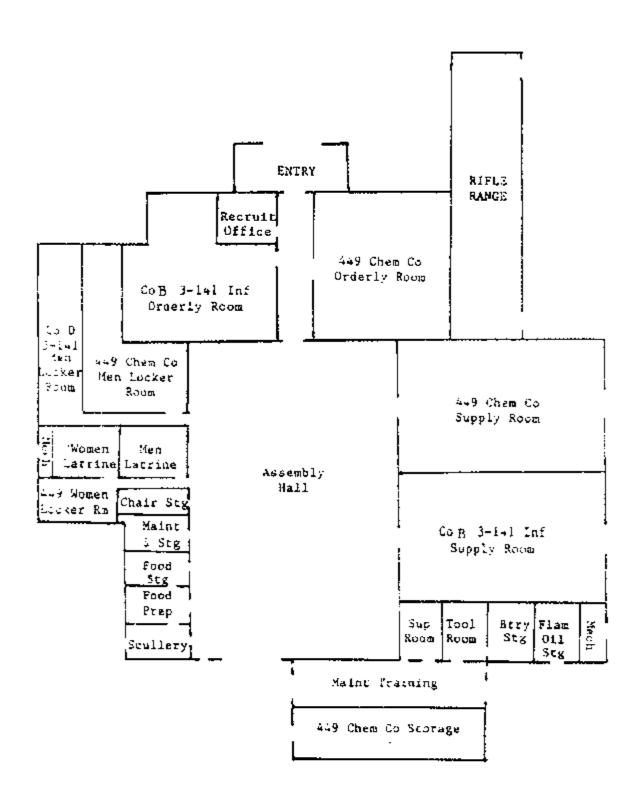
### Recommendations:

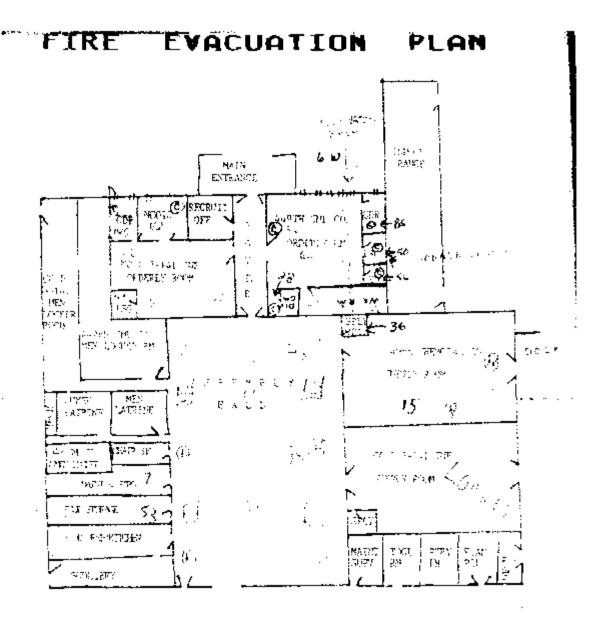
- 1. Repair all water leaks, replace all water damaged building material, such as the ceiling tiles, and clean materials that cannot be replaced such as floor tiles.
- Consider replacing the wooden common plenum with a metal construction plenum.

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

Non-Responsive

APPENDIX A





APPENDIX B

### **EMSL** Analytical

3 Cooper St., Westmont, NJ 08106

Phone: (856) 858-4900 Fax: (856) 858-9551 Email: skauffman@email.com



Attr:

on-Responsiv

Customer ID:

TS80

Customer PO: Received:

03/30/04 10:14 AM

Fax:

Project: Laredo, TX

EMSL Order: EMSL Proj:

200403272

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

Client Sample De	scription	Lab ID	Analyzed	Area Sampled	Lead Concentration
LAR 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	4/14/04	n/a	<10.0 µg/wipe
LAR 02		0002	4/14/04	n/a	14.0 µg/wipe
LAR 93	The state of the s	0003	4/14/04	n/a	13.0 µg/wipe
LAR 04		0004	4/14/04	n/a	150.0 ug/wipe
LAR 05	MALE AND THE PROPERTY OF THE PARTY OF THE PA	0005	4/14/04	n/a	<10,0 µg/wipe
LAR 06		0006	4/14/04	0/8	<10.0 µg/wipe
LAR 07		0007	4/14/04	n/a	<10.0 µg/wipe
LAR ÚS		0008	4/14/04	n/a	<10.0 µg/wipe
LAR 09		0009	4/14/04	ត/ <b>ង</b>	eqiar/gu 0.01>
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/wipa
LAR 15		0015	4/14/04	n/a	<10.0 µg/wipe
LAR 16		2018	4/14/04	n./a	<10.0 µg/wipa
LAR 17		0017	4/14/04	n/a	<10.0 µg/wipe
LAR 18		0018	4/14/04	п/а	<10.0 µg/wipe
LAR 19	The state of the s	0019	4/14/04	n/a	18.0 µg/wips
LAR 20		0020	4/14/04	n/e	<10.0 µg/wipe
LAR 21		0021	4/14/04	n/e	<10.0 ug/wipe

associated with the sample rectars included in this report meet the recovery and precision requirements established by the Allifa, unless specifically indicated distances in section. The lest results contained within the report meet the requirements of NELAC unless otherwise noted. EDITATIONS: NUMELAP: 04853, APA Environmental Lead Laboratory Approval Program: 100194

rigled: #14/04 9:17:20 AM

### **EMSL** Analytical

3 Cooper St., Westmant, NJ 08108



Attn:

on-Responsiv

Fax: Project: Larego, IX Customer ID:

TS80

Customer PO: Received:

03/30/04 10:14 AM

EMSL Order:

200403272

EMSL Proj:

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

Clieni Sample Description	Lab ID	Analyzed	Arva Sampled	Lead Concentration
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	0925	4/14/04	n/a	32.0 µg/wipe
LAR 26	0026	4/14/04	n/a	<10.0 µg/w/tpe
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



I are aclated with the example results included in this report med the recovery and precision requirements established by the AHLA, unless specifically indicated otherwise in a section. The test results contained within this report meet the requirements of NELAC unless otherwise noted. REDITATIONS: NJ-NELAP: 04653, ABNA Environmental Lead Laboratory Approval Program: 100/194

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APPENDIX C

			24	6767272	
EMSL ANALYTICAL	C	HAIN OF C	CUSTODY		
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્રહાતે કહ્યા -	or SW8	46-6C10B	ICP	0.1 mg/l weter 30 mg/kg (prm) soil	
and it will be a second	NIOSH	7082 Med.	Flame Atomic Absorption	4 ug/filter	
36-30 H + + > 10	of NIO	511 7300 Mod.	KP	3.0 ug/fiher	
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Let Whe Type	or SW	146-6010B	ICP	3.0 ug/wipe	Management of the second secon
ICLP Lyad **	SW846	-1311/7420	Flame Atomic Absorption	3.4 mg/l (ppra)	
	or SW8	46-60108	ICF	O, i mg/l (ppr/)	
57 C Cost Cold Free of	CA TH SW846	le:22 (4000-175 <sup>2</sup>	Flame Atomic Absorption	O.4 mg/l (ppra)	8
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EMSL ANALYTICAL

# CHAIN OF CUSTODY

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	torr responsiv	Date:	zokuy
ceived at EMSL By:		Date:	

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

<sup>(2)</sup> 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.

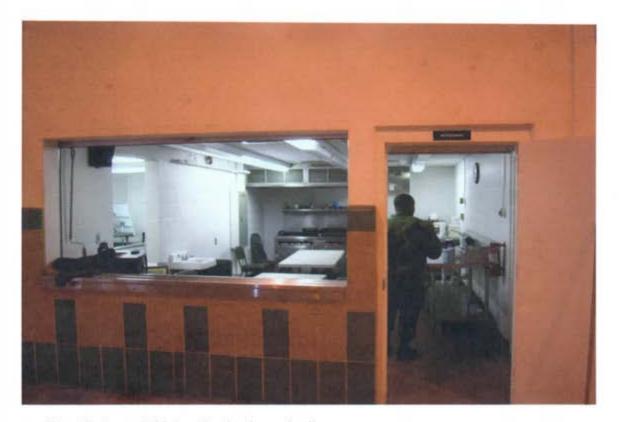


Photo #9: Armory's kitchen showing the serving line.



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.

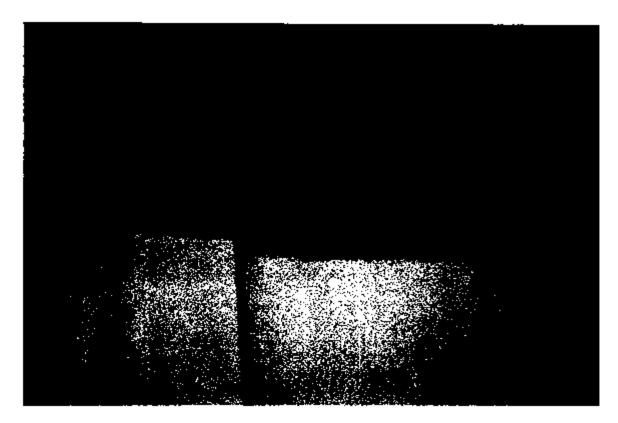


Photo #15: Water damaged ceiling tiles in the administrative area.



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



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

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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.

- 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 (ACGtH), 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.

 Report Survey dated October 2003, Industrial Hygiene Survey, vironmental Management Solutions



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

### 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 Longview Armory, Henderson Armory, Marshal Armory, Kilgore Armory, Texarkana Armory and Atlanta Armory, TX.

- 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.



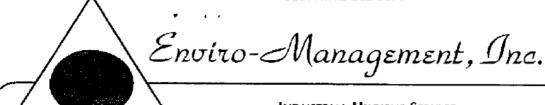
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NBG-AVN-SH

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 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, 22<sup>nd</sup> Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- 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.
- 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 Industrial Hygienist,

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

4. <u>Facility Description.</u> 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 1
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.

### Findings.

- A. <u>Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room</u> 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

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May, 2018

(1)There was no suspect asbestos containing material identified in this facility. The vinyl floor tiles and the ceiling tiles had been recently replaced.

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

Released by National Guard Bureau

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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. <u>Illumination survey</u> 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 leveis.

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

TABLE II Illumination Survey

Location	Illumination Level (flo)	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.

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Posted to NGB FOIA Reading Room

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

- F. <u>Orill Floor</u> 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. <u>Kitchen</u> The kitchen is adjacent to the drill floor and is fully functional. The kitchen is not used.
- H. <u>Flammable Storage Operation</u> 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) reedily 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.

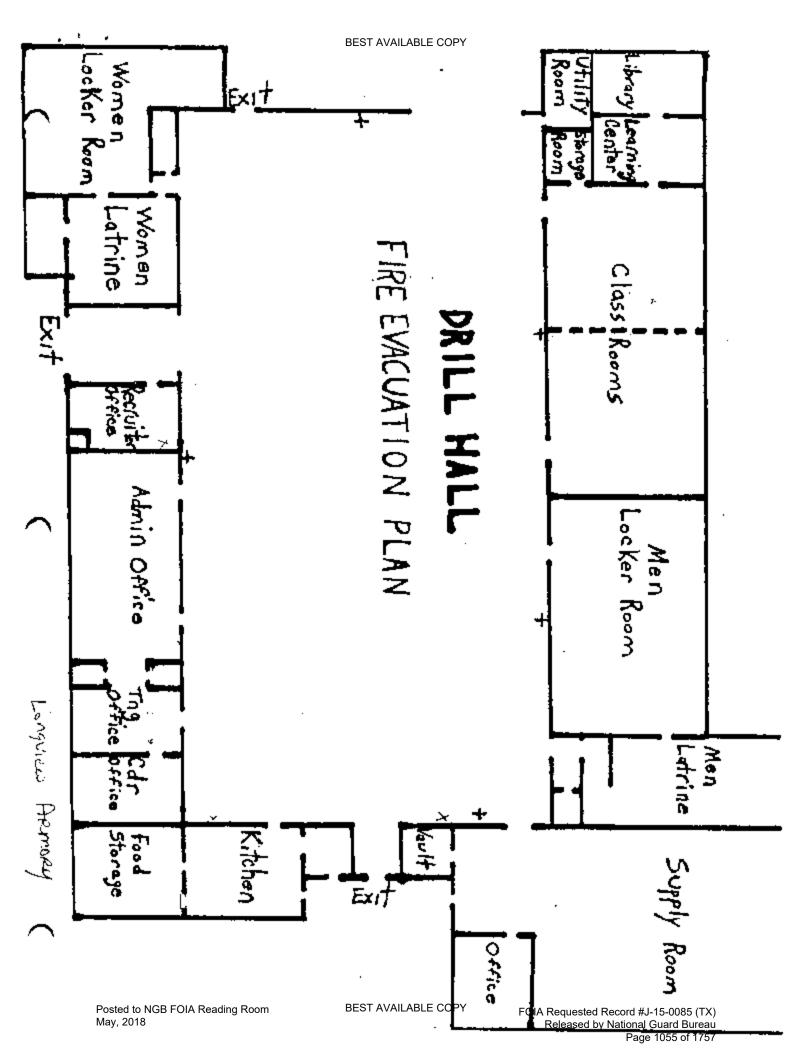
## Longview National Guard Armory Lead Wipe Sample Analysis Appendix E

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

Posted to NGB FOIA Reading Room

May, 2018

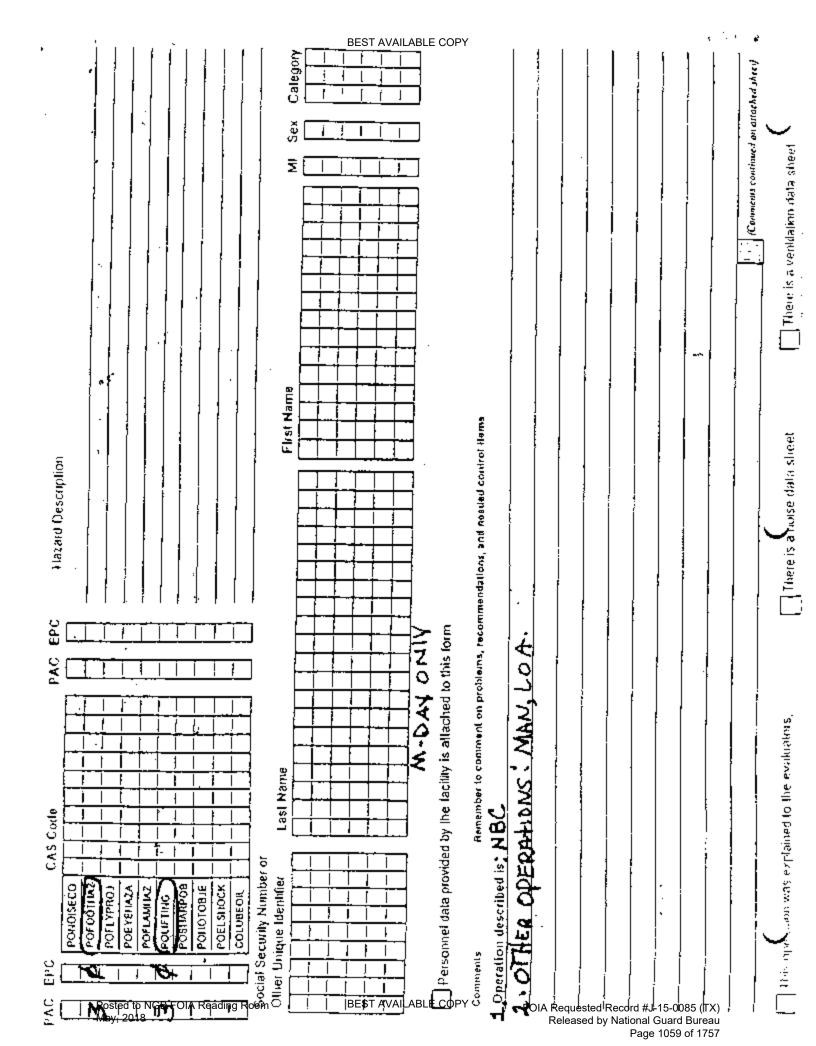
# APPENDIX A



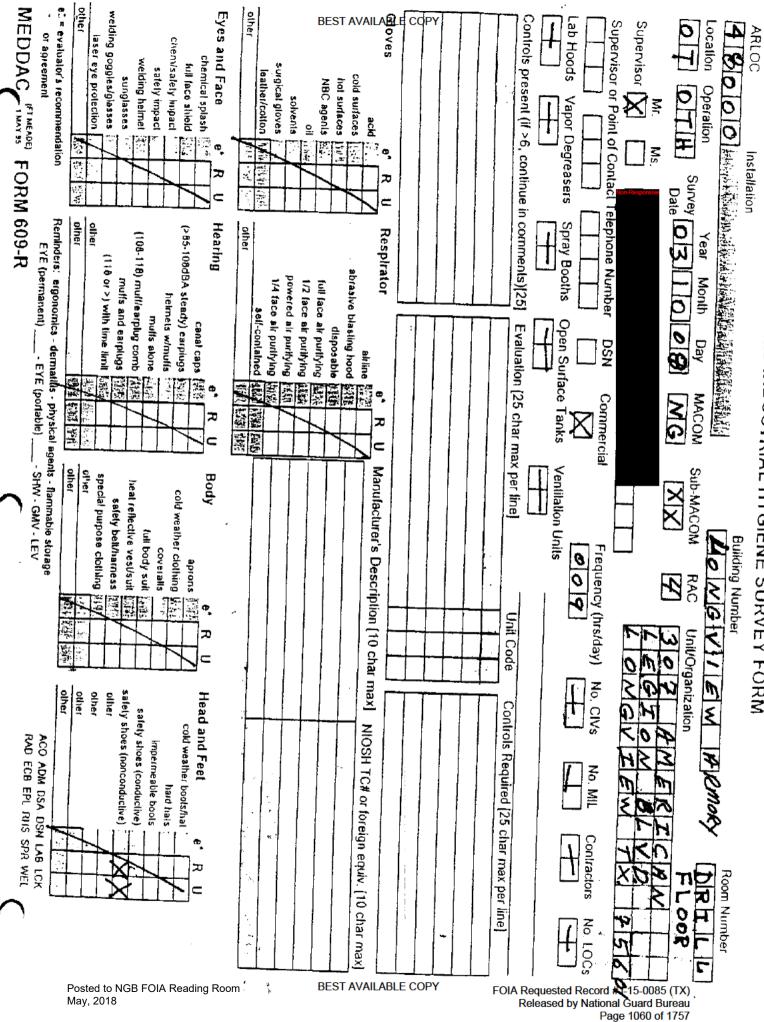
APPENDIX B

APPENDIX C

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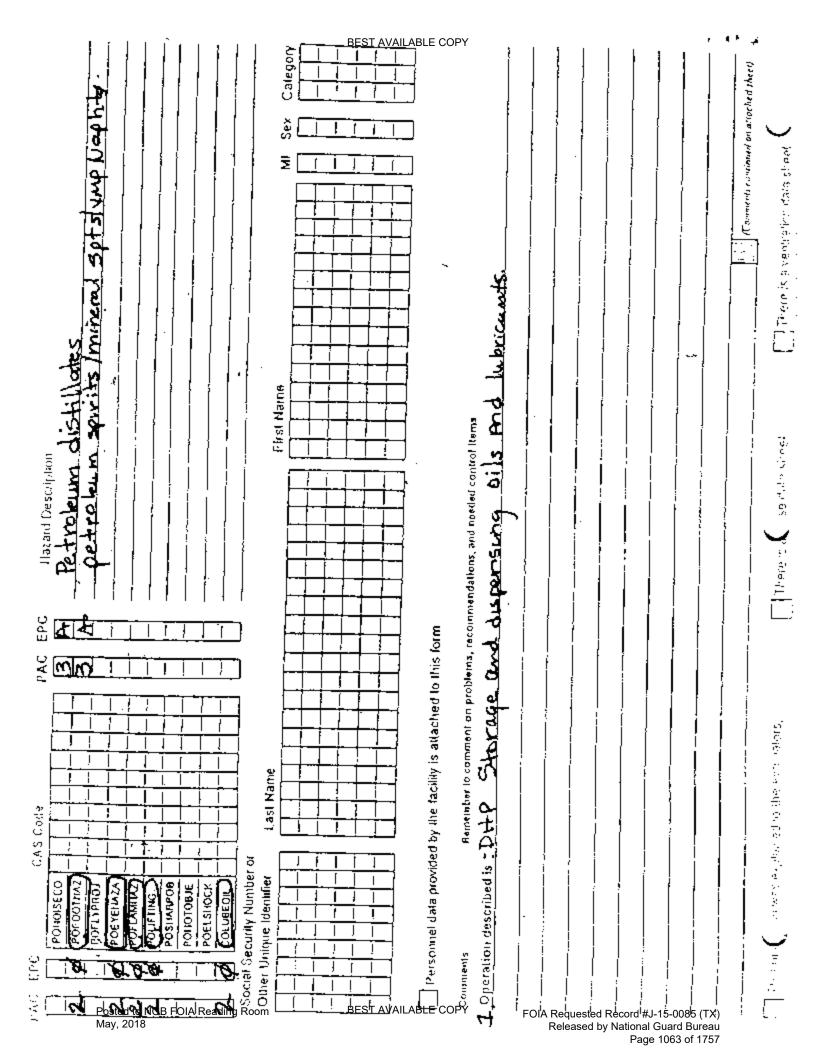
# HHIMS INDUSTRIAL HYGIENE SURVEY FORM

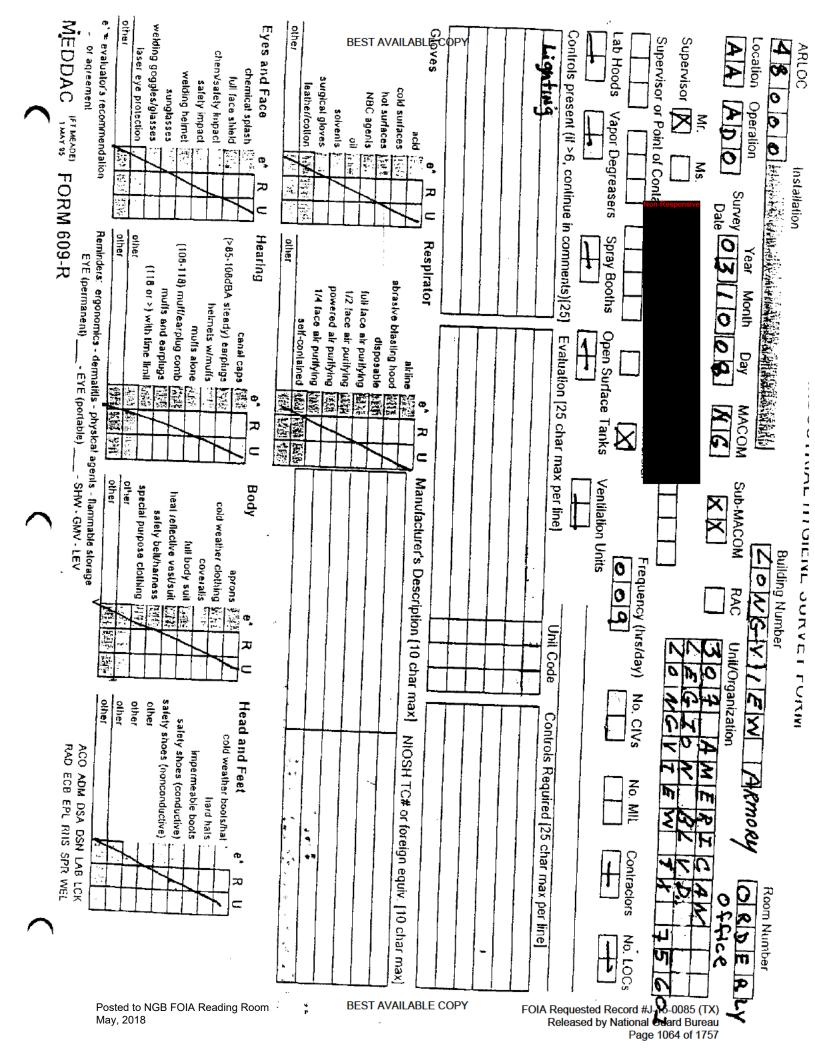


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Page 1062 of 1757

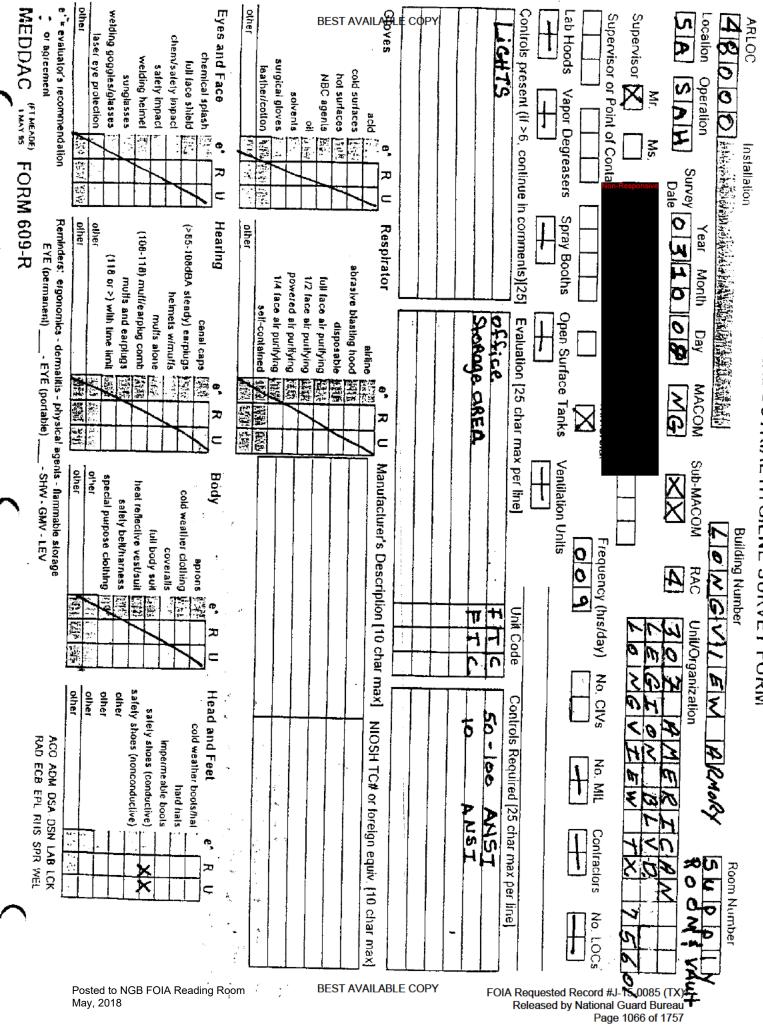
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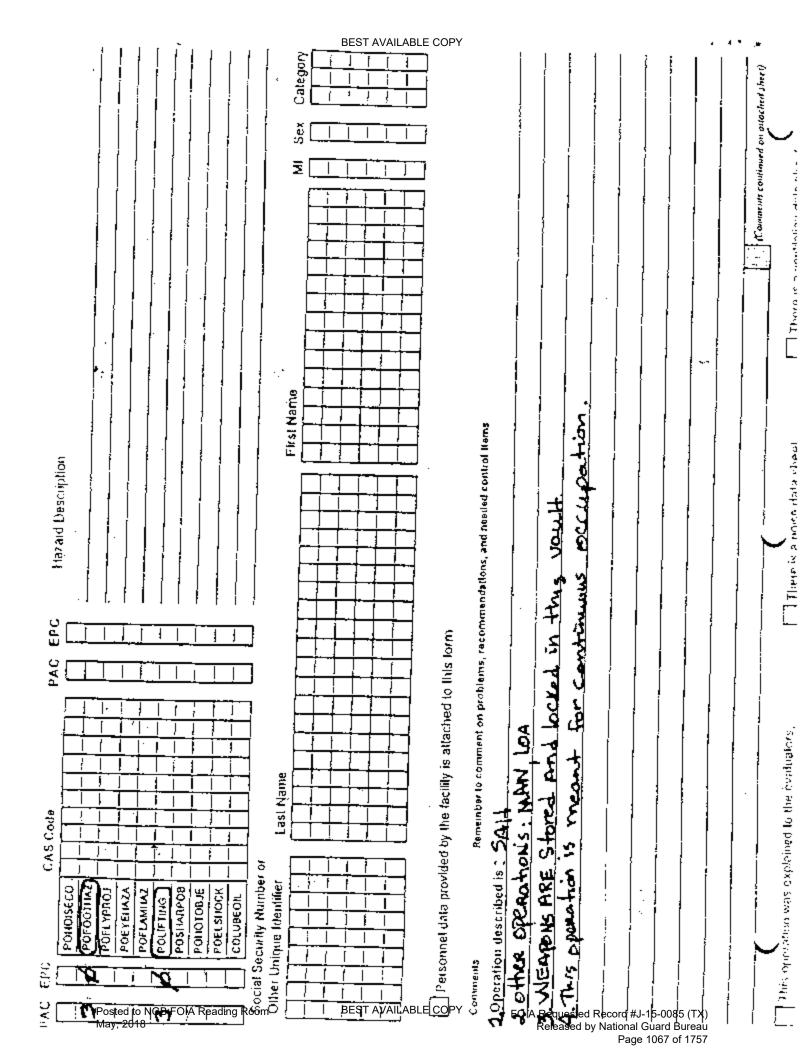


Page 1065 of 1757

# HHIMIS INDUSTRIAL HYGIENE SURVEY FORM



May, 2018



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APPENDIX D

Kenny PYI

HEADQUARTERS DEPARTMENTS OF THE ARMY AND THE AIR FORCE Westilogton, DC 20310-2500 31 January 1294

NG PAM (AR) 385-10/ ANGPAM 91-101

Salety

### GUIDELINES FOR CONVERTING MOOOR FIRMS RANGES TO OTHER USES

Summary. This is a new pareprist. This guidence prescribes policy, responsibilities, and procedures on how to convert lead-contaminated indoor firing ranges. TO DOTHER DOMES.

Applicability. This guidance applies to all persons responsible for the operation of Army Newsonal Guard (ARNG) and Air National Guard (ANG) indoor fiting ranges. As no regulation/guidence can foreces as alt-uations that might arise, the following is written in a broad except and in intereded to be interpreted as to the EXTENT of the law by health professionals,

Supplementation. Supplementation of this quidarcs is prohibited without prior approved from Chief, Neporal Guard Bureau (NGS-AVN-SI).

impact on New Manning System. This guidance opes 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 supersected of rescinded. 10.00

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

Exetribution. 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 tenns	3
Policy and procedures	Ĭ.
Goal	4 5 8 7
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Wipe Sample Media	7
Wipe Sampling Protocol	6
Range Cleaning Instructions	٩
Cleaning Stored Contaminated Equipment	10
Contaminated Sand and Lead Watte	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 Ceaning) C. Interpretation of Sample Results (After Cleaning)

  0. 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 AEH& Form 8-R
- H. Examples of Computation of Lead Level (rom Wipe Sample Results
- t. Supporting Laboratories and Areas Served

### Glossery

### Purpose

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

### References

Related publications are listed below.

- DOD: 60527 (Department of Detense Occupational Salety and Health (OSH) Program).
- b. AR 11-34 (The Almy Respiratory Protection Program),
  - a. AR 40-5 (Preventive Medicine).
- d. HGR (AR) 385-15 (Policy, Responsibilities, and Procedures for Inspection/Evaluation and Use of ARMG Indoor Firms Ranges).
- a. TB MED 502 (Occupational and Environmental Health Repitatory Protection Program).
- f. USAEHA TO 141 (Industrial Hygiene Air Sampling and Bulk Sampling Instructions).
  - Title 29, Code of Federel Regulations (CFR) revision, Part 1918 (Occupational Salety and Health Standards).

or paneary 1954

NG Parti (AR) 085-16/ANG PAM 91-101

APPENDIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO CLEANING)

5-1 200 micrograms/ac ft or LESS if at sample receive are 200 micrograms/ac it or less, the range can be converted and/or used for any purpose.

B-2 #ETWEEN 201 and 200,000 migrograms/ eq.ft.

Range must be committenement. Commiss with meaning highertons listed in personaph 15. Sample require will be used to extablish a best-line. The baseline sample require will be used to ensure the 75 persons recursion is echieved.

D-3 OVER \$99,000 interegrame/eq ft.
Your sample media may not be capable of collecting soditional lead dust and results that are above 200,000 micrograms/eq it should be considered auspect. 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 cleared by either HEPA vacuuming under east wiping to establish a baseline. After the otening procedure is completed, resampling should occur until sample results are under the 200,000 micrograms/eq ft limit.

8-4 High sample results may exist due to personnel waiting or moving equipment/vehicles over the range surfaces causing the leud duet to be "graund" into the substratum. For example, a maintenance activity may have aversprayed paint or spilled solvents onto the surface which would borid with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

APPENDIX O INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING)

C-1 200 microgrammers ft or LESS. If all sample results are less than 200 micrograms/sq h, the range can be convened and/or used for any purpose after a cost of lead-free lines; paint is applied, The paint color must contribut the color of the present substratum.

C-2 ABOVE 200 micrograms/sq ft
As a minimum, a 75 percent reduction should occur
from your initial sample results or the samples should
be under the 200 microgram/sq ft level. If all sample
results meet this criteria, a contrasting color of leadfree latex paint must be applied before the area is utifixed for other purposes. The morn can only be used
as a sprage size. Surrage of kischen equipment and
ignor is prohibited. The room cannot be used for a
child care or nursery area. If sample results are not

below the 75 purpoint reduction, a more thorough dearing of the range is required along with resampting until otheria are mer.

PLEASE NOTE, that it your original wips sample results were, i.e., 175,000 ug/sq it then you would have to reduce the lead level below 13,125 ug/sq it. This would meet the 75 percent reduction craurie, however, this is an enormous amount of tead dust and care should be taken to ensure a heavy cost of paint seals the medicing amount of lead dust will allow the latest the remaining amount of lead dust will allow the latest paint to achieve to the substratum. If the paint peets, tall to schedule to the substratum. If the paint peets, talls to the short and is crushed over a period of time, it will cheek another respirable lead hazard. If this happens, contact your Regional Industrial Hygiene Office for signs of peeting paint, Paint chips can be analyzed for lead content. Do NOT IGNORS PEELING PAINT IN A DONVERTED INDOOR PIRING RANGE.

APPENDIX E

(FAX)301 9373411

P. 005

OCT-23-2003(TBO)

P. 008

10/23/2003 18:15

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EMBL ANALYTICAL

PAGE 08/12

EMSL Analytical, Inc.

10716 Saldmore Avenue, Boltoville, MD 20705

Phone: (301) 237-5700 Fax: 1301) 937-5741 Emal:: beitavilidap@emsi.com

EMSL

Altn.

Fax: Proj**agi**; Customer ID:

Customer PO:

USA508 1451-03W 10/22/03 4:55 PM

Received EM\$L Order:

EMSt. Project 10:

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

Client Sample D	Tescription	Lab ID	Antired	Area Samples	Lond Concentre	i ésr
LV-01	Drift floor mean reliking cloor	0001	16/23/2003	144 in <sup>4</sup>	<10 О №	H*
LV-02	Only floor conter of drill floor	0002	10/23/2003	144 IR*	₹10.0 μ(	/ <del>  *</del>
LV-03	Drift floor from of serving sig.	0003	10/23/2009	144 Ju,	H 0.01>	iti,
LV-04	Kilchen entrance	0004	10/23/2003	164 in²	<10.0 µ	JH2
LV-05	Elerik	8006	10/23/2003	tv/>	q query	rwipa
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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 Amarrillo Armory, Alice Armory, Brownsville Armory, Kingsville Armory, Lubbock Armory, Pampa Armory, Plainview Armory, Weilington Armory and Weslaco Armory, TX.

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



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 2<sup>/146</sup> 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

### 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, 22<sup>nd</sup>, Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- h. IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- 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. <u>Purpose.</u> 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. <u>Background.</u> At the request of Non-Responsive the National Guard Bureau Region South Industrial Hygiene Caracter of LAE Consulting conducted an industrial hygiene survey at Lubbock National Guard Armory, Lubbock, Texas on 23 September 2003.
- 4. <u>Facility Description</u>. 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 SUBJECT: Industrial Hygiene Survey of Lubbook National Guard Armory, Lubbook, 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 I

Sample Number	Sample Location	Results
1	Backstop	<12 ug/ft <sup>2</sup>
2	Right wall cinder block 5 Ft up	<12 ug/ft <sup>2</sup>
3	Left wall cinder block 6 ft up	<12 ug/ft <sup>2</sup>
4	Floor in front of Pit	65 ug/ft²
5	Floor 2 ft from left wall	60 ug/ft²
6	Right wall 7 ft up	<12 ug/ft <sup>2</sup>
7	Table located in the range	$\leq 12 \text{ ug/fl}^2$
8	Divider at weapons station 2	<12 ug/ft <sup>2</sup>
9	Wall leading to supply on range side	<12 ug/ ft <sup>2</sup>
10	I ft outside range door	<12 ug/ ft²
11	Floor of observation room	$20 \text{ ug/ } \text{ft}^2$
12	Exhaust tube in observation room	<12 ug/ ft²
13	Floor in front of NBC room	<12 ug/ ft <sup>2</sup>
14	Floor in front of MP office	<12 ug/ ft <sup>2</sup>
15	Floor in front of Supply HQ	<12 ug/ ft²
16	Kitchen, Top of dishwasher	<12 ug/ ft²
17	Blank	<12 ug/ ft <sup>2</sup>

LAB Consulting 1218 Scartered Pines Coort, Severa, 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.



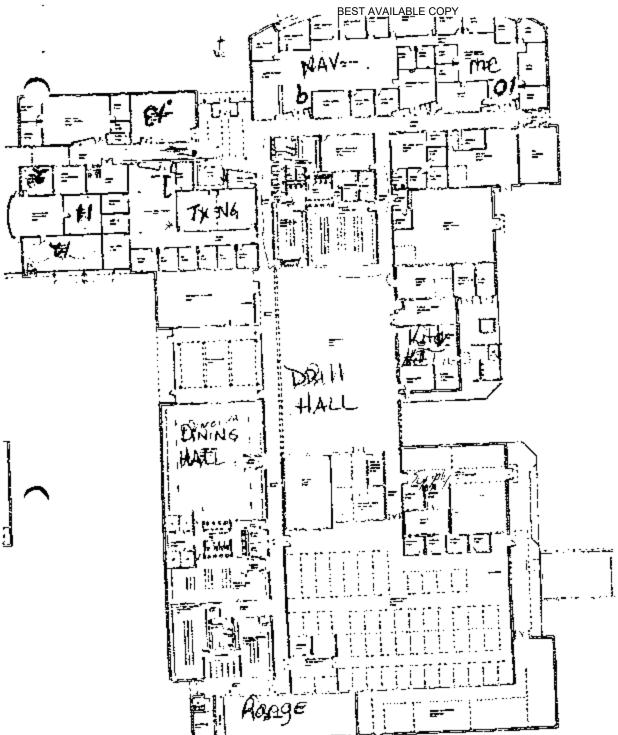
- 5. Pacifity United
- 4. Lead Wipe Results

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

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

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129 - USMC RECRUITING	PRIOR SERVICE MARINE RECRUITER	7511
184 - USMC ADMINISTRATION	6TH MTBN 4TH FSSG	1137
111 - ARNG ADMINISTRATION	HHC SD BN (W) 145D INE	
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A Specialized Environmental Laboratory

## CERTIFICATE OF ANALYSIS

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Attention:

Address: Client

1218 Scattered Pine Court

LAE Consulting

Job Name:

Not Provided



Nan-Respansive	Severn, Maryland 21144
	1 21144

P.O. Number: Job Number: Job Location: Not Provided Not Provided Lubrock NG Armory, TX

Report Date: Person Submitting: Date Analyzed: Chain Of Custody: 114895

09-Oct-03 0/09/2003

Page 1 of 2

## Summary of Atomic Absorption Analysis for Lead

AMA Sample Number	Client Sample Number	2-	Sample Type	Air Volume (L)	Area Wiped (ft²)	Reporting Limit	37	Final Result	ult	Comments
								:		
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0401332	2	Flame	Wipe	:	1.000	12.00 ug/ft²	٨	12	ug/n³	
0401333	₩	Flame	Wipe	į	1.000		Λ	12	ug/ft <sup>a</sup>	
0401334	4	Flame	Wipe	***	1.000			ŝ	ng/ft²	
0401335	v	Flame	Wipe	:	1.000			8	ug/Ω²	
0401336	đ	Flame	Wipe	:	1.000	12.00 ug/ft²	۸	12	ug/ft³	
0401337	7	Flame	Wipe	:	1.000		۸	12	ug∕ft³	
0401338	<b>80</b> 0	Flame	Wipe	:	1.000		۸	12	ug/ft²	
0401339	9	Flame	Wipe	:	1.000		۸	12	ug/ft"	

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 motter without prior written authorization from us. Sample types, locations and cultection 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. This report applies only to the sample, or sample, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to ellents, the public and these Laboratories All rights reserved. ANIA Analytical Services, for

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> 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 1081 of 1757

%Pb = percent lead by weight

N/A = Not Applicable

considered when interpreting the result.

Note: All results have two significant digits. Any additional digits shown should not be

ug = micrograms

Analysis Method For Furnace: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7421; Water: SM-3113B Analysis Method for Flame: Air, Wipes, Paints. and Soil/Soilds: EPA 600/R-93/200(M)-7420; Water. SM-3111B

mg/Kg = parts per million (ppm) by weight <math>mg/L = parts per million (ppm)

ug/L = parts per billion (ppb)



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**1MA Analytical Services, inc.** 

## CERTIFICATE OF ANALYSIS



Attention:

Address: Client:

LAE Consulting

AMA Sample Number

Client Sample

Analysis Type

Sample Type

Number

Severn, Maryland 21144 1218 Scattered Pine Court

P.O. Number: Job Number: Job Location: Job Name: Not Provided Not Provided

Lubrock NG Armory, TX Not Provided Chain Of Custody:

Report Date: Person Submitting: Date Analyzed:

10/09/2003

114895

09-Oct-03

Page 2 of 2

Summary of Atomic Absorption Analysis for Lead

Air Volume Area Wiped

Reporting

Final Result

Comments

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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 ellent. NVLAP Accreditation from us. Sample typus, 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 applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA sir samples. this report is submitted and accepted for the exclusive use of the eltent 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 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 cheens, the public and these Laborances.

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Views of Lubbock Texas National Guard Armory's Drill Hall



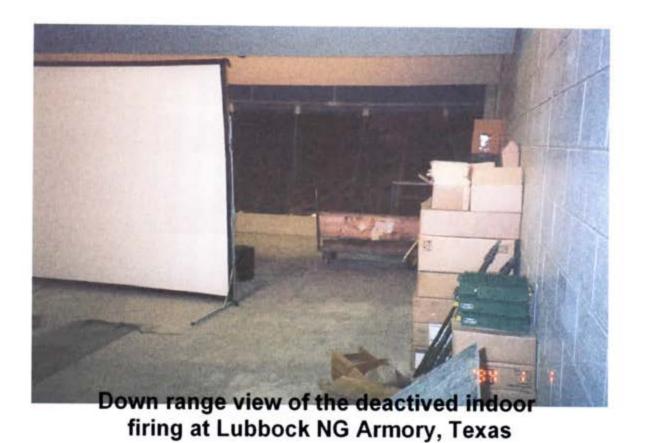


Views of Leaks above the wall locker in the Locker room





View of Hazardous Materials stored in a Flammable storage cabinet





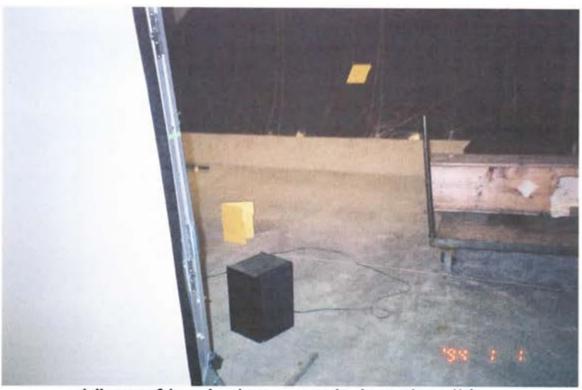
View of Lead wipe sample location 1, the backstop



View of Lead wipe sample location #2



View of lead wipe sample location #3



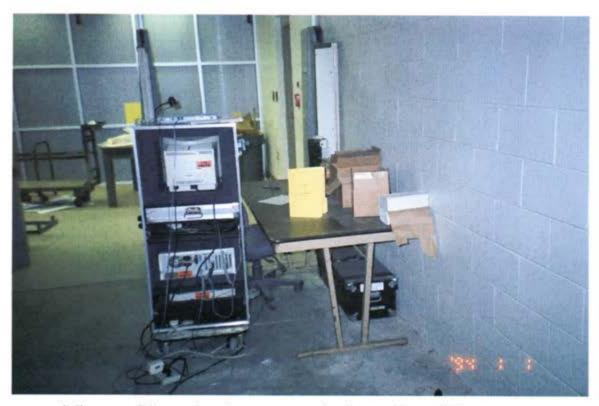
View of lead wipe sample location #4



View of Lead wipe sample location #5



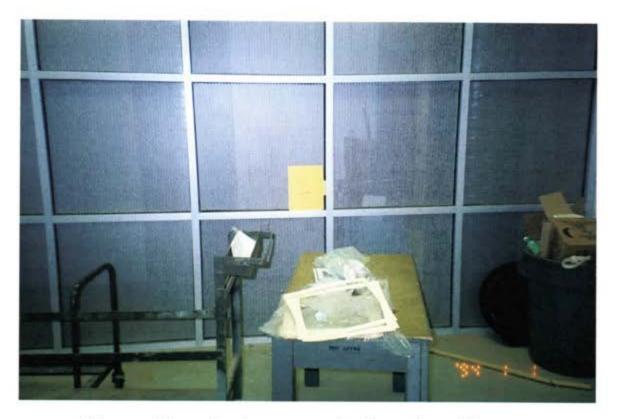
View of lead wipe sample location #6



View of Lead wipe sample location #7



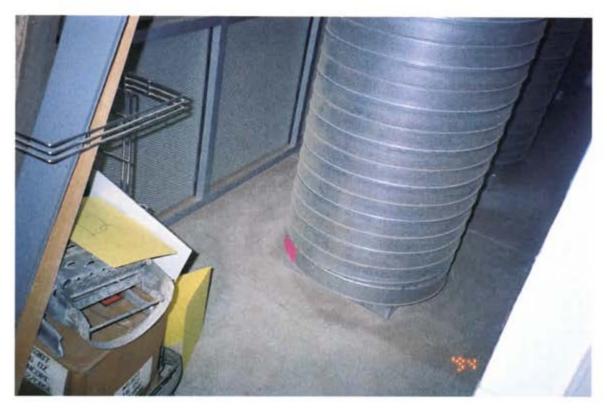
View of Lead wipe sample location #8



View of Lead wipe sample location #9



View of Lead wipe sample location #10



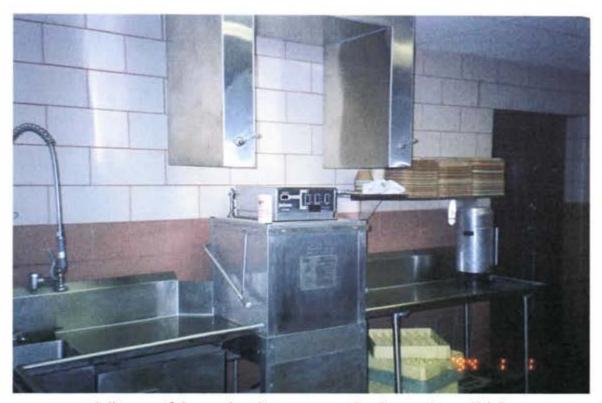
View of Lead wipe sample location #11



View of lead wipe sample location #12



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



View of Lead wipe sample location #16

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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

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  - 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.

- 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



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



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.
- 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.
- National Institute for Occupational Health and Safety (NIOSH), (76-130) Technical Information, Lead Exposure and Design Considerations for Indoor Firing Ranges GPO, 1975.
- Industrial ventilation, 22<sup>nd</sup> Edition, American Conference of Governmental Industrial Hygienist (ACGIH), Cincinnati, Ohio.
- 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. <u>Purpose</u>. 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. <u>Background</u>. 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 7<sup>th</sup> 2003 by Industrial Hygienist.

4. <u>Facility Description</u>. 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.

### Findings.

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May, 2018

- A. <u>Inactive Firing Range/Vehicle Maintenance Facility and Boiler Room</u> 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. <u>Suspect Asbestos Containing Materials</u> (1)<u>Vinyl Floor tile (VFT)</u> - 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.) <u>Ceiling Material</u> -Ceiling tiles observed were 2x2 white lay in tiles. All tiles were new, in good condition, and were not suspect asbestos containing.

- 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. <u>Vault</u> 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. <u>Illumination survey</u> 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.

- F. <u>Drill Floor</u> 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 wipo 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. <u>Kitchen</u> 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.

### Recommendations

- 1. Lighting should be upgraded in all areas which were indicated as deficient.
- 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.

### Marshall National Guard Armory Asbestos Analysis Appendix E

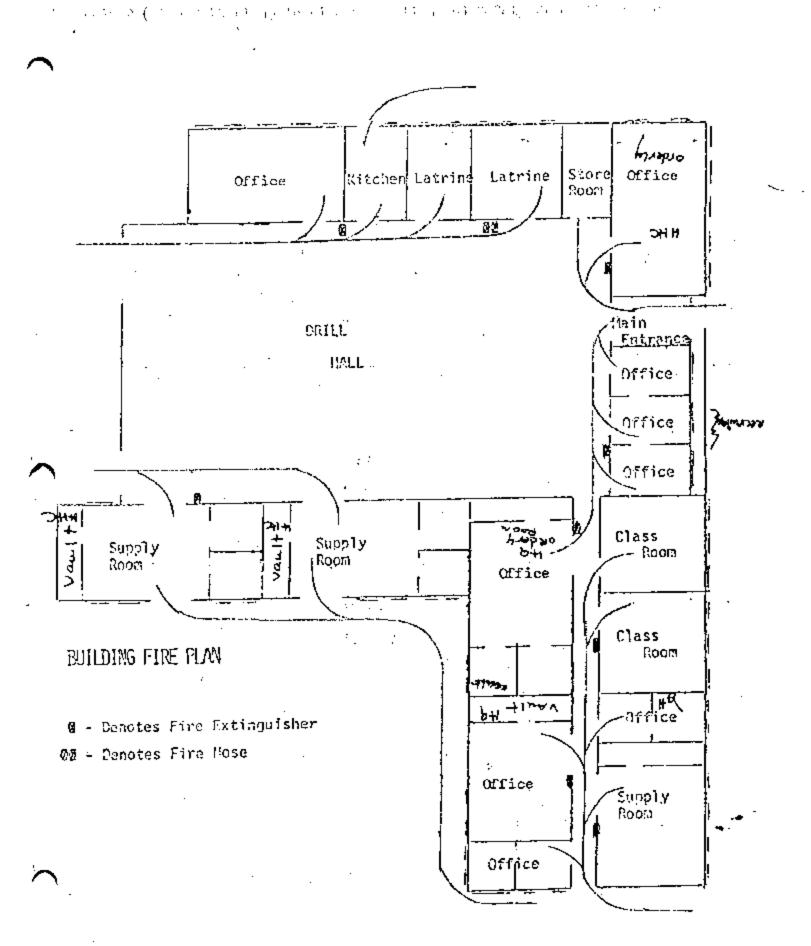
Şample No.	Location	Type Analysis	Results
01	Beige 12x12 beige VFT	Asbestos	None
	w/white & browπ	1	Detected
i	Stripes		. <u> </u>
01A	Mastic from 12X12	Asbestos	7% Chrysotile
	beige VFT (sample 01)		·

## 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

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# APPENDIX A



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APPENDIX B





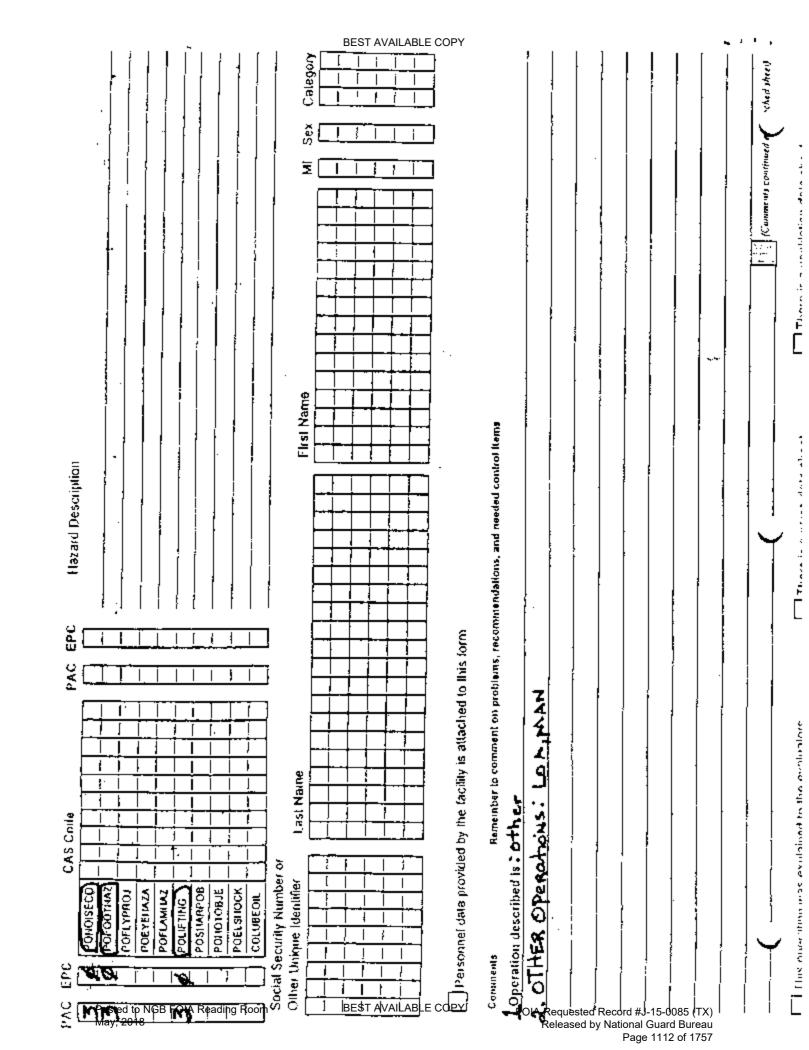




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APPENDIX C

### other e' e evaluator's recommendation MEDDAC FILMENDE FORM 609-R welding goggles/glasses other Eyes and Face BEST AVAILARE Controls present (if >6, continue in comments)(25) -ab Hoods Supervisor or Point of Conta Supervisor 🔀 Location ARLOC laser eye protection or agreement Chenvisalety Impact chemical splash welding helmet full face shield surgical gloves safety impact leather/colton cold surfaces sunglasses Operation NBC agents hot surfaces 07H Vapor Degreasers solvents acid œ S Installation Survey **[0]3][1]0]0]** Ħ Y. Reminders: ergonomics - dermatifis - physical agents - flammable storage olber Hearing olher Spray Booths olher (>85-108dBA steady) earplugs Year Respirator (106-116) mult/earplug comb EYE (permaneni) (118 or >) with time that abrasive blasting hood Month muffs and earplugs powered air purifying 1/4 face air purifying 1/2 face air puritying full face air purifying helmets w/mults THIMS INDUSTRIAL HYGIENE SURVEY FORM self-contained mulis alone Open Surface Tanks canal caps Evaluation [25 char max per line] disposable Day \_ - EYE (portable) alrline が į MACOM × ભ Z W E - SHW - GMV - LEV Ventilation Units olher olher Manufacturer's Description (10 char max) Sub-MACOM Body special purpose clothing heal reflective vest/suit XX cold weather clothing safely belt/harness full body suit **Building Number** coveralls 009 aprons quency (hrs/day) **1** ₹ 7 7 1414157 = Unit Code Unit/Organization Z No. CIVs other safely shoes (nonconductive) other other Head and Feet Controls Required [25 char max per line] safety shoes (conductive) NIOSH TC# or foreign equiv. [10 char max] cold weather boots/hat RAD ECB EPL RHS SPR WEL ACO ADM DSA DSN LAB LCK impermeable boots A RMORY No. Mil hard hals Contractors æ ピタメダ Room Number FLOOR No. LOCs 1



# THIMS INDUSTRIAL HYGIENE SURVEY FORM

Eyes and Face e* R U Hearing chemical splash (>85-108c full face shield fine) chemically impact safely impact sunglasses welding goggles/glasses welding goggles/glasses oither et=evaluator's recommendation or agreement frameroes of the function of agreement frameroes for the first means of the fir	AVAILA  AVAILA  AVAILA  AVAILA  Cold surfaces	ocation Operation Operation Operation Operation Operation Operation of Silverisor or Poupervisor
ee R U canal caps 學語 belinets w/mulfs helmets w/mulfs mulfs alone 经验 mulfs and earplugs 學語 B or >) with time limit ergonomics - dermattifs - physical age	Respirator  shifting life  shrasive blasting hood  disposable full face air purifying 1/2 face air purifying powered air purifying 1/4 face air purifying self-contained other	Day MACOM Day MACOM Open Surface Tanks Evaluation [25 char may
ng yes	Manufacturer's Description [10 char max]	Building Number    A   A   A     A   A     A   A     A   A
Head and Fee!  cold weather boots/hal have inals impermeable boots safety shoes (conductive)  safety shoes (nonconductive) other other other ACO ADM DSA DSN LAB LCK RAD ECB EPL RIIS SPR WEL	NIOSH TC# or foreign equiv. [10 char max]	Room Number

May, 2018

A Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1113 of 1757

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### other e~= evaluator's recommendation other MEDDAQ "MAY" FORM 609-R welding goggles/glasses BEST AVAILABLE Eyes and Face Mr. Supervisor 🔀 Controls present (if >6, continue in comments)[25] Lab Hoods Supervisor or Point of Contact Telephone Number 3 6 Location 4 8 0 0 0 I was a land of the ARLOC laser eye protection cheny/safety impact chemical splash welding helmet full face shield surgical gloves safety impact leather/cotton cold surfaces: sunglasses NBC agents NBC hol surfaces Operation Vapor Degreasers solvenis acid (3) A <u>×</u> æ Installation (7) (1) Survey 03 4007 $\pi$ Spray Booths Hearing Reminders: ergonomics - dermatitis - physical agents - flammable storage olher other Year (>85-108dBA steady) earphigs Respirator (106-118) mult/earplug comb EYE (permanent) (118 or >) with time limit abrasive blasting hood Month powered air purifying muffs and earplugs 1/2 face air purifying 1/4 face air purifying full face air purifying heimets w/muffs self-contained muffs alone Open Surface Tanks Evaluation (25 char max per line) canal caps disposable Day NSO \_\_ - EYE (portable) \_\_ airline 3 MACOM Commercial **新福** X Z C - SHW - GMV - LEV Ventilation Units Sub-MACOM Manufacturer's Description (10 char max) other Body special purpose clothing X heal reflective vest/suit cold weather clothing safely belt/harness full body suit MARSH Building Number Frequency (hrs/day) coveralis 0 aprons RAC 100 Unit Code Unit/Organization Z No. CIVs 1 other safety shoes (nonconductive) other other Head and Feet Controls Required [25 char max per line] safely shoes (conductive) NIOSH TC# or foreign equiv. [10 char max] cold weather boots/hat RAD ECB EPL RHS SPR WEL ACO ADM DSALDSN LAB LCK impermeable boots No. MI 0 hard hals Confractors ROOM Ŋ ZI Room Number X - A No. LOCs Posted to NGB FOIA Reading Room\* **BEST AVAILABLE COPY** FOIA Requested Record #J-15-0085 (TX)

May, 2018

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e\* \* evaluator's recommendation other MEDDAC FINANS FORM 609-R welding goggles/glasses Eyes and Face BEST AVAILAB Controls present (if >6, continue in comments)[25] Lab Hoods Supervisor or Point of Cont Supervisor X Location of agreement ARLOC Enther laser eye protection chenvisately impact chemical splash welding helmet full face shield surgical gloves safety impact leather/collon cold surfaces sungiasses NBC agents hot surfaces Operation ADO Vapor Degreasers solvents 으 100 1 NS. Installation Survey O3  $\overline{z}$ Z Reminders: ergonomics - dermatitis - physical agents - flammable storage Hearing olher other Spray Booths (>85-108dBA steady) earplugs other Respirator 1 Year (106-118) multiearplug comb EYE (permanent) \_\_\_\_\_ - EYE (portable) \_\_\_\_ (118 or >) with time limit Month sbrasive blasting hood mults and earplugs powered air purifying 1/4 face air purifying full face air purifying 1/2 face air purifying helmeis wimults ....... INVOLVE TO THE SURVEY FORM self-contained mults alone Open Surface Tanks canal caps Evaluation [25 char max per line] disposable alrline 1/2 21 MACOM Z , \_\_ · SHW · GMV · LEV Ventitation Units **બher** Manufacturer's Description [10 char max] Sub-MACOM Body special purpose clothing XX heat reflective yest/suit cold weather clothing salely belt/harness full body suil MARSHIALL Building Number Frequency (hrs/day) 000 coverails aprons RAC = Unit Code Ų, Unit/Organization D 0 No. CIVs other safely shoes (nonconductive) other other Head and Feel Controls Required [25 char max per line] safely shoes (conductive) NIOSH TC# or foreign equiv. [10 char max] cold weather books/hal RAD ECH EPL RIIS SPR WEI ACO ADM DSA. DSN LAB LCK impermeable bools A RESORY No. MI hard hats 4 Contractors ORDE Room Number 924406 No. LOCS t BEST AVAILABLE COPY Posted to NGB FOIA Reading Room

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APPENDIX D

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HEADQUARTERS
DEPARTMENTS OF THE ARMY ARD THE ALA FORCE
Washington, DC 20319-2500
31 January 1984

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

### Befely

# GUDELINES FOR CONVERTING MODOR FIRING PANGES TO OTHER USES

Stammery. This is a new pumphint. This guidance prescribes policy, responsibilities, and preceduras 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 (ARMG) and Air National Guard (ARMG) indoor firing tanges. As no regulation-guidance can brease all structure that might write, the todowing is written in a broad scape and is intended to be interpreted as to the RITEMT of the law by heath projectionals.

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

impact on New Manning System. This guidance coes not curtain 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 descrip interim changes on their experiment 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 Onive. Arington, VA 22204-1382.

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

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Wipe Sample Media	5 6 7
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Range Cleaning Instructions	á
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Contaminated Sand and Lead Warte	11
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Worker Education	13
Personal Protective Equipment	14
Point of Contact	15

Appendices

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- A. Sampling Strategy for Collection of Wipe Samples B. Interpretation of Sample Results (Prior to Ceaning)
- C. Interpretation of Sample Results (After Cleaning)
- D. OSHA instruction CPL 2-2-208
- E. Where to Purchase Sample Media and Containers
- F. AEHA Form B-R (Bulk Sample Data)
- C. Instructions to Complete AEH& Form 8-R
- H. Examples of Computation of Coad Level from Wipe Sample Results
- L Supporting Laboratories and Areas Served

### Chossety

1. Pulpose

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

References Related publications are ligged below.

- a. DODI 6035.1 (Department of Defense Occupational Salety and Health (OSH) Program).
- AR 11-34 (The Army Respiratory Protection Program).
  - C. AR 40-5 (Preventive Medicine).
- d. HGR (AR) 325-15 (Policy, Responsibilities, and Procedures for Inepetition/Evaluation and Use of ARNG Indoor Firing Ranges).
- a. 78 MEQ 502 (Occupational and Environmental Health Replietory Protection Program).
- 1. USAEHA TO 141 (industrial Hygiene Alt Samping and Bulk Samping instructions).
  - g. Title 28, Gods of Faderal Regulations (CPR) revision, Parl 1916 (Occupational Safety and Heath Standards),

51 January 1954

. . .

NG Parti (AR) 385-16/ANG PAM 91-101

APPENDIX B INTERPRETATION OF SAMPLE RESULTS (PRIOR TO CLEANING)

B-1 200 microgramming it or LESS if at cample results are 200 microgramming it or beat the range can be converted and/or used for any purpose.

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

Panga must be decoupleminated. Continue with creaming instructions fisted in panegraph 15. Sample results will be used to establish a baseline. The baseline ample require will be used to ensure the 75 percent reduction is achieved.

D-3 OVER sectors interegramated it. Your sectors media may not be capable of collecting socialized lead dust, and results that are above socialized lead dust, and results that are above socialized lead dust may exist on lead. Larger concentrations of lead dust may exist on surfaces tested other than results indicate. If the initial sampling results are above \$00,000 microgrammated it, the range should be cleared by either HEPA vacuuming should be clearing procedure is completed, resampling should occur until sample results are under the 200,000 microgrammated it limit.

8-4 High sample results may exist due to personnel washing or moving equipment/vehicles over the range surfaces causing the lead dust so be "ground" into the substraign. For example, a maintanance activity may have oversprayed paint or spilled solvents onto the surface which would bond with the lead dust. Consult your Regional Industrial Hygiene Office for specific guidance.

APPENDIX O INTERPRETATION OF SAMPLE RESULTS (AFTER CLEANING)

C-1 200 microgramming it or LESS. If all sample results are less than 200 microgramming it, the range can be converted under used for any purpose after a cost of lead-free laws paint is applied. The paint color must contrast the color of the present substratum.

C-2 ABOVE 200 microgramming it. As a minimum, a 75 percent reduction should occur from your initial sample results or the samples should be under the 200 microgram/sq if level. If all sample results steet this criteria, a contrasting color of lead-line later geint stust be applied before the area is utilized for other purposes. The room can only be used as a storage area. Storage of kitchen equipment and food is prohibited. The room cannot be used for a child care or nursery area. If sample results are not

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

\* PLEASE NOTE, that it your original wipe sample results were, i.e., 175,000 ug/to it then you would have to reduce the lead level below 13,125 ug/to it. This would never the lead level below 13,125 ug/to it. This would never the 75 percent reduction criteria, towarver, this is an enormous amount of lead dust and care should be taken to ensure a heavy cost of paint seals the lead dust, it is unknown at this time whether or not the remaining amount of lead dust will slow the taken paint to achieve to the substratum. If the paint peets, take to the item and a crushed over a period of time, it will greate another respirable lead hazard. If this happens, content your Registral Industrial Hygiene Office for goldanos. Periodically monitor the convented range for signs of peeting paint. Paint chips can be analyzed for lead content. DO NOT IGNORE PEELING PAINT IN A CONVERTED INDOOR FIRING RANGE.



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APPENDIX E

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EMSL ANALYTICAL

PAGE 01

EMSL Analytical, inc.

10748 Battimore Avenus, Balleville, MD 20705

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10/22/2003

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

Sample	Location			Hon-A	<u>absaine</u>	Albeaton
		Appopratioe	Trestment	% Fibrous	% Non-Fibrous	% Type
01 180308718-0401	12x12 VFT beige w/ white/brn stripes	G <b>ray/Geige</b> Non-Fibrous H <b>ajeroge</b> neaus	Teased Dissolved	<114 Conulose	100% Nan-fibrous (ether)	None Detected
D1A 180301715-0003	12x12 VFT beige w/ white/bin stripes	Blask/Brown Fibrous Haterogeneous	Teasod Disselved mesta	5% Celiulose	68% Neń-fibraus (other)	7% Chryspille

or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.

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EMSL ANALYTICAL

PAGE 62/12

EMSL Analytical, Inc.

10788 Ballimore August, Buitsville, MO 20708

EMSL

Attni

Fax:

Project Marshall

Customer (D): Customer PO: Received:

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EMSL Order

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EMSL Project (D)

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

Descrimion	Leb ID	Analyzed	área Sampled	Concentration	
Odii figar neer roll-up dast		10/23/2003	144 104		
Drill floor center of one neer	0002	10/23/2003	144 kt <sup>p</sup>		
Orli flop: neaf orderly office	0003	10/23/2003	144 in <sup>a</sup>		
idlichen flöör (neide ammenee	0004	10/21/2003	144 kts		
Orderly rm, supply grit	8005	10/23/2003	144 104	21.0 u /k²	
Stenk	2006	10/23/2003	n/a	<10.0 µ /w/p	Æ
	door  Drift floor center of eris see:  Drift floor near orderly office  Allichen floor meide entrance  Orderly mn, supply grift	Orli floor near roll-up door door  Dril floor center of door ent teer Dril floor near orderly cood office  Kitchen floor theide certaine orderly m, supply gritt door	Orli floor near roll-up dept 10/23/2003 dept 0002 10/23/2003 dept 0002 10/23/2003 dept near orderly 0003 10/23/2003 office 0004 10/23/2003 entrance 0xderly m, supply grit 0dos 10/23/2003	Orli floor near roll-up 0007 10723/2003 144 in <sup>a</sup> dept	Description   Lab ID   Analyzed   Area Sampled   Ceheaner   Idn   Idn

or other approved signatory

0/23/2003 6:08:18 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, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

- References.
- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 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.
- 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

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- k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.
- I. Report of July 14, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

### 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)
- 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 1.1, 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.

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- 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 hydiene survey or air sample



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



July 08, 2004

### Table of Contents

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Findings & Discussion	
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Noise Survey	Page 3
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Recommendations	

# Appendices

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

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.

Survey Date: 02 June 2004

**SUBJECT:** Industrial Hygiene Initial Baseline Survey of the Mexia Armory in Mexia, Texas on 2 June 2004

### BACKGROUND:

Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Mexia Armory in Mexia, Texas Industrial Hygiene Technician for the Texas Army National Guard and 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.

<u>Site Description</u>. 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.

<u>Scope of Work.</u> 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

<u>Lead Wipe Samples:</u> 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

<u>Noise Survey:</u> 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

Survey Date: 02 June 2004

Safety and Health Administration (OSHA) regulated limit of 90 dBA and the Atmy 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

<u>Illumination Survey</u> 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.

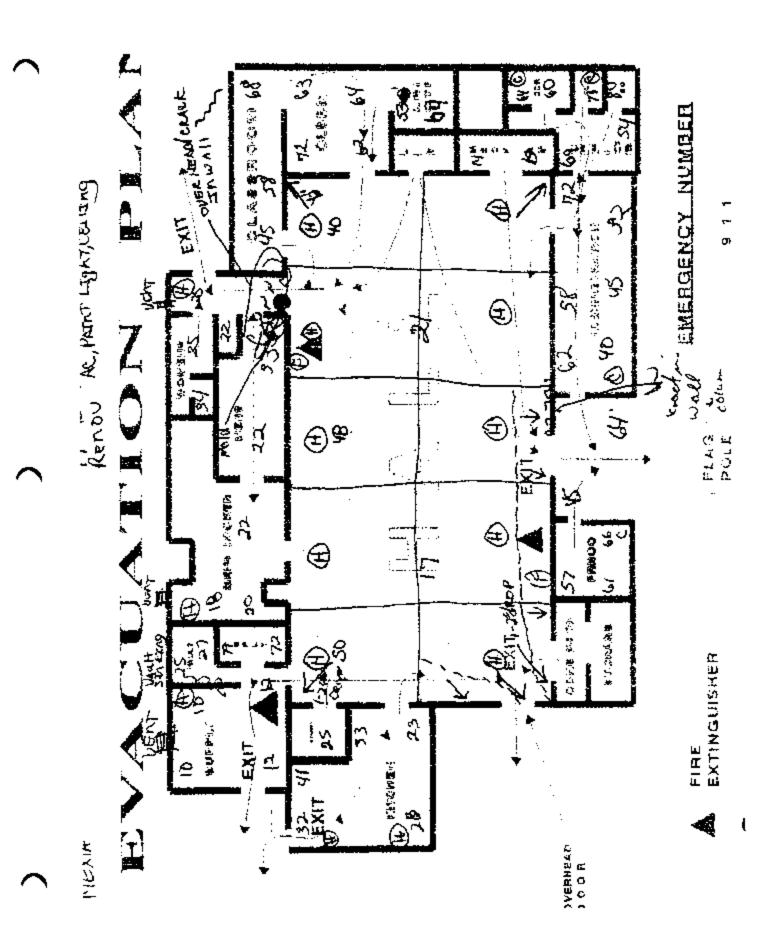
#### Recommendation:

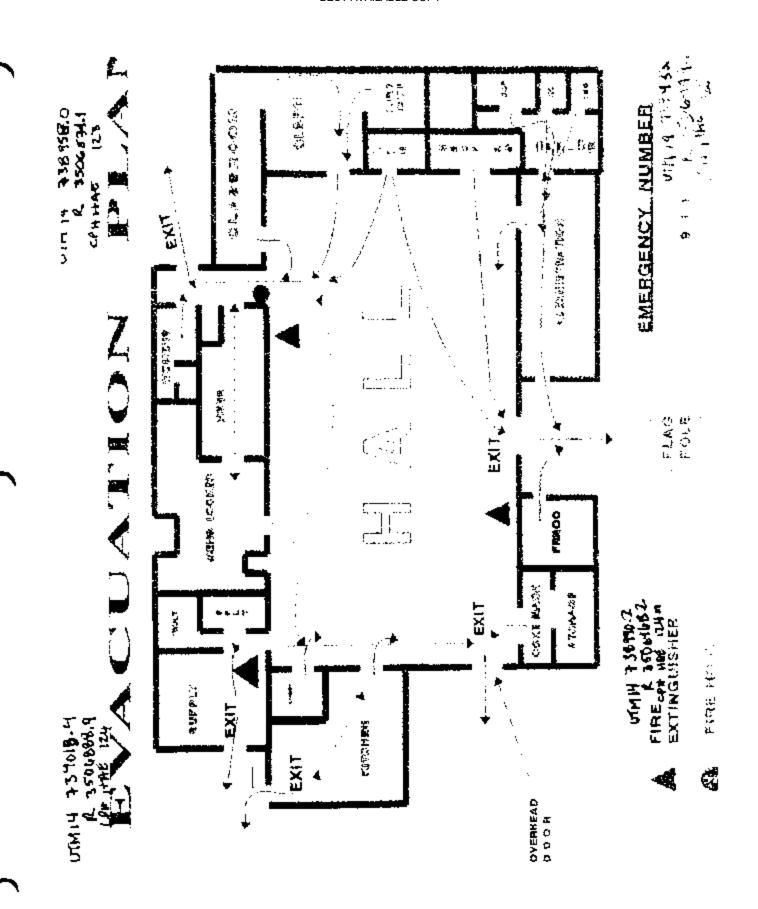
None.

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

Non-Responsive

APPENDIX A





APPENDIX B

**EMSL Analytical** 

3 Gooper St., Westmont, NJ 68108

Phone: (858) 858-4600 Fax: (856) 858-9561 Email: skauffman@email.com

EMS

Non-Responsiv

Fax:

Project:

Customer ID:

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EMSL Order:

200406801

EMSL Proj:

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

Cllent Sample D	· escription	Lab ID	Analyzed	Area Sampled	Lend Concentration
MEX 01	Results for these wipe samples do not meet the EPA standards for sample matrix and are not recognized under the NLLAP socreditation program	0001	6/21/04	0/3	<10.G µg/wipe
MEX 02		0002	6/21/04	u/a	<10.0 µg/wipe
MEX 03		0003	6/21/04	nta	<10.0 µg/wipe
MEX Q4		0004	6/21/04	n/a	<10.0 µg/wipe
MEX 05		0005	6/21/04	n/a	47.0 µg/wipe
MEX 06		0005	8/21/04	n/a	<10.0 µg/wipe
MEX 07		0007	8/21/04	n/a	<10.0 µg/wipe
MEX 08		0008	6/21/04	rula	<10.0 µg/wipe
MEX 09		0009	5/21/04	nie	<10.0 µg/wipe
MEX 10		0010	8/21/04	nia	<10.0 µg/wipe

-Responsiv

The QC data associated with the semple netratic included in this report ment the recovery and precision requirements satisfished by the AHA, unless specifically indicated otherwise in the comment section. The test results bottlend within this report near the recurrences of NELAC unless otherwise noted. This report relates only to those items tested. Unless otherwise noted, and results in this report have not been been corrected.

ACCREDITATIONS: NUNELAP: 04653, AHA Environmental Lead Leboratory Approved Program, 190194.

Date Printed: 6/21/04 4:57:39 PM

EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 08108

Phone: (356) 858-4850 Fax: (\$56) 858-4960 Entail: salegel@EMSL.com



Attn:

Non-Responsive

Fax: Project: Customer ID: Customer PO: Received:

TSEC

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08/07/04 12:53 PM

EMSL Order: EMSL Proi: 040410194

Analysis Date: 6/16/04

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

			Hon-Asbestos Asbestos			Asbestos	
Sample	Location	Appearance	Treatment	*	Fibrous	% Non-Fibrous	% Type
MEX A01 040410194-0091	MEXIA	White Non-Fibrous Heterogeneous	Dissolved			100% Non-fibrous (other)	None Detected
MEX A02 040410194-0002	MEXIA	Gray/White Fibrous Heteropenaous	Teased	40% 40%		20% Non-fibrous (other)	None Detected
MEX A03	MEXIA	Brown Non-Fibrous Heterogeneous	Ashed			100% Non-fibrous (other)	None Detected

Non-Responsive

Due so reagnification intrinsions inherent in PLN, according filtures in dimensions below the resolution, expending of PLM may not be detected. Samples reported as 41% of none described may require a policional testing by TSRA for contrimin absolute report initiation report initiation is extended and may not be representation upon the preparation and in the expense written appropriate of EMSL Analytical, but It is ability in trinied to the cost of examples. EMSL below no responsibility for sample collection additions or analytical method finitiations. Interference of the cost of examples are the resolution and the collection and interference of the cost of examples of examples contained within this report meet the requirements of NELAC unless of examples of exampl

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APPENDIX C

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7 CT B	SW846-7420, 3050B	Flame Atomic Absorption	0.01%	
d Chups*	Mod. / AOAC (974.02)		2.4	
d Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
	or SW846-6010B	ICP	0.1 mg/l water	
á Sn I –	OF DIFFERENCE OF		10 mg/kg (pcm) soil	
din Agree	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
Ç M OST	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
		Flame Alomic Absorption	10 ug/wipe	
ki in Wipe	SW846-7420 / HUD Appendix 14.2 Digest	Flame Alomic Apsorption		Roctini
Wipe Type	<b>Y</b>	100	3.0 ug/wipe	
-non AST	or SW846-6010B	ICP		
		Flame Atomic Absorption	0.4 mg/l (ppr1)	
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	or SW846-6010B			
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APPENDIX D

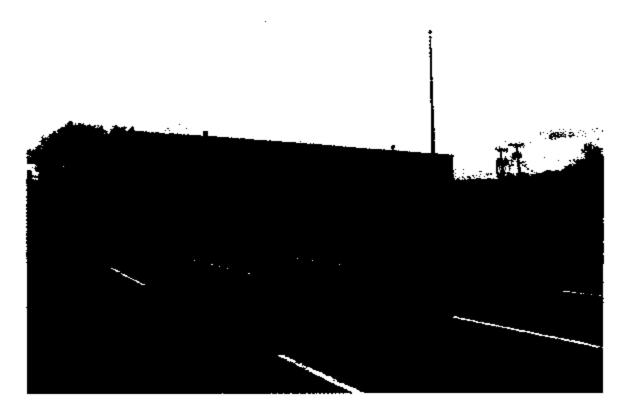


Photo #1: Armory front entrance.

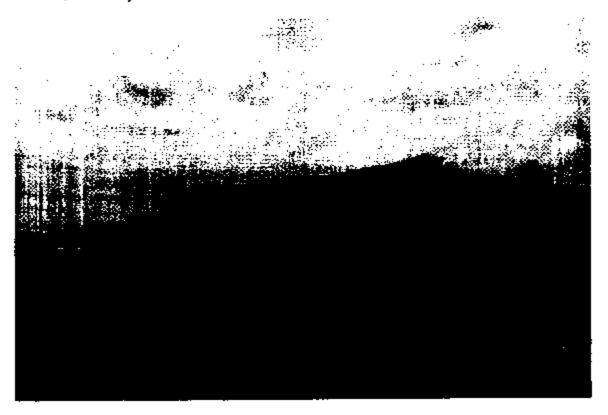


Photo #2: Armory's rear side.



Photo #3: South east side of the armory.

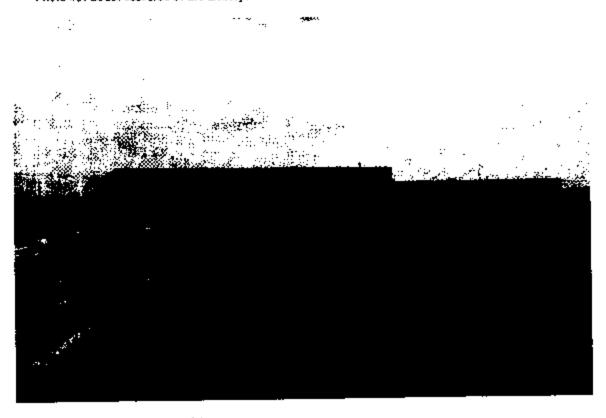


Photo #4: South west side of the armory.

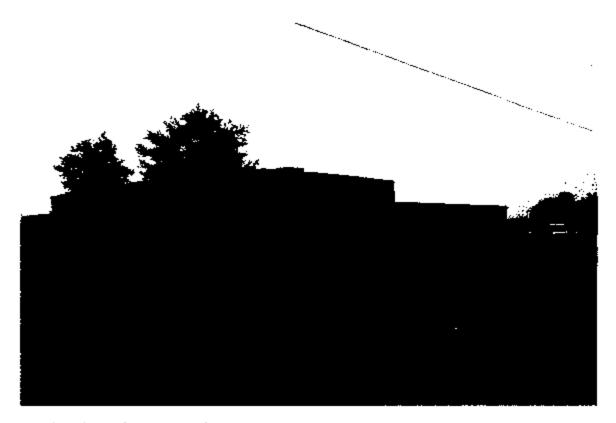


Photo #5: Northwest corner of armory.



Photo #6: Drill hall facing west.



Photo #7: Drill hall facing east.

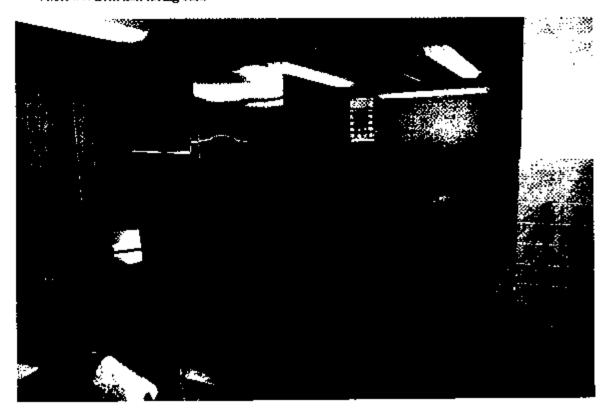


Photo #8: Armory's kitchen.

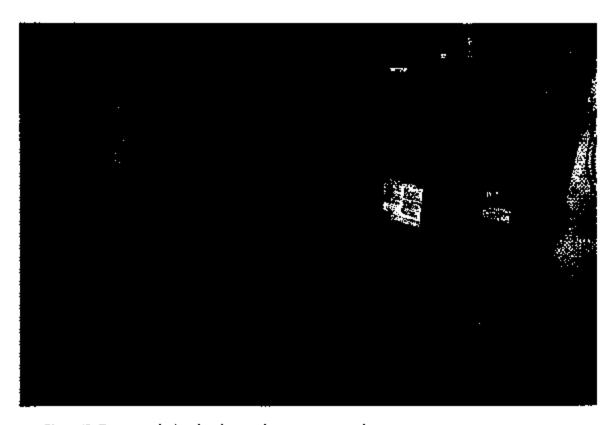


Photo #9: Furnace unit showing the wood common return plenum.

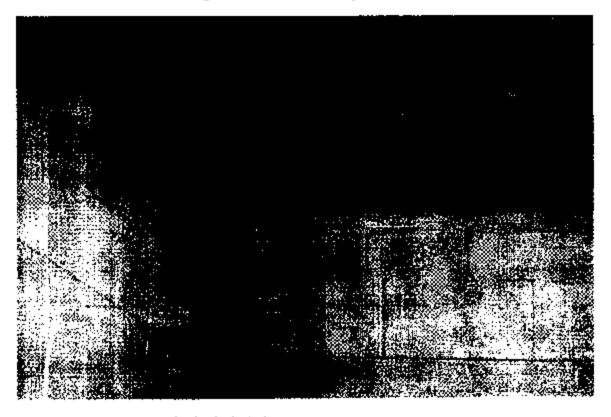


Photo #10: Mold contamination in the locker rooms.

#### 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.

#### References.

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- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
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- 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.
- I. 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.
- Findings. All Health Hazard information are on the survey findings of the report.(See enclosure 1)
- 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 0f 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 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.



CF:

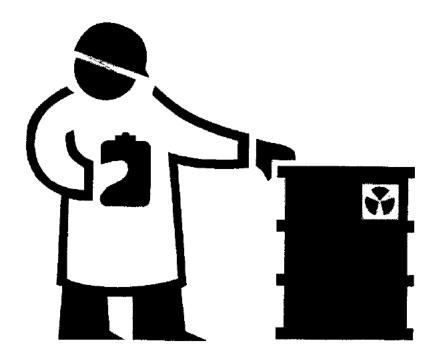
**NBG-AVN-SH** 

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

Non-Responsive

#### BEST AVAILABLE COPY

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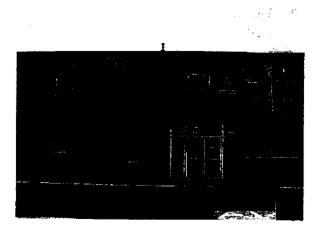
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MEMORANDUM FOR: Texas Army National Guard, ATTN: Non-Responsive Commander, HQ 4-133 FA, 2253 IH 35 W., New Braunfels, TX 78130-6899

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

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:

	DKart - State Stat	5
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 / Indeor Air Quality	<ol> <li>There was evidence of leaks in certain areas of the facility.</li> <li>The facility, overall, seems to be well maintained.</li> </ol>	<ol> <li>Create a maintenance work order to identify and fix sources of leaks.</li> <li>Continue to follow good hygiene and housekeeping practices.</li> </ol>
Lead Wipe Samples	Below Reportable Levels (BRL) to 119 µg/ft <sup>2</sup>	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	No Chemical list available.  MSDS are not updated for chemicals used.  ***Unit just returned from deployment, so they did not have all paperwork updated as yet.	Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.  Personnel responsible for these items should receive annual training in HAZCOM requirements

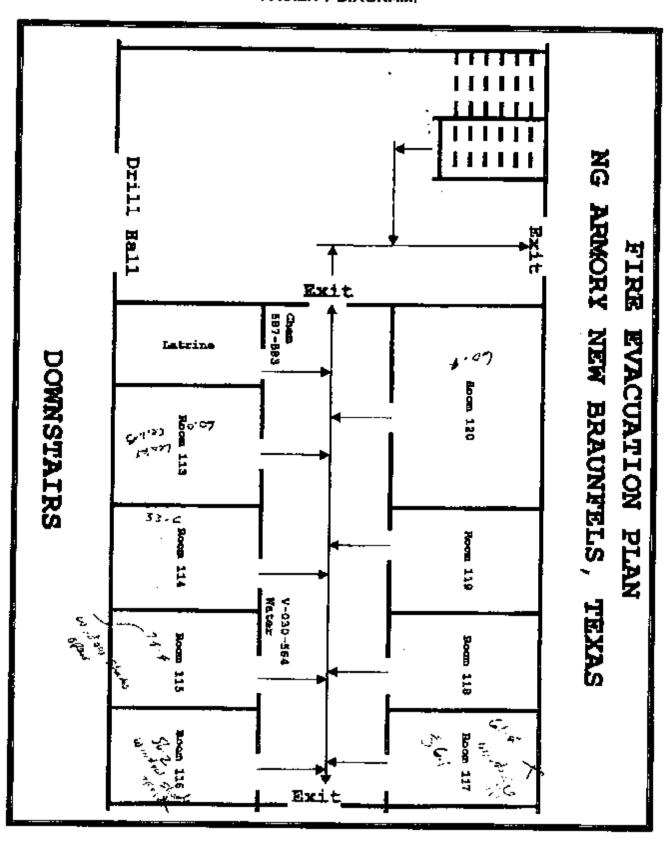
ri guiomics	and Supply Areas	on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action

# Non-Responsive

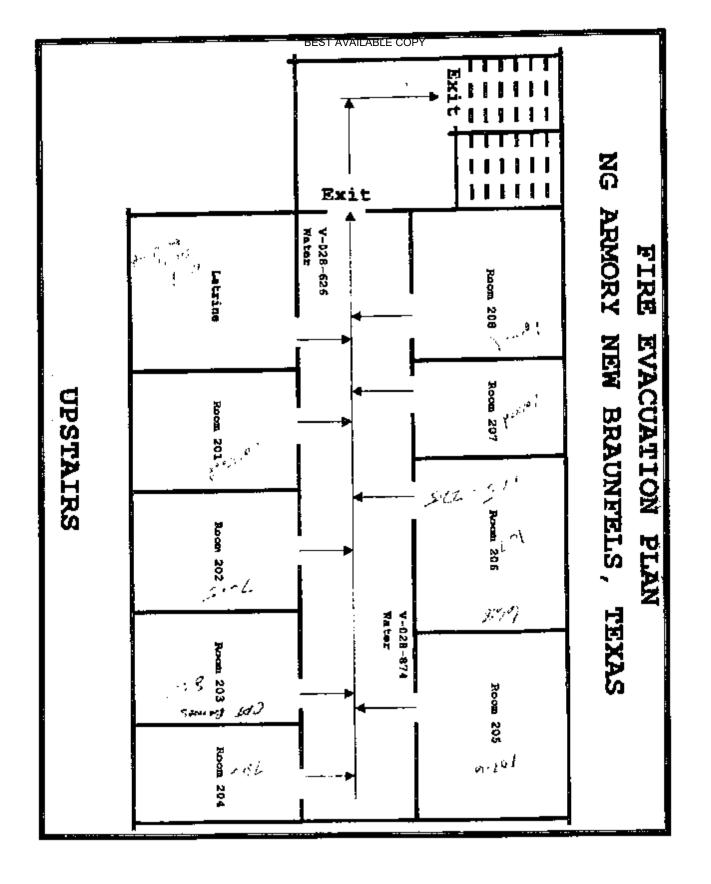
The following survey instrumentation was provided by or for the contractor, and was used to obtain lead wipe dust, illumination, ventilation, and noise sample measurements. All noise dosimeter instrumentation was calibrated before and after sampling. All other instrumentation was operated according to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

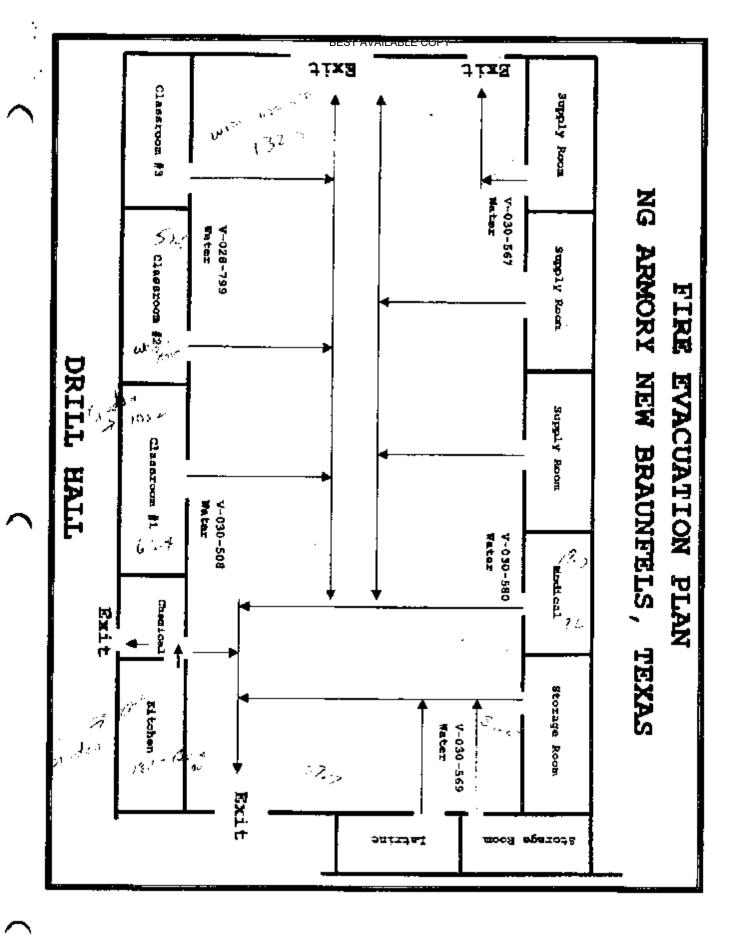
	By well of both	Marian Rational State
Extech Light Meter	Q009472	Purchased New June 2003
Bruel & Kjaer Sound Level Meter	1942768	September 7, 2002
Bruel & Kjaer 4231 Acoustic calibrator	1944552	September 3, 2002
Alnor Velometer	53281	October 1, 2002
Ghost Wipe Lead Dust Wipes		

### FACILITY DIAGRAM:



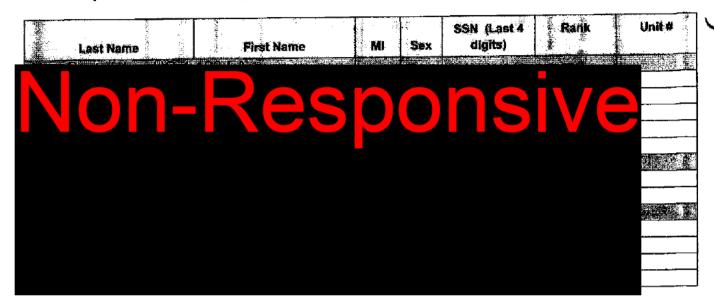
Page - 5





#### **PERSONNEL DATA:**

This facility houses the following full-time personnel:



#### **BUILDING CONDITION:**

#### Walk-through Observations

j król	a de la complicación de la compl	Pasch phone:	
1	Room 113	Leaky ceiling	1
2	2 <sup>nd</sup> 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:

riches	4888 - 1000 Jules is 1800 111 - 1800		
Room 120	60.4		
Room 117		58.75	With window shades open
Room 113	60.0	1	Transcri diagres open
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:**

· · · · · · · · · · · · · · · · · · ·		errechtender Far	+Control single rise
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 (1257)   Remarks					
Grill in Commander's Office (RM	2-New Braunfels	BRL	Below Reporting Levels		
205)					

#### KITCHEMILAMESS 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:

	A STATE OF THE STA		
	100 mm		
By window	28.2		
Counter	18.1		Bulb out
	<u> </u>	<del> </del>	
	· · · · · · · · · · · · · · · · · · ·		
	1	<u> </u>	<u> </u>

#### 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 said of the said	
1-New Braunfels	Blank (Admin, Kitchen, Drill	BRL	Below Reporting Levels
	Hall & HVAC)		
3-New Braunfels	Kitchen Counter	BRL	<u>.</u>
<u> </u>			

#### DRILL HALL

Personnel officially use the drill half 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 equare foot on bare and carpeted floors is considered dangerous. The following are the sample results:

4-New Braunfels	Drill Hall outside Supply	33.0	
	Room 2 (SVC)		
5-New Braunfels	Drill Hall outside Supply	65.0	
	Room 1		
6-New Braunfels	Drill Hall by back door	30.0	

#### Noise Sample Results:

Molee 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.

#### BEHTVANCLSBYSTEFM

#### 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:

THE TAXABLE PARTY.		
None - This unit has never had an		•
<u>IFR</u>	 	
		<u></u> _

### 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.

	11-1 2-1-2 1-1-2		
Commander's Office (205)	60.3	7 ft.	
Commander's office (205)	70.4	At source	

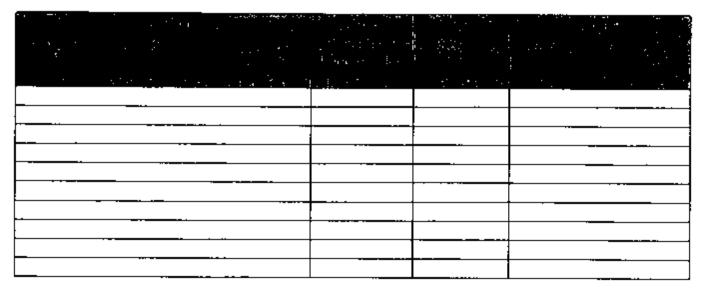
#### SUPPLY POOM SPENCE VAULT(e)

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 equare foot on bare and carpeted floors is considered dangerous.

			The second secon
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	<u> </u>
12-New Braunfels	Rack in Vault 2	119.0	- "-
13-New Braunfels	Shelf in Vault 2	89,0	· <del>-</del>
14-New Braunfels	Blank (Supply / Vault)	BRL	
			1

#### INDOOR FIRING RANGE

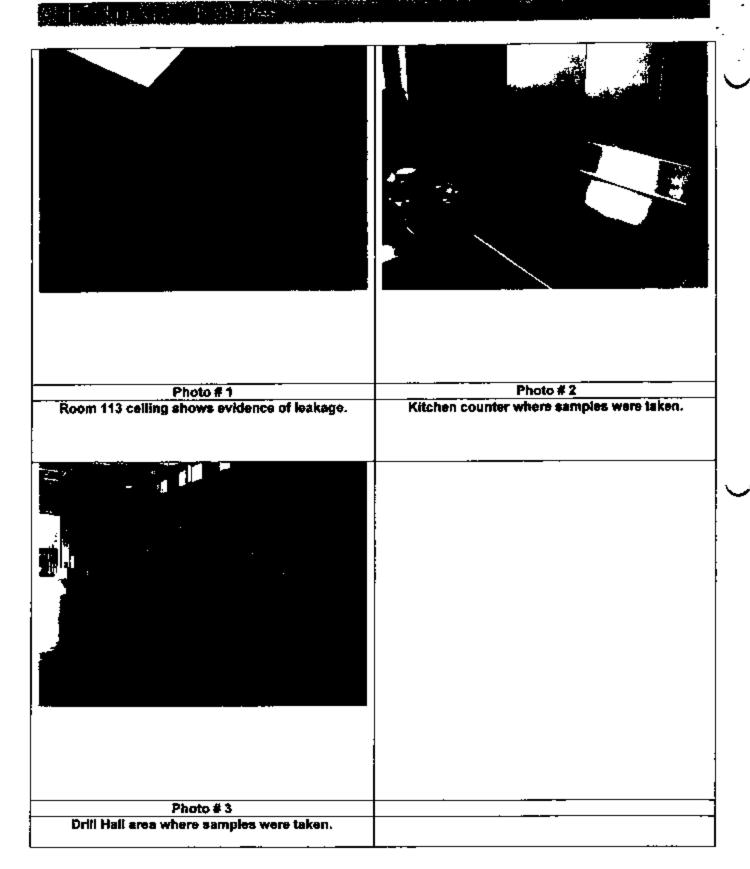
This facility has never had an indoor firing range.

#### 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 maintanance 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 building 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 gun, or applying makeup. Remove all refrigerators, cups, and other utensils from supply and maintenance areas.
- Fire extinguishers should be visually inspected on a monthly basis and recorded on service tag.
- Perform noise survey on maintenance equipment. Ensure that all noise hazardous machinery and noise hazardous areas are appropriately marked.
- Perform noise dosimetry on maintenance personnel during drift weekend, in order to document noise exposure.
- 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

Project:

New Broanfels Armory

Project No: PO No:

New Brownfels A

Date Received: Matrix:

0310643

10/20/2003 12 5 Wipe

Analysi:

Lab Order:

555

							<del></del>
(elementery (D)	Client Sample ID	Results	C'mitts	MDL	DF	Date Cellected	Date Analysed
03106-13-001 A	I-NEW BRAUNFELS	BRLL	ир, Тогы	2.83	ŀ	to/1 <b>47003</b>	1073/2003
03106-D-002A	ANEW BRAUNIFELS	BAL	ред Тока	2.83	ı	10/14/2003	10/23/2003
CC1D443-003A	FNEW BRAUNFELS	BR).	pg, Total	283	1	10/14/2003	10/23/2003
0310 <del>6</del> 43-004A	4 NEW BRAUNFELS	33.6	μ <b>μ. Tcrol</b>	280	1	10/14/2003	10/23/2003
931@-C-001A	SNEW BRAINFELS	65.0	μg. Total	283	1	10/14/2003	10/23/2003
0310a-CI-006A	>NEW BRAUNFELS	30.6	µg, Total	283	1	10/14/2003	10/23/2003
03   Oo-CI-CD7A	T-NEW HMALNEELS	BRI.	μg. Total	283	1	10/14/2003	(0/23/2003)
0310640-008A	FMEW BRALNIFELS	BRL	μg. Total	380	1	19/14/2003	(0.23/2003
031 <b>06-</b> 03-009A	ANEW BRAUNFELS	BRL	pg, Total	2 83	1	10/14/2003	10/22/7003
0310 <del>643-</del> 010A	ONEW BRAINFELS	48.0	µg. Total	2 80	1	10/14/2003	10/23/2003
A110-1240100	1-NEW RALAUNFELS	250	pg, Tobil	283	ŀ	10/14/2003	(0/23/2003
0310643-012A	2-NEW BRAUNTELF	119	дд. Тоғы	2.83	1	10/14/2003	10/23/2003
0310649-013A	3-NEW BRAUNFELS	∯r≥ 0	pig. Total	283	ı	10/14/2003	(0/73/2003
03106-D-014A	ANEW BRAUNIELS	BRL	pp. Total	280	ı	10-14/2003	10/23/2003

Qualifiers:

MDI - Method Detretion Limit

ND - Not Delected at the Reporting Land

DF - Dibrion 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.

#### References.

- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. Report dated February 23, 2004, Industrial Hygiene Survey, 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-Responsiver 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



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-I (Caponaive

Orange, TX 77630

RE: Baseline Industrial Hygiene Survey

#### FINAL REPORT

#### **FOR**

#### BASELINE INDUSTRIAL HYGIENE SURVEY

#### TEXAS ARMY NATIONAL GUARD

ORANGE ARMORY

ORANGE, TX

DATE:

**JANUARY14, 2004** 

PREPARED BY



#### CONTENTS

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#### 2.0 INSTRUMENTATION

#### 3.0 FINDINGS

#### 4.0 REFERENCES

Attachment ! 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 rformed 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 1/133<sup>rd</sup> FA. The armory is used by the troops of the DET 1 Service Battery 1/133<sup>rd</sup> FA for their monthly weekend drills.

The HHB 1/133<sup>rd</sup> 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. For 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 through out 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

#### Humination

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 Halt

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 advice 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/ft2 (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	VC-Heating Unit 1, Fan Side of Filter	20ug
54	A/C-Heating Unit 2, Supply Side of Filter	BLR
55	AC-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 I	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, 4<sup>th</sup> 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.



#### 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 foe 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 MAZARU INFORMATION MODULE FIELD SURVEY \*SEE PRIVACTEST AND ABBLE COPPON REVERSE. (For use of this form, see FIRM User's Instructions.)

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# Non-Responsive de CATECORY

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#### · PRIVACY ACT STATEMENT

Title 6 U.S. Code, Section 301; Executive Order 9397 authorizes the use of your Social Security Number as a identification number. The purps of this information is to identify and monitor data relating each DA civilen employee exposed to a hazardous workplace or operation. The use this information is to provide histories of exposure for any given worker.

Disclosure of your Social Security Number is not mandatary; however, nondisclosure may result in untimely provision of proper medical maintening.

#### Analytical Environmental Services, Inc.

Date: 3/11/2004

# TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

Non-Responsive

Project:

Orange, TX Armory

Project No:

Orange, TX Arm

PO No:

Lab Order:

0403358

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
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	l	1/14/2004	3/10/2004
0403358-008A	47	BRL	μg, Totał	2.83	1	1/14/2004	3/10/2004

ualifiers:

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:

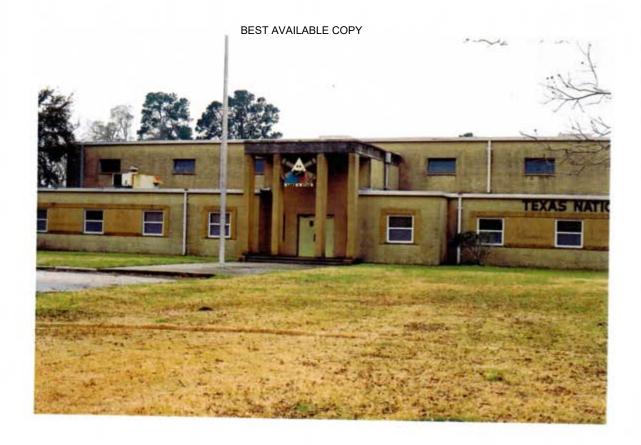
Orange, TX Arm

Matrix: Analyst: Wipe SSS

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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	10 <del>9</del>	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





# ORANGE,TX ARMORY



Posted to NGB FOIA Reading Room May, 2018

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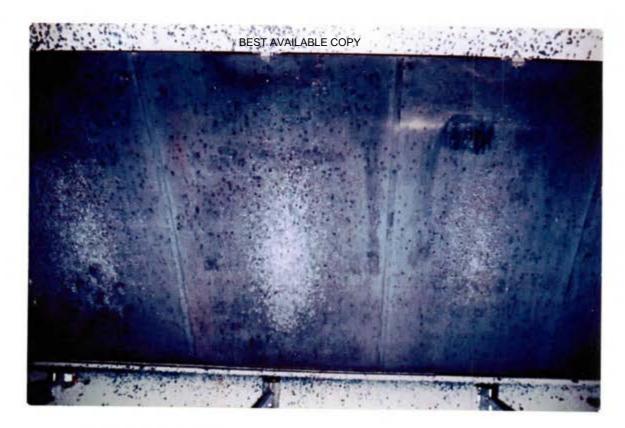


# DRILL HALL



Posted to NGB FOIA Reading Room May, 2018

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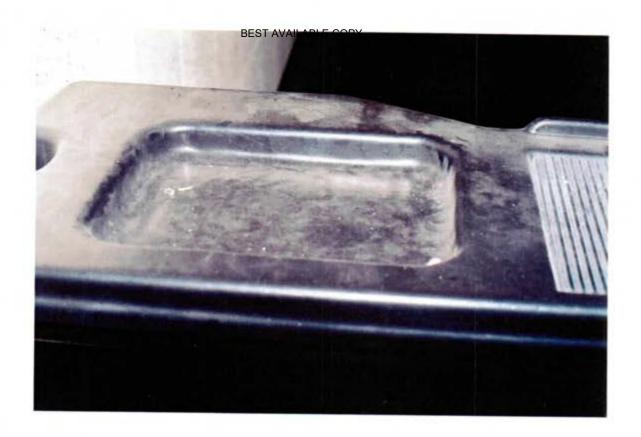
IFR, BULLET BACKSTOP

## IFR, BULLET CASINGS

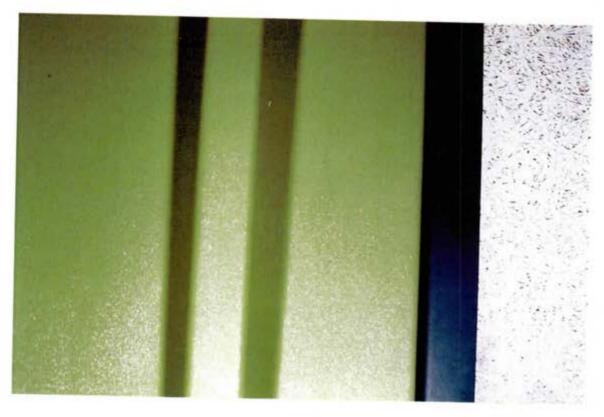


Posted to NGB FOIA Reading Room May, 2018

OIA Requested Record #J-15-0065 (TX) Released by National Guard Bureau Page 1191 of 1757



IFR, SAMPLING AREAS



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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1192 of 1757



A/C-HEATING UNIT, FILTER

# A/C OUTLET, OFFICE



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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1193 of 1757



A/C OUTLET, SUPPLY ROOM

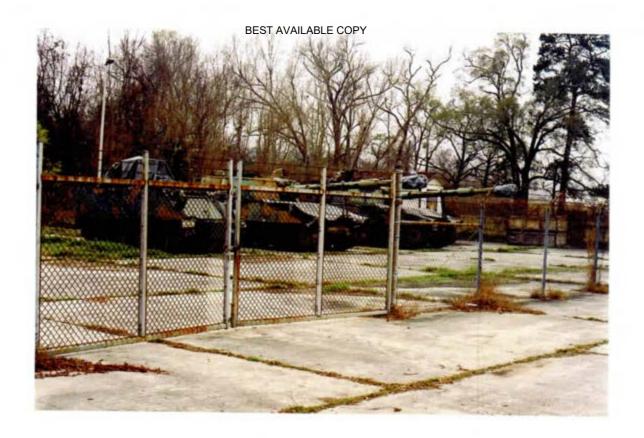
# SUPPLY ROOM EMPTY



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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1194 of 1757



# **MOTOR POOL**



Posted to NGB FOIA Reading Room May, 2018

Erck, Phillip A. (TX)

From:

Non-Responsive

Sent: To: Subject:

Thursday, May 08, 2003 3:05 PM

TXALL

Closed Indoor Firing Ranges

This message approved by

Non-Responsive

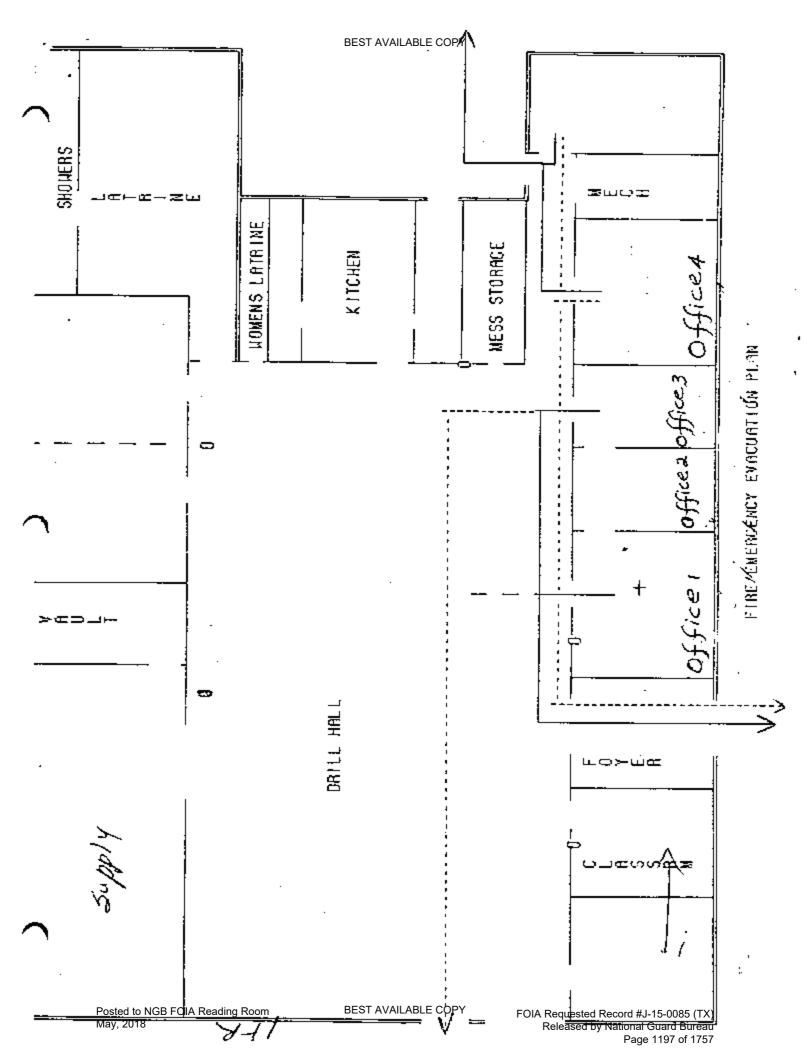
Director of Army Aviation and Safety

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





# 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 35<sup>th</sup> 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
- Non-Responsive dustrial Hygiene Technician for the Texas Army National Guard conducted the survey on 5 May 2009.

#### 3. General.

- a. <u>Site Description</u>. 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 dost 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. <u>Asbestos Suspect Building Material</u>: 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.
- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- 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 VOT work. Areas with low light readings have burnt out builts 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)
- 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)



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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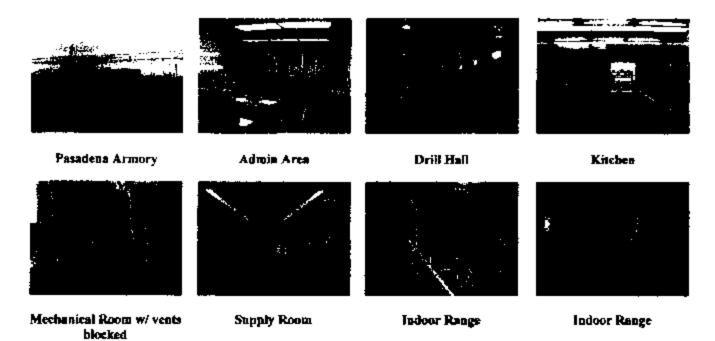
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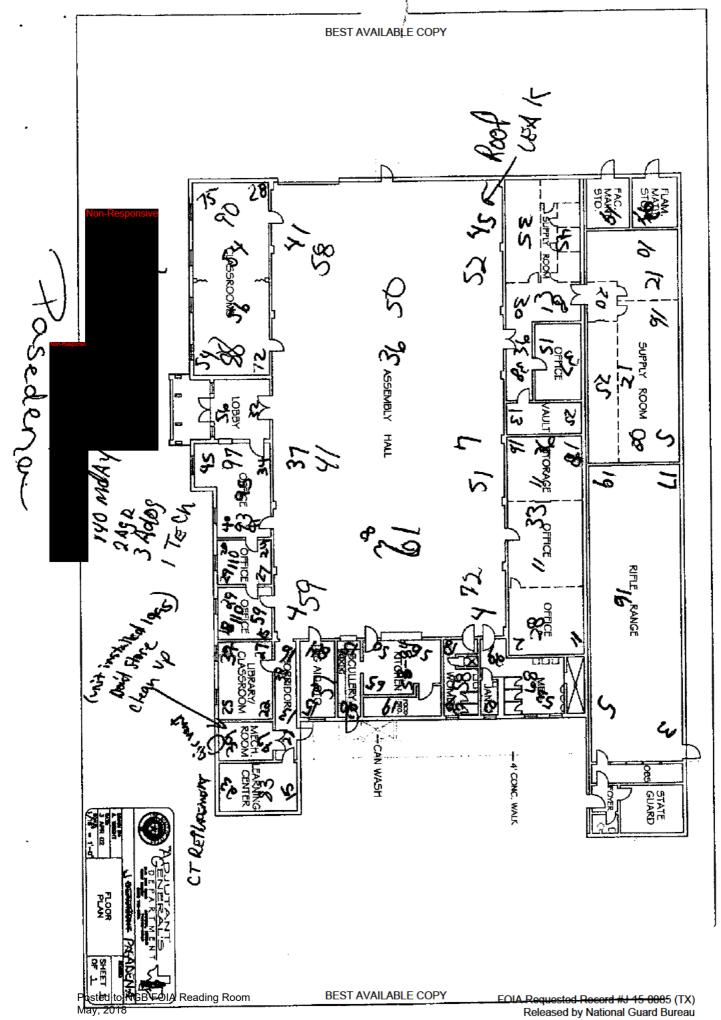
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#### Appendix A

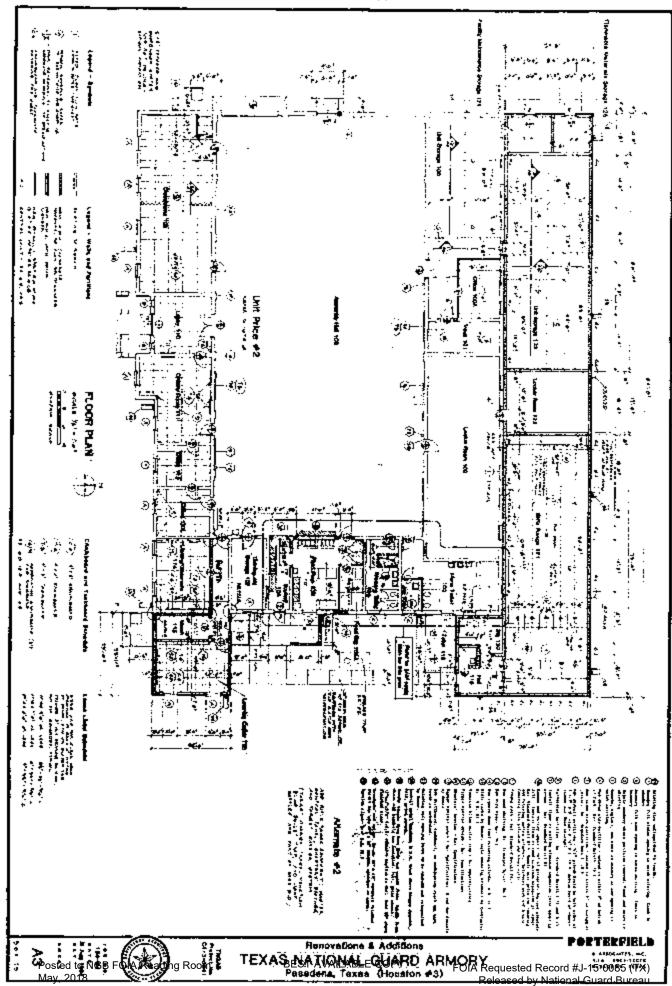
#### Photographs and Floor Layout.

#### Pasadena Armory





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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 35<sup>th</sup> 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 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
  - Non-Responsive Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 23 January 2008.

#### 3. General.

- 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. <u>Scope of Work.</u> 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 frieble and damaged building material. Each bulk sample are then placed in a scaled bag and sont 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.

#### Findings.

Lead Wine 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.

- 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.
- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> 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 sturage/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..

#### 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)
- 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)



CF: NGB-ARS-IHSE

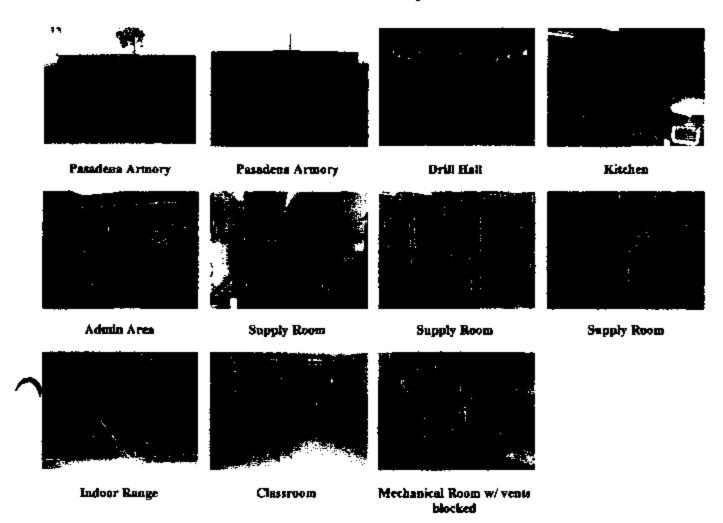
State Occupational Health Office, 3500 West 35th Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218. ENCL.

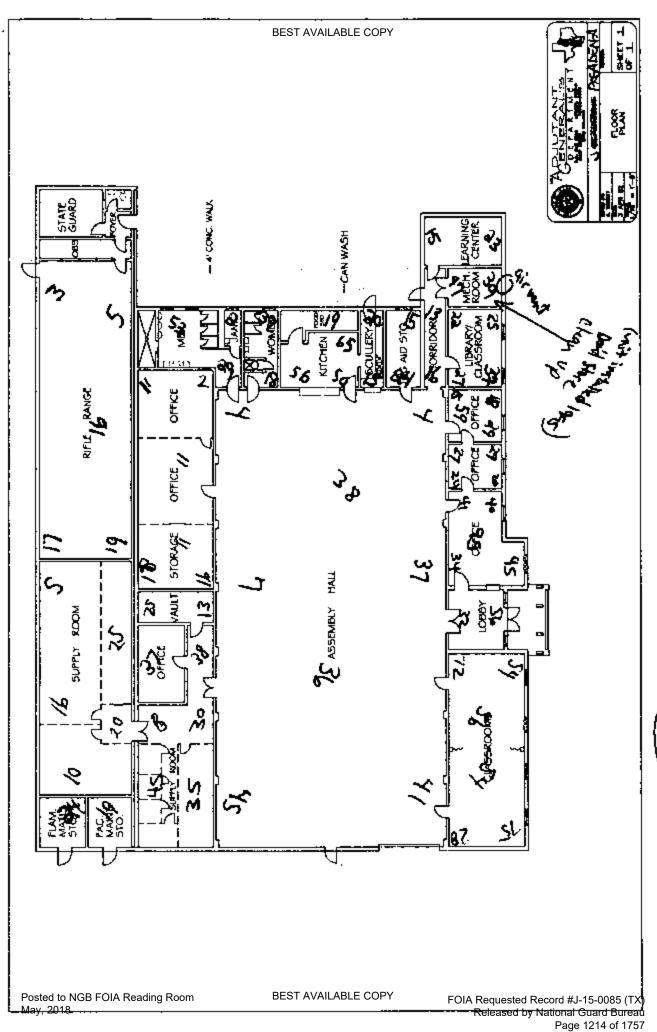
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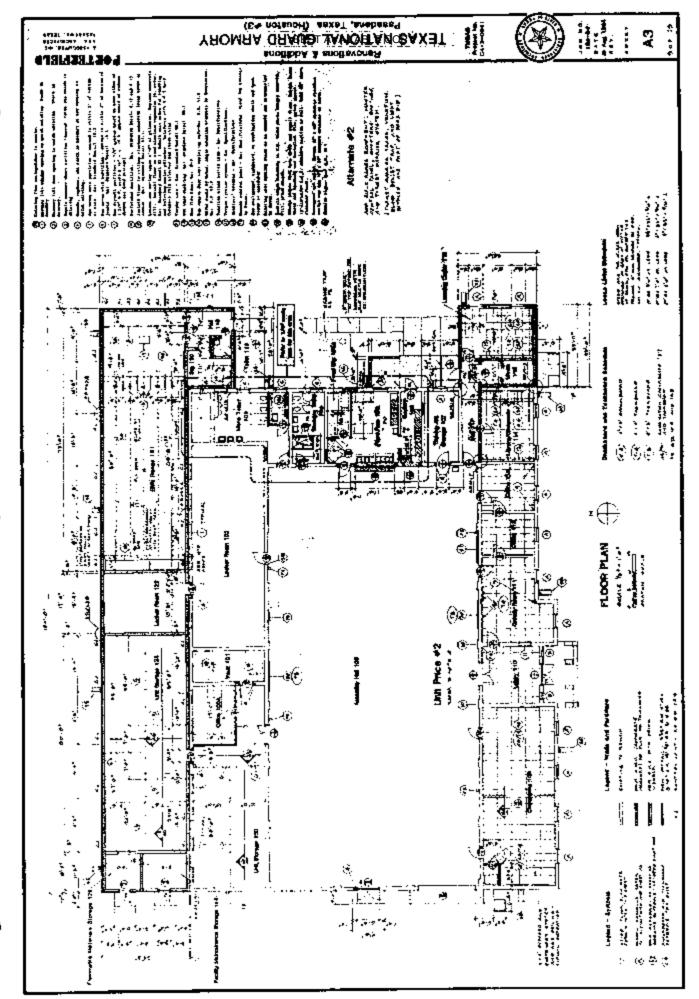
Photographs and Floor Layout.

#### Pasadena Armory





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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

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.

- 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.
- 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.
- Report dated February 23, 2004, Industrial Hygiene Survey, Non-Responsive Fayetteville, GA.

#### 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-Responsivenger Cake RD, Fayetteville, GA, conducted the survey.
- 3. Findings. All Health Hazard information are on the survey findings of the report. (See enclosure 1)
- 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.

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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



February 18, 2004

# Non-Responsive

3451 57 St Port Arthur, TX 77642

RE: Baseline Industrial Hygiene Survey

#### FINAL REPORT

#### FOR

#### BASELINE INDUSTRIAL HYGIENE SURVEY

#### TEXAS ARMY NATIONAL GUARD

PORT ARTHUR ARMORY

PORT ARTHUR, TX

DATE:

**JANUARY13, 2004** 

PREPARED BY



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#### INSTRUMENTATION 2.0

#### FINDINGS 3.0

#### 4.0 REFERENCES

Attachment 1 HHIM Forms

Attachment 2 Laboratory Reports: Deactivated Indoor Fiting 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

Anachment 6 A User-Friendly Workstation Diagram

#### 1.0 INTRODUCTION

At the request of the National Guard Bureau South Region Industrial Hygiene Office, Non-Responsive formed a Baseline Industrial Hygiene Survey at the TX ARNG Fort Armur 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 1/133<sup>rd</sup> FA. The armory is used by the troops of the Battery B 1/133<sup>rd</sup> FA for their monthly weekend drills.

The Battery B 1/133<sup>rd</sup> 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 through out 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 !

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 rurned 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/fi2. 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

	Outlet Grill, Classroom	<b>A</b> .
34		21ug
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)	JES 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, 4<sup>th</sup> 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.



#### 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 vauit 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.

# \*SEE PRIVACY ACT STATEMENT ON REVERSE. (For use of the Strandard BEDCORY) insuration.)

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OIL SOLVENTS	<del></del>	SAFETY/IMPACT CHEMICAL/SAFETY	<del>/-</del>	CANAL CAPS		COVERALLS	<del>                                     </del>	I	BLE POOTS	<del></del>
HCT SURFACES	,	FULL FACE SHIELD	,	HELMETS	<del>-/-</del>	FULL BODY SUIT SAFETY BELT/ HARNESS	1	SAFETY N SAFETY N TIVE SHO	DNDUCT SHO CNCONDUCT	<del>== :</del> .
COLD SURFACES		WELDING HELMET	7			HEAT REFLECT		1 45375		!
MBC AGENTS			<u> </u>							
CTION 4. HAZ	ARD	INVENTORY DATA								
. CAS CODE			ARD D	ESCRIPTION	-9		د. ۽	AC or EPC	d. MEDIC SURVEILL HECOMME:	ANCE
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SECTION S. SAM

SAMPLING DATA

BEST AVAILABLE COPY

a. HAŻARD	A SAMPLE TYPE	C RESULTS	d. REMARKS
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SECTION 6.

PERSONNEL DATA

# Non-Responsive #GR

Rederes NCO

1 Rederes NCO

2-Hos been at this facility obser 5 yes

Was at the Ocord TX Artury before

3 Computer work 8-10 to lay

5 Should take leads when writing with computer for long pours of ine

6 No lead to publicue related to job.

#### · PRIVACY ACT STATEMENT

Title & U.S. Code, Section 301; Executive Order 9397 authorizes the use of your Social Security Number as a identification number. The purpose of this information is to identify and monitor data relating each DA civilian employee exposed to a hazardnus workplace of operation. The use of this information is to provide histories of exposure furnity given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in untimely provision of proper medical maintening

Signature

#### HEALTH HAZARD INFORMATION MODULE FIELD SURVEY \*SEE PRIVAGES AWAITABE CONTYON REVERSE.

SECTION 1.

**DEMOGRAPHIC DATA** Post Arthur b. INSTALLATION OF AVERY a. ARLOC d, LOCATION/CODE SAH GPERATION/CODE L & DESCRIPTION g. MACOM/CODE I. SUPERV spons I. TELEPHONE/AUTOVON NUMB 1. FREQUENCY IH m. NO CIV(5) a. NO CONTRACTOR(S) a. NO OTHER \_ p. NO LOCIS) -S ECTION 2. IH STAFFING DATA A. LAS HOUDS - b. VAPOR DEGREASERS C. MAINTENANCE BAYS d. SPRAY BOOT-S-. OPEN SURFACE TANKS 1. VENTILATION UNITS SECTION 3. SURVEY DATA 3-24 A. SURVEY DATE b. EVALUATOR (INITIALS C.CONTHOLS PRESENT d. EVALUATION 4. UNIT CODE 1 1. CONTROLS REQUIRED htirs-office 41-75: A-09 RC. 60 50-100 h. PERSONAL PROTECTIVE EQUIPMENT (R\*REQUIRED: A=AVAILABLE: J. RESPIRATOR MANUFACTURER NIOSH IC NO ۵. ـ DISPOSABLE 4 FACE AIR PURIFYING WEACE AIR PURIFYING FULL FACE AIR PURIFYING POWERED AIR PURIFYING AIRLINE SELF-CONTAINED ABRASIVE BLASTING HOOD é = ·± GLOVES 3. EYES/FACE 4. HEARING R/A S. BODY R/A 6. HEAD/FOOT ACID CHEMICAL/SPLASH MUFFS APRONS HARD HATS SAFETY/IMPACT EARPLUGS COVERALLS IMPERMEABLE POOTS SOLVENTS CHEMICAL/SAFETY CANAL CAPS SAFETY CONDUCT SHCES FULL BOOY SUIT SAFETY BELT HCT SURFACES FULL FACE SHIELD HELMETS TIVE SHOES HEAT REFLECT COLD SURFACES WELDING HELMET NBC AGENTS SECTION 4. HAZARD INVENTORY DATA d. MEDICAL SURVEILLANCE RECOMMENDED b. HAZARD DESCRIPTION CAS CODE PAC or EPC PU VDT Computer work Helan, lefter POLIFTING 3 10月0THAZ BEST AVAILABLE COPY Posted to NGB-FDIA-Reading-Room ····· FOIA Requested Record #J-45-0085 (TX) May, 2018 Released by National Guard Bureau · - · · · ~ Page 1231 of 1757

SECTION 5. SAMPLING DATA L SAMPLE TYPE . HAZARD C. RESULTS d. REMARKS 7.7 SECTION 6. PERSONNEL DATA

SECTION 7. COMMENTS (Adoptions ineed of paper 1) necessary)

(1) & Bottom i / 133 of FA Supply Sgt

(2) xlos hear in this facility for 3 yrs.

(3) Before was est HHB- fact of ine (3 yrs)

(5) Computer words about 5-6 h/lag

(5) No health problems related to job.

(6) Chould tolle heals when working with computer for by period of fine

#### · PRIVACY ACT STATEMENT

Title & U.S. Code, Section 301: Executive Order 9397 authorizes the use of your Social Security Number at a identification number. The purpose of this information is to identify and monitor data relating each DA civilion employee exposed to a hazardous workplace of exposure fue any given worker.

Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in untimely provision of proper medical maniforms.

#### 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: Analyst: Wipe SSS

PO No:

			·					
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

#### Analytical Environmental Services, Inc.

Date: 3/11/2004

#### TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

Non-Responsive

Lab Order:

0403371

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
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	ł	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	I	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	ı	1/13/2004	3/10/2004

Dualifiers:

MDL - Method Detection Limit

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

#### **BEST AVAILABLE COPY**

Analytical Environmental Services, Inc.

Date: 11-Mar-04

CLIENT:

Client Sample ID: 29

Lab Order:

Port Arthur, TX Armory

Tag Number:

Project: Lab ID:

0403372-010A

Collection Date: 1/13/2004 3:30:00 PM

Matrix: PAINT

Analyses	Result	Limit Qu	al Units	DF	Date Analyzed
TOTAL METALS IN PAINT Lead	BRL	<b>PAINT</b> 0.00964	wt%	1	Analyst: <b>SSS</b> 3/11/2004

Qualifiers: Value exceeds Maximum Contaminant Level В  ${\tt BRL}$ E Below Reporting Limit Н Holding times for preparation or analysis exceeded J Ν Analyte not NELAC certified

Analyte detected in the associated Method Blank Value above quantitation range

Analyte detected below quantitation limits

NELAC analyte certification pending Spike Recovery outside accepted recovery limits S

Rpt Limit Reporting Limit

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#### ANALYTICAL ENVIRONMENTAL SERVICES, INC.

#### **Bulk Sample Summary Report**

Client Name: Project Name: on-Responsiv

Lab ID# 102082-0 0403344

AES Job Number:

Project Number:

Page 1 of 1

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			СН	AM	CR	AN	TR	AC	
38 Layer: 1	0403344 -001A	Broken Floor Tile Kitchen					T i		Floor Tile
38 Layer: 2	0403344 -001A	Broken Floor Tile Kitchen	5	: : :					Black Mastic

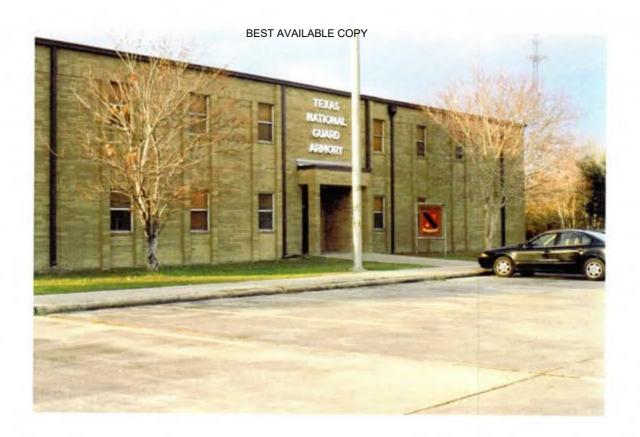
Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophylite For comments on the samples, see the individual analysis sheets.

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 iPolarized 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:



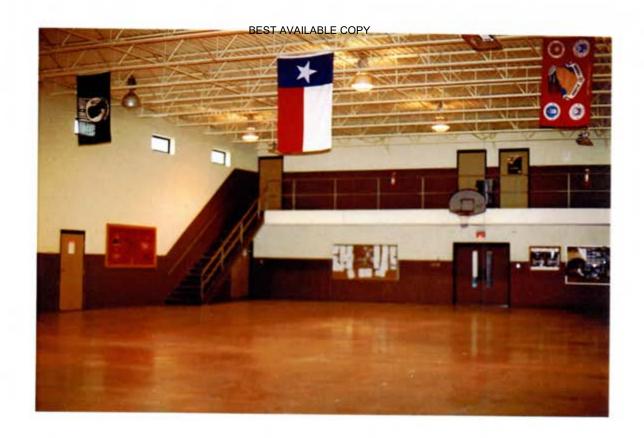
### PORT ARTHUR, TX ARMORY



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## DRILLHALL



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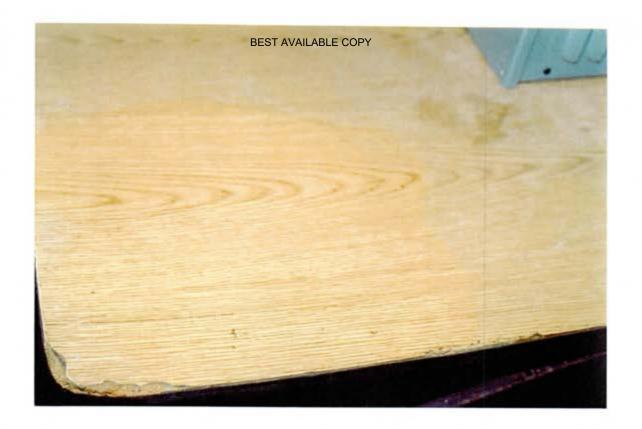
# IFR, FRONT VIEW

# IFR, REAR VIEW



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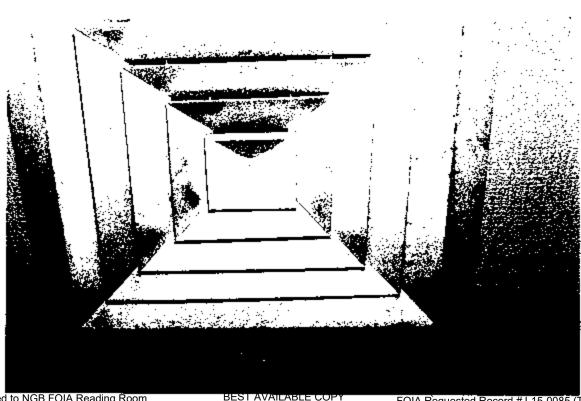


## IFR, SAMPLING AREAS





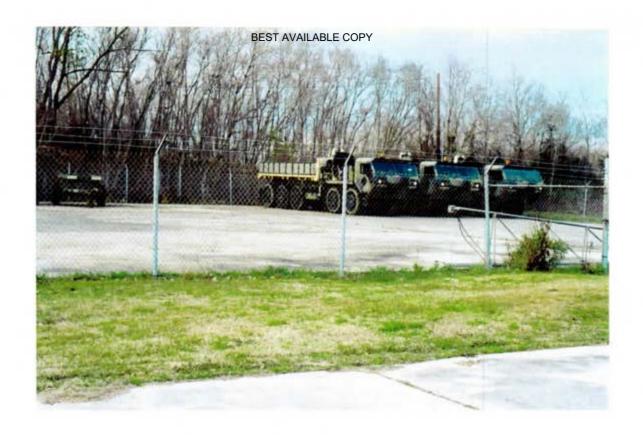
# A/C OUTLETS, **OFFICES**



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# **MOTOR POOL**

### A/C-HEATING UNIT



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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1242 of 1757



RECRUITER OFFICE, DESK CHAIR

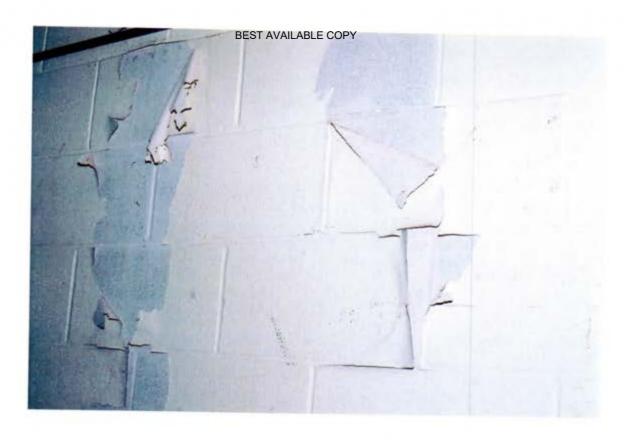
### FLAMMABLE MATERIAL STORAGE



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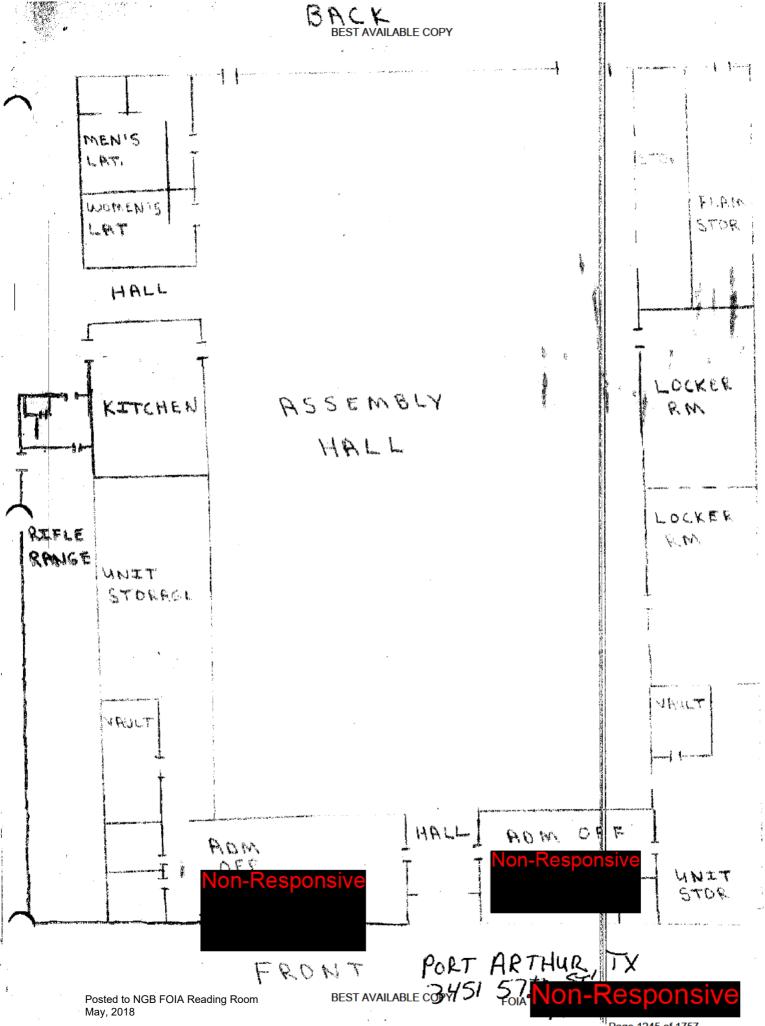
FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1243 of 1757



PAINT OFF, SUPPLY ROOM

## BROKEN FLOOR TILES, KITCHEN





Page 1245 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-ARS-IHSE (40-5f)

04 September 2009

MEMORANDUM FOR: ADJUTANT GENERAL TX ARNG, ATTN.: Port Arthur Armory, BTRY B, 1st BN 133rd FA, 3451 57<sup>th</sup> ST, Port Arthur, Texas 77642

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

SUBJECT: Transmittal of IH Survey, Port Arthur Armory, BTRY B, 1st BN 133rd FA, 3451 57<sup>th</sup> 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.

#### 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 57<sup>th</sup> 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
- Non-Responsive ndustrial Hygiene Technician for the Texas Army National Guard conducted the survey on 01 June 2009.

#### 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. <u>Scope of Work.</u> 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.
- 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. Asbestas 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. <u>Lead Wipe Samples:</u> 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. <u>Asbestos Suspect Building Materials</u>: 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 Numb <del>er</del>	Sample Location	% Asbestos Type
PAT 64	12 x 12 Floor Tite (Layer 1)	None Detected
PAT 64	12 x 12 Floor Tile (Layer 2)	Black Mastic contains 3% Chrysotile

 Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey. Illumination Survey Evaluated lighting levels within the Armory ranged between 0 to 139 foot-cardies.

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 warrage 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		estos	Mine	ral Po	rcent	ege	Comments
			СН	AM	CR	AN	TR	AC	
PAT 64	0906192-123 001A	x12 Floor Tile	ND	ND	ND	ND	ND	ND	Gray Floor Tile
Layer: 1 PAT 64	0906l92- 001A	x12 Floor Tile	3	ND	ND	ND	ND	ND	Bitumen
Layer: 2							! 		

Note: CH=chrysolite, AM=amosite, GR=croclobille, AC=actinolite, TR=tremolite, AN=anthophylite For commants on the samples, see the individual analysis sheets.

ND = None Detected

PLM is not consistently reliable in detacting 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 ostimated volume. All analyses are performed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials, EPA/800/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:

#### Analytical Environmental Services, Inc.

Date: 6/30/2009

TOTAL LEAD IN PAINT (N7082) PAINT

CLIENT:

National Guard Bureau Region-South III

Lab Order:

0906J06

Project:

Port Arthur, TX Armory

Date Received: 6/24/2009 9:55 AM

Delivery Order:

Matrix:

Paint

PO No:

<del></del>				******				
Laboratory	Clicot Sample	Results	Units	Report	DF	Date	Date	Analyst
ED	at a			Limit.		Collected	Analyzed	
0906J06-00TA	PAT 65	0.0185	wt%	0.00964	1	6/1/2009	6/26/2009	AZS
0906306-002A	PAT 66	BRI,	wt%	0.00979	i	6/1/2009	6/26/2009	AZS

BRL - Not Detected at the Reporting Lamin

Df. - Delution Factor

Results are blank corrected where applicable

### Appendix B: Lab Chain of Custody

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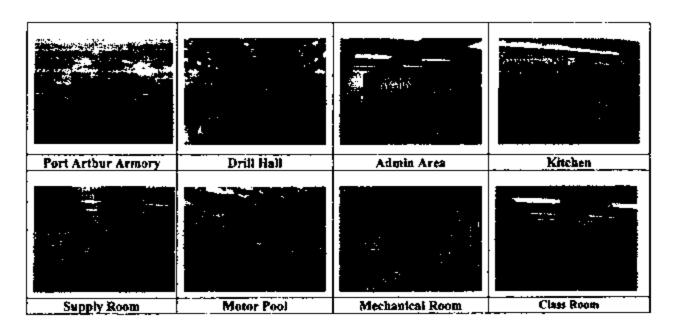
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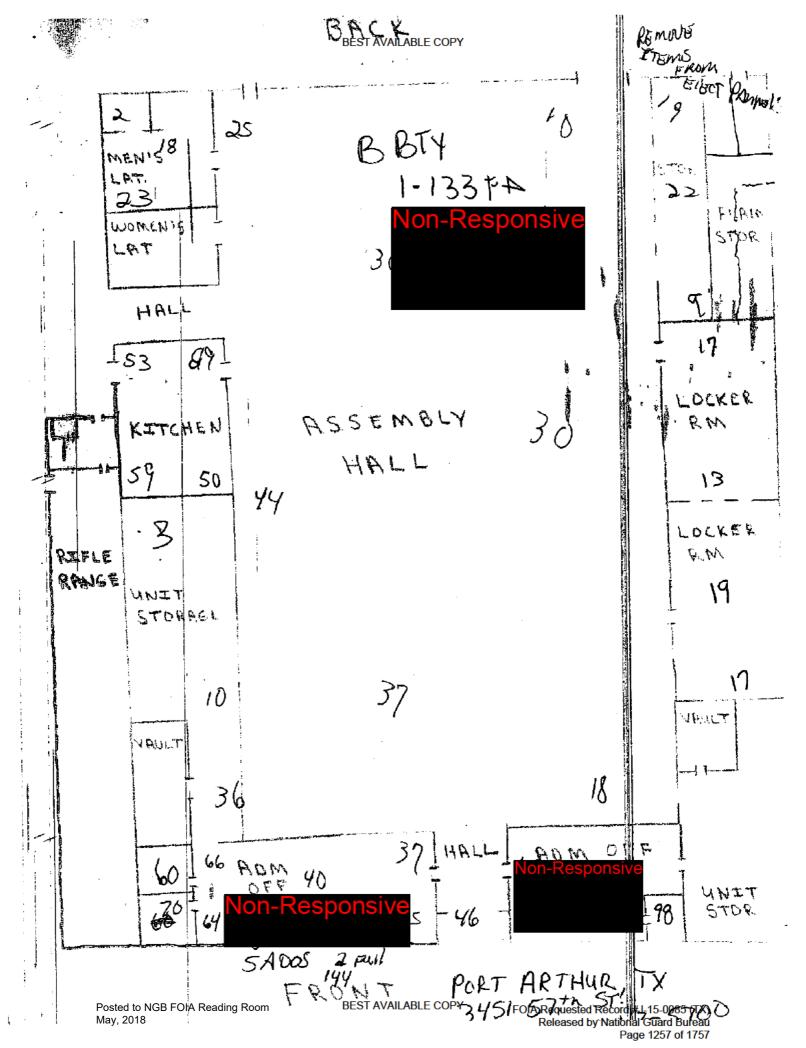
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# BEST AVAILABLE COPY **Appendix C**:

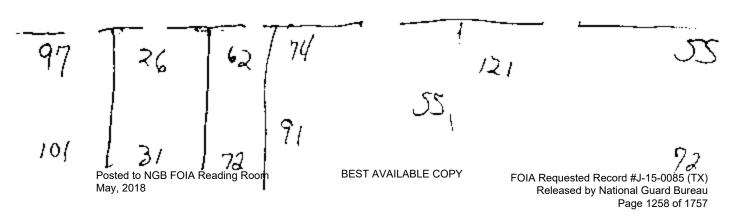
#### Photographs and Floor Layout

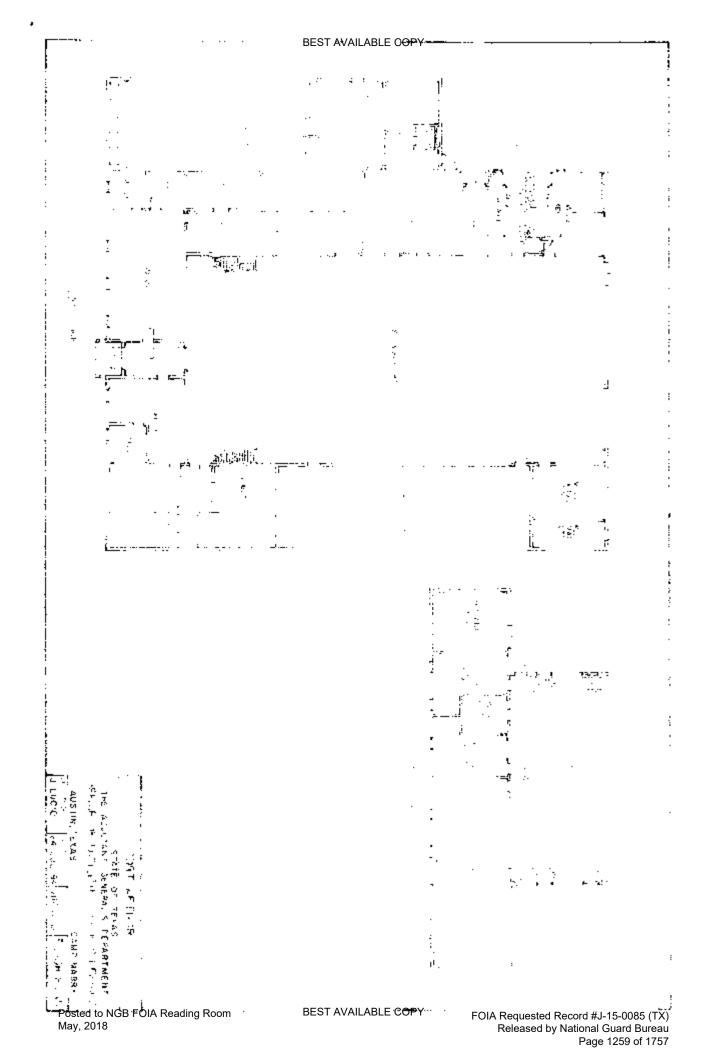
#### Port Arthur Armory





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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 536<sup>th</sup> BSB, 511 Grigsby Drive, Port Neches, Texas 77651.

Thru: Non-Responsive Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35<sup>th</sup> 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
- c. Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 05 May 2009.

#### 3. General.

- a. <u>Site Description</u>. The Port Neches Armory; a one story brick over einder 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. <u>Scope of Work.</u> The work included collecting wipe 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.

#### Findings.

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

- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> 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 our 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...

#### 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)



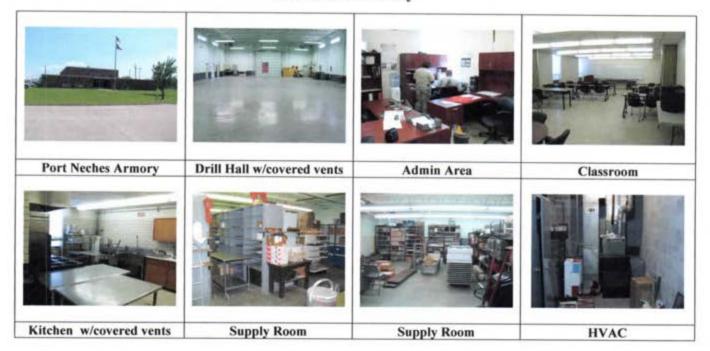
CF: NGB-AKS-IHSE

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218. ENCL.

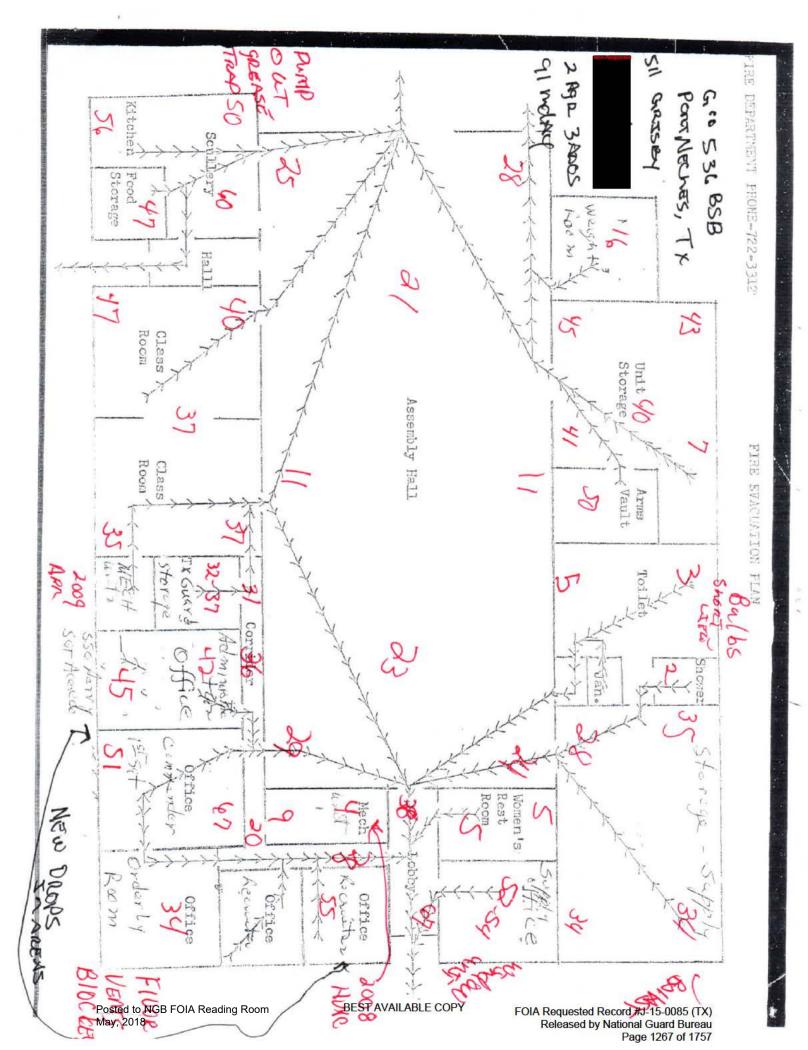
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# Appendix A; Photographs and Floor Layout.

#### Port Neches Armory



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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.: Port Neches Armory SVC BTY 1-133<sup>rd</sup> FA, 511 Grigsby Drive, Port Neches, Texas 77651.

Thru: Non-Responsive Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35<sup>th</sup> Street, Building 10, Austin, 1X 78763-5218.

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> 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 adustrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 25 September 2007.

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> FA, 511 Grigsby Drive, Port Neches, Texas 77651

#### 3. General.

- a. <u>Site Description</u>. The Port Neches Armory; a one story brick over cinder block structure with Central RVAC 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 scaled plastic bag and sent for analysis to an American Industrial Hygiene Association (AlHA) 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.

#### Findings.

- a. <u>Lead Wipe Samples:</u> 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 meluded 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:

SUBJECT: Transmittal of JH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> 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

- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> 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

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> 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..

#### 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)
- 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)



CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218. ENCL.

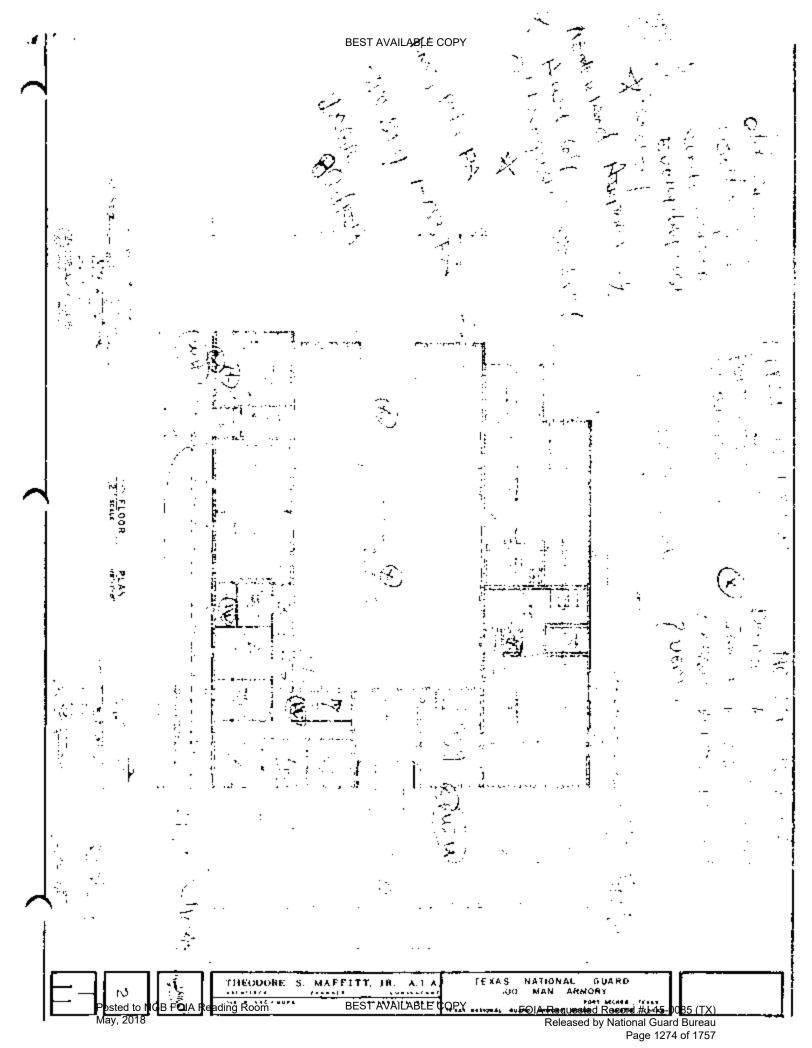
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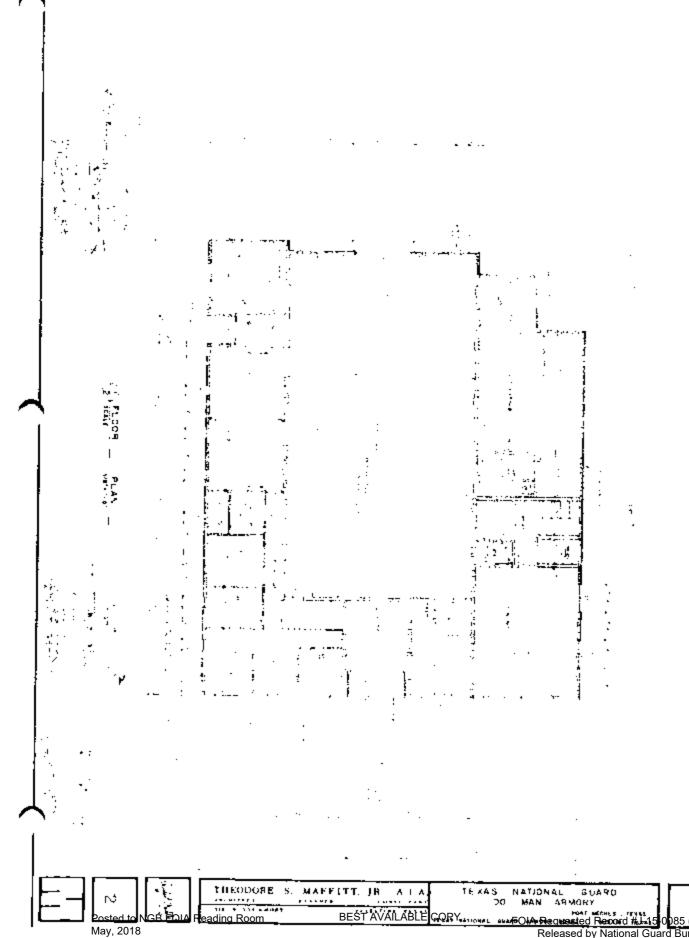
NGB-ARS-IHSE (40-51)

10 October 2007

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> FA, 511 Grigsby Drive, Port Neches, Texas 77651

Appendix A: Photographs and Proof Layout.

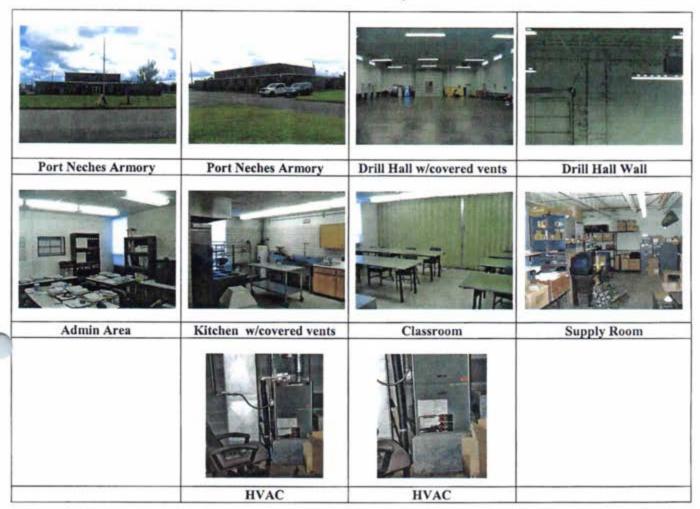




Released by National Guard Bureau
Page 1275 of 1757

SUBJECT: Transmittal of IH Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> FA, 511 Grigsby Drive, Port Neches, Texas 77651

#### Port Neches Armory



NGB-ARS-THSE (40-5f)

10 October 2007

SUBJECT: Transmittal of III Survey, Port Neches Armory SVC BTY 1-133<sup>rd</sup> 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 35<sup>th</sup> Street, Building 10, Austin, TX 78763-5218.

SUBJECT: Transmittal of IH Survey, Redbird Armory, CO A, 372<sup>nd</sup> 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.

- The Point of Contact during the survey was Non-Responsive
- Non-Responsive Industrial Hygiene Technician for the Texas Army National Guard conducted the survey on 22 October 2008.

### 3. General.

- a. <u>Site Description</u>. The Redbird Armory; a one story brick over einder 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. <u>Scope of Work.</u> 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 (AlHA) 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. <u>Lead Wipe Samples:</u> 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. <u>Asbestos Suspect Building Material</u>: 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.
- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> Evaluated lighting levels within the Armory ranged between 0 to 73 foot-candles. Lighting issues to include have been documented with state facilities.

Hondo Armory	Reading in Font-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.

### **BEST AVAILABLE COPY**

e. Heating Ventilating and Air Conditioning (HVAC): The Heating Ventilating and Air-Conditioning (HVAC) System for the Armory consisted of several residential use Central IIVAC 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 IIVAC 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)



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.

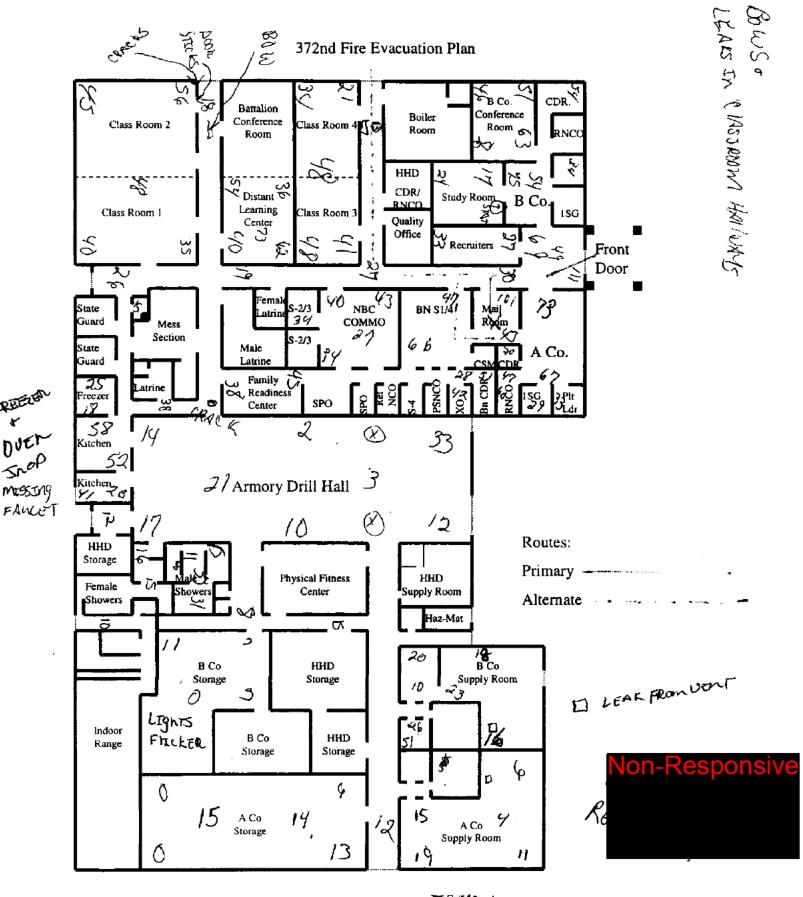
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### Appendix A

Photographs and Floor Layout

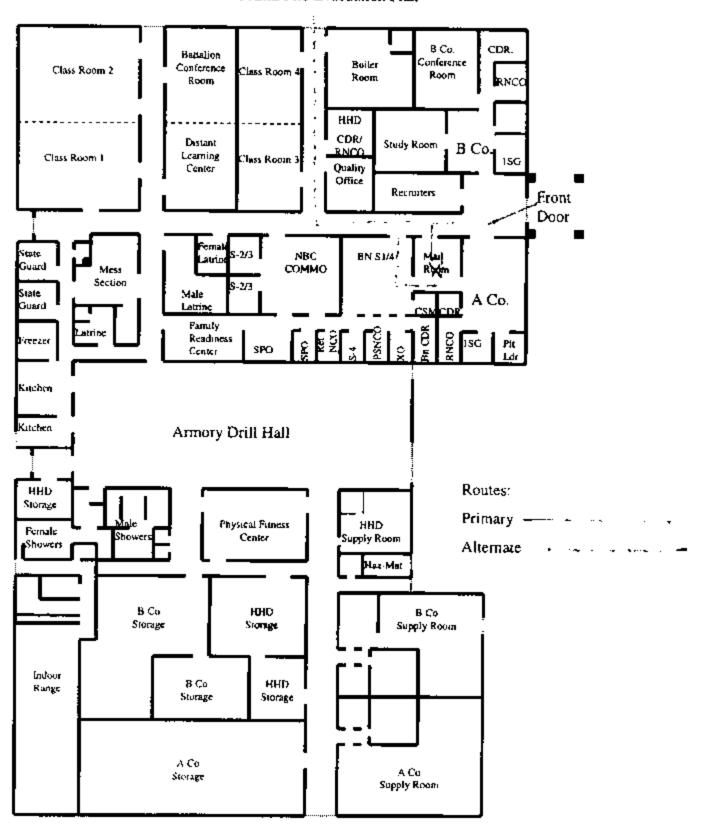
### Redbird Armory





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### 372nd Fire Evacuation Plan



### TEXAS MILITARY FORCES Co A 372<sup>ND</sup> 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 halfway. 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.



DATE 08.19.08

DALLAS FIRE DEPARTMENT GENERAL INSPEC

- Lesponsive

	LOCATION 3630 W. RED BILD LA NAME
	OCCUPANCY EXOS NOTODO GOOD ADDR
	PROPERTY CODE: LTRS: [] 1 [] REINS
	Miked Use (400)  Maintaining hazardous conditions is a VIOLATION of City-ordinances. The following conditions must be corrected immediately:
	Post ADDRESS visible from the street.
	Provide marking/striping for all designated FIRE LANES.
	Provide ACCESTANTIFE department connections. COLOR DIDES
	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. (USTOP (2) HT MOTY
	Provide and maintain smoke detectors in approved locations for each RENTAL UNIT.
	PROVIDE one A 1013 rated portable fire extinguisher for each COC square feet. Maximum travel distance 75+7
	SOSERVICE fire extinguishers and recharge those expended. Annual service required by state licensee.
	DEMOUNT portable tire extinguishers in conspicuous accessible locations. CODOC # 7500 Armon ONES Ext
	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.
	Remove GREASE from cooking appliances, vent-hoods ducts, etc.
ΚĄ	12 12 12 12 12 12 12 12 12 12 12 12 12 1
	Provide extra sprinklers and a sprinkler WRENCH ONNIKET OF (18) Building Services.
	Discontinue LOCKING - BLOCKING - exit dodes, exit windows; or exit pathways.
	Maintain exit doors and/or windows easily OPENABLE without a key or special knowledge.
	Repair illuminated EXIT SIGNS. Thomas and Among the Amon
	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.
	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. (CORDS) AFTER DEON FORMAT COME
	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.
	Debusin City of Dallas PERMIT for: Optimate of Occupancy / Flamble Combustide
	Post OCCUPANT LOAD sign near main exit.
	reprovide Secondary containment Corrasives in Shop
	void a Provide knox Look nate crossing the lone
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	A House Ewestern trefant dipartic add 3 should be used to less thought
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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 1<sup>st</sup> BN 112<sup>th</sup> CAV, 2020 Wallis Wehering, Rosenberg, Texas 77471

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

SUBJECT: Transmittal of IH Survey, Rosenberg Armory, B TRP 1<sup>st</sup> BN 112<sup>th</sup> 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.

- The Point of Contact during the survey was Non-Responsive
- Non-Responsive ndustrial Hygiene Technician for the Texas Army National Guard conducted the survey on 24 January 2008.

### 3. General.

- a. <u>Site Description.</u> 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. <u>Scope of Work.</u> 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 scaled 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 Wine 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.

- Asbestos Suspect Building Material; Based in the build date, 1993 and visual inspection, no ACBM was identified or tested during the current survey.
- Noise Survey: No noise Hazardous areas were identified or tested on the day of the survey.
- d. <u>Illumination Survey</u> 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 Łobby	21-51		
Latrines	15-50		
Drill Half	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 our 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 Stare 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.

### 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)
- 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)



CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218.

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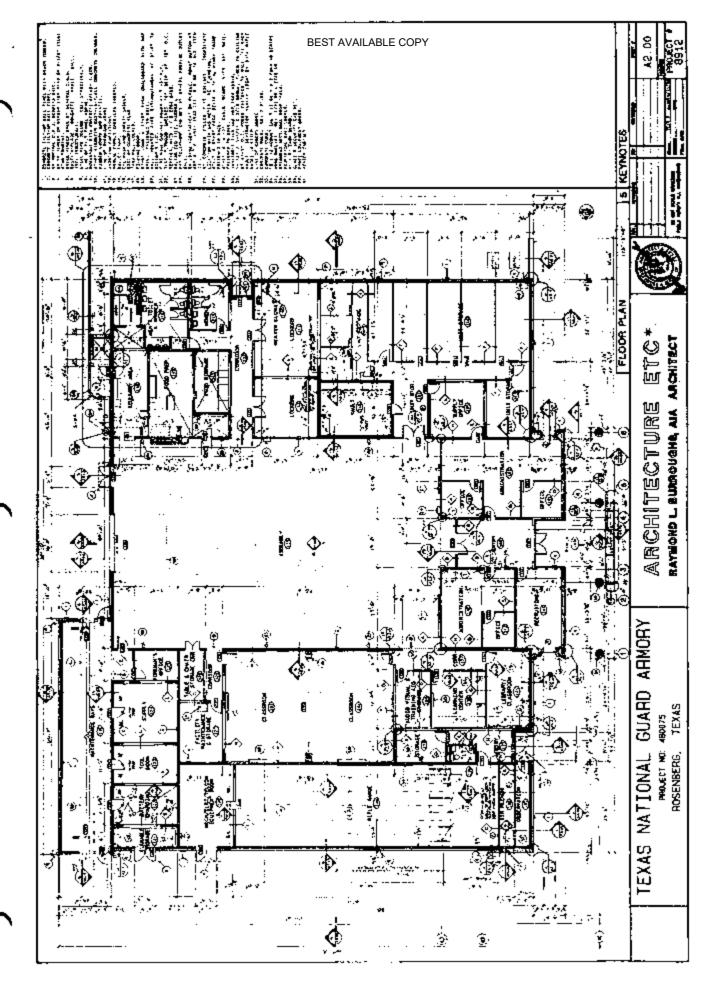
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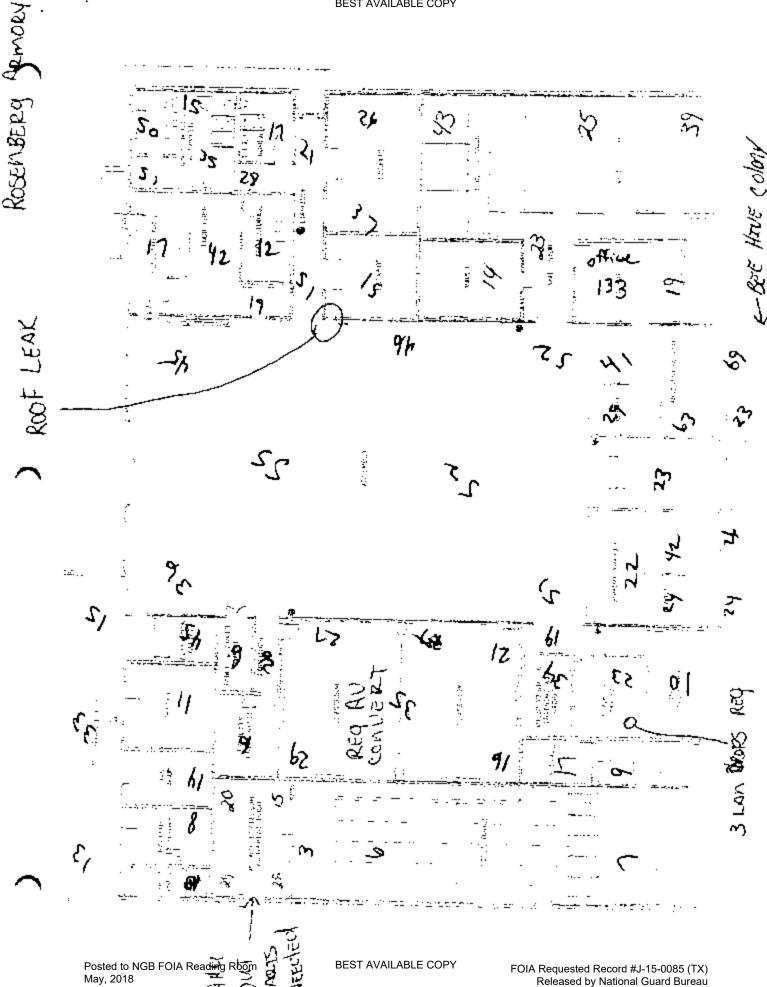
### Appendix A

### Photographs and Floor Layout

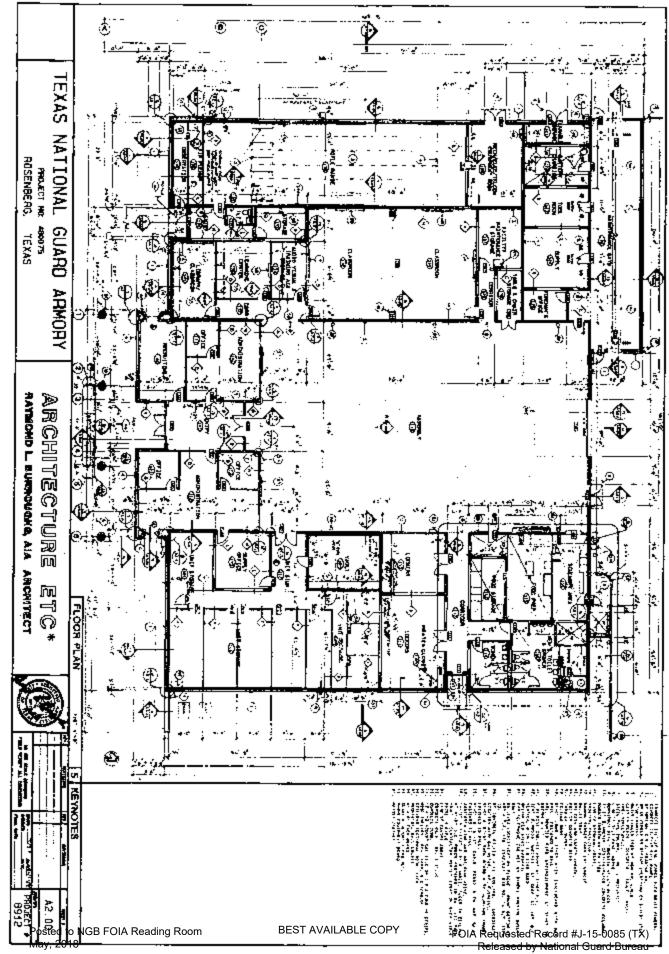
### Resemberg Armory

Rosenberg Armory	Rosenberg Armory RT Poyer	Bee Hive Colony Point of Entrance	Indeor Range
		-	
Kitchen	Supply Room	Drill Hall	Admin Area
	HIM CARDES IN		
	Rear Maintenance Bay	Mechanical Room with Missing HVAC Parts	





FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1297 of 1757



Page 1298 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-P (40-5f)

July 23, 2012

MEMORANDUM FOR: The Adjutant General of TX ARNG, ATTN: NOTE-RESPONSIVE TX Army National Guard Armory, 2020 Wallace Wehring Road, Rosenberg, TX 77471.

Thru: Non-Responsive eputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35th Street, Dunlang 10, Austria, 117 /8763-5218.

SUBJECT: Transmittal of IH Survey of TX ARNG Rosenberg Armory, Rosenberg, TX.

### References.

- 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.
- 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.
- Threshold Limit Values and Biological Exposure Indices (TLV's) for 2003, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- 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.
- 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.

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.
- 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.
- 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



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



April 23, 2012

### Non-Responsive

norv

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



### CONTENTS

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### 2.0 INSTRUMENTATION

### 3.0 FINDINGS

### 4.0 REFERENCES

Attachment 1 HIHM 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 1-112<sup>th</sup> CAV. The armory is used by the troops of the above mentioned unit for their monthly weekend drills.

The B Troop 1-112<sup>th</sup> 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.

### Meter 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	BRI.	
9	Drill Hall Floor, Left Side Wall, 15' 6" To The Left Of The Fire Extinguisher	BRI.	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	BRL	BRI.		
4	Top Of The 4 <sup>th</sup> Shooting Platform (Folded) From The Left, At The Rear Of Room	BRL	BRL		
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	Res	ults
10	Rear Wall Right, Only Rack At Rear, Floor & Rack Bottom	50ug	7lug/ft2
11	Right Wall, 1st Rack From The Rear, Floor & Rack Bottom	13lug	187ug/ti2
12	Right Wall, 2 <sup>nd</sup> Rack From The Rear, Floor & Rack Bottom	100ug	142ug/ft2
13	Right Wall, 4th 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/fi2 and NGB 200ug/fi2. 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	BRI.

7		A/C-Heating Outlet, Classroom	BRI.
14	1	Blank	BLR

### Material Safety Data Sheets

There was an MSDS Book on top of the right flammables cabinet in the POL 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. S2)	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, 4<sup>th</sup> 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.



### 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 arimunition. Ensure that the weapons racks are well cleaned before placing them back in the vault.
- Recommend that 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.

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SECTION 6.

PERSONNEL DATA

# Non-Responsive AGR

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### · PRIVACY ACT STATEMENT

Title 6 U.S. Code, Section 301: Executive Order 9397 authorizes the use of your Social Security Number as a identification number. The purpose of this information is to identify and monitor data relating each DA civilian employee exposed to a hazardous workplace or operation. The use of this information is to provide histories of exposure for any given worker.

Disclosurs of your Social Security Number is not mendatory; however, nondisclosure may result in untimely providen of proper medical munitors

Signatur

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SECTION 6.

PERSONNEL DATA

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Disclosure of your Social Security Number is not mandatory; however, nondisclosure may result in untimely provident of proper medical manifest

Signature

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### **BEST AVAILABLE COPY**

Analytical Environmental Services, Inc

Lab Order: 1204E77

Client: Rosenberg, Tx Armory Project:

Matrix: Wipe

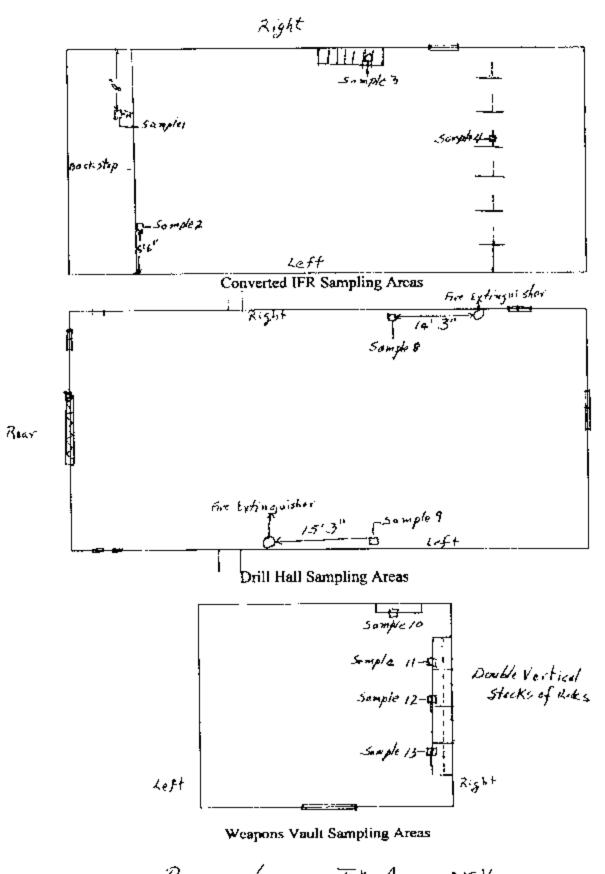
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26-Apr-12 Date:

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	ı		04/10/2012	04/24/2012	MW
1204E77-005A	5	BRL	ug, Total	20	ı		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	ı		04/10/2012	04/24/2012	MW
1204E77-008A	8	BRL	ng, 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
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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





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



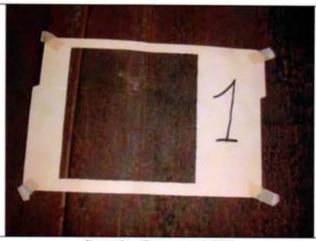
Converted IFR, Front View



Converted IFR, Backstop Close Up



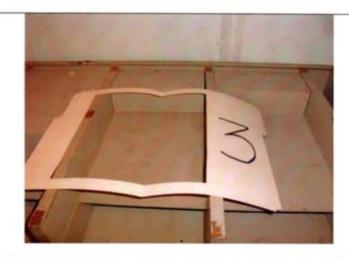
Converted IFR, Rear View



Sample, Converted IFR



Sample, Converted IFR



Sample, Converted IFR



Sample, Converted IFR



POL, Outside



Two Flammables Cabinets Inside POL



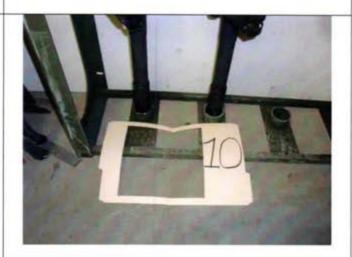
MSDS Book On Top Of Flammables Cabinet



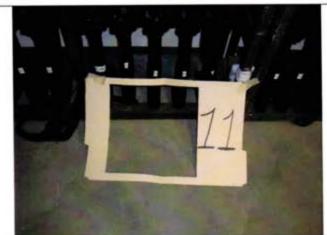
Contents, Flammables Cabinet



Contents, Flammables Cabinet



Sample, Weapons Vault



Sample, Weapons Vault



Sample, Weapons Vault



Sample, Weapons Vault



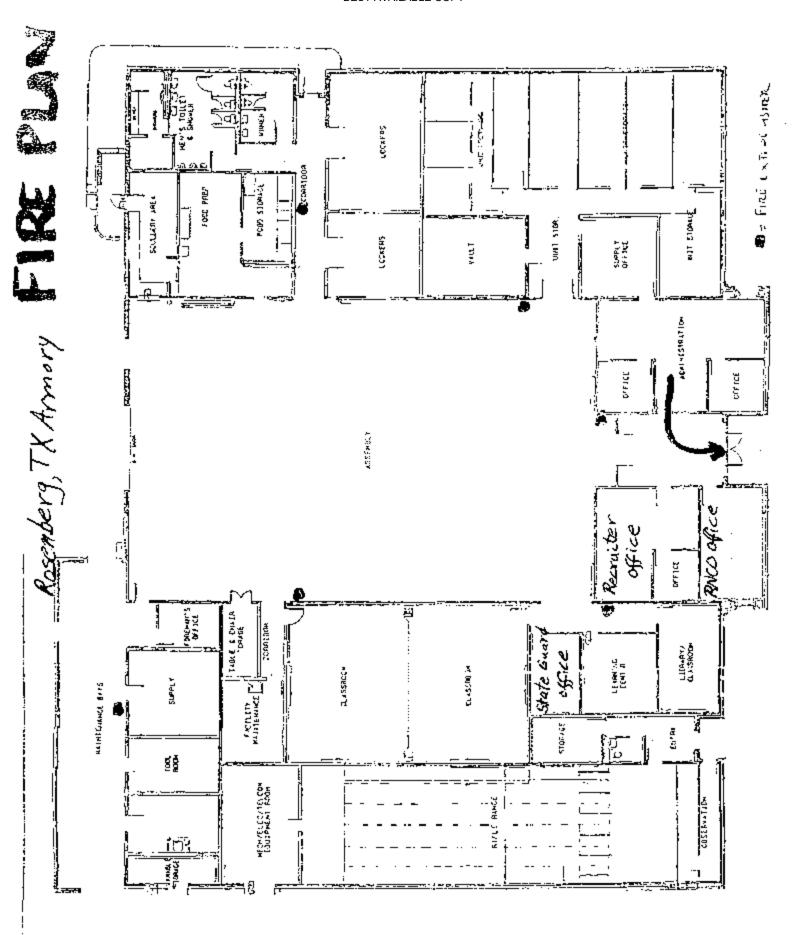
Maintenance Bay



Motor Pool



Trailers Stored Outside Fenced Area Of Motor Pool



### 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.

### References.

- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. 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.
- Findings. All Health Hazard information are on the survey findings of the report.(See enclosure 1)

### 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 0f 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 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.



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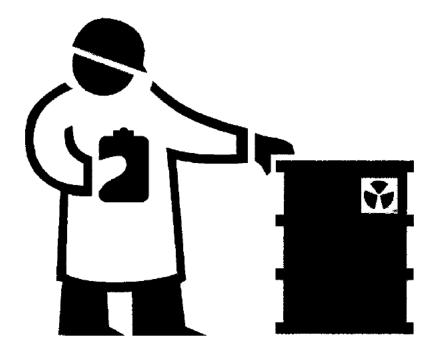
**NBG-AVN-SH** 

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

<sub>POC</sub>Non-Responsiv

### BEST AVAILABLE COPY

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MEMORANDUM FOR: Texas Army National Guard, ATTN:

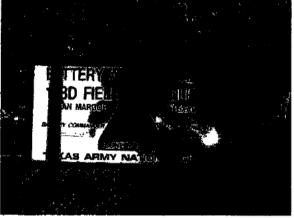
Battery A 4th Battalion 133 FA, 201 City Park, San Marcos, TX 78666-5826

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

At the request of NON-Responsible and 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:

### Sau Marcos Armory 201 City Park San Marcos, TX 78666-5826





This facility houses the following units:

A to Zee	The composition of the contract of the contrac
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	There were no obvious signs of occupational hazards or concerns.      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 <sup>2</sup>	Continue to follow good hygiene and housekeeping practices.
Asbestos Bolk 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 foctures, rearranging furniture to make better use of available light, and supplemental or task lighting ere considerations in increasing available light levels.
Noise Survey	No issues	No action
Hazards Communication	No Chemical list available.  MSDS are not updated for chemicals used.  ***Unit just returned from deployment, so they did not have all paperwork updated as yet.	Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.  Persoanel responsible for these items should receive annual training in HAZCOM requirements

Posted to NGB FOIA Reading Room

May, 2018

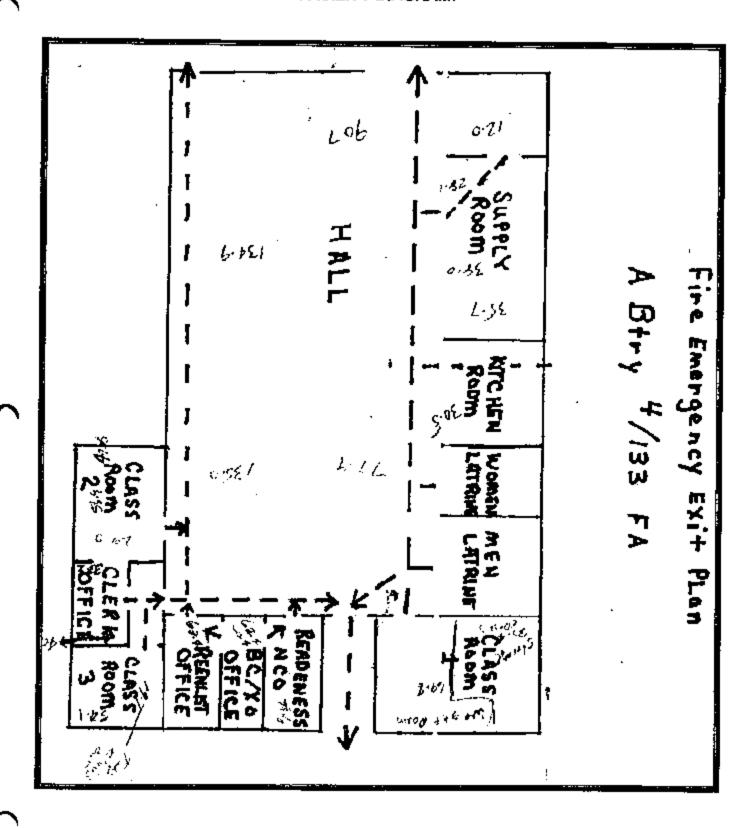
E4 gonomics	and Supply Areas AVAILABLE COPY	on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action



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.

DEFECTION OF STREET	7511.0000.130W	
Extech Light Meter	Q009472	Purchased New June 2003
Bruel & Kjaer Sound Level Meter	1942768	September 7, 2002
Bruei & 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:

Unit#		(Last 4 (its)	di	Sex	DATE:	 First Name	i f	Lasin
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### **BUILDING CONDITION:**

### Walk-through Observations

	Post and	property and the property and the second second	. Phonesis
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 Propolicio - Sa	Santpla No	e Permits quyding	

May, 2018

### 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:

AND SHAPE OF THE S			Succession of the succession of
ReEnlist Office	63.4	CW.1	
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	<del></del>	37.2	<del></del>
Classroom 3	19.7		Two bulbs blown
Classroom 3	54.1		- TO SHOW OF SHOW

### Ventilation Sample Results:

BC / XO Office	800	12 X 12	ilenta

### Lead Wipe Sample Results:

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

	3 15 m ( )	Ample No.	The second	40 min (20) (20)
			<u></u>	
			<del></del>	 
<u> </u>	-			 
				 <u> </u>
L				

### KITCHENWIMESSHALL

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					
	_			<del>-   -</del>		
	<u> </u>			_+_		
	<u>J</u>	!	_	L	···-	

### 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.

A. S.			
1-San Marcos	Blank (Administrative Offices, Kitchen, Drill Hall and HVAC)	BRL	Below Reporting Levels
2-San Marcos	Kitchen Counter	BRL_	
		<u> </u>	
<u></u> -	<u> </u>	<del>  -</del>	
		<del>  -</del>	
•			

### DRILL HALL

Personnel officially use the drill half 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:

		Pro-St
Drill Hall 1	72.9	A NOTE OF THE PROPERTY OF THE
Drill Hall 2	135.0	
Drill Half 3	134.9	<u> </u>
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 half area were below the threshold required for hearing protection. There is no requirement for a Hearing Conservation Program for full-time personnel.

### BHYACISYSTEM

## Lead Wipe Sample Results:

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

			1	Çiki Pêr <b>ija</b> ra - P Tarih - Vin leb			
Complementary	-750-50			ilija juri garagangen 1 <sub>0</sub> , 17	PER - 20 A CHIEFTON - MA		
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					<u> </u>	ļ. <b>—</b>	
						<del> </del> -	<del>_</del>
					<del></del>	<del>  -</del>	<u>.</u>
<u> </u>						<del>  -</del> -	
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	<del></del>	···				Γ	
		· <u>·</u> ·					
				_		ļ	<u> </u>
						<del>                                      </del>	
						<u> </u>	

### SUPPLY RECOM(s) Lind 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:

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) leed dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous.

5-San Marcos	Blank (Supply and Vault)	BRL	Below Reporting Levels
6-San Marcos	Vault Rack	32./0	<u> </u>
7-San Marcos	Shelf in Vault	439	
8-San Marcos	Supply Desk	86.0	
			· · · · · · · · · · · · · · · · · · ·
<u> </u>			

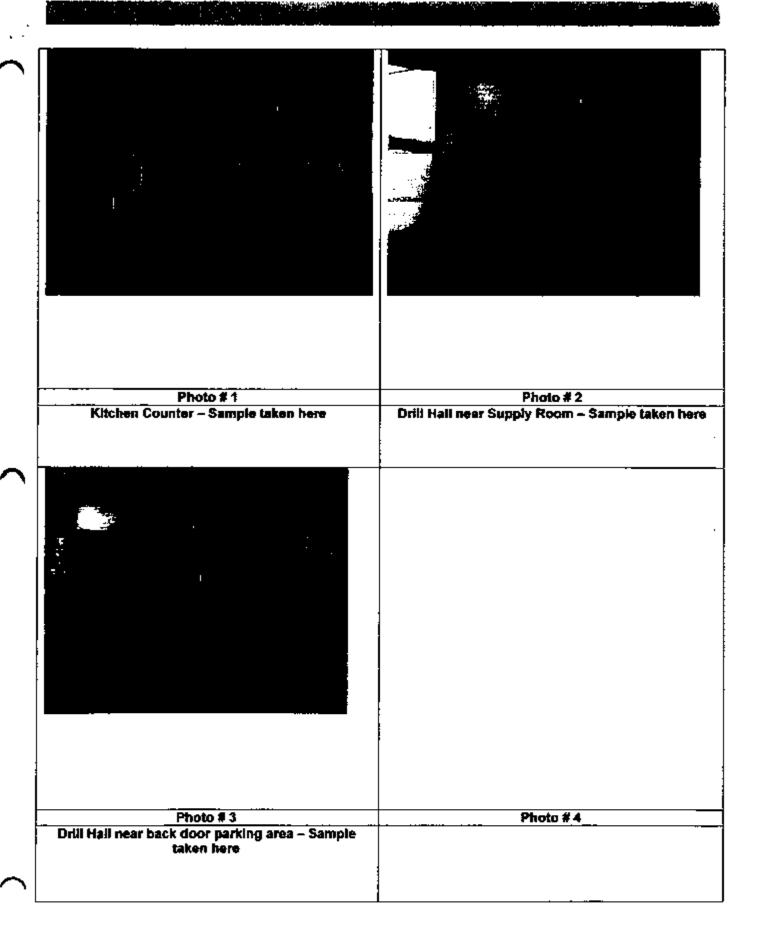
### INDOOR FIRING RANGE

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 gun, or applying makeup. Remove all refrigerators, cups, and other utensits 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.
- Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.



Analytical Environmental Servs, Inc.

Date: 16/24/2003

TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

Technical Solutions International

Lab Order:

0310640

Project.

- V---- -

Date Received:

18/20/2003 12:5

Project No:

San Marcos Attenty
San Marcos Attn

Matrix

Wipe

PO No:

Analysi

tymal: CDW

Laboratory ID	Client Sample ID	Remite	Unks	MDL	DF	Date Collected	Dute Analyzod
9310440-001 A	I-SAN MARCOS	BALL	pg, Total	283	1	10/14/2003	10/31/2003
0310640-007A	2-SAN MARCOS	BRL	μg, Total	2.89	1	10/14/2003	10/21/2003
g\$10640-003A	3-SAN MARCOS	BRL	pg_Total	2 83	ı	10/14/2003	10/21/2003
0310640-004A	4-SAN MARCOS	BRL	μη, Total	2.83	1	10/14/2003	10/21/2003
03100-43-003A	1-SAN MARCOS	8RL	μ <u>α</u> . Total	2 63	1	(0/14/2003	10/21/2003
0310640-006A	SAN MARCOS	32.0	μg, Tetul	2.83	1	10/14/2003	10/21/2003
0316640-007A	"-SAN MARCOS	.174)	pg_Total	2.83	ı	10/14/2003	10/21/2003
0310c-10-008A	B-SAN MARCOS	80.0	μ <b>g. Total</b>	283	1	10/14/2003	10/21/2003

Odd**ille**s:

MDL - Method Detection Lamb

ND - Not Detected as the Reporting Lane

100 - Dilloton Factor

Page 2 of I

### 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.

### References.

- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. 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)

### Recommendations.

- 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 0f 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 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.



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 On-Responsive

#### **BEST AVAILABLE COPY**

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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



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:

	Non Posponeivo
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 Annory, 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:

dia		
Building condition / Indoor Air Quality	There were no obvious signs of occupational hazards or concerns.     The facility is maintained very well.	Continue to follow good hygiene and housekeeping practices.
Lead Wipe Samples	Below Reportable Levels (BRL) to 29 µg/ft <sup>2</sup>	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	No Chemical list available.  MSDS are not updated for chemicals used.  ***Unit just returned from deployment, so they did not have all paperwork updated as yet.	Update and maintain chemical inventory list and cross-reference MSDS book to inventory list for easy access in case of emergency.  Personnel responsible for these items should receive annual training in HAZCOM requirements

May, 2018

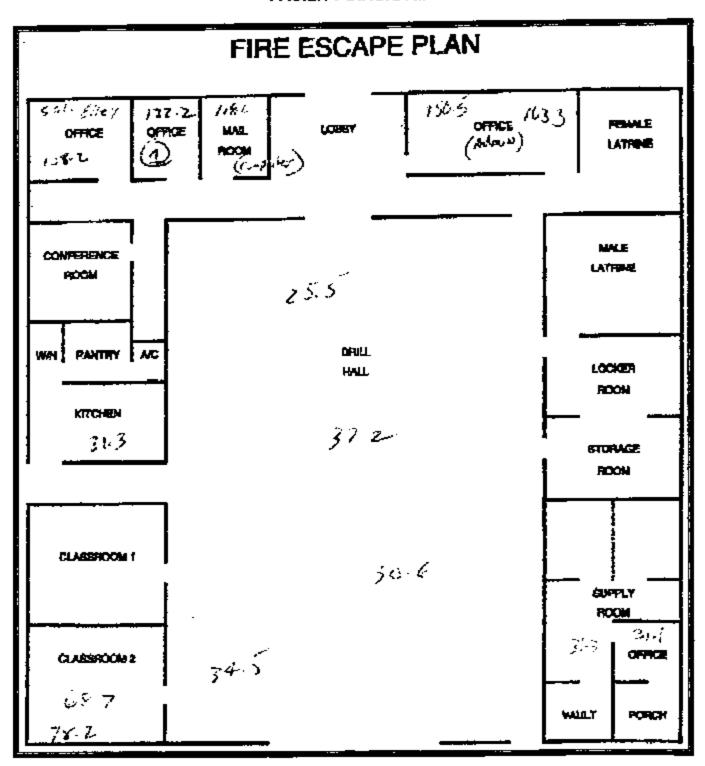
Ergonomics	Ergonomics concerns in Administrative and Supply AFEAST AVAILABLE COPY	Complete ergonomics survey on all personnel and offer ergonomic training or awareness to employees who spend the majority of their time working on a computer terminal
Personal Protective Equipment	No issues	No Action



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.

the thirty of	Recent on about	3 (1) (2)
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:

GastiName First Name	of See Agree) Rank Walter
Non-Responsiv	<b>/</b> e

#### **BUILDING CONDITION:**

#### Walk-through Observations

	enging to the transfer of the second control of the second second second second second second second second se
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:

Bocques 21		West of the first	
	rvei bevei be	1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
P. 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:**

Garta a recommenda (Galliandia) (Commenda e Commenda (Galliandia) (Commenda e Commenda e Commenda e Commenda e Commenda e Commenda e Commenda e Commenda e Commenda e Commenda e	· Fishipela Fishipela	audine as 5 — Apeatoleach De	le en le est d'anné politique de la commune
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.	AKENDE ANDREA	Carl Remarks 1995
NONE - Newly remodeled and no			
IFR			

#### KITCHENY-MESSMALL

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:

		VIII (1987) 74 (1	the state of		ing the section of the section
<u> </u>					
	Kitchen Counter	31.3	-	_	·
					-
		'-			
			· <del></del>	<del>                                     </del>	
		<del></del>		<u> </u>	
·	<del></del>			<u> </u>	

#### 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 May 11 - 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ीर <b>्ष्यान्य क्षांत्रा</b> क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्रा क्षांत्र विकास
Blank (Kitchen / Admin / HVAC)	4-Seguin	BRL	Below Reporting
			Levels
Kitchen Counter	5-Seguin	BRL	

### BEST AVAILABLE COPY 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:

The second secon		2000 2000 2000 2000 2000 2000 2000 200
and the second s		
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 fool on bare and carpeted floors is considered dangerous. The following are the sample results:

	Marie the street and the	ogtory, some of the	
Drill Hall Outside Supply Office		BRL	Below Reporting
1		_	Levels
Drill Hall by back door	7-Seguin	BRL	. <u></u>

#### Noise Sample Results:

Noise levels in the drill half 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) leed dust levels above 40 micrograms per square foot on bare and carpeted floors is considered dangerous. The following are the sample results:

gandis Tossisso	Sample No.	Results (ug/ff*)	Remarks
Newly Remodeled			
	-		

#### SUPPLYROOM(#) Fand 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:

The state of the s	The state of the s	ুলী শুহালীনি, শুকাৰণ কৈছিল চৰ	Company of the State of the Sta
		·	
Supply Desk	30.1		
Vault	31.3		<del></del> -

#### Lead Wipe Sample Results:

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

		AND THE STATE OF T	
Blank (Supply and vault)	1-Seguin	BRL	Below Reporting
			Levels
Supply Desk	2-Seguin	BRL	
Vault Floor	3-Seguin	29.0	

#### **BEST AVAILABLE COPY** 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:

. Z::. · ·	:	1.0	<u>.</u>	."-4", "	
4				:	-
		$(s,s) \in I$			
5 34 1 2 3 4 4 1 2 20 1 1 2 4 A	ing same of w		14 5 7 4 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10.00
N/A	<u> </u>	<u> </u>	<del></del>	<u> </u>	
				<u> </u>	

- 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 waliboards 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 scaled plastic bag. There are no special requirements for the disposal of moldy materials.
- c. 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 gun, or applying makeup. Remove all refrigerators, cups, and other utensits from supply and maintenance areas.
- 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.
- Perform noise dosimetry on maintenance personnel during drill weekend, in order to document noise exposure.
- Portable eyewashes should be maintained on a weekly basis to ensure removal of opportunistic pathogens.

Analytical Environmental Serva, Inc.

Date 10/34/2003

TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

**Technical Solutions International** 

Lab Order:

0310644

Project:

Seguin Ameny

Date Received: 10/20/2003 12/5

Project No:

Segun Amory

Metric

Wipe

PO No:

Analyst:

355

Laboratory	Clicat Sample	Results	₹°ndte	MDL	DF	Date	Date
<b>D</b>	<b>D</b>					Collected	Applyted
0310644-001A	L-SECULIN	BRL	pp. Total	2 87	1	10:1-1/2003	10/23/2003
Q310644-0Q7A	2-SEGUTN	BRL	pop. Total	243	1	10/14/ <b>700</b> 3	10/23/2003
0310644-003A	3-SEGUTN	79-0	pp. Total	2.80	1	10/14/2003	10/23/2003
0310644-004A	4-SEGUIN	BET	ppp. Total	280	3	16/14/2003	10/23/7003
0310544-005A	3-SEGUIN	BRI.	µg. Total	240	1	19/14/2003	10/23/2003
0310644-006A	6-SEGUTN	BR1.	μg, Tetal	283	1	10/14/2003	10/23/2003
0310544-007A	7-SECRUIN	BRL	reg. Total	210	1	1 <b>0 14.500</b> 3	10/73/7003

MEX. - Mathed Datestion Lamit

DF - Dilation Factor

ND - Not Detected at the Reporting Limit

Page 2 of I

# 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.

- 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



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

#### 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 mmer 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)

#### 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 1.1, 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



June 24, 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.

#### 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.

Торіс	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.
нуаслао	No issues observed or documented.	No action.

**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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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



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

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.

<u>Noise Survey:</u> 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.

<u>Illumination Survey</u> 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:

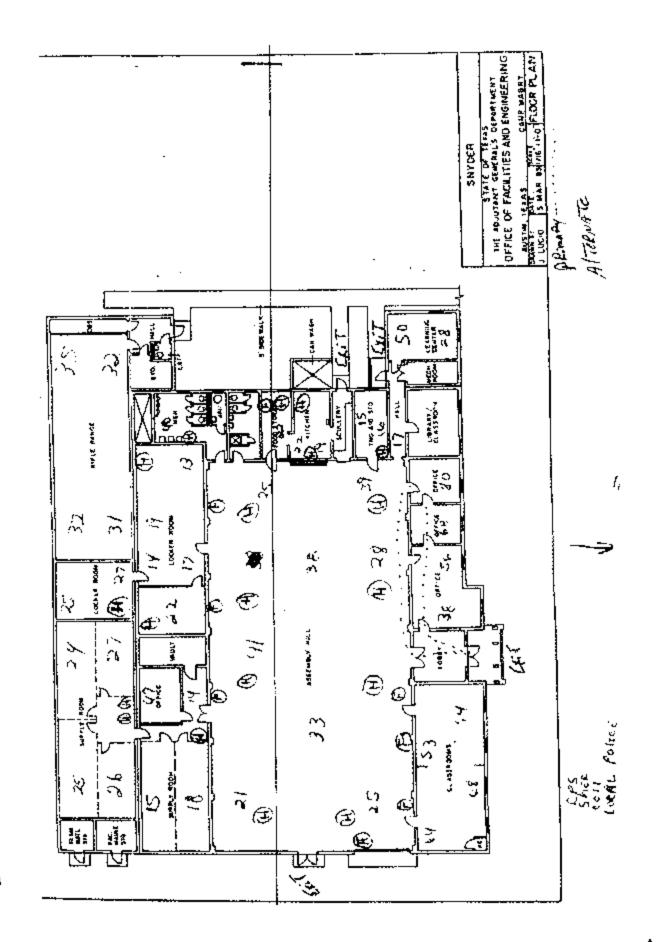
Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

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

# Non-Responsive

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APPENDIX A



**BEST AVAILABLE COPY** 

APPENDIX B

#### **EMSL** Analytical

3 Cooper St., Westmont, NJ 08168

Phone: (856) 958-4800 Fax: (856) 655-6561 Email: skauffman@emat.com



Attn:

## Non-Responsive

ner PO:

TS60

elvad:

04/22/04 1:43 PM

Fax: Project:

aL Order: aSL Proj: 200404879

#### 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	aa01	5/6/04	1,64 jus <sup>2</sup> .	8500 Cl µg/ft*
SNY-FR02		0002	5/6/04	144 io <sup>z</sup>	1200.0 µg/R³
SNY-FR03		0003	5/6/04	144 in <sup>1</sup>	1200.0 pig/fc
SNY-FR04	A	0004	5/6/04	144 in³ .	19000.0 pg/tt³
SNY-FR05		0005	5/6/04	144 (n²	19000.0 pg/代
SNY-FROS		9006	5/6/04	144 kg²	21000.0 µg/h²
SNY-FR07		0007	5/6/04	144 ln²	830.0 µg/tt <sup>a</sup>
SNY-FROB		0008	5/6/04	144 iri²	1400.0 µg/ft²
SNY-FR09		0009	5/6/04	144 in <sup>2</sup>	1500.0 µg/H²
SNY-FR10		0010	5/6/04	144 in <sup>2</sup>	250.0 µg/ft²
SNY-FR11		0011	5/6/04	144 in*	130.0 pg/ft*
SNY-FR12		0012	5/6/04	144 in <sup>a</sup>	*jñ.qu 0.08
SNY-FR13		0013	5/6/04	144 (n) <sup>2</sup>	16000.0 pg/ft³
SNY-FR14		0014	5/5/04	144 in²	8700.0 µg/ñ²
SNY-FR15	**************************************	0015	5/6/04	144 in*	2300.0 µg/ft <sup>s</sup>
SMY-FR16		0016	5/6/04	144 in <sup>a</sup>	710.0 µg/h²
SNY-FR17		0017	5/8/04	144 in²	41.9 µg/(t²
SNY-FR18	<u> </u>	0018	5/6/04	144 in³	55.0 µg/R*
SNY-01		0019	5/5/04	144 in³	<10.0 µg/t/²
5NY-02		0020	5/6/04	144 m'	<10.0 µg/H <sup>r</sup>
SNY-03	**************************************	0021	5/6/04	144 in <sup>2</sup>	12.0 pg/ft*

Non-Responsive

The OC date electristic with the sample results included in this report need the recovery and precision requirements established by the AHA, unless specifically indicated offerences in about. The tear requirement should be about the report of the recovery and precision requirements of AlbeitaC unless otherwise intelled. This report relates only to those knowledges of the report of the report needs of the report of the report needs of the report o

REDITATIONS NUMBER 20053, Airia Environmental Lead Laboratory Approval Program, 100194

3/04 5:55:42 PM

#### **EMSL Analytical**

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4400 Fax: (656) 858-4551 Email: skauffman@emsl.com



Attn:

Fax:

Project

on-Responsiv

Customer ID: Customer PO: T\$80

04/22/04 1:43 PM

Received: EMSL Order:

200404879

EMSL Proj:

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

Client Sample Description	Lab ID	Analyzed	Area Sampleil	Lead Concentration
SNY-04	0022	5/6/04	144 in²	10.0 p <b>g/f</b> t <sup>c</sup>
SNY-05	0023	5/6/04	1 <b>44 i</b> n²	43.0 µg/ft²
SNY-06	0024	5/6/04	144 in²	21.0 µg/ft²
SNY-0?	0025	5/6/04	1 <b>44 ln²</b>	20.0 µg/ft²
SNY-D8	0026	5/6/04	144 in³	14.0 µg/lP
SNY-09	0027	5/6/04	144 in²	150.0 µg/ft <sup>e</sup>
SNY-10	0028	5/6/04	144 in²	<10.0 µg/fi*
SNY-11	0029	5/6/04	144 in²	4300.0 μg/ft²
SNY-12	0030	5/6/04	144 in³	<10.0 µg/ft²



GC does as soluted with the bilimpte results included in this report must be recovery and precision requirements established by the APA, unless specifically indicated otherwise in procure western. The first results conducted within this report meet the requirements of NELAC unless otherwise noted. This report relates only to thickeliberts lessed. Unless noted, the results in this report have held been blank connected.

EDITATIONS: NUNELAR: 04853, ARIA Environmental Leas Laboratory Approval Program; 193194

4×15/04 5:55:50 PM

#### EMSL Analytical, Inc.

107 Hadden Ave., Westmeist, NJ 08108

Phone: (856) 858-4300 Fax: (856) 858-4960 Email: salege@@f45t.com



Atm:

Fax

Project:

Non-Responsive

Customer IO: Customer PO: T580

Received:

04/22/04 12:29 PM

EMSL Order:

040407150

EMSL Proj

Analysis Date: 4/30/04

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

				Non-Asbestos		Asbestos	
Sample	Location	Appearance	Treatment	% Fibrous	% Non-Fibrous	% Type	
\$NY-A01B		Gray	Teased	70% Cellulose	30% Non-fibrous (other)	None Detected	
#48487150-8801		Fibrous Heterogeneous					
SNY-A02B-Tite		White	Dissolved		100% Non-fibrous (other)	None Detected	
840407150-0002		Non-Fibrous Heterogeneous					
SNY-A02B-Mas	dic	Tan	Dissolved		100% Non-fibrous (other)	None Detected	
040407750-0234		Non-Fibrous Helerogeneous					
SNY-A03B		Black	Ashed		100% Non-fibrous (other)	None Detected	
049467150-9603		Non-Fibrous Heterogeneous					

# Non-Responsive

Due to magnification himitations inherent in PLM, asterboy (beyon indirections below the resolution capability of PLM may not be detected. Samples reported as 41% or none distants interinquine additional tasks glay TSM to confirm asterdates quantifies. The above test report relates only to the standard and may not be reported in a confirmation of the confirmation of th

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APPENDIX C

#### 200404879

Date: EMSL Represer Company Name: Tamore: S	ciences Inc	EMSL-Bill to:	ns as walto	
Street 3744 Lawrence [	Street St	rect:		
30x 4:		Box #:		
City/State: Naperville IL	7 in 64564	City/State:	7in:	
Phone Results to: (Name)	i-Respons	Ve Telephon	n-Resp	ons
Fax Results to: (Name)	METHOD	Fax #: INSTRUMENT	RL (Reporting Limit)	TAT
Lead Chips*	SW845-7420, 3050B Mod. / AQAC (974.02)	Flame Atomic Absorption	0.01% ↔	
Lead Was swater	SW846-7420	Flame Atomic Absorption	0,4 mg/l water 40 mg/kg (prm) soil	1
Lend Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (ppm) soil	
Lesă in A :***	NIOSH 7082 Mod.	Flame Atomic Absorption	# ug/filter	
Extensión de esta e	or NIOSH 7300 Mod.	(CP	3.0 ug/filter	
Lead in Wipe* ZASTM	SW846-7420 / HUD Appendix 14.2 Digest.	Flame Atomic Absorption	10 ug/wipc	Routin
List Wipe Type	ot SW846-6010B	ICP	3.0 ug/wipe	
TCLP Let 6 **	SW846-1311/7420	Fleme Atomic Absorption	0.4 mg/l (ppm)	
(CL) Line	or SW846-6019B	ICP	0.1 mg/l (ppm)	- Laure È
STUC Land (California)	CA Title 22 sees 14	Flame Atomic Absorption	0.4 mg/l (ppr/l)	
	SW846-7420 or SW846-6010B	ICP	0.1 mg/1 (ppr1)	
Leed in Air ****	NIOSH 7105 Med.	Oraphics Furnace Atomic Absorption	0.03 ug/filter	
Lese Westerwater	SW846-7421	Graphize Furnace Atomic	0.003 mg/l (ppm) water	12 3
Lear Soil -	_	Absorption	i).3 mg/kg (ppm) soil	
Lead is Frincing Water (check state Confication Requirements)	EPA 239.2 / 200.9	Oraphite Furnace Atomics Absorption	0.003 mg/l (ppin)	
	NIOSH 0500-0600	Georgianic Reduction	0.0001g 5 Days, 6-10 Days	1.23
T/.1 (Turnstound)		ay, 2 Days, 3 Days, 4 Days # Please Refer to Price Que ed, non-ASTM is assumed	Air volume. L	LAB#
SAMPLE*		LOCATION	Area, in <sup>2</sup>	64572/
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Land Chain Nov 2004 - STLC.doc

The individual signing and relinquishing those samples to the laboratory attests to the recurracy of the information reported on this chain of curredy.

# 040407150



EMSL Analytical, Inc. Envised 07/07/99

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APPENDIX D

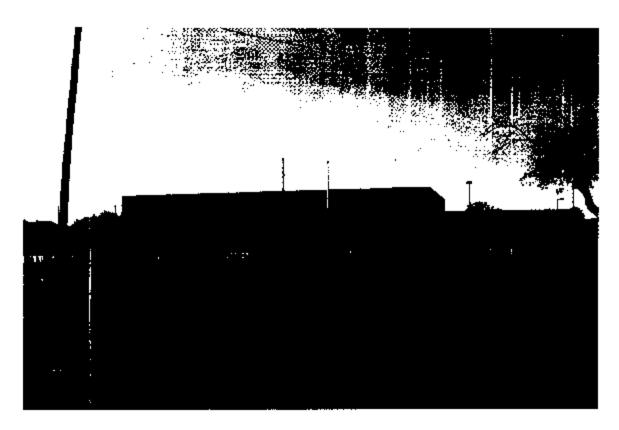


Photo #1: Armory front entrance.



Photo #2: East side of the armory.

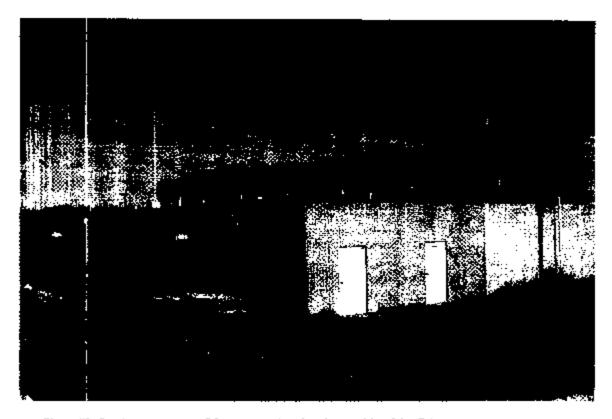


Photo #3: South west corner of the armory showing the outside of the firing range.



Photo #4: North side of the armory.

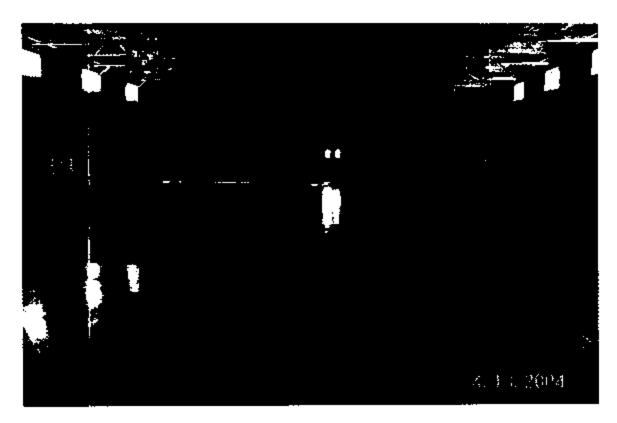


Photo #5: Drill hall facing east.

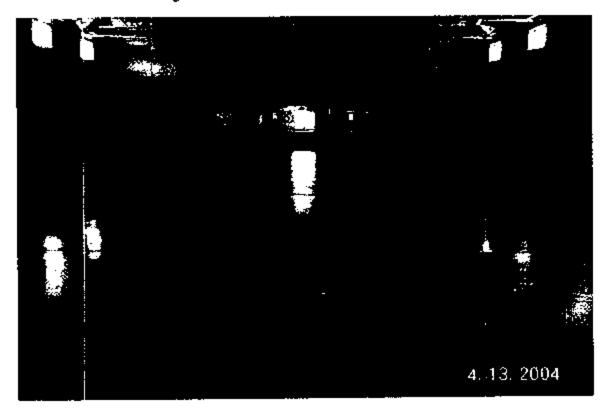
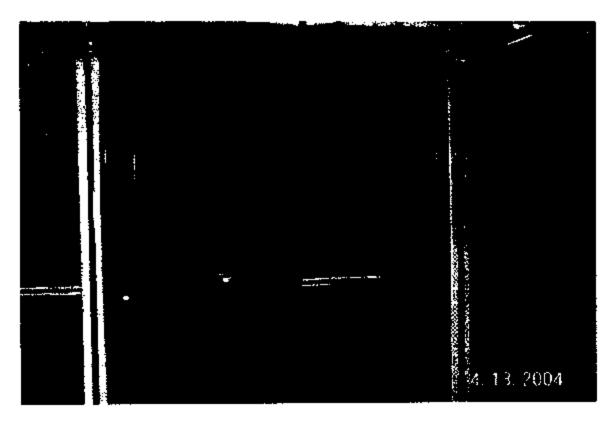


Photo #6: Drill hall facing west.



Photo#7: Indoor firing range facing bullet stop.



Photo #8: Indoor firing range facing firing line.

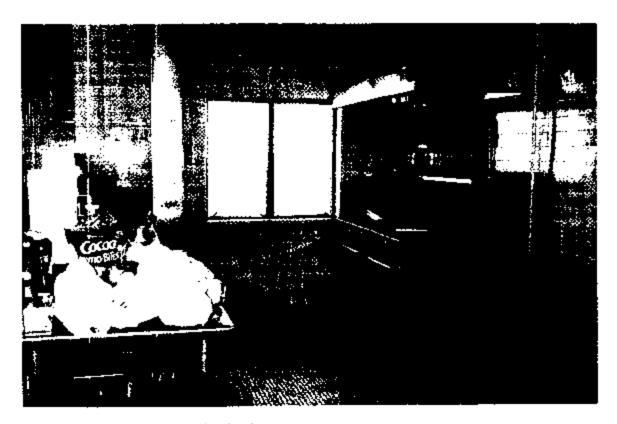


Photo #9: Armory's kitchen showing the stove.



Photo #10: Armory's forced air furnace showing the wooden air plenum.

### **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)

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 35<sup>th</sup> 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.
- The Point of Contact during the survey was Non-Responsive
- Non-Responsive ndustrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 18 March 2009.

## General.

- a. <u>Site Description</u>. 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 closers. 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. <u>Scope of Work.</u> 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. <u>Methodology</u> 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. <u>Lead Wipe Samples</u>: 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
TEM:0701	136th BN Admin Supply Duct	Below Recordable Limits
TEM0702	136th 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 Bareau 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. <u>Ashestos Suspect Building Material</u>: 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. <u>Hlumination Survey</u> 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	1 <b>B-2</b> 5	
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 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 ceiting 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.

# 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)
- 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)
- 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)



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: Date Received: 4/6/2009 10:55 AM

0904345

Project:

Temple, Texas Armory

Matrix:

Wipe

Delivery Order:

PO No:

Cilent Sample	Results	Units	Report	DF	Date	Date	Analyst
ID			Limit.		Collected	Analyzed	
1EM 91	BRL	ug, Joiai	20	ı	3/31/2009	4/8/2009	MAW
TEM 92	BR1.	ug. Total	20	1	3/31/2009	4/8/2009	MAW
TEM 93	20	ug. Total	20	í	3/31/2009	4/8/2009	MAW
TEM 94	BRI.	ug, Total	20	1	3/31/2009	4/8/2009	MAW
	1EM 91 TEM 92 TEM 93	1D 1EM 91 BRL TEM 92 BRL TEM 93 20	1D  1EM 91 BRL ug. Foral TEM 92 BRL ug. Total TEM 93 20 ug. Total	ID         Limit.           1EM 91         BRL         ug, Total         20           TEM 92         BRL         ug, Total         20           TEM 93         20         ug, Total         20	ID         Limit.           1EM 91         BRL         ug, Total         20         1           TEM 92         BR1         ug, Total         20         1           TEM 93         20         ug, Total         20         i	ID         Limit.         Collected           1EM 91         BRL         ug, Fotal         20         1         3/31/2009           TEM 92         BRL         ug, Total         20         1         3/31/2009           TEM 93         20         ug, Total         20         i         3/31/2009	ID         Limit.         Collected         Analyzed           TEM 91         BRL         ug, Fotal         20         1         3/31/2009         4/8/2009           TEM 92         BRL         ug, Total         20         1         3/31/2009         4/8/2009           TEM 93         20         ug, Total         20         i         3/31/2009         4/8/2009

Qualifiers:

BRU. Not Detected at the Reporting Firmit

DF - Dilution Factor

Appendix B: Lab Chain of Custody

# BULK SAMPLE DATA

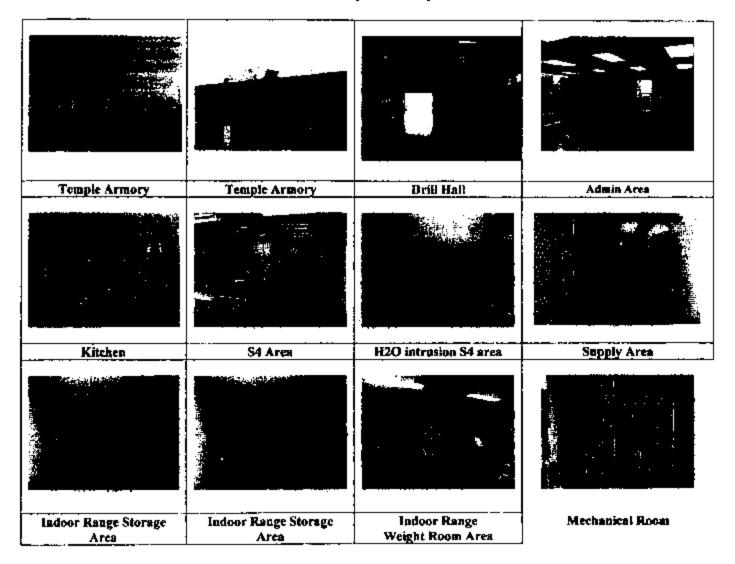
For use of this form see USAEEA TO 141; the proponent is ESEE-LO.

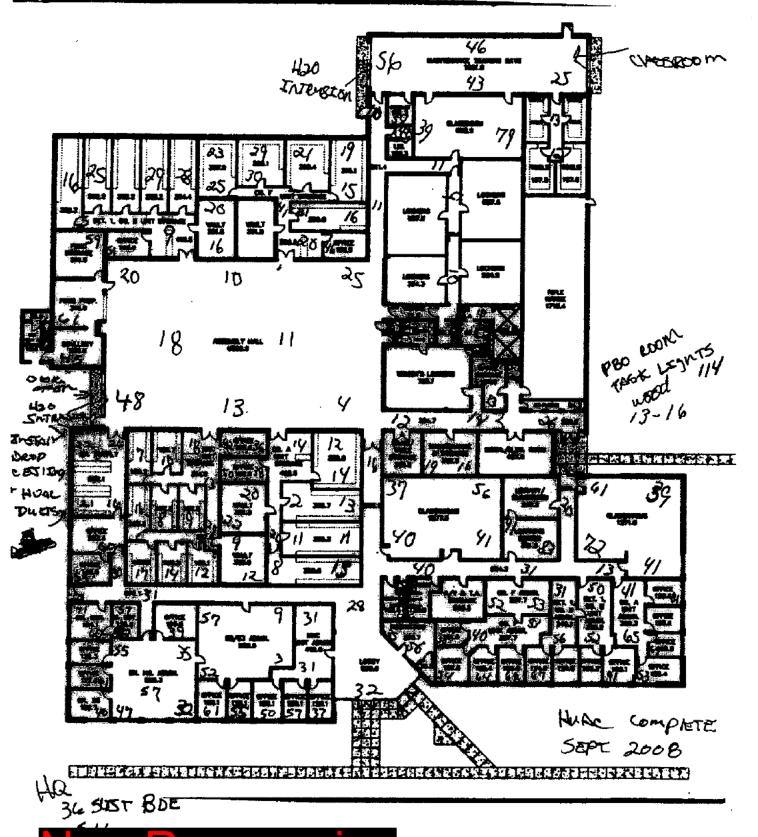
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RETURN ACTIVESS (COMPLETS CRITICISMS UNCLUSING 2  NATIONAL GUARD BUREAU REGION SOUTH IN OFFICE 510 PLAZA DRIVE, SUITE 1530  COLLEGE PARK, GA 10349	Non-Responsive
Sampled Installation Project Nul	
TEMPLE, TEXAS REMOVED	
Non-Responsive Date College	ted Date Snipped
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peace iption of Operation	Location (BLZG/AREA)
converted IFR ARMORY	
Associated Complaints (be specific)	ARMORY WT ROOM
Associated Air Samples IT yes, il	st samo:e numbers
Yes Mo	
Label Inform	Prior
Trade Name . ::SN	Чапитастиге <i>г</i>
Address	MSDS ATTACHED
	[]Yes [::o
Analysis Desired USAC	
Constituents  Only No. Constituents	Results Remarks
TEM91 BLANK	:
TEM92 TO WTROOM	
TEM 93 OBSERVATION WALL MIR BEN	
TEM 33 OBSERVATION WALL MIT BEN	N .
TEM94 OPSERVATION WALL LEFT	
Comments to Lap:	
Lab Use Oni	V
Analyst (institute) Reviewed By (institute)	Date Received late Recorted
Arocedures Performed Limments:	

# Appendix C

Photographs and Floor Layout.

# Temple Armory



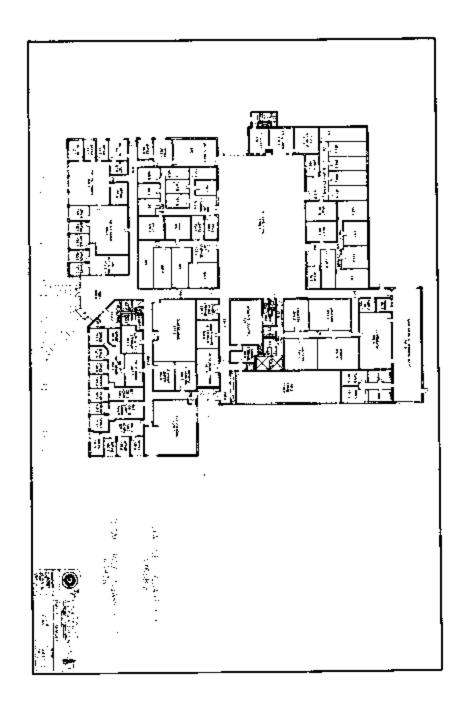


Non-Responsive

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





# DEPAREMENT 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, Tmple, TX 76502.

SUBJECT: Transmittal of Industrial Hygiene Survey Report of TXARNG Temple Armory, Traple, Texas

- References.
  - a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 19 August 1998.
- 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.
- Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- k. Industrial Ventilation, 26<sup>th</sup> rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.
- 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, Tmple, 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

ARNG-CSG
SUBJECT: Transmittal of Industrial Hygiene IH Survey Report Temple Armory, Tmple,
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 forward in a decided when the decided when forward in a decided when the decided when



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



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NOISE DOSIMETRY	5
HAZARDOUS NOISE PRODUCING EQUIPMENT/TOOLS	6
HAZARDOUS MATERIALS	6
RECOMMENDATIONS	

# **Appendices**

Appendix	A -	Ref	erences
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# 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<sup>2</sup> square feet ft<sup>3</sup> 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 Sates 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.

SUMMARY OF FINDINGS	RECOMMENDATIONS
Air Sampling	
N/A	N/A
Ventilation Measurements	
N/A	N/A
Noise Measurements	
N/A	N/A
	N/A  Ventilation Measurements  N/A  Noise Measurements



TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
	Noise Dosimetry	4
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 wer-	The second secon	RAC 4
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



# Environmental Consulting and Training Services, Inc. (ECATS)

Temple Armory ARNG, Temple, TX

TOPIC	SUMMARY OF FINDINGS	RECOMMENDATIONS
	Asbestos	<b>\</b>
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 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

- 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)
- 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 10<sup>th</sup> 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.



Environmental Consulting and Training Services, Inc. (ECATS)

Temple Armory ARNG, Temple, TX

# APPENDIX B PHOTOS



**Temple Armory** 



Potential Mold - Drill Floor Ceiling



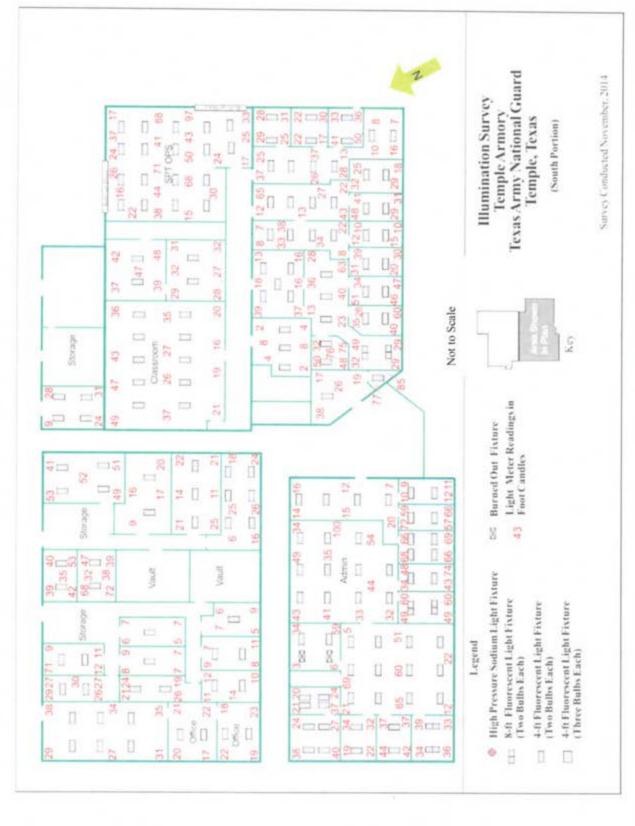
Potential Asbestos Insulation - Test Results were negative



Temple Armory ARNG, Temple, TX

## APPENDIX C

## LIGHTING SURVEYS





Temple Armory ARNG, Temple, TX

## APPENDIX D LEAD TEST RESULTS



Temple Armory ARNG, Temple, TX



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 18, 2014



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.

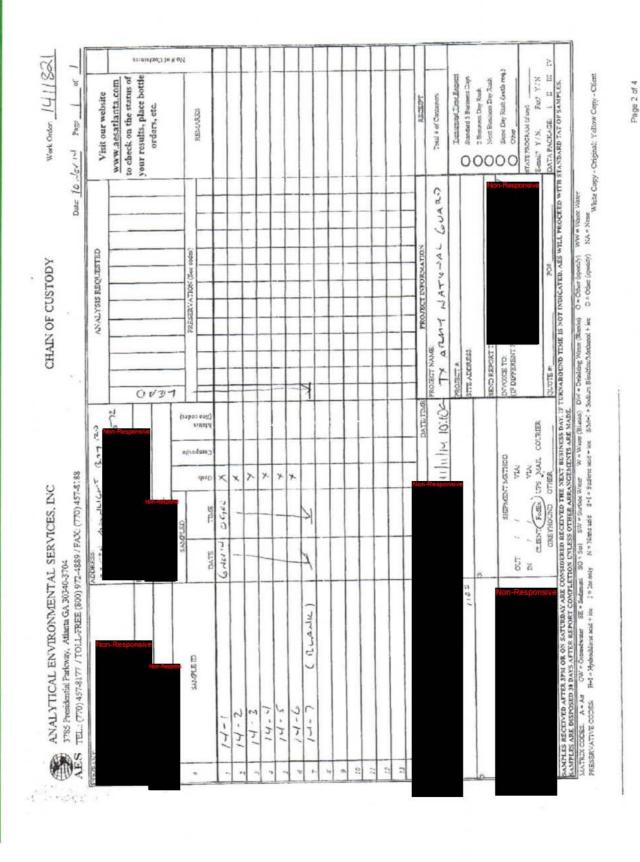
If you have any questions regarding these test results, please feel free to call.



1080 Presidential Drive - Atlanta, Georgia 30340 - Tel. 770 457.8177 - Fax: 770.457.8188 - Tell Free: 800.972.4889

Page 1 of 4

Training Services, Inc. (ECATS) **Environmental Consulting and** 



Page 1426 of 1757



## Temple Armory ARNG, Temple, TX

Analytical Environmental Services, Inc

1411821

ECATS

Client: Project:

Lab Order:

TX Army National Guard

Matrix: Wipe

Date Received: 11/11/2014 10:10:00 AM

Date:

18-Nov-14

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	f		11/06/2014	11/17/2014	13
1431821-002A	14-2	BRL	ng, Total	20	13		11/06/2014	11/17/2014	JG
1411821-003A	14-3	BRL	ug. Total	20	1.5		11/06/2014	11/17/2014	JG
1411821-004A	14-1	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	JÇI
1411821-007A	14-7	BRI.	ug. Total	20	1		11/06-2014	11/17/2014	JG

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18 Innerhor

Page 3 of 4



Temple Armory ARNG, Temple, TX

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client GA Army Wational Guard		Work Orde	r Number 141/821
Checklist completed by	u /14		
Carrier name: FedExUPS Courier Client U	S MailOther	Γ	_
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 A-Minent Cooler #2 Cooler #3	Cooler #4	Coc	oler#5 Cooler #6
Chain of custody present?	Yes 🗹	No —	
Chain of custody signed when relinquished and received?	Yes _	No _	
Chain of custody agrees with sample labels?	Yes 🗹	No _	
Samples in proper container/bottle?	Yes _	No _	
Sample containers intact?	Yes 🖊	No _	
Sufficient sample volume for indicated test?	Yes 🗹	No _	
All samples received within holding time?	Yes 🗹	No _	
Was TAT marked on the COC?	Yes	No /	
Proceed with Standard TAT as per project history?	Yes	No	Not Applicable
Water - VOA vials have zero headspace? No VOA vials so	ubmitted <u></u>	Yes _	No
Water - pH acceptable upon receipt?	Yes _	No	Not Applicable
Sample Condition: Good Other(Explain)	Chee	cked by	
(For diffusive samples or AIHA lead) Is a known blank inclu-	ded? Yes	_ 3	No /
See Case Narrative for resolution of the Non-Conformance	e.		
* Samples do not have to comply with the given range for certain parameters	k.		
\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Cla	ecklists\Sample Re	eceipt Checkli	sts\Sample_Cooler_Receipt_Checklist

Page 4 of 4



Temple Armory ARNG, Temple, TX

## APPENDIX E ASBESTOS TEST RESULTS

Page 1 of 2 sponsi BECEI 1411835 For AES Use Only GUARD Comments コントラマ IX girma 14 1.0A7 4002 Timo ANALYTICAL ENVIRONMENTAL SERVICES, INC. Project Number: Sampling Date: Project Name: Page 22 3785 Presidential Pkwy., Atlanta, GA 30340-3704 (770) 457-8177 / Toll Free (800) 972-4889 / Fax (770) 457-8188 ASKLASTES A SEPERTY. Requested Analysis Phone: BULK ASBESTOS ANALYSIS Fax CHAIN OF CUSTODY 90123 Sample Location/Description 200h イイナローナイン Critica 50877 是 4647 TE 1922 5 311 (10245) Sample ID City, State, Zip: Client Name: 5-6 2 75227 Address: Sampler' Contact 1 7

Temple Armory ARNG, Temple, TX

Environmental Consulting and Training Services, Inc. (ECATS)

2

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13 12

7

16



Temple Armory ARNG, Temple, TX



## ANALYTICAL ENVIRONMENTAL SERVICES, INC. Bulk Sample Summary Report

qalvn

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			Mine			AC AC	Comments
4-8	1411835- 001A	Utility Room	ND ND	ND	ND	ND	_	ND	
Layer 1 14-9	1411835- 002A	Supply Room	ND	ND	ND	ND	NĐ	SD	
Laver: 1									

Note: ("Hechrysonic Advantages ("Becreatiolite AC-acturolite TR-tremelite AN-anthophylite For community on the samples, see the individual analysis sheets.

NO = None Detected.

AUX, 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 Hulk Insulation Samples" (EPA 600 N1482-020). 1982 as found in 40 CFR. Part 763. Appendos b to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA 600 II-60-136). 1983.

These test results apply only to those sumples 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, quaristative TEM is currently the only method that can be used to determine conclinative adsestos content.

This report must not be reproduced except in full without written approval of Analytical Environmental Services. Inc.

Microanalyst:





# 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.
  - 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.
- The Point of Contact during the survey was Non-Responsive
- c. India Responsive ndustrial Hygiene Technician for the Texas Army National Guard conducted the sampling on 29 January 2007.

#### 3. General.

- a. <u>Site Description.</u> 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 ashestos containing building material, illumination levels, noise readings, and an evaluation of the ventilation system as it pertains to indoor air quality.
- c. <u>Methodology</u> 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 scaled plastic bag and sent for analysis to an American Industrial Hygiene Association (AIIIA) 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. <u>Lead Wipe Samples:</u> 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	136th BN Admin Supply Duct	Below Recordable Limits
TEM0702	136th 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	1FR Builet 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. <u>Illumination Survey</u> 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 wartage 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 Hearing 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; hearing units are working. Various HVAC issues have been documented or communicated with the POC and will be forwarded to the Stare Facilities Commission. Currently roof and HVAC repairs are pending contract per POC.

#### 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
- Ensure all equipment and materials in the IFR are properly decontaminated before they are reissued to its corresponding unit. RAC 2
- 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



CF: NGB-ARS-IHSE

State Occupational Health Office, 3500 West 35<sup>th</sup> 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: 2/20/2007

## TOTAL LEAD IN WIPE SAMPLES N7082

CLIENT:

National Guard Bureau Region-South III

Lab Order:

0702723

Project:

Temple, Texas Armory

Date Received:

2/13/2007 10:05 AM

**Delivery Order:** 

Matrix:

Wipe

PO No:

Laboratory	Client Sample	Results	Units	Report	DF	Date	Dute	Analyst
łD	IB			Limit		Collected	Analyzed	
0702723-001A	TEM0701	BKI.	jig, Total	20	3	1/29/2007	2/15/2007	ĮΥ
0702723-002A	TEM0702	25	μę, Total	20	1	1/29/2007	2/15/2007	JY
0702723-003A	TEM0703	BRL	μg. Total	20	1	1/29/2007	2/15/2007	١Y
0702723-004A	TEM0704	BRI.	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	BRI.	με. Total	20	1	1/29/2007	2/15/2007	JY
0702723-007A	TEM0707	BR),	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	11:M0709	59	μg. Total	20	1	1/29/2007	2/15/2007	JY
0702723-010A	TEM0710	BRL	μg. (otal	20	1	1/29/2007	2/15/2007	JY
0700723-011A	TEM0711	52	μg, (oral	20	1	1/29/2007	2/15/2007	1Y
0702723-012A	11:M0712	BRIL	μg. Lotal	20	1	1/29/2007	2/15/2007	JY
0702723-013A	FEM0713	34	με Lotal	20	ì	1/29/2007	2/15/2007	JΥ
0702723-014A	1'EM0714	54	ng Lotal	20	4	1/29/2007	2/15/2007	JY
6763723 015A	110M6715	33181	per local	20	1	1/29/2007	2/15/2007	JV
0707723-016A	[1 Mu716	22	μβ, Fotal	20	1	1.29.2007	2/15/2007	JY
0702723-017A	11.M0717	BRI	gg. Lotal	20	ι	1/29/2007	2/15/2007	JY
0702723-018A	TEM0718	255	ug, Total	20	1	1/29/2007	2/15/2007	βY
0702723-019A	T6M0719	BRI.	ug. Total	20	1	1/29/2007	2/15/2007	JY
0702723-020A	TEM0720	BRI.	μ <mark>g, Τ</mark> οιαί	20	1	1/29/2007	2/15/2007	JΥ
0702723-021A	FEM0721	BRL	μg. Total	20	1	1/29/2007	2/15/2007	JY
0702723-022A	19:M0722	BRI	μg, Total	20	t	1/29/20017	2/15/2007	JΥ

Qualifiers:

BKL - Not Detected at the Reporting Limit

DF - Dilution Factor

## Appendix B: Lab Chain of Custody

## BULK SAMPLE DATA

For use of this form use USAEHA TG 141: the

`	Return Actives (and in the proposent is ASHE-10.
'	Return Acaress (complete andress including lip Code)
	NATIONAL GUARD BUREAU REGION SOUTH THOPPICE SIO PLAZA DRIVE, SUITE 1230 COLLEGE PARK GA 19349
i	Sampled Installation Project Number
	TEMPLE TEXAS ARMORY TEM 290/07
į	Non-Responsive Date Collected Date Sollected
1	29Jan07 12/EB07
- 1	PRIMORY DITTER (F-11-
Ì	Asseciated Complaints (be specific)  Asseciated Complaints (be specific)
f	Associated Air Samples IT yes, List sample numbers
L	Yes XNo
	Label Information
	Trage Name "SN "anuracturer"
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	Temopol 136 BN Advan Supply
	Tomorn 134 Rai Note
1	TEMOTOR 136 BN Adman RTN
-	TEMO763 CLASSROOM HO32 SUPPLY
-	Tempoy Classroom #032 RTN
	TEMOTOS DRILL HALL FLOOR (RR WALLOCKER)
	TEMOTOS DRAIL HALL FLOOR (CENTER)
	TEMOTATION (CENTER)
	DEMOTOTO DRAIL HOLL FLOOR (LEFT FIX FIRE EXT.)
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## BULK SAMPLE DATA

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NATIONAL GUARD BURBAL 510 PLAZA DRIVE STORY	REGION SOUTH IN OFFICE	Z	ED Code!	n-Responsiv
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3 P. 1 P. 1	LEAD		•	
an Use Sample Only No.	Constit	uents	0	
			Results	Remarks
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Tem0709	HAC ARMS	S Room SAFE		
Temozio	BLANK	/		
TempII		-		
	Detilet	STOP UPPER L	<u>eft</u>	
15m0712	LFR BUILET	STOP CONTE	-D	
ITEMO7[3].	LFRRUILFT	STACL	0	
Temo710	Too Q. U.	LEFT FRON	SSAT	n - Borgon Sheerd
mments to Lab:	- LV DWIE 12	TOP (CENTER (	30110mdellecu	R - Bottom dland
		- (3	7	SHEID SHIELD
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## ATAG EMPLE DATA

For use of this form see: USAFER TG 141; the

Jan 348: USIEHE TG 147.	
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NATIONAL GUARD BUREAU REGION SOUTH CHOPPICE  NATIONAL GUARD BUREAU REGION SOUTH CHOPPICE  SID PLAZA DRIVE, SUITE LISE  COLLEGE PARK, GA ROSE  SASTOLEGO (UST 2015)	
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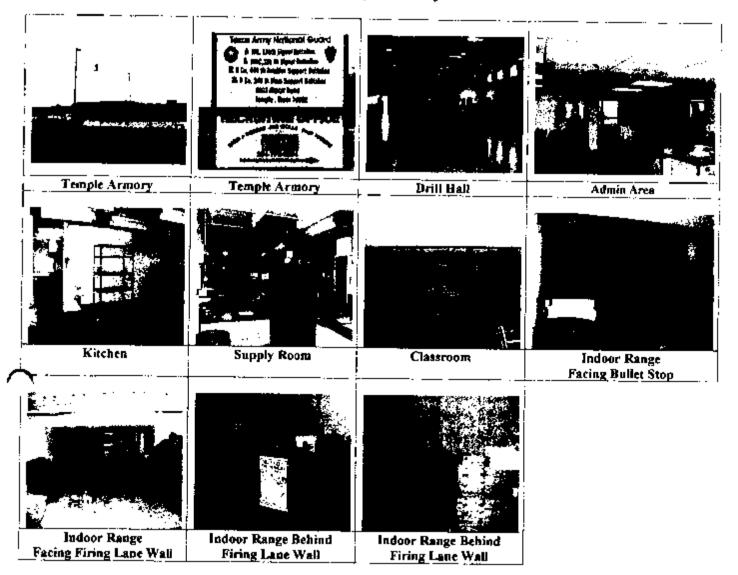
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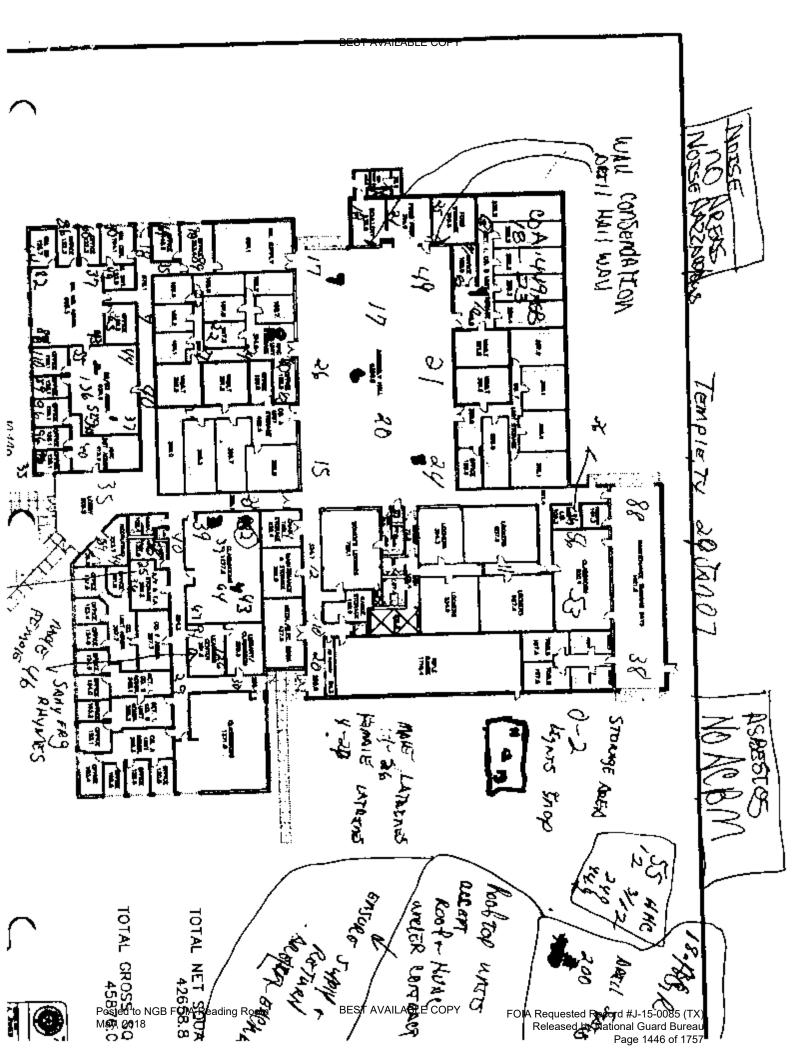
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## Appendix C

Photographs and Floor Layout.

## Temple 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

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.

- References.
- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program. 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. 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.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 0f reference 1.1, 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.

- 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.



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



July 8, 2004

## **Table of Contents**

Executive Summary	Page 1
Subject	
Background	Page 2
Introduction	
Site Description	
Scope of Work	
Methodology	
Findings & Discussion	
Lead Wipe Samples	Page 3
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Noise Survey	Page 4
Illumination Survey	Page 4
Heating Ventilating and Air Conditioning (HVAC)	
Recommendations	Page 5

## **Appendices**

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

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.

Торіс	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.
НУАСЛАО	No issues were found.	No action.

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 f the National Guard Bureau Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Temple Armory in Temple, Texas. Technician for the Texas Army National Guard and 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.

<u>Site Description.</u> 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.

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

Survey Date: 04 June 2004

#### FINDINGS and DISCUSSION:

The Point of Contact during the survey was Non-Responsive

<u>Lead Wipe Samples:</u> 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

May, 2018

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.

<u>Noise Survey:</u> 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.

<u>illumination Survey</u> 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.

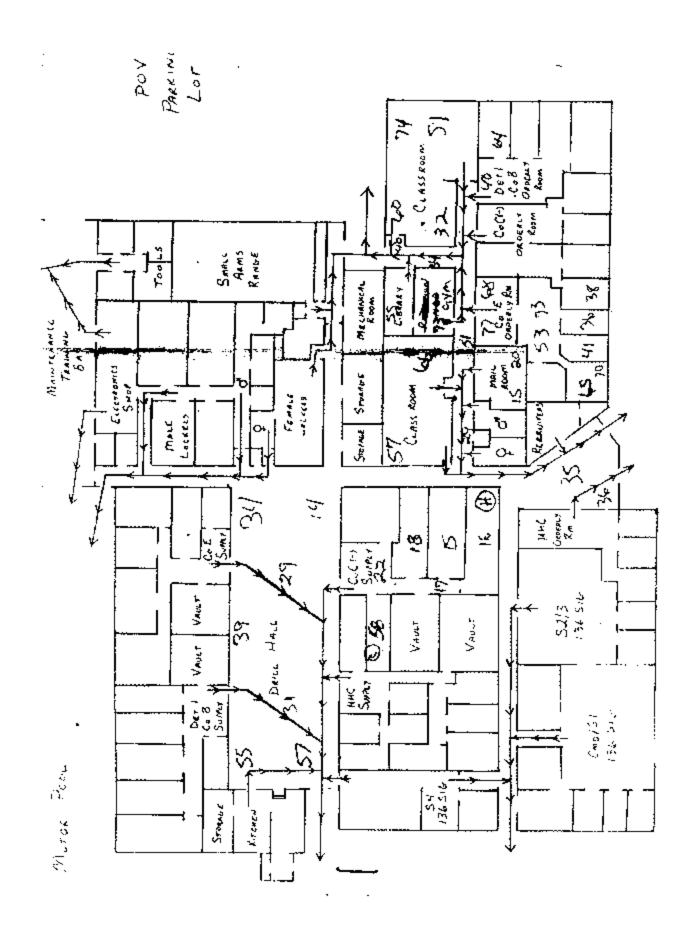
## Recommendation:

None.

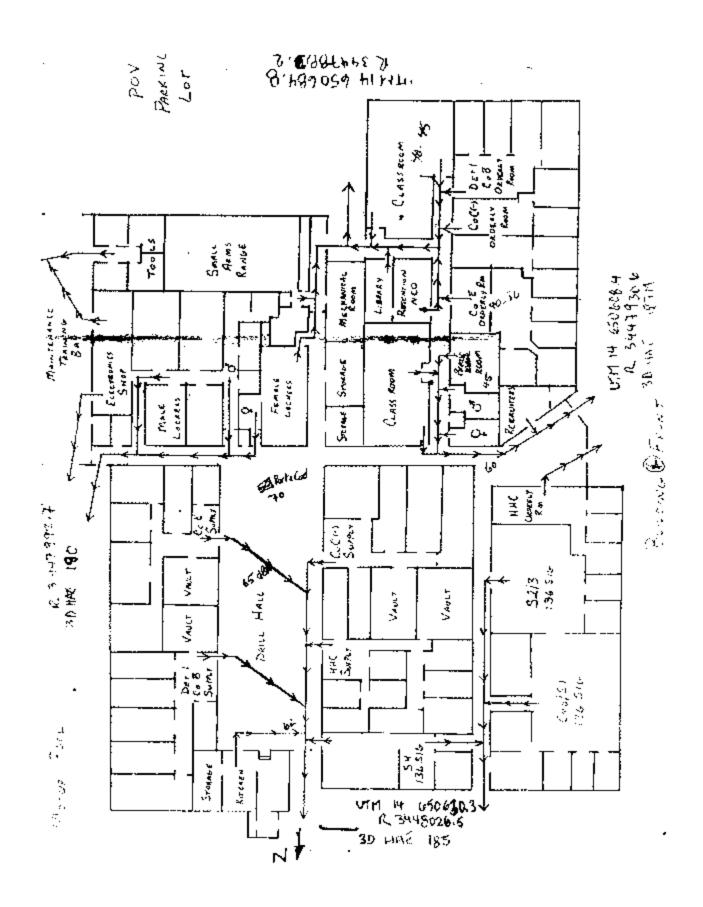
**Technical Assistance:** For technical assistance regarding information found in this report

Non-Responsive

APPENDIX A



Page 1458 of 1757



APPENDIX B

**EMSL Analytical** 

3 Cooper St., Westmont, NJ 98108

Phone: (856) 856-4800 Fax: (856) 856-6551 Email: skatiffman@emel.com

Attn:

₹ax:

Project:

Customer ID:

T\$80

Customer PO: Received:

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EMSL Order:

EMSL Proj.

200406798

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

Client Sample Description		Lab ID	Analy;ed	Area Sampled	Lead Concentration
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	0901	5/21/04	n/a	<10.0 јідЖіре
TEM 02		0002	6/21/04	n/a	18.0 <u>ug/wipe</u>
TEM 03		0003	6/21/04	n/a	<10.0 µд∕міре
TEM 04		0004	6/21/04	n/a	<10.0 µg/wipe
YEM 05		0005	8/21/04	n/a	<10.0 µg/wipe
TEM 06		2006	6/21/04	n/a	<10.0 yg/wipe
TEM 07		0007	6/21/04	n/a	<10.0 µg/wipe
TEM 08		0008	6/21/04	nia	18.0 µg/wipe
TEM 09		0009	6/21/04	n/a	62.0 yg/wipe
TEM 10		0010	6/21/04	n/a	<10.0 µg/wipe
TEM 11		0011	8/21/04	n/a	20.0 µg/wipe
TEM 12		0012	6/21/04	n/a	110.0 µg/wipe
TEM 13		0013	8/21/04	n/a	28.0 µg/wipe
TEM 14		0014	8/21/04	n/a	180.0 µg/wipe
YEM 15		0015	6/21/04	n/a	37.0 ug/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 18		0019	6/21/04	n/a	t30.0 µg/wipe
TEM 20		0020	5/21/04	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 ABHs, unless specifically indicated otherwise in the comment section. The lest reputs opnacional within this report meet the requirements of NELAC onless otherwise noted. This report relates only to those items lested. Unless otherwise noted, the reputs in this report have not been blank corrected.

ACCRECITATIONS: ALIABLAP: 04653, AIHA Stiveonmental Leed Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:50:31 PM

#### **EMSL** Analytical

3 Cooper St., Westmont, NJ 08165

Phone: (856) 858-4800 Fax: (856) 858-9551 Emeil: skauffman@emst.com



Attn:

Fax:

Project:



Customer ID: Customer PO: TS80

Customer PO: Received:

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EMSL Order:

200406798

EMSL Proj:

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

Client Sample Description	Lab ID	Analyted	Area Sampled	1.9ad Concentration
TEM 22	0022	6/21/04	n/a	25.0 µg/міре
TEM 23	0023	6/21/04	n/a	<10.0 pg/wipe
TEM 24	0024	6/21/04	n/a	<10.0 pg/wipe
TEM 25	0025	6/21/04	.n/a	<10.0 jug/wipe
TEM 26	0026	6/21/04	n/e	<10.0 jughvipe
TEM 27	0027	6/21/04	n/a	<10.0 µg/wipe
TEM 28	0028	6/21/04	n/a	<10.0 pg/wipe
TEM 29	0029	6/21/04	n/ai	630.0 µg/wipe
TEM 30	0030	6/21/04	n/a	≺10.0 jig/wipa



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

ACCRECITATIONS: NUMBERS ARTA Environmental Lead Laboratory Approval Programs 190794

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EMSL Analytical, Inc.

Fax

Project

167 Hadden Ave. Westmost, NJ 68108

Propor (PDB) 888-4800 Fate: (886) 858-4969 Email: selegal@EJASL.com



Non-Responsive

Non-Responsive

Customer ID:

Customer PO.

TS80

Received:

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EMSL Order: EMSL Proj:

r: 040410186

Analysis Date:

6/14/2004

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

				Non-Asbestos			Asbestos
Sample	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous	% Type
TEM01 04041#188-0971	Temple	Gray Fibrous Heterogeneous	Teased Dissolved		Cellulose Min. Wool	4% Non-fibrous (other)	None Detected
TEM02 040410168-0002	Temple	White Non-Fibrous Homogeneous	Crushed Dissolved	1%	Cellulose	99% Non-fibrous (other)	None Detected
TEM03 846470188-0063	Temple	Tan Fibrous Homogeneous	Tessed Crushed Dissolved		Cellulose Min: Wool	40% Non-Abrous (other)	None Detected
TEM04 64041018884004	Temple	Brown Non-Fibrous Homogeneous	Crushed Dissolved	5%	Cellulose	95% Non-fibrous (other)	None Detected

Non-Responsive

## Non-Responsive

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Another performant by EMSL Wassington (NVLAP \$10100850), NY ELAP 10872

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APPENDIX C

EMSL ANAL YTICAL  Date: EMSL Repri	senative:	Project Name/No.:	P.O.#:	-
Company Name: Tammer	Sciences In	EMSL Bill to:	me our built be	
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	SW846-7420, 3050B	Flame Atomic Absorption	0.01% ÷÷	<u> </u>
Lead Chips*	Mod. / AOAC (974.02)	1.1		
Lead Wastewater	SW846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil	
	or SW846-6010B	ICP	0.1 mg/i water	
Lend Soil ÷	Ø1:0310 000 0011 00		i0 mg/kg (prm) soil	
Lead in Actas	NIOSH 7082 Med.	Flame Atomic Absorption	4 ng/filter	<del></del>
	or NIOSH 7300 Med.	ICP	3.0 ug/filter	1
Centin Wine Z-ASTM	SW846-7420 / HUD	Flame Atomic Absorption.	10 ug/wipe	Rock
Lend in Wipe - 2-ASTM	Appendix 14.2 Digest.			+==
	rM or SW846-6010/3	ICP	3.0 ug wipe	
TCLPLess**	SW846-1311/ 7420	Flame Atomic Absorption	0.4 mg/l (ppr1)	
(C) Leas	or SW846-6010B	ICP	O.t mg/l (pysa)	
	CA Title 72 00101.425	Flame Atomic Absorption	0.4 mg/l (ppua)	
STUC Lead (California) #	SW846-7420	ICP	0.1 mg/l (pprs)	<del></del>
	a: SW846-6010B	Graphite Furnace Atomic	0.03 ug/fülter	
Lead in /ar ****	NIOSH 7105 Med.	Absorption	3.00	
	SW846-7423	Graphite Furnace Atomic	0.003 trig/l (ppm) water:	3
Lend Wastewater	3,44,67,427	Absorption	0.3 mg/kg (ppm) soil	4-5
Lead Soi +				-
Lead in Drinking Water (check state	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (rpm)	÷ :
Certification Requirements) Total Dust	NIOSH 0500-0600	Commission Participant	0.0001g	<u></u>
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EMSL Analytical, Inc. Envised 97/97/99

#### CHAIN OF CUSTODY

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APPENDIX D

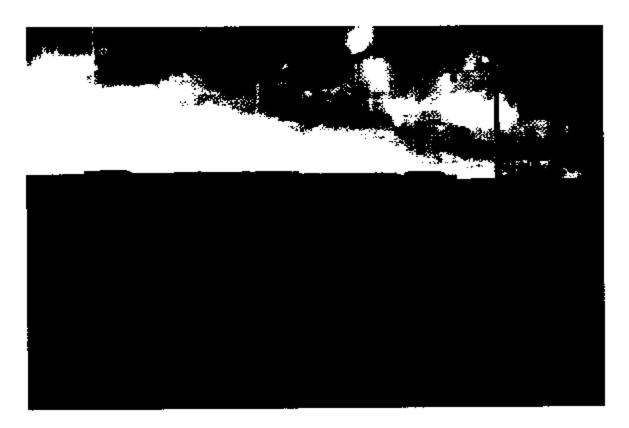


Photo #1: Armory front entrance.



Photo #2: South side of the armory.

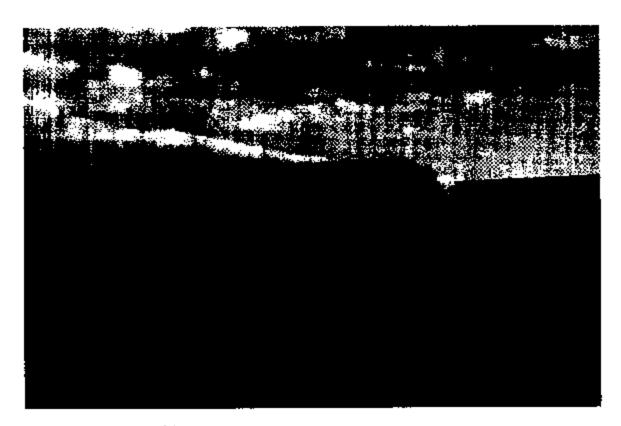


Photo #3: East side of the armory.

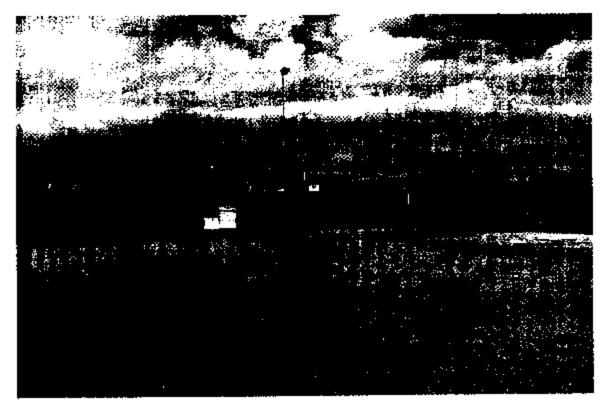


Photo #4: North side of the armory.



Photo #5: IFR showing the welding compressed gas stored in the range.

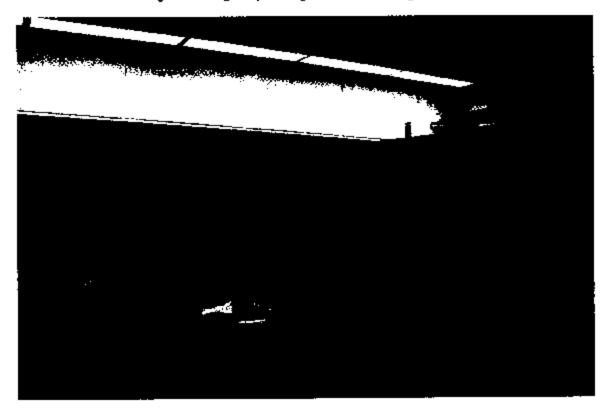


Photo #6: Indoor firing range facing the bullet trap.

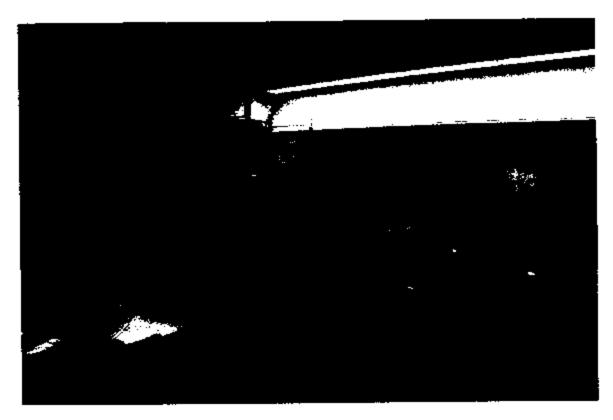


Photo #7: Indoor firing range showing items stored.

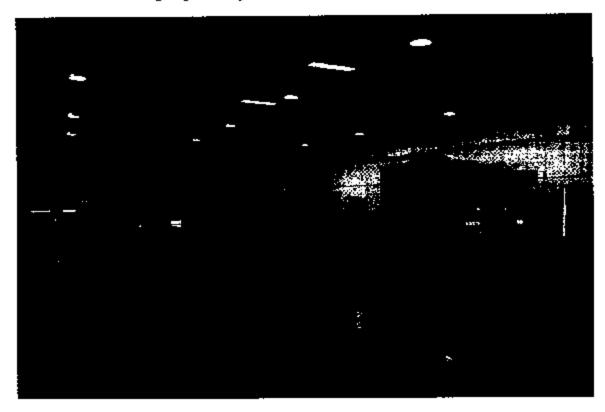


Photo #8: Drill hall facing south.



Photo #9: Drill hall facing north.



Photo#10: Armory's kitchen showing the stove.

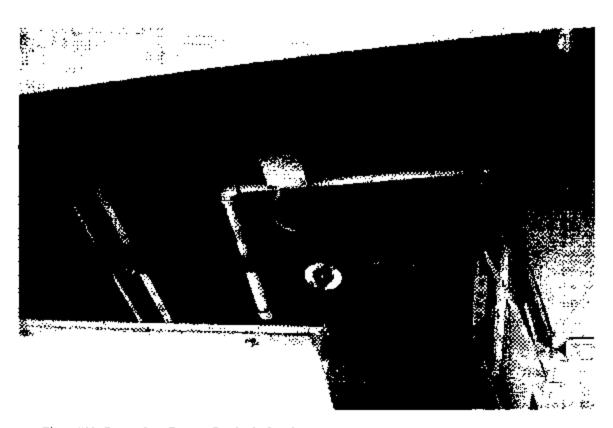


Photo #11: Sprayed on fireproofing in the break room.

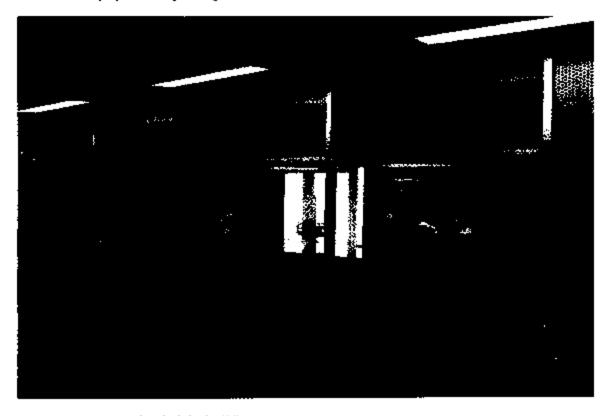


Photo #12: Observation deck in the LFR.

# 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.

- 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.
- I. 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 nmer 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 1.1, 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



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



#### Table of Contents

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Site Description	
Scope of Work	
Methodology	
Findings & Discussion	
Lead Wipe Samples	Page 3
Asbestos Suspect Building Material	Page 4
Noise Survey	Page 4
Illumination Survey	Page 4
Heating Ventilating and Air Conditioning (HVAC)	Page 5
Recommendations	Page 5

#### 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 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.
No excessive noise source was identified.		No action.
Illumination Survey	10 to 80 footcandles	No action.
нуаслад	Water damaged ceiling tiles were observed.	Repair water leaks and replace all water damaged building materials.

**BEST AVAILABLE COPY** 

**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.

<u>Site Description.</u> 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.

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

May, 2018

#### FINDINGS and DISCUSSION:

The Point of Contact during the survey was



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

**BEST AVAILABLE COPY** 

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, einder 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 footcandles 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 footcandles for office work, 20 to 50 for general lighting. Luminance depends on various

May, 2018

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 replace or cleaned and contaminated if replacement is not feasible. No other complaints of indoor air quality issues were documented or communicated with the POC.

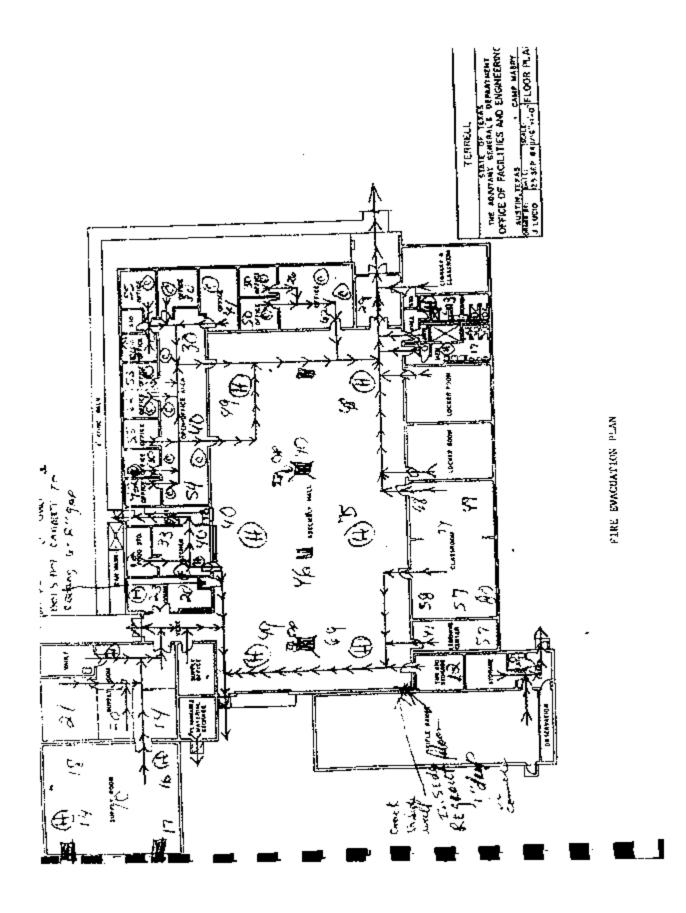
#### Recommendations:

- 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

APPENDIX A



APPENDIX B

#### **EMSL Analytical**

3 Cooper St., Wastmont, NJ 98108



Fax:

Project: Terrell, TX

Customer ID:

T580

**Customer PO:** Received:

04/22/04 1:42 PM

EMSL Order:

200404965

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 semple matrix and are not recognized under the NLLAP accreditation program	0001	5/7/04	144 in <sup>2</sup>	110.0 µg/H²
TER-FR02		0002	5/7/04.	144 in²	27.0 µg/ft²
TER-FR03		0003	5/7/04	144 m²	1100.0 µg/ft <sup>a</sup>
TER-FR04		0004	5/7/04	144 in²	5600.0 µg/ft²
TER-FR05		0005	5/7/04	144 in²	3500.0 µg/ft <sup>y</sup>
TER-FR06		<i>0006</i>	5/7/04	144 in²	4400.0 µg/ft²
TER-FR07		0007	5/7/04	144 in²	750.0 µg/ft²
TER-FR08		0008	5/7/04	144 163	61.0 µg/ft <sup>q</sup>
TER-FR09		0009	5/7/04	144 ln²	450.0 µg/ft <sup>a</sup>
TER-FR10		0010	5/7/04	144 ln²	75.0 µg/h²
TER-FR11		0011	5/7/04	144 in²	13.0 µg/ft²
TER-FR12		0012	5/7/04	144 In <sup>3</sup>	<10.0 µg/fi²
TER-FR13		0013	5/7/04	144 in?	31000.0 µg/fi*
TER-FR14		0014	5/7/64	144 in <sup>3</sup>	12000.0 µg/ff
TER-FR15		0015	5/7/04	144 ln²	13000.0 µg/ft²
TER-FR16		0016	5/7/04	144 in³	150.0 pg/ft*
TER-FR17	· · · · · · · · · · · · · · · · · · ·	0017	5/7/04	144 in <sup>2</sup>	12.0 µg/ft²
TER-FR18		0018	5/7/04	144 in²	130.0 µg/ft*
TER-FR19		0019	5/7/04	144 km²	21000.0 yg/ft*
TER-01		0020	5/7/04	144 in¹	260.0 µg/ft²
TER-02		0021	5/7/04	144 in¹	<10.0 yig/tt²
15000		VVE.	371747	(	

is associated with the sample results included in this report ment the recovery and precision requirements established by the ABNA, unless specifically indicated otherwise in its count. The last results contained within this report meet the requirements of MELAC unless otherwise model. This report relates only to those items tested. Unless otherwise model, the results is this report have not been blank contained.

RECITATIONS: NUMBELAP: 04853, AINA Environmental Land Laboratory Approval Program; 100194

1/04 12:12:20 PM

#### EMSL Analytical

3 Cooper St., Westmont, NJ 06164

Phone: (856) 858-4600 Fax: (856) 858-8581 Email: skeuffman@emal.com



1580

04/22/04 1:42 PM

ASL Order:

200404965

Project

#### 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 in²	<10.0 pg/ft*
TER-04	0023	5/7/04	144 in²	28.0 µg/ft?
TER-05	0024	5/7/04	144 in*	<10.0 µg/It <sup>2</sup>
TER-06	0025	5/7/04	144 in²	27,0 µg/ft <sup>g</sup>
TER-07	2026	5/7/04	144 in?	<10.0 µg/ft²
TER-08	0027	5/7/04	144 ln²	23.0 µg/ft²
TER-08	0028	5/7/04	144 ln³	92.0 pg/f
TER-10	0029	5/7/04	144 in <sup>3</sup>	19.0 µg/ft <sup>o</sup>
TER-11	0030	5/7/04	. 144 in²	30.0 µg/N²
TER-12	0031	5/7/04	144 in²	19.0 µg/ft°



in an occided with the sample results included in this report meet the recovery and precision recustements established by the APIA, unless specifically indicated chloriduse in its second. This results contained within the report meet the requirement of NELAC unless otherwise noted. This report relates only to those name lessed. Unless observed the results in this report have not been blank corrected.

EDITATIONS: NUNELAP: 04603, April Engineerial Lead Laboratory Approval Program; 100194

Z/04 12:12:30 PM

#### EMSL Analytical, Inc.

167 Haddon Ave., Viestment, NJ 08108

Phone. (356) 858-4386 Fax: (856) 868-4560 Email: sciogel@EMSL.com





Fax:

Customer ID:

TS80

Customer PO:

Received: 04/22/04 12:31 PM

EMSL Order:

040407153

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-A	Asbestos	
				% Fibrous	% Non-Fibrous	% Туре
TER-A018	<del>''                                   </del>	Gray	Teased	80% Cellulose	20% Non-fibrous (other)	None Detected
640407153-0001		Fibrous Heterogeneous		20% Glass		
TER-A02B-Tile		White	Dissolved		100% Non-fibrous (other)	None Detected
(#0497153-9002		Non-Fibrous Heterogenaous				
TER-A02B-Mastic		Black	Dissolved		100% Non-fibrous (other)	<1% Chrysotile
040407 183 6504		Non-Fibrous Heterogeneous				
TER-A03B		Brown	Ashed		100% Non-librous (other)	None Detected
0404071502-0003		Non-Fibrous Heterogeneous				

## Non-Responsive

may dequire positional testing by TEM to confirm autoestos quantities. The above lax report relates only to the issent heritad may not be represented in may form without the appress writing operated. Exc. It wishest the CHMCL is validated to the cost of analyses. EMGL bears no responsibility for sample collection activates or analysisal interfaces. Interfaces, and the responsibility of the collection activates or analysisal interfaces. Interfaces and the responsibility of the collection activates or analysis interfaces. Interfaces and the responsibility of the collection activates or analysis and the office of the collection activates or analysis and the responsibility of the collection activates or analysis. The test results contained within this report meet the requirement of NELAC unless otherwise notice.

Analysis parameter by EMS. Weatmont (NMAP #10048-0), NY ELAP 10872

1 11 11 11 11

B-3

THIS IS THE LAST PAGE OF THE REPORT

APPENDIX C

200404965

EMSL ANALYTICAL Date: EMSL Represent	rietri/e:	Project Name/No.:	P.O.#		
Company Name: Tamaser S	ciences Inc.	EMSL-Bill to:	no no mail to.	.,	
Succes 3744 Lawrence 1	Your St	reet:			
		Box 4:		<del></del>	
Box#:	710/0564	City/State:	Dog		
City/State: Napety 1	-Respon	S V ephona	in-Res		
	rtcopon	x #:			
Fax Results to: (Name)	METHOD	INSTRUM	Limit)		
	2000	Flame Atomic Absorption	0.01%		
Load Chips*	SW846-7420, 3650B Mod. / AOAC (974.02)				
Lend Wastewater	8W846-7420	Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (ppm) soil		
	or SW846-6010B	ICP	0.1 mg/l water		
Lord Soil			10 mg/kg (ppm; soil 4 ug/filter		
Lead in Action	NIOSH 7082 Mod.	Flame Atomic Absorption	3.0 ug/filter		
	or NIOSE 7300 Med.	ICP			
Land in Wine - I-ASTM	SW846-7420 / HUD	Flame Atomic Absorption	10 ug/wipe	Routin	Ĺ
Land in Wipe 2 2-ASTM	Appendix 14.2 Digest.		3.0 ug wipe		
	or SW846-6010B	ICP	3,0 all wife		
	SW846-1311/ 7420	Flame Atomic Absorption	0.4 mg/l (ppm)		
TCLP Leid **	or SW846-6010B	ICP	0.1 mg/l (ppr-1)		
		Flame Atomic Absorption	0.4 mg/l (ppro)		
STICLend Catifornie: #	CA Title 22 (626) 126 / SW846-7420		0.1 mg/l (ppr1)		
	or SW846-6010B	ICP	0.03 ug/filter	N3	-
Lead in Air ****	NIOSH 7195 Mod.	Graphite Furnace Atomic Absorption	0,03 00124-	<u> </u>	1
		Graphite Furnace Atomic	0,003 mg/l (ppm) water	APR ST	
Lead Wastewater	SW846-7421	Absorption	0.3 mg/kg (pont) soil	<del>                                      </del>	Į.
Lead Soi +	7			N 22	\$
A la Vallatina Micros delivede state	EPA 239.2 / 200.9	Graphite Furnece Asomic	0.003 mg/l (rpm)		Ŀ
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Jun 04965

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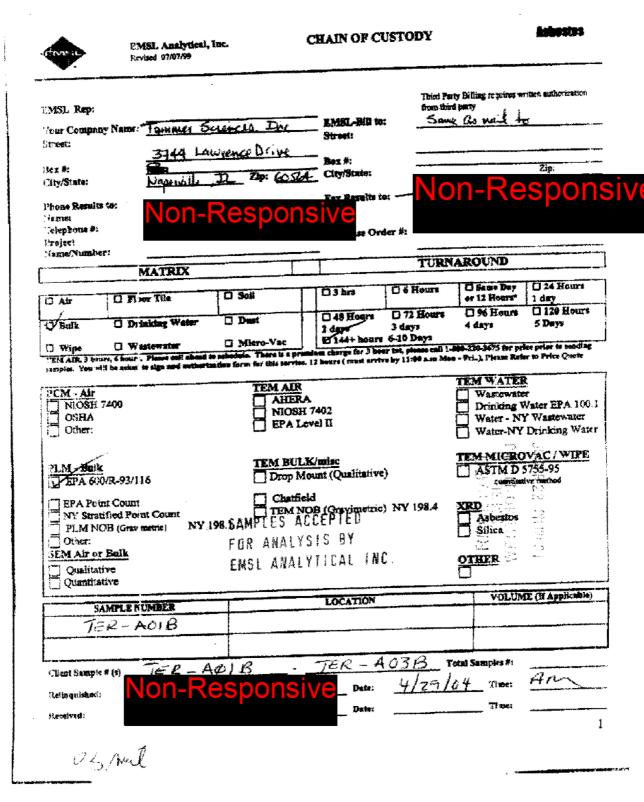
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APPENDIX D

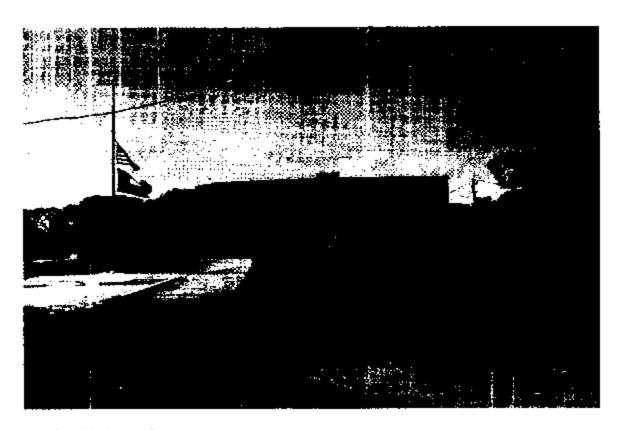


Photo #1: Armory front entrance.



Photo #2: East side of the armory.

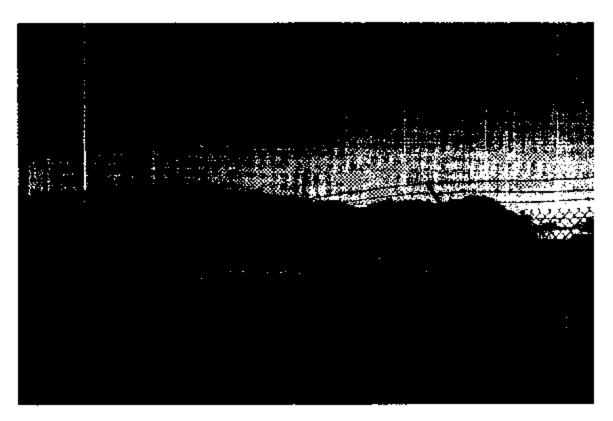


Photo #3: South west corner of the armory showing the outside of the firing range.

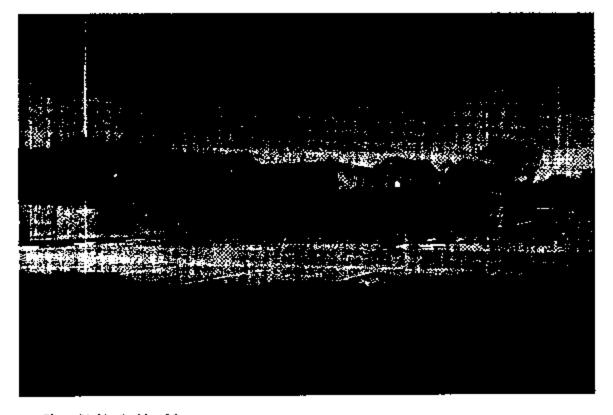


Photo #4: North side of the armory.



Photo #5: Drill hall facing east.

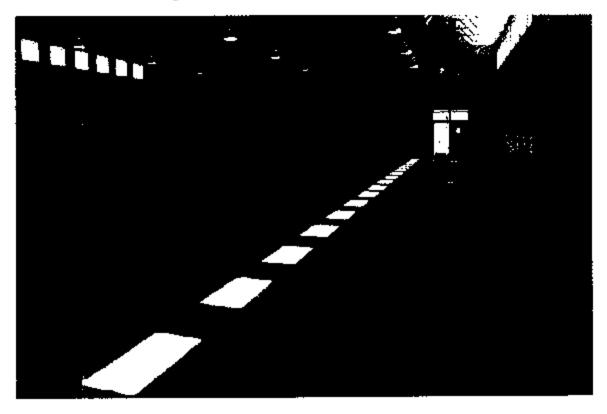


Photo #6: Drill hall facing west.



Photo#7: Indoor firing range facing bullet stop.

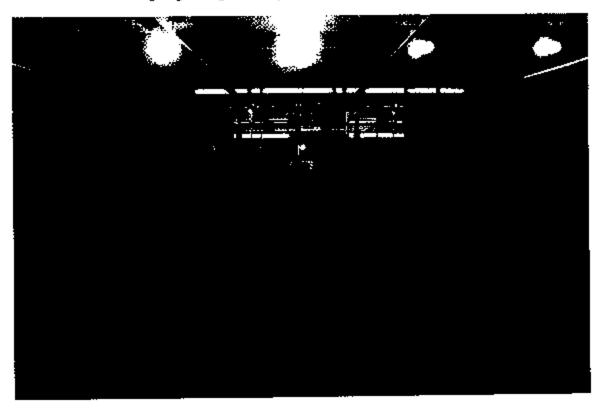


Photo #8: Indoor firing range facing firing line.



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.

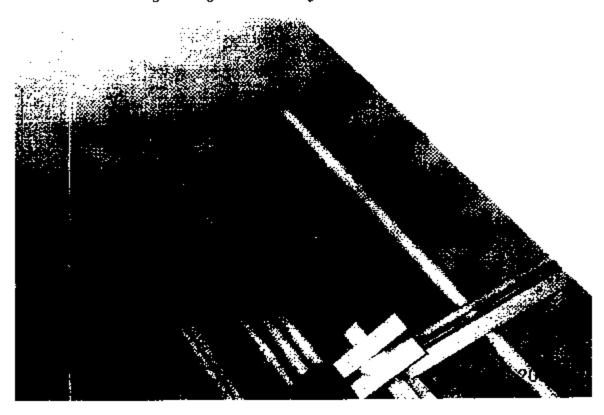


Photo #12: Water heater exhaust pipe has a 8 inch gap between the ceiling and the duct.

# 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.
- 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.
- 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.
- I. 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 nmer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, ey.
- 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 0f 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.

- 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.



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



#### Table of Contents

Executive Summary	Page 1
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Scope of Work	
Methodology	
Findings & Discussion	
Lead Wipe Samples	Page 3
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Noise Survey	Page 4
Illumination Survey	Page 5
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 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.
HVACЛAQ	No issues observed or documented.	No action.

Page 1

SUBJECT: Industrial Hygiene Initial Baseline Survey of the Victoria Armory in Victoria, Texas on 24 March 2004

#### BACKGROUND:

Region South Industrial Hygiene Office, an initial baseline industrial hygiene survey was performed at the Victoria Armory in Victoria, Texas.

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.

<u>Site Description.</u> 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.

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



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:

% Asbestos Type Sample # Description

1			
	VICB01	12x12 inch floor tile.	None.
Ī	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.

<u>Illumination Survey</u> Lighting levels throughout the Armory ranged between 15 footcandles 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

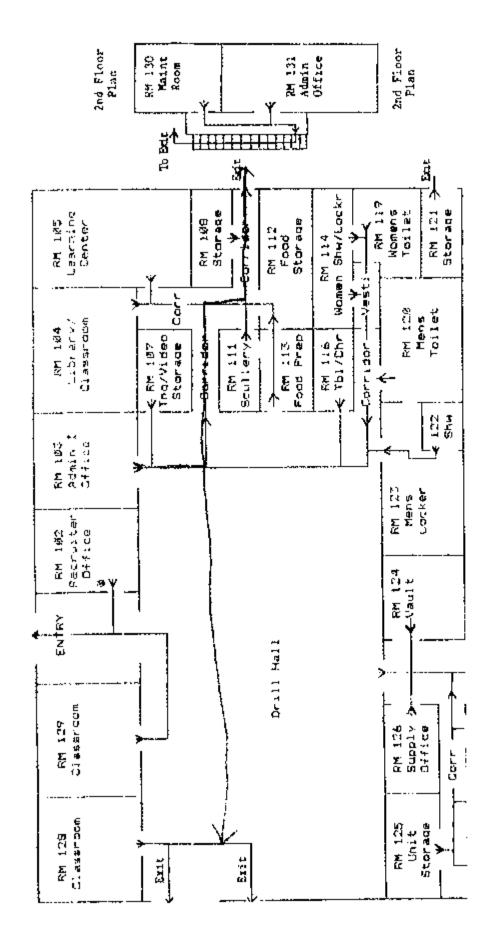
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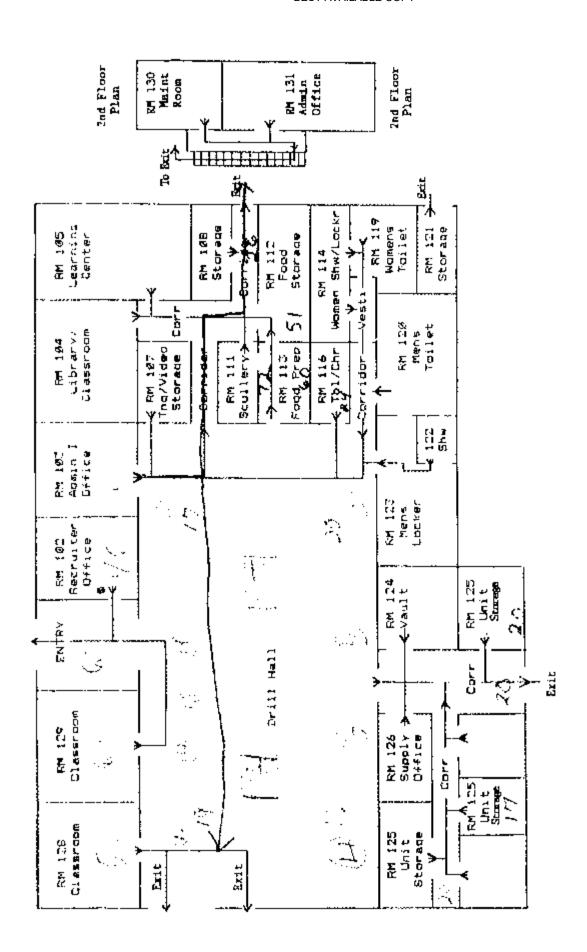
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Report Date: 15 June 2004

Page 4

APPENDIX A





APPENDIX B

**EMSL** Analytical

3 Cooper St., Westmant, NJ 08508

Phone: (888) 858-4400 Fax: (656) 858-9551 Email: skauffman@emai.com



Atin:

Fax:

Project:

Non-Responsive

Customer ID:

7580

Customer PO: Received:

03/30/04 10:13 AM

EMSL Order:

200403341

EMSL Prof:

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

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VIC07		0007	4/13/04	n/a	<10.0 powipe
ViC08		0003	4/13/04	n/a	<10.0 µg/wipe

Non-Responsive

The CIC date can obtained with the sample results included in this record must the necessary and prepiation requirements established by the AFFA, unless specifically indicated exhausts of high comment set from The test results contained within this report meet the hequirements of NELAC unless otherwise noted.

CREDITATIONS NUMELAP: 04853; AIHA Environmental Lend Laboratory Approval Program: 100

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Page 4 of

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EMSL Proj: Analysis Cate.

4/8/2004

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

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APPENDIX C

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Neteired:

APPENDIX D



Photo #1: Armory front entrance. Note the armory was hosting a mash fund raiser on the day of the survey.



Photo #2: Outside the armory's drill hall.



Photo #3; North side of the armory.

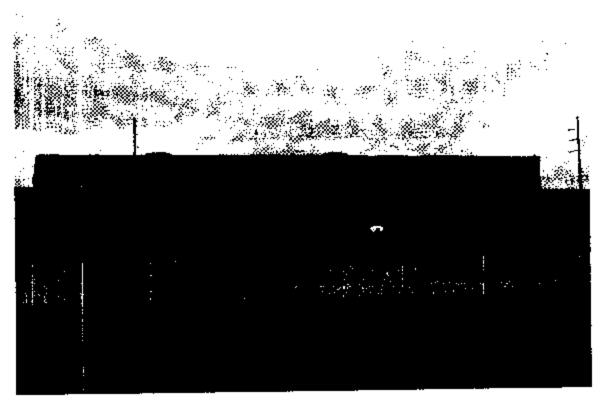


Photo #4: West side of the armory.



Photo #5: Southwest corner of armory.



Photo #6: Drill hall facing south.



Photo #7: Drill hall facing north.

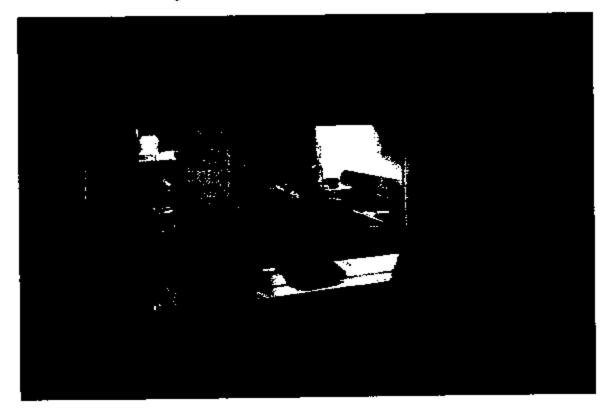


Photo #8: Armory's kitchen.

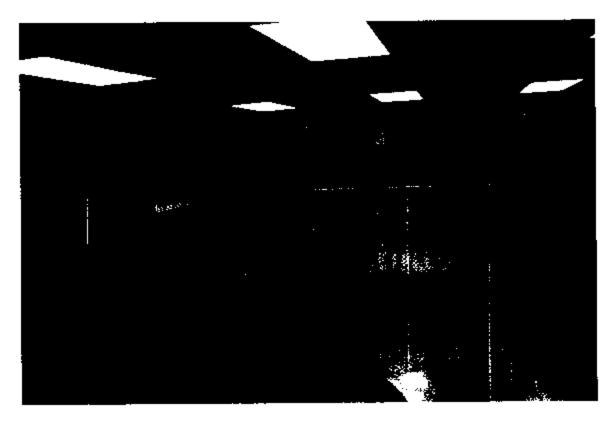


Photo #9: Classroom in the Armory.

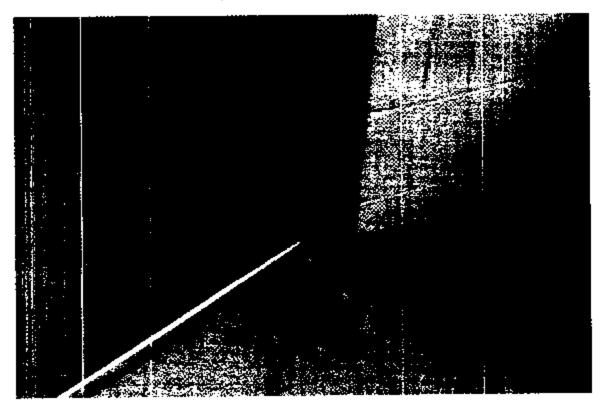


Photo #10Floor tiles were bulk sample was collected.

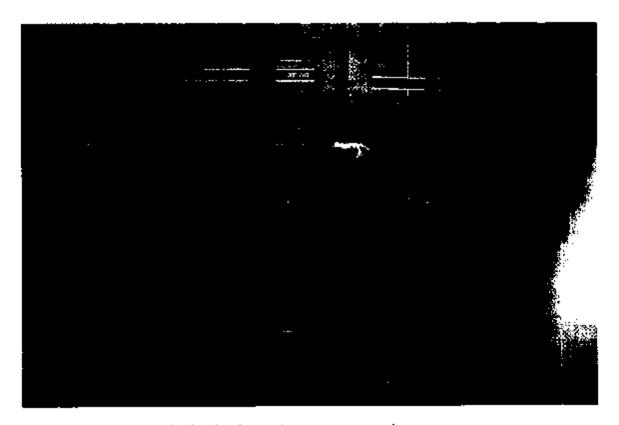


Photo #11: Furnace units showing the wooden common return plenum

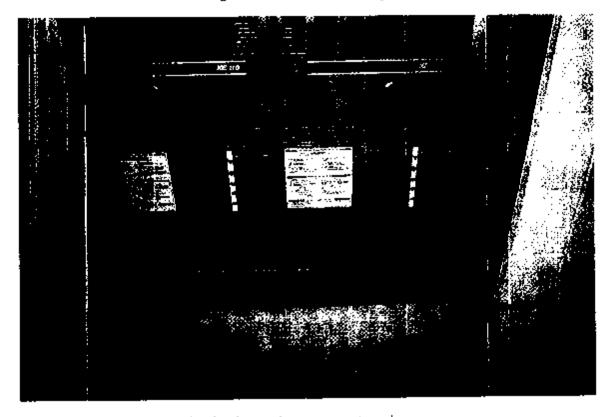


Photo #12: Furnace units showing the wooden common return plenum

## 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, Kileen Armory, Temple Armory, Brenham Armory, and Bryan Armory, TX.

#### References.

- Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 26 October 1984.
- b. Army Regulation (AR) 40-5, 30 August 1986, Medical Service, Preventive Medicine.
- 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.
- 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.
- I. 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)
- Recommendations.
  - a. Follow all recommendations made in reference 1.1., 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 1.1, 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.



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



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Subject	Page 2
Background	Page 2
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Site Description	
Scope of Work	
Methodology	
Findings & Discussion	
Lead Wipe Samples	Page 3
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Illumination Survey	
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Recommendations	_

#### Appendices

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

Survey Date: 03 June 2004

#### **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.
Ulumination Survey	1 to 60 footcandles	No action.
HVAC/IAQ	No issues were found.	No action.

Survey Date: 03 June 2004

**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.

Technician for the Texas Army National Guard and 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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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



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

May, 2018

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, einder block walls, and corrugated steel deck in the drill hall, supply, storage, and other areas. Fiber glass thermal insulation was lso 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/SSt Amold Office.	40 – 50			
Drill Hall.	50 – 60			
Troup A Supply Room.	40 – 50			
Squadron HQ Administrative Office.	45 – 55			
Front Lobby.	40 – 50			
Staff Section 2nd 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			

Survey Date: 03 June 2004

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/SSt Arnold Office.	50 - 60			
Drili Hall.	20 - 30			
Troup A Supply Room.	1-20			
Squadron HQ Administrative Office.	40 – 60			
Front Lobby.	45 – 55			
Staff Section 2 <sup>nd</sup> 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.

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

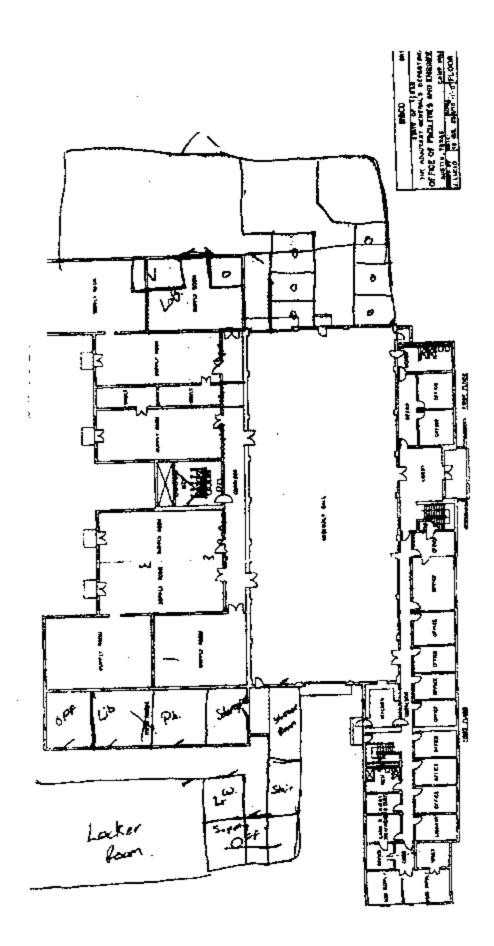
Technical Assistance: For technical assistance regarding information found in this report

## Non-Responsive

May, 2018

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APPENDIX A



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APPENDIX B

#### **EMSL** Analytical

3 Cooper St., Westmont, NJ 06106

Phone: (858) 858-4800 Fax: (858) 858-8551 Email: skauffman@email.com



Fax:

Project

Ion-Responsiv

Customer IO: Customer PO:

T\$80

Received:

06/07/04 1:20 PM

EMSL Order:

200406802

EMSL Prof:

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

Client Sample D	escription	Lab ID	Analyzes	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 NILLAP accreditation program	0001	6/21/04	n/a	<10.0 µg/wipa
WAC 02		0002	8/21/04	n/a	48.0 µg/wipe
WAC 03		0003	8/21/04	7/8	30.0 µg/Wipe
WAC 04		0004	6/21/04	n/à	15.0 µg/wlpe
WAC 05		2005	6/21/04	rVa	<10.0 µg/Mpe
WAC 06		0006	6/21/04	r√a	30.0 µg/wipe
WAC 07		0007	6/21/04	r/a	13.0 µg/wipe
WAC 08		8000	6/21/04	0/8	22.0 µg/wipe
WAG 09		0009	6/21/04	o∕a	48.0 µg/wipe
WAC 10		0010	6/21/04	n/2	<10.0 µg/wipe
WAC 11		0011	6/21/04	rva	24.0 µg/wipe
WAC 12		QQ12	6/21/04	n/s	<10.0 µg/wipe
WAC 13		0013	8/21/04	n/a	<16.0 µg/wipe
WAC 14		0014	8/21/04	n/s	<10,0 yg/wipe
WAC 15		0015	6/21/04	n/a.	<10.0 µg/wipe
WAC 16		0016	6/21/04	nia	<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	0/2	<10.0 µg/wipe
WAC 20		0020	6/21/04	n/a	<10.0 µg/wipe
WAC 21		0021	6/21/04	UĄĐ	<10.0 µg/wipe
					7 / / / / / / / / / / / / / / / / / / /

The QC data associated with the sample results included in this report over five recovery and precision requirements established by the ABA, unless specifically indicated otherwise in the command section. The test results contained within this report meet the requirements of MELAC unless otherwise noted. This report results only to troose items Lested. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NUMERAP: 04653. ABHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:43:00 PM

#### **EMSL Analytical**

3 Cooper St., Westmont, NJ 86106

Phone: (856) 856-4860 Fax: (856) 858-6551 Emell: skeuffman@erral.com



Attn:

Fax:

Project:

### Non-Responsive

Customer ID:

TS60

Customer PO: Received:

06/07/Q4 1:20 PM

EMSL Order:

EMSL Proj:

200406802

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

Client Sample Beserbpllan	Lab ID	Analysed	Area Sampled	Lynd Cancentration
WAC 22	0022	8/21/04	r/s	<10.0 μg/wipė
WAC 23	0023	6/21/04	n/a	<10.0 µg/wlps
WAC 24	0024	6/21/04	r√a	100.0 µg/wipe
WAC 25	0025	6/21/04	nia	110.0 pg/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/wips
WAC 29	0029	6/21/04	n/a	65.0 µg/wipe



The OC data associated with the earnote results included in this report most the recovery and precision requirements established by the ABHA, unless Specifically indicated circements of NELAC unless otherwise noted. This report relative only so those items restore. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NUMBER, 04850, ARIA Environmental Lead Estoratory Approval Program: 100 IRA.

Date Printed: 6/21/04 4:43:08 PM

#### EMSL Analytical, Inc.

107 Hedden Ave., Westmost, NJ 08108

Phone: (856) 868-4880 Fax: (856) 888-4860 Email: salegot@EMSL.com



Attn:

Project:

Non-Responsive

ax:

Customer ID:

Customer PO:

Received:

06/07/04 12:50 PM

EMSL Order:

040410183

EMSL Proj

Analysis Date: 6/

6/16/04

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

					Non-A	bestos	Asbestos
Sample	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous	% Туре
WAG01		White	Dissolved			100% Non-fibrous (other)	None Detected
040410393-0001		Non-Fibrous Heterogeneous					
WAC02		Gray/White	Teased	40%	Cellulose	20% Non-fibrous (other)	None Detected
040410193-0002		Fibrous Heterogeneous		40%	Glass		
WAC03		Brown	Ashed			100% Non-Shrous (other)	None Detected
040M19193-0003		Non-Fibrous Heterogeneous				·	

# Non-Responsive

Our to magnification hinthalove interest in PLE, adjusted Stern is dimensions below the resolution capability of PLE may not be desected. Samples reported as <1% or none desected only rangive additional testing by TEM to confirm Alberton quantities. The pibrie feet report misters only to the terms tested and may not be reproduced in any form vertical testing by the terms possible of EMSL Amelytics, from EMSL in thickly in Smitter for the cost of analysis. EMSL bears no responsibility for sample collection advisible or analytical method feritations interpreted for resolutions for the capability of the clear. The feet result of which is a report of the capability for the clear. The feet result is a feet of the capability for the clear.

Analytics performed by EMSL Versimon's INVLAP \$101048-0), NY ELAP 10872:

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APPENDIX C

ate. EMSL Represen	tative:		Project Name/No.:	Υ.O.#: Λ i	<del></del> -
ompany Name: Tammer Sc	a caced	$\mathbf{I}_{24}$	EMSL-Bill to:	e co want to	Weeken on the con-
meet 3744 LAW SENSE D	Vive.	St	rect:		_4600
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hore Results to: Name)		shons	ive clephon	n-Respo	nsiv
Those Results to: Name)	-110	spons	Fax #:		
MAT RIX	1 (*25		STRUMENT	Limit)	
M3563 4074			Flame Atomic Absorption	0.01%	
end Cheps*		420, 3050B OAC (974,02)	1.393(16 MCOATH)		
	SW846-7		Flame Atomic Absorption	0.4 mg/l water 40 mg/kg (pr m) soil	
Lead Wastevalor			ICP	0.1 mg/: water	
Lead Soil =	or SW84	5-05/10D	The state of the s	10 mg/kg (pem) soil	
Lead in Ax***	NIOSH	082 Mod	Flame Atomic Absorption	4 ug/filter	
Lygany DF ≦ 3	or NIOS	H 7300 Med.	ICP	3.0 ug/filter	
	- C11245	7420 / HUD	Flame Atomic Absorption	10 ug/wipe	Mc mu
Lead in Wipe*	Appendi	x 14.2 Digest.			L
List Wipe Tupe	or SW8	46-6010B	ICP	3.0 ug/wipe	
LJ-non AS ( M				0.4 mg/) (ppv1)	
TCIPLead **	1	1311/7420	Flame Atomic Absorption	0.1 mg/ (ppri)	
	or SW8	6-6010B	ICP		
SILClead (Carlora)) #		z 22 ordel.ize /	Flame Atomic Absorption	0.4 mg/l.(ppm)	
THE CONTRACT OF MICKES AND	SW846		1CP	0.1 mg.1 (ppr1)	
		7105 Mod.	Graphite Furnace Atomic	0.03 ug filter	
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APPENDIX D

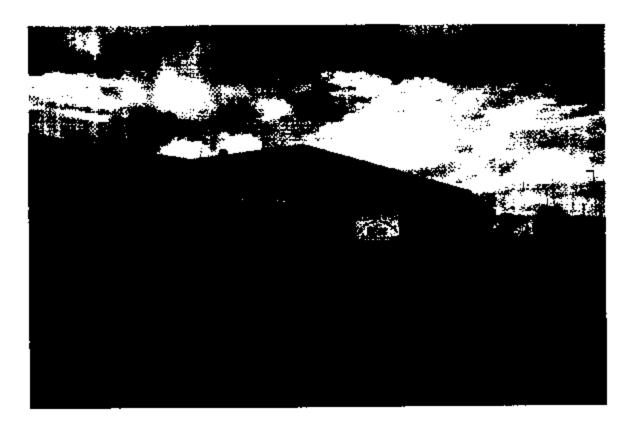


Photo #1: Armory front entrance.

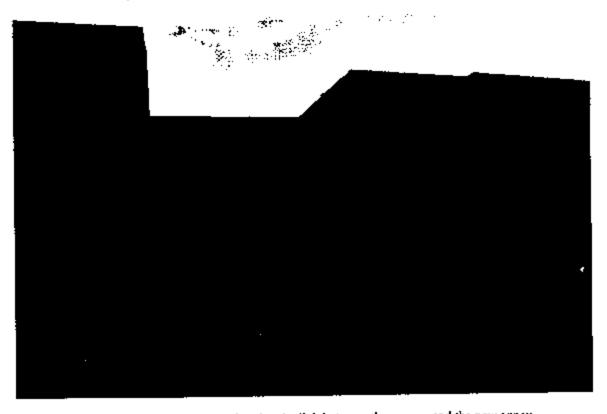


Photo #2: South side of the armory showing the link between the armory and the new annex.



Photo #3: north side of the armory.



Photo #4: The new annex of the armory.



Photo #5: The south side of the annex.

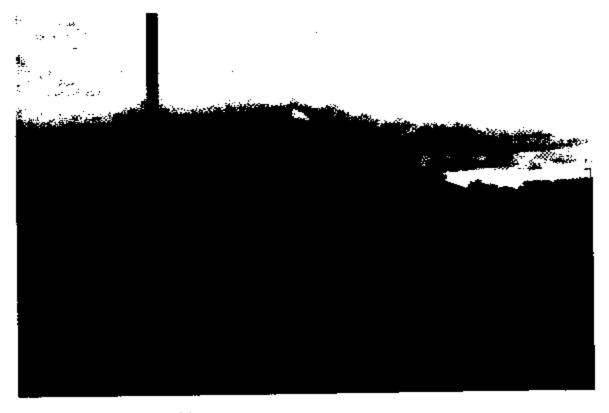


Photo #6:The west side of the armory.



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 1-124<sup>th</sup> CAV Waco Armory 2120 North New Road Waco, TX 76707

Thru Non-Responsive Deputy State Army Surgeon, JFTX-ARM-SS, 3500 West 35<sup>th</sup> 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.
- The Point of Contact during the survey was Non-Responsive
- c. Non-Responsive dustrial Hygiene Technician for the Texas Army National Guard conducted the survey on 18 March 2009.

#### General.

- a. <u>Site Description</u>. 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. <u>Scope of Work.</u> 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 scaled 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. <u>Lead Wipe Samples:</u> 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. <u>Asbestos Suspect Building Material</u>: 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.
- Noise Survey: No noise Hazardous areas were identified or recorded on the day of the survey.
- d. <u>Illumination Survey</u> 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 Fáring 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.

c. 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.

#### 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

May, 2018

Posted to NGB FOIA Reading Room

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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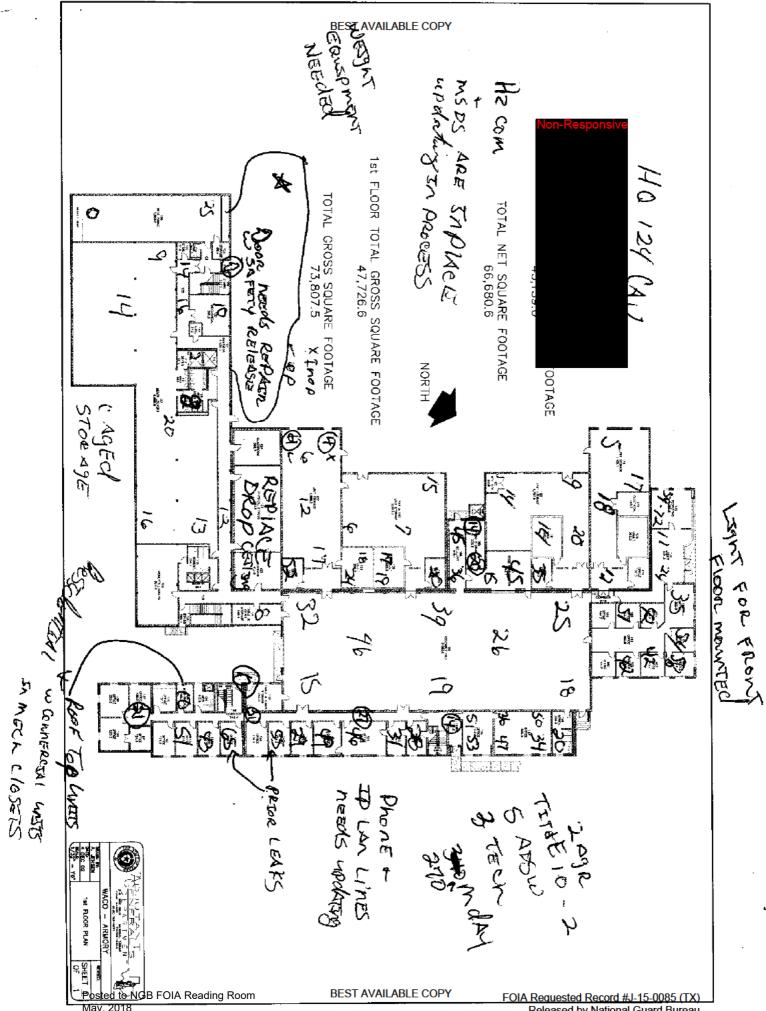
#### Appendix A

Photographs and Floor Layout.

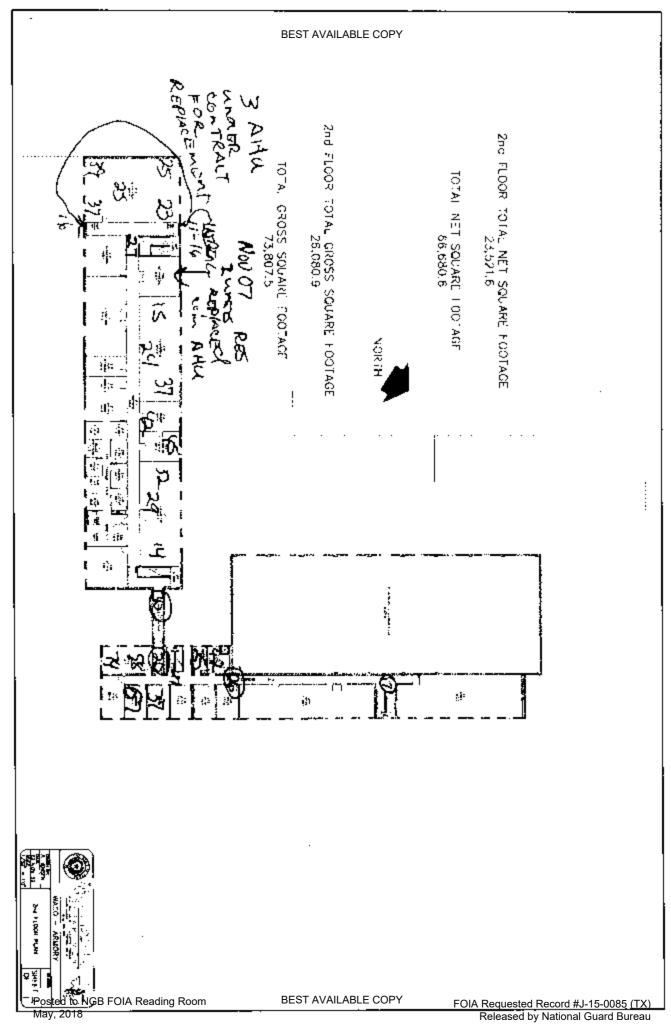
#### Waco Armory



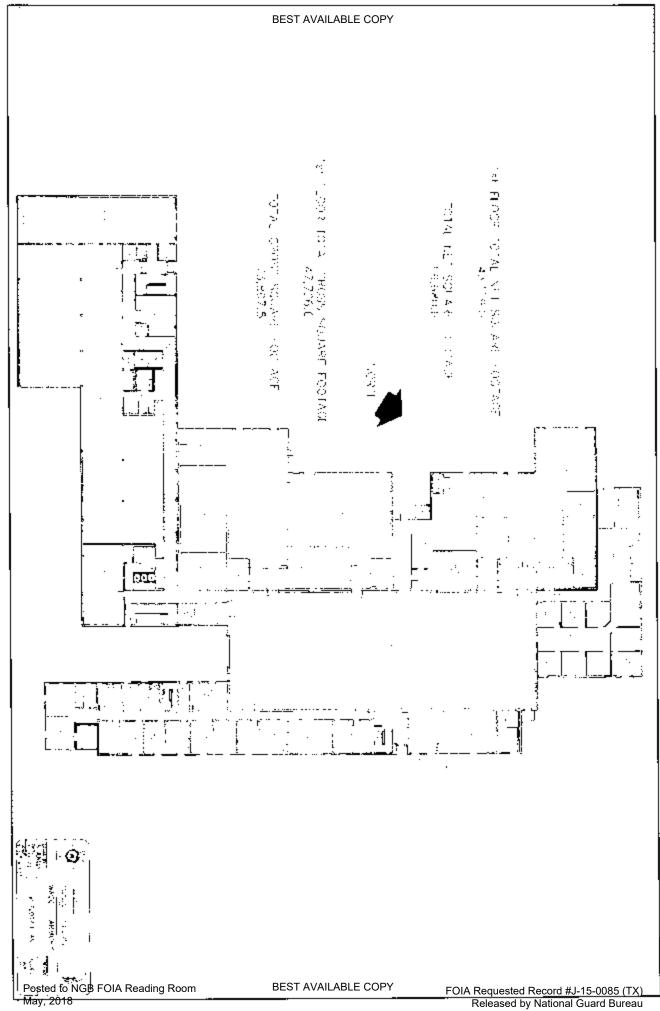
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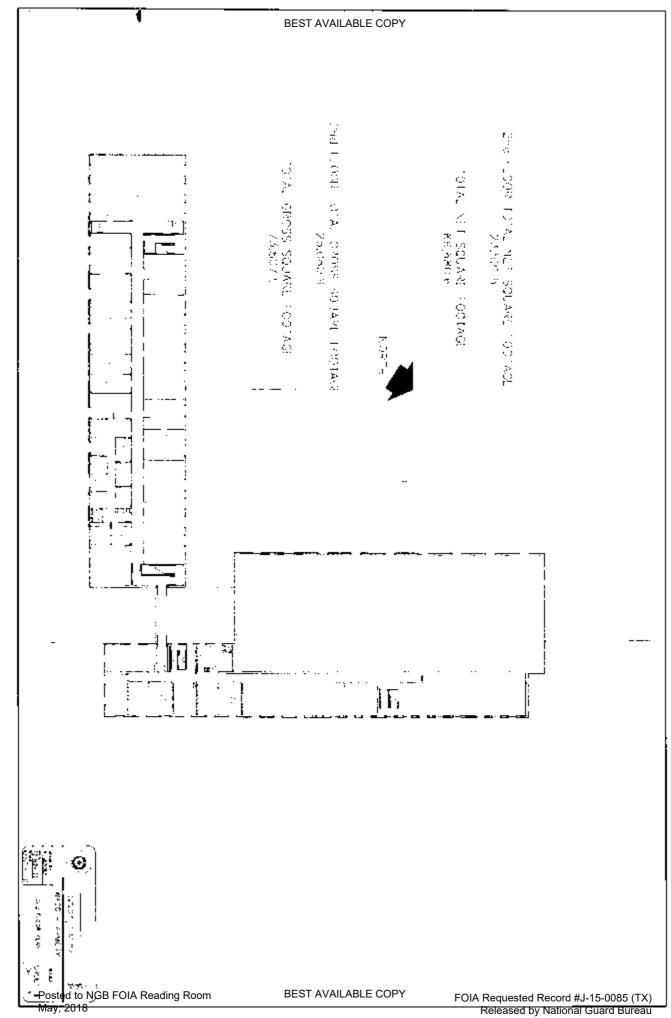
Released by National Guard Bureau Page 1562 of 1757



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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 March 23, 2015

MEMORANDUM Adjutant General TX ARNG, ATTN: 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

- 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.
  - 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.
- TB MED 503, the Army Industrial Hygiene Program, 30 October 2000.
- Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- k. Industrial Ventilation, 26<sup>th</sup> rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- USAEHA TG-141, November 1997, Guidelines for Air Sampling and Bulk sample Collection.
- 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.

  Posted to NGB FOIA Reading Room

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

Released by National Guard Bureau Page 1566 of 1757 ARNG-CSG BEST AVAILABLE COPY March 23, 2015
SUBJECT: Transmittal of Industrial Hygiene IH Survey Report Waxahachie Armory, Waxahachie,

### 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



CF: ARNG

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. Deputy State Army Surgeon, Non-Responsive JFTX-ARM-SS, 3500 West 35<sup>th</sup> Street, Building 10, Austin, TX 78763-5218.

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

as

Original

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



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Appendix D – Drawings of Facility
Appendix E - Photographs of Facility
Appendix F – HHIM Forms

# 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.

Executive Officer, 449th SIG CO, TX ARNG, 628 N. MEMORANDUM FOR: 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)
  - o 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 µg/ft²
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  $1:\mu g/ft^2$  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

<sup>\*</sup>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
  inaterials 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 scaled. (RAC3)
- Replace the light fixture builts 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



# APPENDIX A Lab Test Results

Analytical Environmental Services, Inc.

Date: 14-5ep-14

Lab Order: Cliest: Project:

1409931

Pinnacle IH

Washington TX Amony

LEAD ON WIPES (N7082)

N7082

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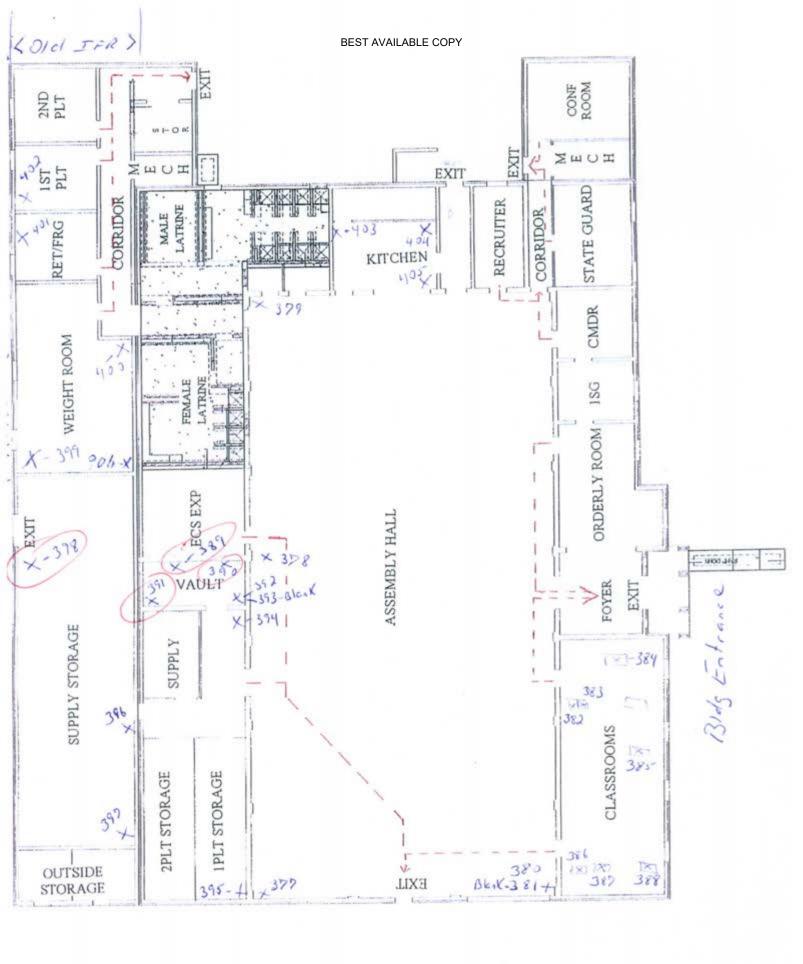
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Page 5 of 7

Nat Guard armory Waxahachle, TX

30 June, 2014

# APPENDIX B Drawing of Sampled Areas



# APPENDIX C Photographs of Areas Sampled for Lead in Dust

JPR392-393 Weapons Vault





JPR394 Supply Room





JPR399 Gym (Converted IFR)





JPR382-383 Classroom



JPR384 Classroom



JPR403 Kitchen



JPR404-405 Kitchen



JPR379 Drill Hall

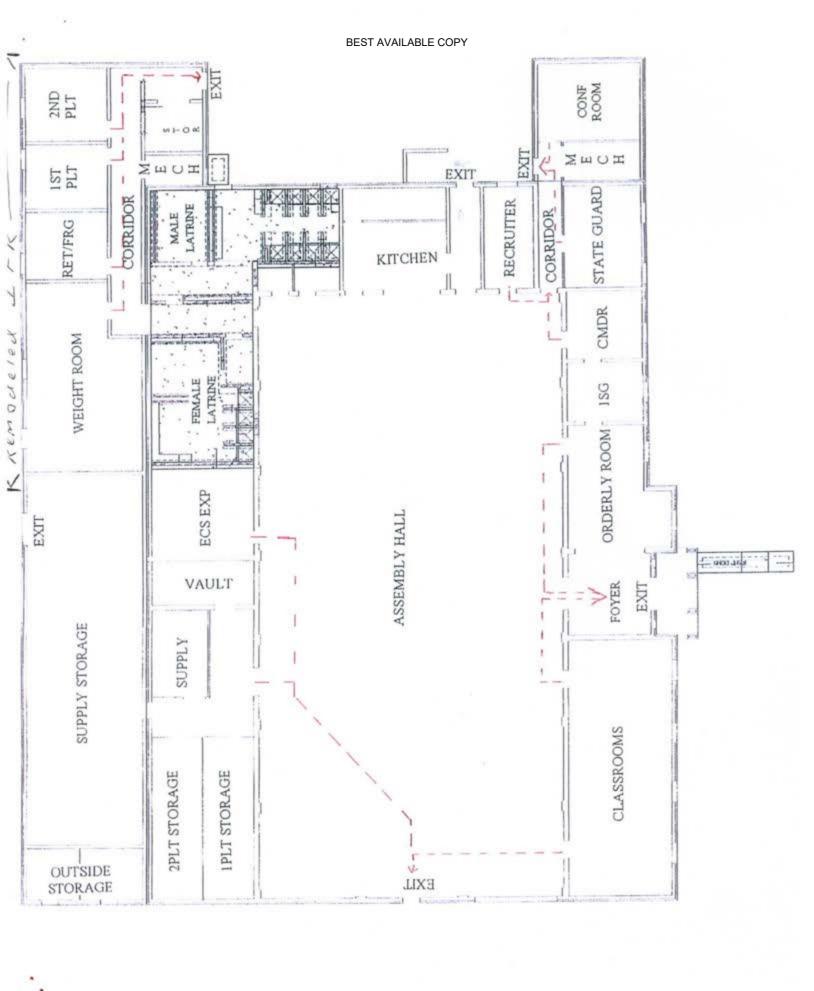


JPR378 Drill Hall



Waxahachie, TX

# APPENDIX D DRAWING OF FACILITY



# APPENDIX E PHOTOS OF FACILITY

Bldg Front



Drill Hall



Former Vehicle Maint Bays



Motor Pool



Storage



Flammable/Hazardous Chemicals



Nat Guard armoly Waxahachie, TX

30 June 2014

# APPENDIX F HHIM Forms

# HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

\*SEE PRIVACY ACT STATEMENT ON REVERSE.

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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

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# HEALTH HAZARD INFORMATION MODULE FIELD SURVEY

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# SECTION 5. SAMPLING DATA

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SECTION 6.

PERSONNEL DATA



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 nest and clean throughout.

#### PRIVACY ACT STATEMENT

Title 2 U.S. Code, Section 301; Executive Order 9397 authorizes the use of your Social Security Number at a identification of this information is to identify and monitor data relating each DA civilian employee exposed to a hazardous workplace at the information is to provide histories of exposure for any sizen worker.

# 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.

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

# 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. Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL 60564, conducted the survey.
- 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 1.1., 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 1.1, 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 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.



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



July 8, 2004

### BEST AVAILABLE COPY

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Noise Survey	Page 4
Illumination Survey	Page 4
Heating Ventilating and Air Conditioning (HVAC	
Recommendations	•

# 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 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.

Торіс	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.
НVАСЛАQ	No issues were found.	No action.

**SUBJECT:** Industrial Hygiene Initial Baseline Survey of the Waxahachie Armory in Waxahachie, Texas on 01 June 2004

#### **BACKGROUND:**

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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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



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

Ashestos 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 AQI	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

<u>Humination Survey</u> Lighting levels throughout the Armory ranged between 10 footcandles 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

Survey Date: 01 June 2004

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:

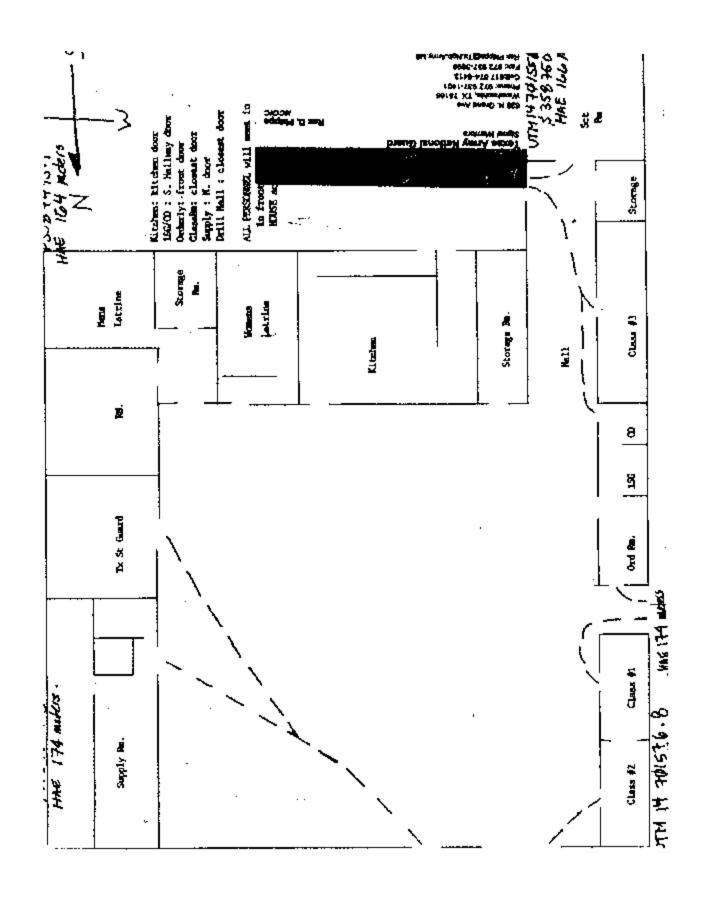
Clean and decontaminate the firing range in accordance to NG PAM 385-15 specifications.

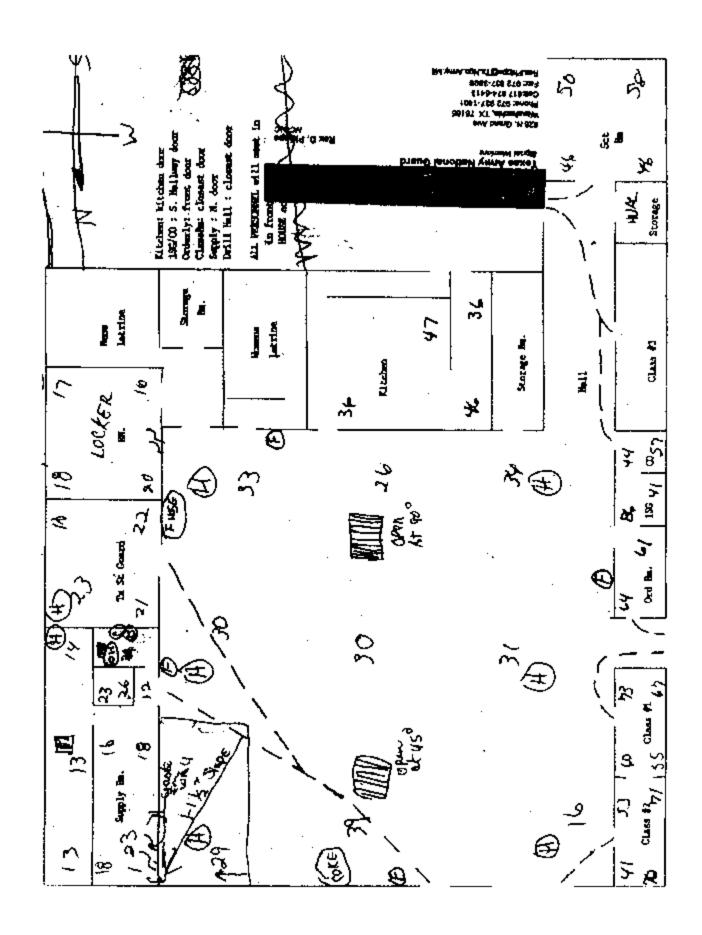
Technical Assistance: For technical assistance regarding information found in this report

Non-Responsive

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APPENDIX A





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APPENDIX B

#### **EMSL** Analytical

3 Cooper St., Westmont, NJ 08106

Phone: (858) 858-4800 Fax: (856) 888-6581 Email: akaumman@emai.com



Attn:



Fax: Project: Customer IO:

T\$80

Customer PO: Received:

06/07/04 1:18 PM

EMSL Order:

EMSL Proj:

200406799

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

Cliew Sample De	scription	Lab ID	Analyzed	Area Sampled	Lead Cancentration
WAX 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·	18.0 идимире
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	กัง	<10.0 μg/wipe
WAX 05		0005	6/21/04	n∕a	14.0 µg/wipe
WAX 06		0006	6/21/04	n/a	2B.0 µg/wips
WAX 07		0007	8/21/04	n/a	12.0 µg/wips
80 XAW		0008	6/21/04	ri/e	38.0 µд/мрв
WAX 09		0009	6/21/04	n/a	53.0 удлијов
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 yg/wipe
WAX 13		0013	6/21/04	n/a	76.0 µg/wlipe
WAX 14		0014	6/21/04	n/a	15.0 ug/wipe
WAX 15		0015	8/21/04	n/a	130.0 µg/wipe
WAX 16		0016	6/21/04	Uya	960.0 µg/w/gu, 0.09€
WAX 17		0017	8/21/04	n/a	70.0 µg/wipe
WAX 18		0018	6/21/04	N/a	580.0 µg/wipe
WAX 19		0019	6/21/04	r/a	<10.0 µg/wipe
WAX 20		0020	6/21/04	n/a	2200.0 µg/wipe
WAX 21		0021		n/a	<10.0 µg/włpe

Non-Responsive

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

ACCREDITATIONS: NUMELAP: 04653. AIHA Environmental Lead Laboratory Approval Program: 100194

Date Printed: 6/21/04 4:58:30 PM

#### **EMSL Analytical**

3 Cooper St., Westmont, NJ 08108

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Project:



Customer ID:

T\$80

Customer PO: Received:

06/07/04 1:18 PM

EMSL Order:

200406799

EMSL Proj:

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

Client Sample Description	Lab ID Analyse	d Area Sampled	Lend Concentration
WAX 22	0022	n/a	<10.0 µg/wipe
WAX 23	0023	n/a .	6200.0 µg/wips
WAX 24	0024	n/a	18000.0 µg/wipe
WAX 25	0025	n/a	39000.0 µg/wipe
WAX 26	0025	n/a	43000.0 µg/wipe
WAX 27	0027	n/a	40000.0 µg/wipe
WAX 28	0028	n/a	39000.0 µg/wipa
WAX 29	0029	n/a	26.0 µg/wipe
	T		



The OC data associated with the sample results included in this report meet the recovery and precision requirements established by the ABHA, unless specifically indicated otherwise in the comment section. The less results contained within this report meet the requirements of NCLAC unless otherwise noted. This report relates only to those Aeros sasted. Unless otherwise noted, the results in this report have not been blank corrected.

ACCREDITATIONS: NUMBELAP: 04683, AHA Environments Leed Laboratory Approved Program: 100194

Date Printed: 6/21/04 4:58:37 PM

#### EMSL Analytical, Inc.

107 Haddon Ave., Westmont, NJ 98108

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Attn:

Fax:

**Project**:

Non-Responsive

Gustomer ID: Customer PO: T\$80

Customer PO: Received:

**J**:

06/07/04 1:04 PM

EMSL Order:

040410195

EMSL Proj:

Analysis Date: 6/16/04

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

					Non-A	sbestos	Asbestos
Sample	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous	% Type
WAX A01-Tile 040410195-0001		Gray Non-Fibrous Heterogeneous	Dissolved			100% Non-Borous (other)	None Detected
WAX A01-Mastic		Slack 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 040410195-0009		Gray/White Fibrous Heterogeneous	Teased	40% 40%		20% Non-florous (other)	None Detected

# Non-Responsive

Due to magnification intellistone exherint in PLM, assesses there in dignansions before the resolution capability of PLM may not be diseased. Samples reported as <1% or none detected may require additional testing by TEM to confirm aspection, cultures. The above ties report restate only to the litters sasted and may not be reproduced in any form refload the express width approprial of EMS, Analytical, Inc. EMSI; habitify is striked to the cost of smaryels. EMSI, bears no responsibility for sample collection activities or endytical method finitiations. Pressure and and use of the results are the responsibility of the client. The base results contained within the report made the requirements of NELAC unless ofference model. Analytical performed by EMSI. Weathorn (NVLAP #101048-0), NY ELAP 10872.

المرسولين بفأرتك

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APPENDIX C

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EMSL ANALYTICAL	CHAIN OF C	CUSTODY	]	EAD
Date EMSL Represer	tative:	Project Name/No.:	P.O.#:	
Company Name: Tammer So	Traces Inc.	EMSL Bill to:	me as well to	
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City State: Naparville IL	Zip.(d)S&4 (	City/State:	Zin:	
Phone Results to: Name On-	-Responsi	VE- Telephone	n-Resp	ons
Fax Results to: (Name)	METHOD	INSTRUMENT	KI. (Reporting Limit)	1,50,1
Losd Chips*	SW846-7420, 30508 Mod. / AOAC (974.02)	Flame Atomic Absorption	0.01% ++	
Lead Wastewater	5W846-7420	Flame Atomic Absorption	0.4 mg/ water 40 mg/kg (prm) soil	
Lead Soil ±	or SW846-6010B	ICP	0.1 mg/i water 10 mg/kg (ppm) soil	
Lead in Air***	NIOSH 7082 Med.	Flame Atomic Absorption	4 ug/filier	
	or NIOSH 7300 Med.	ICP	3.0 ug/filter	<u> </u>
Lead in Wins* Z-ASTM	SW846-7420 / HUD Appendix 14.2 Digest.	Flame Atemic Absorption	10 ug/wipe	yRecini
List Wipe Tope	er SW846-6010B	iCř	3.0 ug/wipe	
TCI P Lead 9#	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
•	or SW846-6010B	ICP .	0.1 mg/l (pp/3)	
STLC Lead (California) 8	CA Tipe 22 65361.028 / SW846-7420	Flame Atomic Absorption	0.4 mg/l (ppm)	
	or \$W846-6010B	ICP	0.1 mg/(ppm)	<del> </del>
Legal in Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic Absorption	0.03 ug/filter	<u> </u>
Load Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (rpm) water	
Lext Sri **			0.3 mg/kg (p;m) soil	1 3
hand in Drinking Weser (check state Confliction Requisition (the	EPA 239.2 / 200.9	Graphite Furnace Atomic Absorption	0.003 mg/l (Fpm)	12 -
	NIOSH 0500-0600	Gravimetric Reduction  y, 2 Days, 3 Days, 4 Days  Please Refer to Price Ono	0.0001g 5 Days 6-10 Days	- 50
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EMSL Analytical, Inc. Envised 07/07/99

#### CHAIN OF CUSTODY

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APPENDIX D

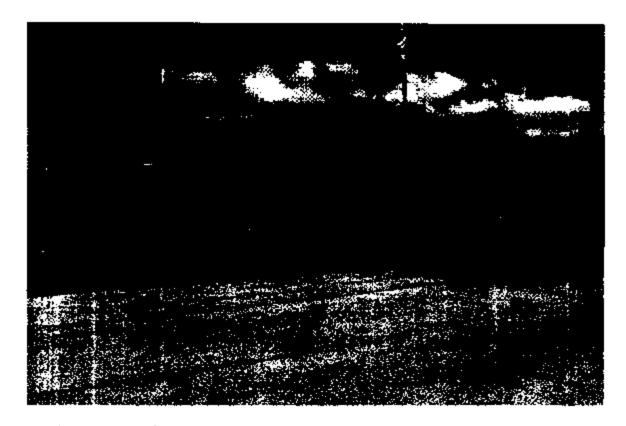


Photo #1: Armory front entrance.



Photo #2: North side of the armory.



Photo #3: North east corner of the armory.



Photo #4: South side of the armory.

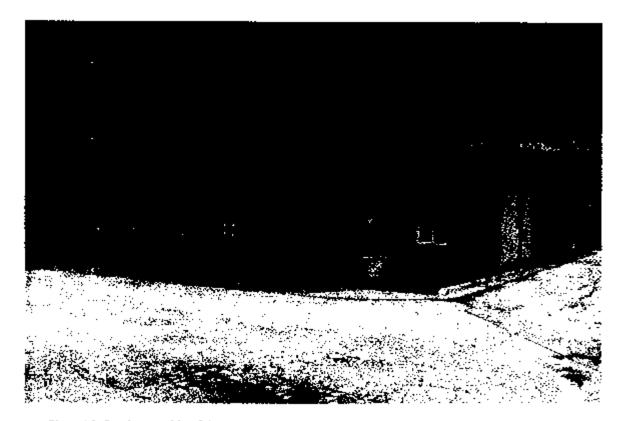


Photo #5: South west side of the armory.



Photo #6: Indoor firing range facing the bullet trap.

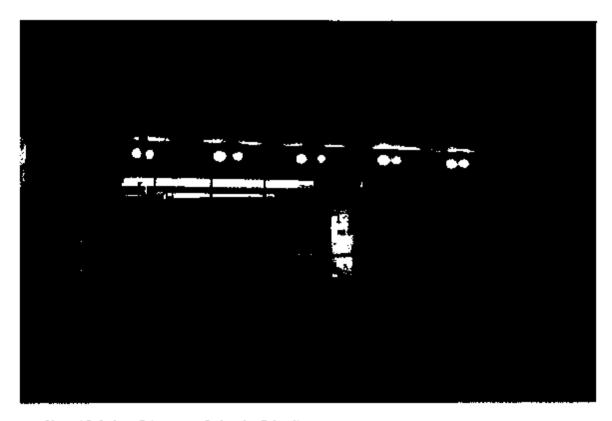


Photo #7: Indoor firing range facing the firing line.

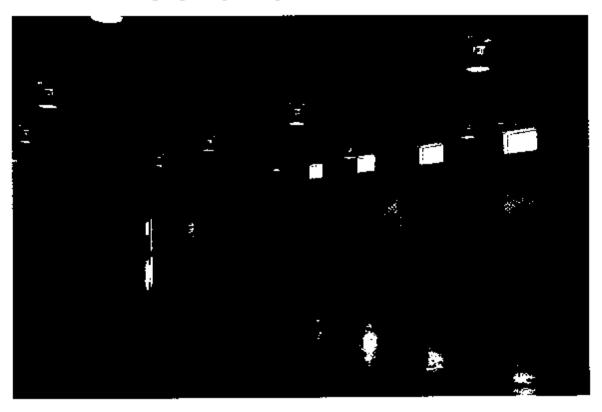


Photo #8: Drill hall facing north.



Photo #9: Drill hall facing south.

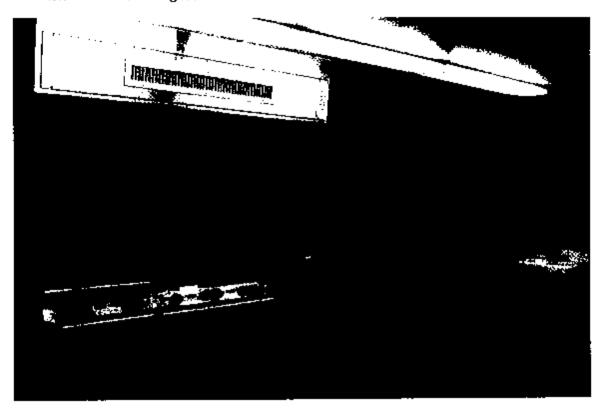


Photo410: Armory's kitchen showing the stove.

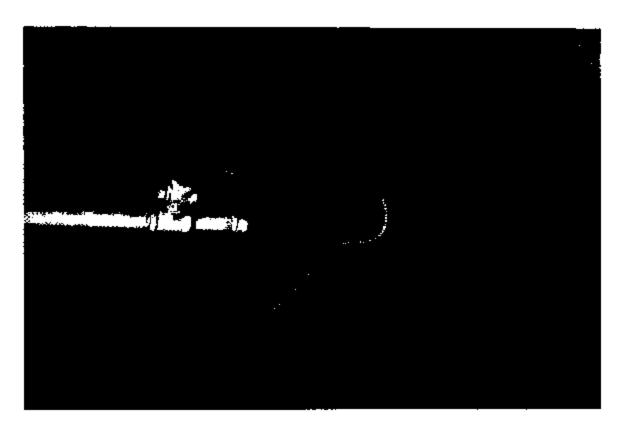


Photo #11: The Armory's forced air furnace



Photo #12: Outside makeup air inlet in furnace room.

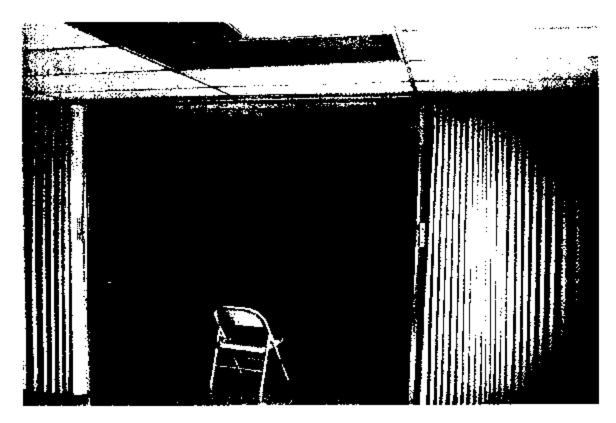


Photo #13: The Armory's classrooms.



Photo #14: A structural crack found in the armory's drill hall northeast side.





# 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: Non-Responsive p Supervisor, Weslaco Army National Guard Armory, Weslaco, Texas.

Thru Non-Responsive State Army Surgeon, JFTX-ARM-SS, 3500 West 35<sup>th</sup> Street, Building 10, Austin, 12 78703-5218.

SUBJECT: Transmittal of IH Survey of TX ARNG Weslaco Armory, Weslaco, TX.

#### 1. References.

- 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.
- 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.
- 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.
- Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
- USAEHA TG-141, January 2007, Guidelines for Air Sampling and Bulk sample Collection.
- 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.

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 35<sup>th</sup> Street, Building 86, Austin, TX 78763. State Safety Manager, P. O. BOX 5218, Austin, TX 78763-5218. ENCL.

as



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, 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.



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APPENDIX B:	Firing Range Sample Placement Diagram, Chain of Ci Forms, Lab Sample Results & Sample Photographs	ustody

Photographs & References

Occupant Health and Comfort Questionnaire, Facility Information Form, Health Hazard Information Module,

APPENDIX C:



#### 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

Region South Industrial Hygiene Office to conduct an Industrial Hygiene Initial Baseline Survey of the Weslaco Army National Guard Armory, HQ 3<sup>rd</sup> BN 141<sup>st</sup>, Weslaco, Texas 78596-0922. The survey was conducted on December 7<sup>th</sup> and 9<sup>th</sup>, 2010 by Paul Nichols, Certified Hazard Control (CHCM).

Weslaco Army National Guard Armory is the head quarters for A/3-141<sup>st</sup> (Brownville, Texas), B (-)/3-141<sup>st</sup> (Laredo, Texas) and D/3-141<sup>st</sup> (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 3<sup>rd</sup> BN 141<sup>st,</sup> 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.

#### 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. vvesiaco 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,



#### Sponsive NVIRONMENTAL ASSOCIATES, INC.

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



#### ENVIRONMENTAL ASSOCIATES, INC.

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.



#### 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

Posted to NGB FOIA Reading Room

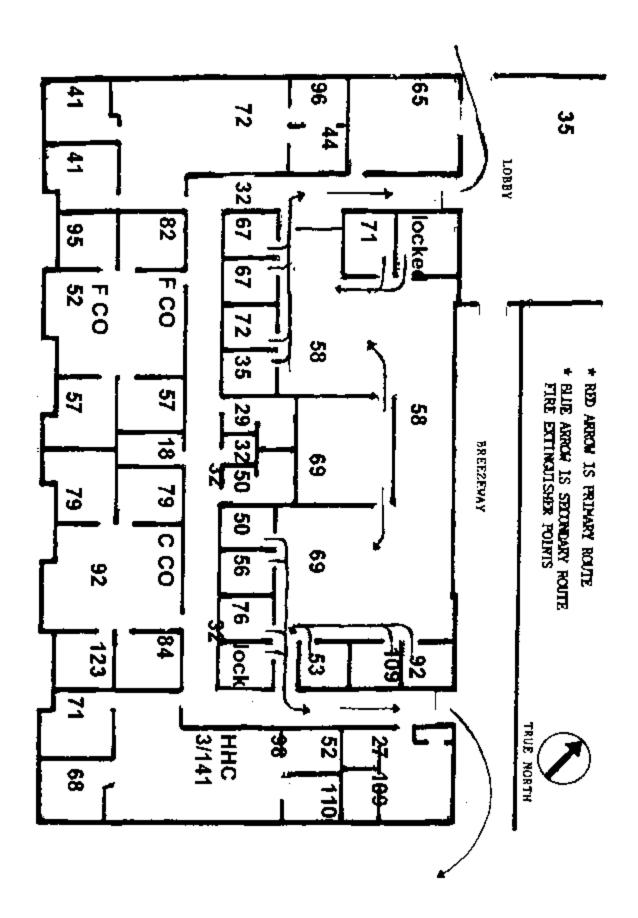
May, 2018

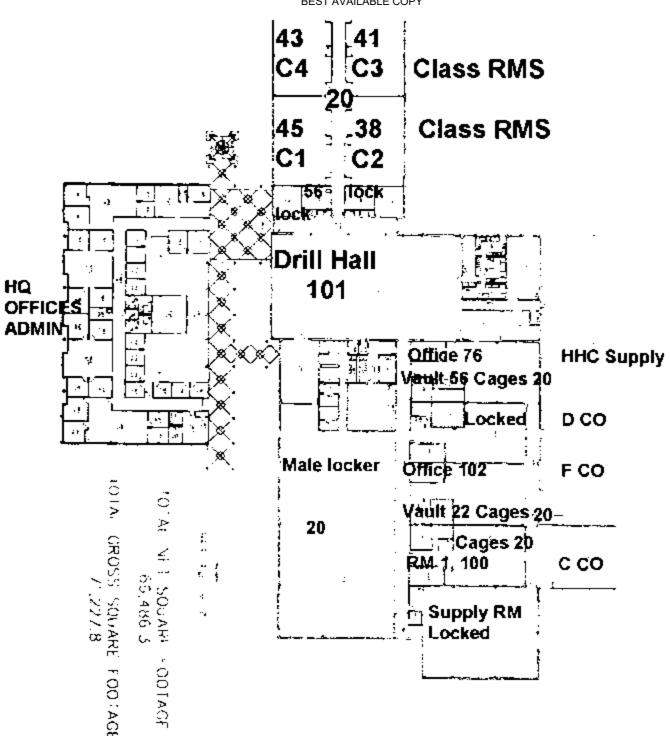
- a. Laboratory lead wipe sample results in the inactive IFR indicated lead concentrations above the National Guard Bureau (NGB) Pamphlet 420-15 guidelines of 200µg/ft². The local facilities commission responsible for maintenance should be contacted to facilitate decontamination and cleaning of the IFR. (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

# Measurements (HQ, OFFICES ADMIN) **Building Diagram & Summary of Illumnation**





## **Building Diagram & Summary of** Illumination Measurements Footcandles (FCS)

GENERAL'S DEPARTMENT OFFICE OF FACILITIES AND ENGINEERING CAMP MAHRY P.O. BOX 5218 (512) (61-507) TEXAS 78763-5218 FAS (NIE) 483-3111 Þ

#### Table 8 DG 416-2 Ugriting Standards

DG 415-2 01 MARCH 2005

Table 8. Electrical Requirements

	FUNCTIONAL AREA	LIGHTING	OUTLETS	MOTE
Off	Tice Are se			
1	General Supervisor	70 FC. FL	I Ouplet per wall	_
2	Supervisor	70 FC FL	1 Outpet per wal	1
3	Production Controller	70 FC, FL	1 Outper per wal	- 1
4	Inspection and Library	70 FC, FL		- 1
6	Automation Clark	70 FC, FL	1 Oupes per 10 LF of wall	-1
6	Common IT Space	70 FC, FL	1 Ouples per 10 LF of wall	- 1
7	IT Support Activities	70 FC, FL	1 Ouples per 10 LF of wall	2
	Classroom	70 FC, FL	1 Ouples per 10 LF of wall	2
Per	reconnel Areas	7070,71	1 Ouples per 10 LF of wall	
1	TolevShower	40 FC. FL	I Oupes OFCIper 2 sins	_
2	Locker Room	40 FC. FL	I Output OFCI	
3	Bre at. Area	30 FC, FL	I Ouples per 10 LF of wall	-
4	Physical Fitness Area	SO FC, FL		-
Wo	t Areas	1 2010,12	1 Ouplex per 12 LF of wall	2
1	Tool Room	50 FC. FL	1 Oupes per 20 LF of wall	_
2	Supply Room	30 FC, FL	1 Ouples per 20 LF of wall	
3	Battery Room	30 FC. FL	explosion proof	
4	Comm. & Electronic Shop	70 FC, FL	1 duplex per 2 LF of wonderch	2
5	Instrument Repair Shop	70 FC, FL	1 duples per 2 LF of workbench	2
•	Small Arms Repair Shop	70 FC, FL	I duplex per 2 LF of workbench	2
7	Small Arms Test Room	70 FC. FL	1 Output per 2 LF of workberch	2
	Vaul (Small Arms)	20 FC, FL	1 Oupes	
_	Vault (CBT Vehide Arms)	20 FC, FL	1 Ouples	
10	Injector Test Room	70 FC, FL	I duples per 2 LF of workbench	2
11	Fuel and Ignition Repair Shop	70 FC, FL	i duplex per 2 LF of workbench	2
12	Bill Storage/Isaue	20 FC. FL	1 Ouples per 20 LF of wall	
13	Machine Shop	50 FC, FL	1 Ouples per 10 LF of wall	2
14	Carpenter Shop	50 FC, FL	1 Oupes per 10 LF of wall	2
15	Lumber Storage Shed	10 FC, FL	rore	-

## DO 110 CLOTHING Standards

DG 415-2 01 MARCH 2005

Table &. Electrical Requirements

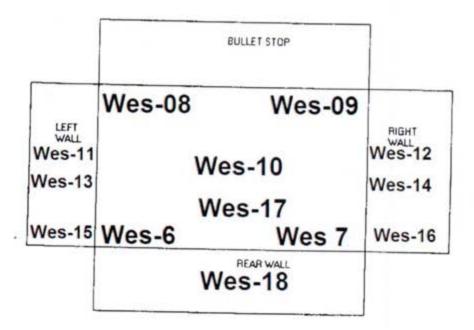
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1	General Supervisor	70FC, FL	1 chapter par well	Υ
2	Supervisor	70 FC. FL	1 cribes but sel	<del>- '</del>
1	Production Contrater	70 FC. FL		<b>⊢</b> ∴
•	Paperton and Library	70 FC, FL	I dupas per wai	<u> </u>
7	Automotion Cine	JOFC FL	I duplace par 10 LF of wall	<u>'</u>
•	Common (T Space	<del></del>	I duples per roll Following	<u>'</u>
7	IT Support Activities	70FC FL	I dupas par louf of war	2
÷	Classroom	70 FC, FL	I dupos per 10 EF of wall	2
-		70 FC, FL	I dupled per 10 (F of will)	
_	TORRE APPL			
<u> </u>	Tob (Show)	40 FC, FL	1 Output GFC1per 2 sites	
2_	Locker Roam	40 FC. FL	I dupme GFC!	_
3	Sout Avec	30 FC, FL	1 (A.Char par 10 L.F.pl. et al.	<del>                                     </del>
4	Physical Filmer Area	SO FC, FL	I OLDER ON 12 LF player	
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<u>.                                     </u>	Tool Agen	SO FC, FL	1 Outples par 20 LF of wall	
?	Supply Room	30 FC FL	I Supley per 20 LF of wall	
,	Saltery Room	30 FC FL	#19iotion proof	
4	Comm. & Electronic Shop	70 FC. FL	I duplis per 2 UF of workingth	<del>-</del>
•	Installment Report Shop	70 FC, FL	1 Supplie (ar 2 [F of workbench	3
•	Small Auto Repair Shop	70 FC, FL	a cycles bas 5 [g o]	2
<u> </u>	Serel Arts Tex Room	70 FC. FL	) Output per 2 (5 of legalourch	2
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9	Vaut (CBT Vende A(ms)	20 FC, FL	1 Ouples	
10	Myector Test Room	70 FC, FL	i Ougha per 2 LF ui Wombergn	2
11	Fuel and Ignition Report Shop	70 FC, FL	1 duplins per 2 LF of workbench	
17	Bit Storage teams	20 FC, FL	I Duples per 20 LF of warr	
1)	Macrime Shap	SOFC, FL	I Ouples per 10 LF of wall	<del>- ,</del>
	Carpenter Shop	SOFC.FL	1 Outpea par 10 LF of ware	
15	Lumber Storage Shad	IOFG FL	none	. 2

# 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** 

Wes-03 Wes-04 Wes-05 Wes 01 Wes 02



# 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 1D #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.



Analytical Environmental Services, Inc

Date:

21-Dec-10

Lab Order:

1012C49

Client:

Environmental Associates, Inc.

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

N7082

Project: Matrix:

Wipe

Date Received: 12/15/2010 9:45:00 AM

Laboratory ID	Client Sample ID	Result	Units	Reporting Limit	ÐF	Qual	Date Collected	Date Analyzed	Analyst
1012C49-001A	WES-01	BRL	ug, Total	20	ı	<u> </u>	12/07/2010	12/16/2010	JY
1012C49-002A	WES-02	BRL	ug, Total	20	ı		12/07/2010	12/16/2010	JY
1012C49-003A	WES-03	BRL	ug, Total	20	- 1		12/07/2010	12/16/2010	J <b>Y</b>
1012C49-004A	WES-04	BRL.	ug, Total	20	ı		12/07/2010	12/16/2010	jγ
1012C49-005A	WES-05	BRL.	ug, Total	20	- 1		12/07/2010	12/16/2010	JY
1012C49-006A	WES-00 BLANK	BRI.	ug, Total	20	i		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	,		12/07/2010		
1012C49-009A	WES-08	41	ug, Total	20			12/07/2010	12/16/2010	JΥ
1012C49-010A	WES-09	48	ug, Total	20	,		12/07/2010	12/16/2010	JY
1012C49-011A	WES-10	242	ug, Total	20				12/16/2010	JΥ
1012C49-012A	WES-11	BRL	ug, Total	20			12/07/2010	12/16/2010	JY
1012C49-013A	WES-12	BRL	ug, Total	20			12/07/2010	12/16/2010	JY
1012C49-014A	WES-13	BRL	~.				12/07/2010	12/16/2010	JY
1012C49-015A	WES-14	BRL	ug. Total	20	'		12/07/2010	12/16/2010	JY
1012C49-016A	WES-15		ug, Total	20	,		12/07/2010	12/16/2010	JΥ
1012C49-017A	WES-16	BRL	ug, Total	20	ł		12/07/2010	12/16/2010	JY
1012C49-018A	-	BRL	ug, Total	20	1		12/07/2010	12/16/2010	JY
	WES-17	111	ug, Total	20	ı		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

Results are blank corrected where applicable

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378; Presidental Parkway, Atlanta GA 30341-3704   AES	) 977-4884 (FAX (770) 457-6188		DAV D/B/D Fage / M
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AMPLEA RECEIVED WITER IPM OR VAIL ROAT WAS COKE	NAMED IN THE SECOND STATES THE CONTRACT OF CONTRACT OF STATES SOLD STATES SECOND STATE	SAMPLES RECEIVED AFTER INVIOR SAFTERAN, WE CONSIDERAD IN RECEIVED ON THE NIXT BUSINESS DAY, IF NO TAT IS MARKED ON OUT AND WILL PROCEED AN STANDARD TAT	

# Analytical Environmental Services, Inc.

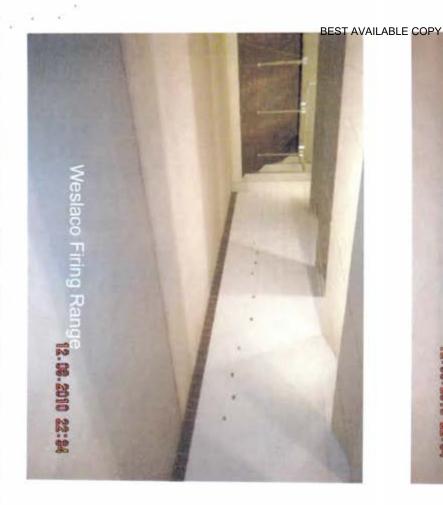
# Sample/Cooler Receipt Checklist

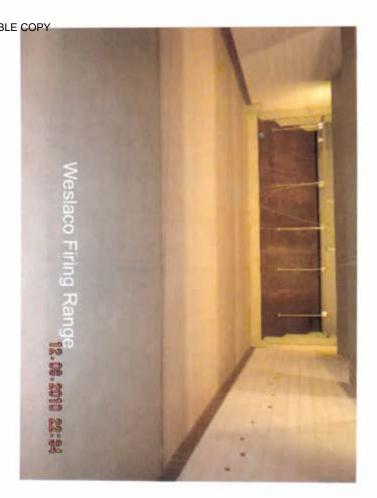
Client GA Army Non-Responsive	·	Work Order	Number 1012C119
Checklist completed by Sign Date	1-15-18		
Carrier name: FedEx UPS Courier Client US	MailOther		_
Shipping container/cooler in good condition?	Yes 🗸	No	Not Present
Custody seals intact on shipping container/cooler?			Not Present
Custody seals intact on sample bottles?	Yes _	No _	Not Present
^		No .	
Cooler #1 HMDQ/ Cooler #2 Cooler #3	_ Cooler#4	Coo	ler#5 Cooler #6
Chain of custody present?	Yes 🔽	No	
Chain of custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample labels?	Yes _	No _	
Samples in proper container/bottle?	Yes _	No	
Sample containers intact?	Yes	No	
Sufficient sample volume for indicated test?	Yes	No _	
All samples received within holding time?	Yes	No	
Was TAT marked on the COC?	Yes _	No _	
Proceed with Standard TAT as per project history?	Yes	No	Not Applicable
Water - VOA vials have zero headspace? No VOA vials su	bmitted	Yes	No
Water - pH acceptable upon receipt?	Yes	No _	Not Applicable
Adjusted?	Chec	ked by	
Sample Condition: Good Other(Explain)			
Sample Condition: Good Other(Explain)  (For diffusive samples or AIHA lead) Is a known blank include	ed? Yes	N	o
See Case Narrative for resolution of the Non-Conformance	ı.		

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

L\Quality Assurance\Checklists Procedures Sign-Off Templates\Che

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample\_Cooler\_Receipt\_Checklist







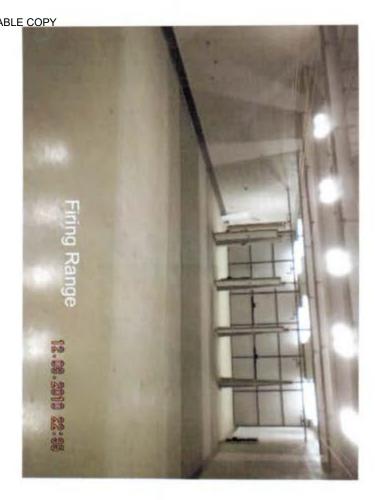




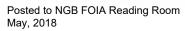
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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1642 of 1757









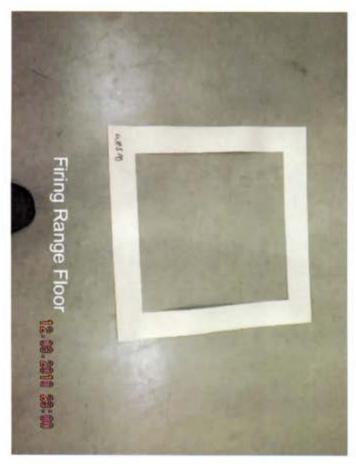


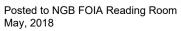
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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1643 of 1757





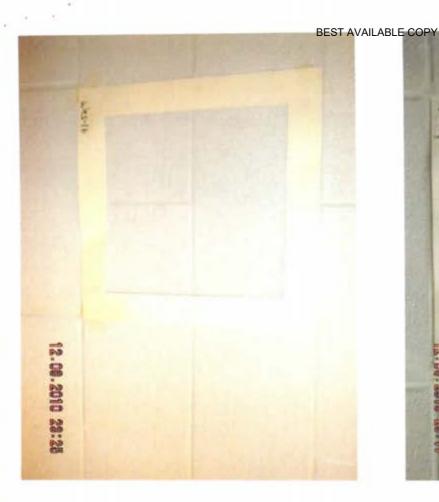






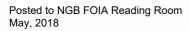
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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1644 of 1757





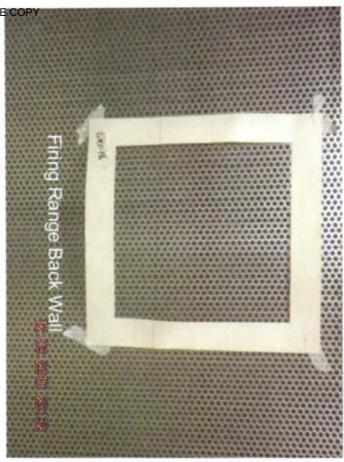




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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1645 of 1757











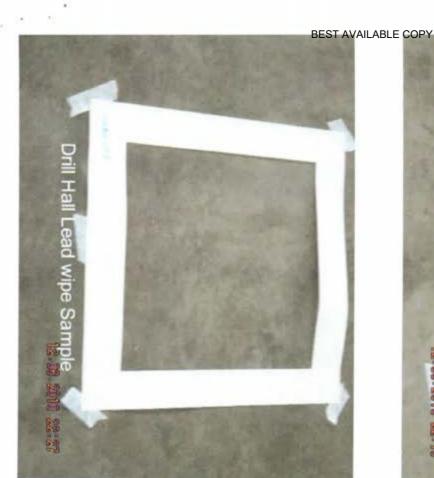






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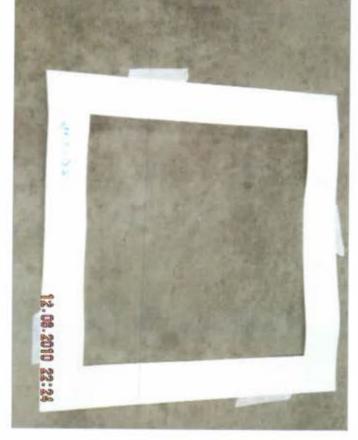
FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1647 of 1757











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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1648 of 1757

# 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	_	Date Prepared Non-ResponsiveSupervisor:
Facility Address:1100 Vo Tech Dr	, Weslaco, TX 78596	
Phone#:_Non-Responsi	V <b>e</b>	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 (ft²)	5000ft <sup>2</sup>	
ApproximateDate/ Construction	1996	
Firing Range inactive	1.000	
I ming realige mactive	Operations	
	Yes (if Yes, How Many Hours per	No
	Day on Average)	
Abrasive Blasting (List Type)	l l	No
Aerosol Can Painting		No
Air Compressors (How many?)		No
Armament		
Aviation Life Support Equipment		No
Avionics		No
Battery Shop or Storage?		No
Brake/Clutch Repair and/or		No
Replacement		
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)		Y <sub>o</sub>

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

Other Noise sources

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Ì	HOT SURFACES N8C AGENTS	/	DISPOSAL FULL FAC		RIFYING									1
4	OIL SOLVENTS	,	1/2 FACE	AIR PURIF	YING									/no
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ı		<u> </u>	<u> </u>											
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Firing range inactive.

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	Unit XO
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# Non-Responsive

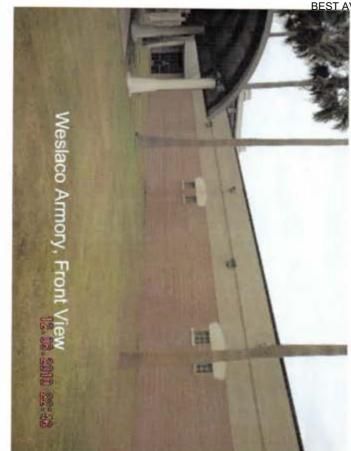
# Non-Responsive

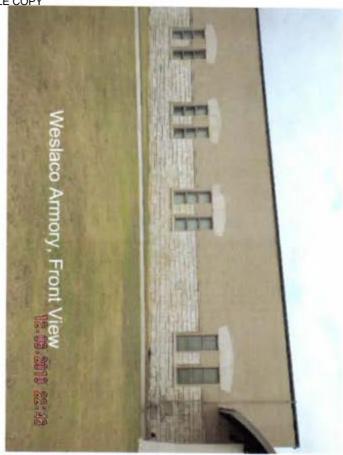
Posted to N May, 2018

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

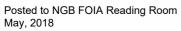
Indoor Air	Quality :	Survey	NO NAN	IES)		
Date:						
Location of Fa	scility					
2 Area or room v	where you spe	end the most	time in the bu	ilding:		
	Male Under 25	Female 25-34	35-44	45-54	55 and over	
Please rate a Poor I 2 Please rate r	s/dermatitis? ims? es? ese? splay terminals on for asthma our work ac denstics: ersons sharing adequacy of y  Average 3 room temperate erage	? a. allergies.s citivities pro g same room/ our workspac 4 ture:	work area	or odor?	Yes windows in room/work	No No No No No No No
	area?in	this building?	_			
8. List symptoms may occur freque	s you have exp ently, and impi	perienced in rove on vecal	this building. I t <u>ion.)</u> When d	More than one do these symp	answer may apply (f toms occur?	or <u>example, headaches</u>
Have you seen a If yes, did your do When do symptoi	octor relate thi	is to your wer			liagnosis and recomm	nended treatment?

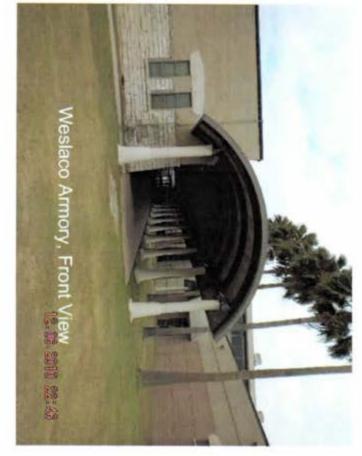
9. In your opinion, what is the cause of perceived indoor air quality problems?





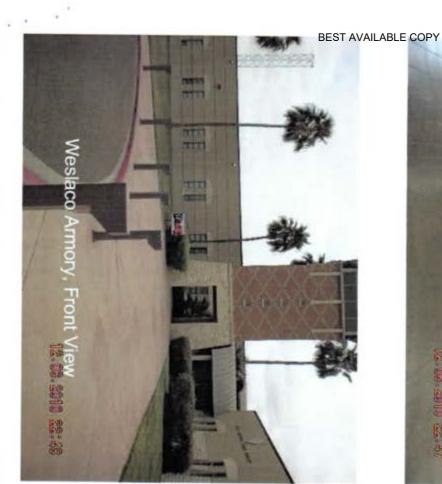


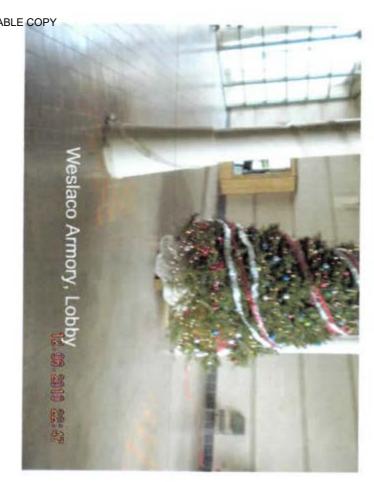




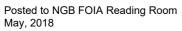
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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1658 of 1757

Weslaco Armory, Rear View (Ro









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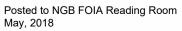
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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1660 of 1757

# REFERENCES

- Department of Defance 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.
- 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.

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- 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 Quard Indoor Firing Ranges, 3 November 2006.
- g. DA PAM 40-503, The Army Industrial Hygiene Program, 30 October 2000.
- Threshold Limit Values and Biological Paposure Indices (TLVs) for 2003, Asserican Conference of Governmental Industrial Hygienius (ACOIH), Cincinnuti, Obio.
- Industrial Ventilation, 23rd Edition, American Conference of Governmental Industrial Hygients, Cincinnati, Ohio.
- 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 Weslaco Armory, TX.

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

### 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, Weilington Armory and Weslaco Armory, TX.
- b. The surveys were conducted by Non-Responsive 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)

### 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 0f 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.



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

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

# 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.
- Department of the Army Pamphlet (DA PAM) 40-501, 27 August 1991, Hearing Conservation.
- g. Industrial Ventilation, 22<sup>rd</sup>, Edition, American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
- IES Lighting Handbook, Application Volume 1981, Illumination Engineering Society of North America.
- 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. <u>Purpose.</u> 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. <u>Background</u>. 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. <u>Facility Description</u>. This facility currently houses HQ 3/141<sup>st</sup> 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 I

Sample Number	Sample Location	Results
1	Bullet stop lane #3	34000 ug/ft <sup>2</sup>
2	Right deflector on bullet stop	190 ug/ft <sup>2</sup>
3	Left wall 6 feet up	41 ug/ft <sup>2</sup>
4	Floor 4 feet in front of pit	290 ug/ft <sup>2</sup>
5	4 feet up right wall	<12 ug/ft <sup>2</sup>
6	Center behind weapons simulator	210 ug/ft <sup>2</sup>
7	Folding table near simulator	41 ug/ft <sup>2</sup>
8	Left wall 6 feet from lane 1	$< 12 \text{ ug/ft}^2$
9	Acoustic material of fire line?	<12 ug/ ft <sup>2</sup>
10	Firing side of observation room Lane 2-3	<12 ug/ ft <sup>2</sup>
11	Floor 2 feet outside range entrance	<12 ug/ ft <sup>2</sup>
12	Observation room wall	<12 ug/ ft <sup>2</sup>
13	C Co Supply room weapons issue	39 ug/ ft <sup>2</sup>
	counter	ū
14	Drill hall floor	<12 ug/ ft <sup>2</sup>
15	Kitchen, table at serving area	$<12 \text{ ug/ ft}^2$
16	Blank	<12 ug/ ft <sup>2</sup>

f.AE Consulring 1218 Scattered Procs Court, Sevens, Maryland 21144 Telephone (410; 551-2717 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

Lead wipe Results

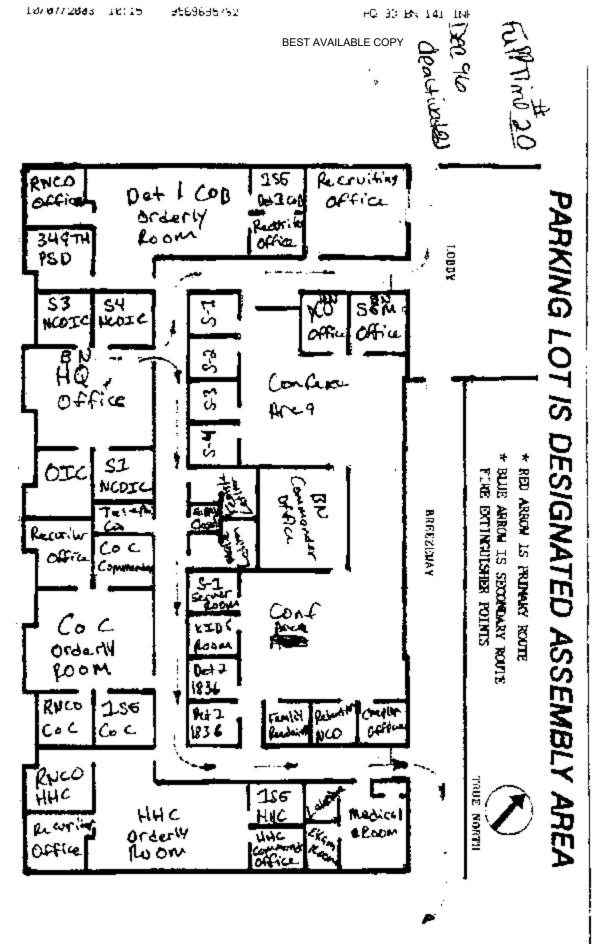
CF: Texas Army National Guard, Safety Occupational Health Office,

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

Page 4

Whe show Armon

# EMERGENCY EVACUATION PL





A Specialized Environmental Laboratory

# CERTIFICATE OF ANALYSIS

<u>대</u> LAH Consulting

1218 Scattered Pine Court

Sevem, Maryland 21144

P.O. Number: Job Number: Job Location Job Name:

Not Provided Not Provided Westaco, TX

Address:

Attention

Date Analyzed: Chain Of Custody:

134865

National Guard Armory

10/16/2003

Person Submitting: Report Date:

Page 1 of 2

# Summary of Atomic Absorption Analysis for Lead

AMA Sample Number	
Client Sample Number	
Client Sample Analysis Type Number	
Sample Type	•
Air Volume (L)	
Area Wiped (ft <sup>2</sup> )	•
Reporting	
Final Result	
Comments	

Number	Number	After size Commen	Sample of the	(L)	Arca reped	_ 8	Keperting Limit	-	Final Result	=	Comn
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0403045	<del>.</del>	Plante	Wipe	:	1.000	12.00	ug/ft²		39	ug/ft²	
0403046	4	Flame	Wipe	:	1.000	12.00	ug/ft²	٨	12	µg/ਜ²	
0403047	15	Flame	Wipe	**	1.000	12.00	ng/fu	٨	12	ug/ft²	
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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 distain any knowledge and 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 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 Labratics. applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA sir samples. 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 Accorditation

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-k ELAP (#10920) Accredited Laboratory • Toll Free (800) 346-0961 • Fax (301) 459-2643

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%Pb = percent lead by weight

N/A = Not Applicable

considered when interpreting the result.

Analysis Method For Furnace: Air, Wipes, Paints, and Soil/Soilds: EPA 600/R-93/200(M)-7421; Water: SM-31138

mg/Kg = parts per million (ppm) by weight ug ≖ micrograms

mg/L ≈ parts per million (ppm)

Analysis Method for Flame: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7420; Water: SM-3111B



A Specialized Environmental Laboratory

# CERTIFICATE OF ANALYSIS



AMA Sample Number		Attention:			Address:	Client:
Clicat Sample Number		Non-Res	b	Severn, Maryland 21144	1218 Scattered Pine Court	LAE Consulting
Analysis Type				144	ourt	
Sample Type	Summary		P.O. Number:	Job Number:	Job Location:	Jeb Name:
Air Volume (L)	of Atomic		Not Provided	Not Provided	Weslaco, TX	National Guard Armory
Ares Wiped (ft²)	Absorption A		-	-		ard Armory
Reporting	Summary of Atomic Absorption Analysis for Lead		Report Date:	Person Submitting:	Date Anafyzed:	Chain Of Custody:
Final Rosuk			16-Oct-03	ion-Re	10/16/2003	114865

Comments

i

Note: All results have two significant digits. Any additional digits shown should not be ug/L = parts per billion (ppb)



from us. Sample types, locations and collection profocols are based apon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly dividing any knowledge and 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 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 contrast protection to clients, the public and these Laboratories, applies only to polarized light enicroscopy of bulk samples and transmission electron microscopy of AHERA air samples. liability for the accuracy and completeness of this information. Residual sample souterial will be discarded in accordance with the appropriate regulatory An ATHA (#8863), NVLAP (# 101143), & New York ELAP (#10920) Accredited Laboratory guidelines, unless otherwise requested by the client. NVLAP Accorditation All rights reserved. AMA Analytical Services, Inc.

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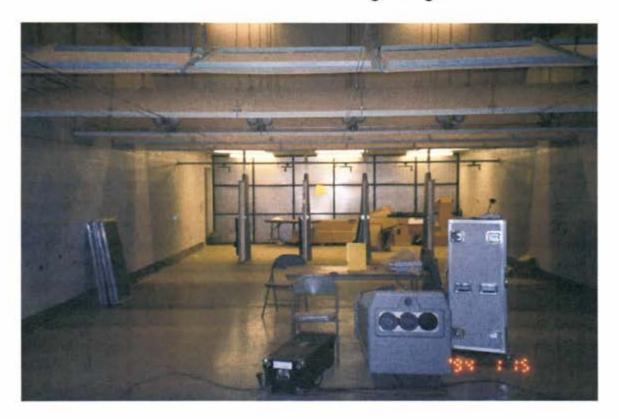
Posted to NGB FOIA Reading Room May, 2018

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FOIA Requested Record #J-15-0085 (TX) Released by National Guard Bureau Page 1671 of 1757



Up and down range views of the deactivated indoor firing range

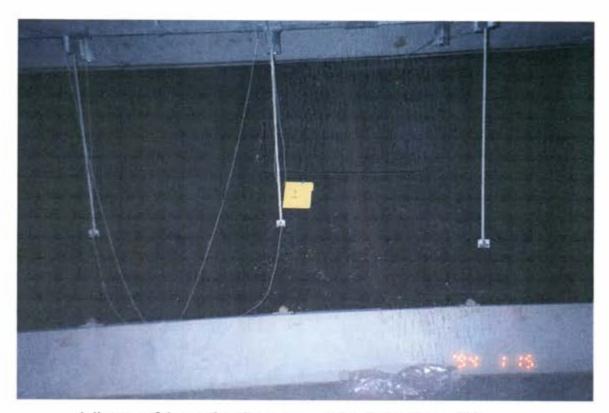




View of Hazardous Material storage cabinet



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

May, 2018



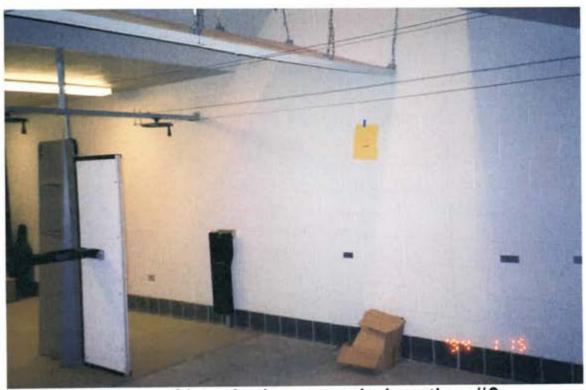
View of Lead wipe sample location #5



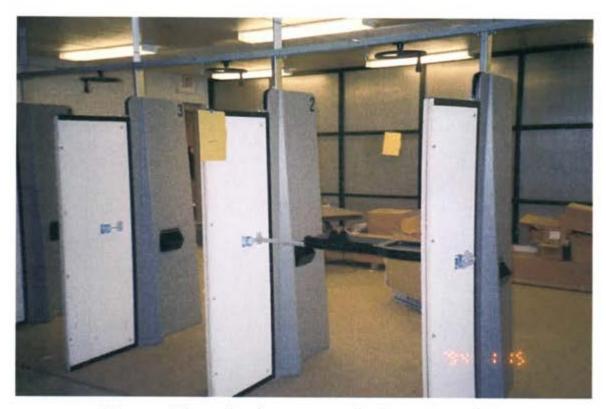
View of Lead wipe sample location #6



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

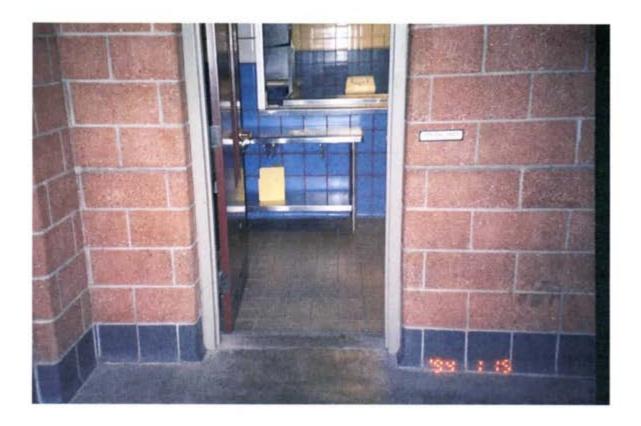


View of Lead wipe sample location #13



View of Lead wipe sample location #14

May, 2018



View of Lead wipe sample location #15

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Posted to NGB FOIA Reading Room May, 2018

FOIA Requested Record #J-15-0085 (1X)
Released by National Guard Bureau
Page 1682 of 1757

	SECTION 4: HAZARD INVE			ENTORY DATA			
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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 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.

- 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
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- 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

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- k. Title 29, Code of Federal Regulations (CFR), 2000 rev., part 1910, Occupational Safety and Health Standards.
- I. Report of June 30, 2004, Industrial Hygiene Survey, Tammer Sciences INC, 3744 Lawrence Dr., Naperville, IL.

#### 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)
- Recommendations.
  - a. Follow all recommendations made in reference 1.1., 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 0f 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.



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



June 24, 2004

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#### Executive Summary

An initial baseline industrial hygienc 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.

**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.

<u>Site Description.</u> 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.

<u>Scope of Work.</u> 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



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

<u>Noise Survey:</u> 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.

<u>Illumination Survey</u> 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.

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

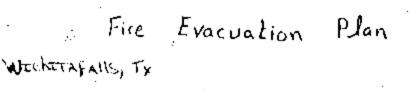
Update the facility asbestos management plan to include the tile mastic.

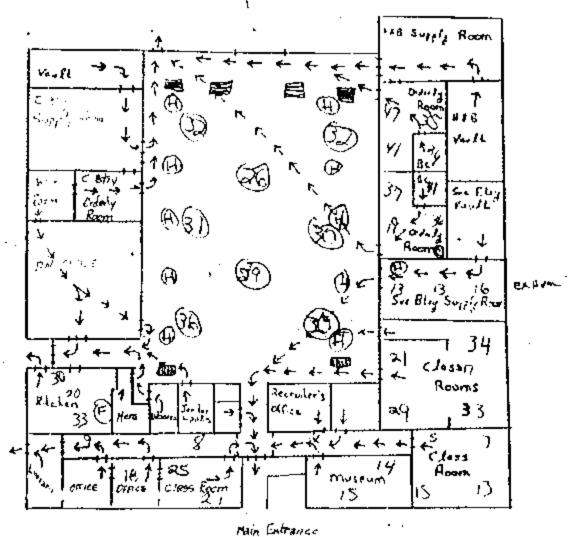
Technical Assistance: For technical assistance regarding information found in this report

# Non-Responsive

BEST AVAILABLE COPY

APPENDIX A





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APPENDIX B

**EMSL** Analytical

Project: Wichita Falls

3 Cooper St., Westment, NJ 98108

Phone: (858) 858-4600 Fax: (856) 858-8561 Email: skauffman@emal.com



Attn:

₽ax:

on-Responsiv

Customer ID: Customer PO:

TS60

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Received: EMSL Order:

200404880

EMSL Proi:

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

Citant Sample De	escrip dou	Lab ID	Analyzed	Area Samplesi	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 <sup>2</sup>	<10 0 hô <sub>ùts</sub>
V/F-02		0002	5/6/04	144 ln²	<10. <b>0</b> ;ig/ft*
WF-03		0003	5/8/04	144 in?	22.0 µg/fi*
WF-04		9004	5/6/04	144 in²	61,0 µg/h*
WF-05	The state of the s	0005	5/6/04	144 in*	<10.9 μg/h*
WF-06		0006	5/6/04	144 in*	<10.0 µg/ft*
WF-97		0007	5/6/04	144 in²	<10.0 µg/ft*
WF-08		8000	5/6/04	144 ln²	<10.0 µg/ft²
WF-09	***************************************	0009	5/6/04	144 in²	19.0 µg/ft²
WF-10		0010	5/6/04	144 in*	<10.0 µg/ft²
WF-11		0017	5/6/04	144 in²	30.0 µg/ft*
WF-12		0012	5/6/04	144 in <sup>3</sup>	<10.0 μg/ft²



2 Of data associated with the sample requits included in this report meet the recovery and precision requirements established by the AHA, unless operationly included citieness comments as not. The text results contained within this report meet the requirements of NELAC unless observing hitself. This report retifies only to those dams exited. Unless entirely in the report hitself contained and the results in this report hitself contained in the requirements of NELAC unless observed. This report retifies only to those dams exited. Unless exited hitself contained in the results in this report hitself contained and the results in this report hitself. ASHA Environmental Lead Leboratory Approval Program: 100184.

Ind 18/04 4:03:58 PM

#### EMSL Analytical, Inc.

107 Histian Ave., Westmant, NJ 08108

Phone: (888) 658-4190 Fax: (888) 658-4950 Email: eslegel@EMSL.com



Attn

Fax

Project

## Non-Responsive

Customer ID: Customer PO: T\$80

Received:

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EMSL Orden

040407151

EMSL Proj: Analysis Dale:

4/30/04

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

				Non-Ar	Asbestos	
Sample	Location	Appearance	Treatment	% Fibrous	% Non-Fibrous	% Тура
WF-AC1B		Gray	Teased	60% Cellulose	20% Non-fibrous (other)	None Datected
04040715±0001		Fibrous Heterogeneous		20% Glass		
WF-A02B		Ten	Dissolved		97% Non-fibrous (other)	3% Chrysotile
040407151-0002		Non-Fibrous Heterogeneous				•
WF-A03B		Brown	Ashed		100% Non-fibrous (other)	None Detected
(40407151-0003		Non-Fibrous Heterogeneous				

# Non-Responsive

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APPENDIX C

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	i-iveshous	Fax #:	11-170-2	UIR
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Lend Was eviates	SW846-7420	Flame Atomic Absorption	6.4 mg/l water 40 mg/kg (pcm) soil	Ì
Lead Soil -	or SW846-6010B	ICP	0.1 mg/l water 10 mg/kg (prm) soil	
Leedin Asess	NJOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
Probation New or aga.	or NIOSH 7300 Mod.	ICP	3.0 ug/filter	
Lead in Wip: Z-ASTM	SW846-7420 / HUU Appendix 14.2 Digest.	Flame Atomic Absorption	10 ug/wipe	Roolini
Lis: Wipe Type		ICP	3.0 ug/wipe	
TCLP Lead **	SW846-1311/ 7420	Flame Atomic Absorption	0.4 mg/l (ppru)	
1CLP LEIG.	Cr SW846-6010B	ICP	0.1 mg/l (ppm)	
	CA Tirle 22 6636.125 /	Flame Atomic Absorption	0.4 mg/l (ppm)	
STIC Lead Cardonic . *	SW846-7420	ICP	0.1 mg/l (ppr1)	
	or SW846-601010	Graphite Furnace Atomic	0.03 ug/filter	
Lend in Air ****	NIOSH 7105 Mod.	Absorption.		<b>1</b> 3
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MARA PARA

EMSL ANALYTICAL

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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 classical.

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EMSL Analytical, Inc. Revised 07/07/99

#### CHAIN OF CUSTODY

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APPENDIX D



Photo #1: Armory front entrance.

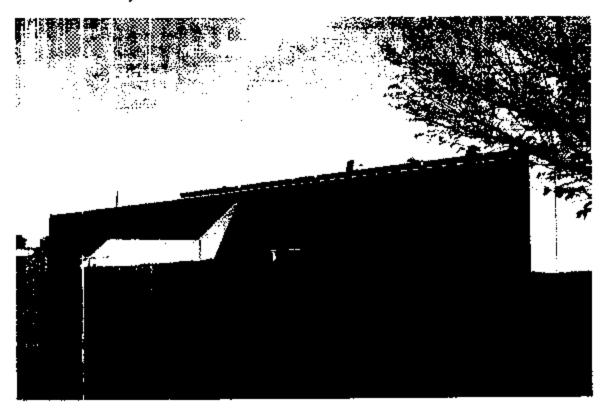


Photo #2: North side of the armory.



Photo #3: North east corner of the armory.

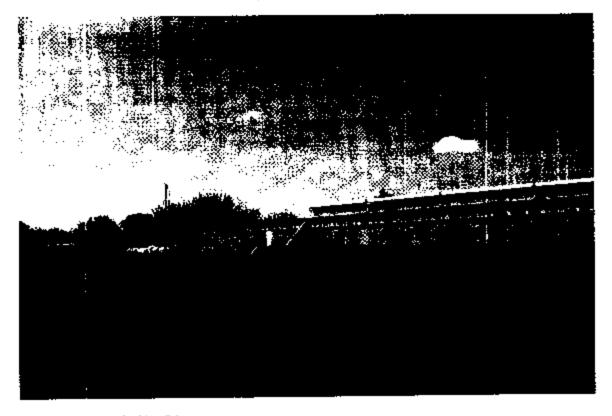


Photo #4: South side of the armory.



Photo #5: Drill hall facing west.

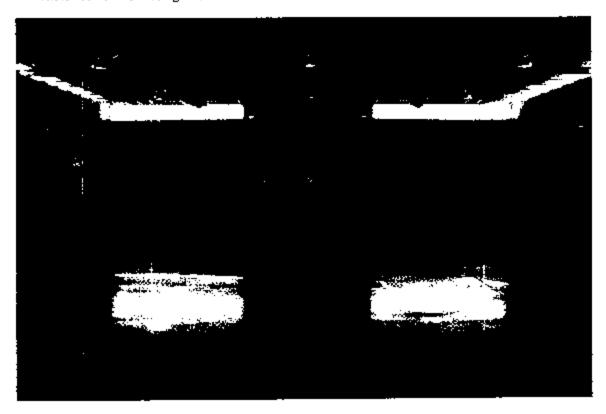


Photo #6: Drill hall facing east.



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

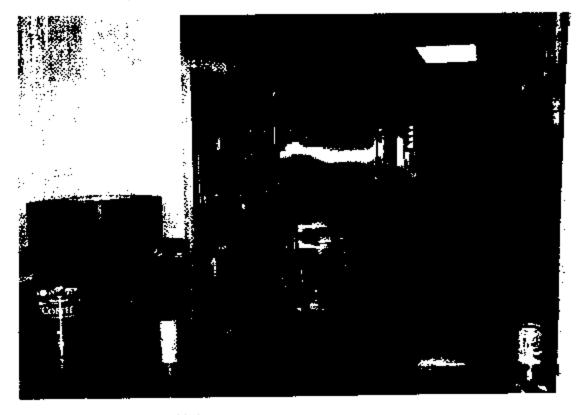


Photo #8: The Armory's kitchen



# DEPARTMENT OF THE TRMY 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

- References.
  - a. OSHA Standards 29 CFR (Code of Federal Regulations), General Industry, revised 1996 rev.
  - Department of Defense Instruction 6055.1, Department of Defense Occupational Safety and Health (OSH) Program, 19 August 1998.
  - 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.
  - 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.
  - Threshold Limit Values and Biological Exposure Indices (TLV's) for 2009 American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, Ohio.
  - Industrial Ventilation, 26<sup>th</sup> rd Edition, American Conference of Governmental Industrial Hygienist, Cincinnati, Ohio.
  - 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

ARNG-CSG

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March 23, 2015

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



CF: ARNG

State Occupational Health Office, 3500 West 35<sup>th</sup> Street, Building 86, Austin, TX 78763. Deputy State Army Surgeon, Non-Responsive JFTX-ARM-SS, 3500 West 35<sup>th</sup> 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



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Appendix D – Drawings of Facility
Appendix E - Photographs of Facility
Appendix F – HHIM Forms

# 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 µg/ft2
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:µg/ft² 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	IES Recommendations
	(foot candles)	(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

<sup>\*</sup>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



# APPENDIX A Lab Test Results for Lead

Analytical Environmental Services, Inc.

Date: 24-Sep-14

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LEAD ON WIPES (N7082)

N7081

Matrix: Wipe Date Received: 9 17 2014 3 30:00 PM

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1409Q53-009A	JERASO-CELL HALL	37L	1570	20	1		07 02:2014	09/22/2014	75
1409057-0048	592451-DRILL HALL	BRI	=\$ 52	20	1		07.00-2014	29.22.2014	75
1409053-005A	SPANIORAL BALLBLANC	371	19.82	20	1		07/02/2014	09:22:2014	.75
1409G51-006A	DEAD-DITCHES	871	19.00	21	1		07-02-2014	09 22 3014	55
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1409053-025A	TRANSVAULT INVIED	75	18.60	22	1		07.02.2014	19-22-2014	25
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140FQ53-028A	798413-REMODELED SPR	BPL	19.60	20	-1		07-02-2014	09 22 2014	-25
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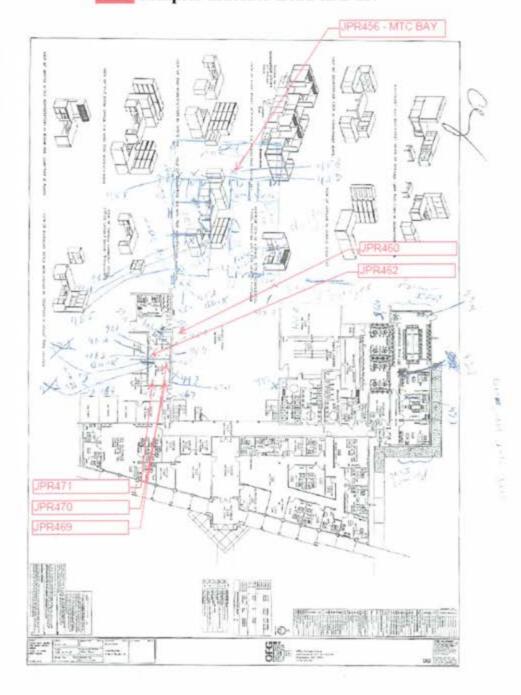
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Page 5 of 6

# APPENDIX B **Drawing of Sampled Areas RED** samples indicate Lead in Dust



# APPENDIX C Photographs of Areas Sampled for Lead in Dust





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



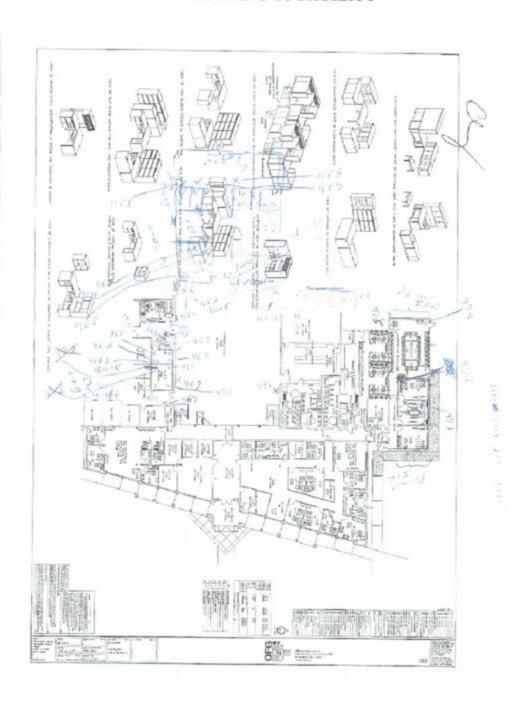
JPR450 Drill Hall



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.

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-Responsive

SECTION 7. COMMENTS (And blank sheet of paper If necessary)

- 1) There were no complaints of health issues by personnel.
- 2) Lighting was excellent.
- 2) Lighting was excellent. 3) Armory was neat and clean overall.

PRIVACY ACT STATEMENT

Time & U.S. Code. Section 301; Assenting Order 9397 authorizes the use of your North Security Number is a identification of this information is to identify and monitor data relating such UA civilian employer exponent to a hazardous workpiece this information is to provide histories of exposure for the given works.

# HEALTH HAZARD INFORMATION MODULE FIELD SURVEY \*SEE PRIVACY ACT STATEMENT ON REVERSE. IFOR use of this form. era IIHIM Upre's Instructions.)

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SECTION 6. PERSONNEL DATA



- 1) There were no complaints of health issues by personnel.
- a) Lighting was excellent
- s) Armery was neat and clear overall

PRIVACY ACT STATEMENT

Tion 6 U.S. Code, Section 2011 Executive Order 9397 outhorizes the vac of your Nocial Security Number as a scrittification of this information is to identify and monitor data relating over U.A civilian amployer exposed to a hazardous workplace this information is to provide histories of exposure for any given worker.

# 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.

- 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.
- 1. 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)
- 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.

- 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



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



June 25, 2004

# Table of Contents

Executive Summary	Page
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Noise Survey	Page 4
Illumination Survey	Page 4
Heating Ventilating and Air Conditioning (HVAC)	Page 5
Recommendations	Page 5

# Appendices

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

Survey Date: 14 April 2004

# 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.
НУАСЛАQ	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 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.

<u>Site Description.</u> The armory houses the headquarters of the first of the 112 artillary. 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.

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

Survey Date: 14 April 2004

# FINDINGS and DISCUSSION:

The Point of Contact during the survey was Non-Responsi

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.

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.

<u>Noise Survey:</u> 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

Survey Date: 14 April 2004

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:

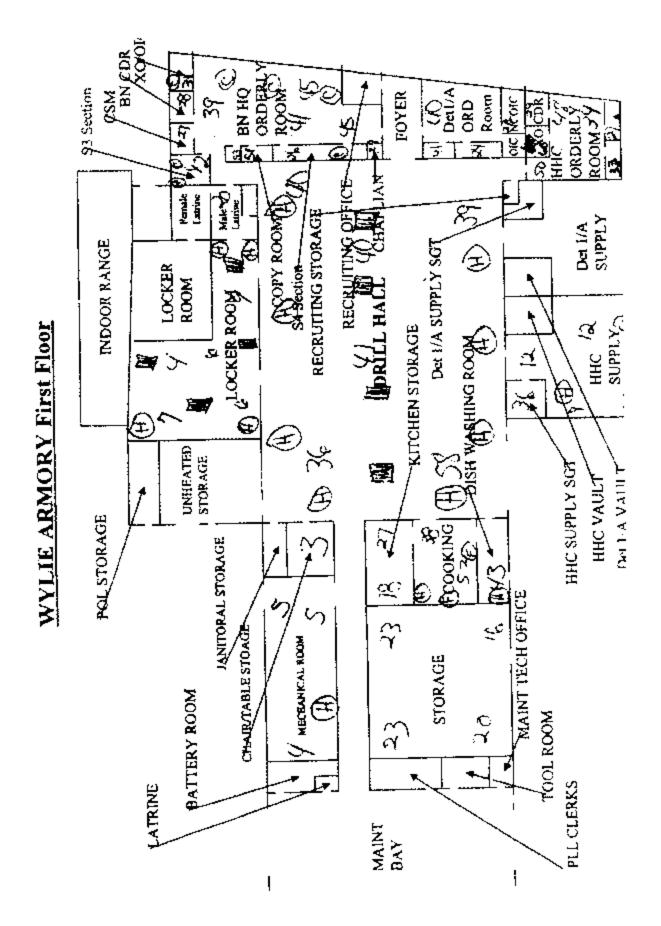
- 1. Update the building asbestos management plan to include the floor tiles.
- Repair water leaks observed on the supply air ducts and replace all water damaged material like insulation.

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

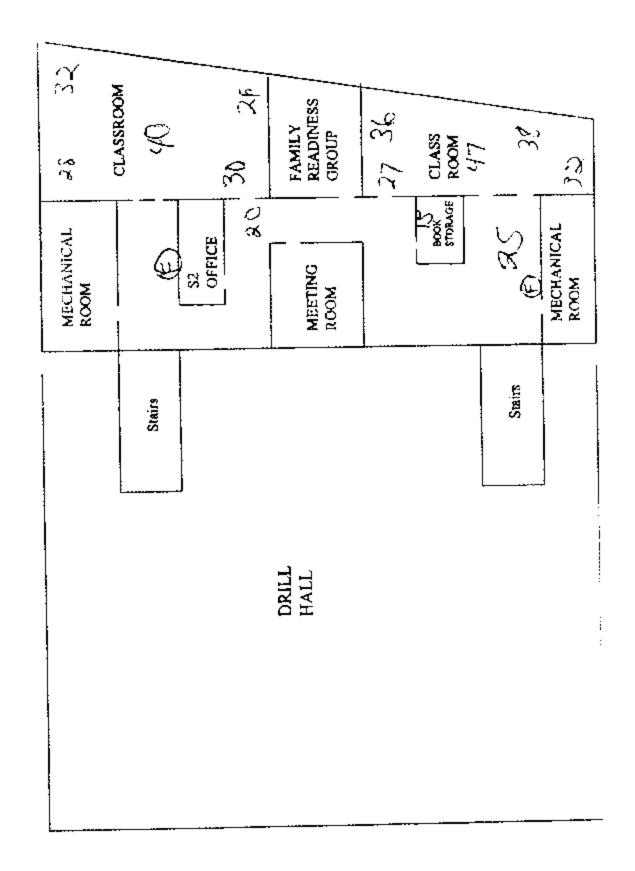
Non-Responsive

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APPENDIX A



# WYLIE ARMORY Second Floor



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APPENDIX B

# **EMSL Analytical**

3 Cooper St., Westmont, NJ 08108

Phone: (856) 858-4809 Fax: (856) 838-9551 Email: skauffmen@emai.com



Fax: Project:

Customer ID: Gustomer PO:

Received:

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EMSL Order:

200404876

T580

EMSL Proj.

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

Client Sample Description	Lab ID	Analyzed	Area Sampled		Lend Concentration
WY FR01 Results for these wip samples do not meet the EPA standards for sample malitie and er not recognized under the NLLAP accreditation pregram	es 0001 t pr re	5/7/04	144 107		<30.0 µg/ft²
WY FR02	0002	5/7/04	144 in*		'#\qu 0.0t>
WY FR03	0003	5/7/04	144 in²		<10.0 µg/ft²
WY FR04	0004	5/7/04	144 lm"		<10.0 µg/t²
WY FROS	0005	5/7/04	144 in <sup>a</sup>		<10.0 µg/ff²
WY FR06	2006	5/7/04	144 in³		<10.0 µg/ft*
WY FR07	0007	5/7/04	144 (n²	Local distriction of the second secon	10.0 µg/ft²
WY FR08	0008	5/7/04	144 in*		<10.0 µg/R
WY FR09	0009	5/7/04	144 in*		70.0 µg/ft²
WY FR10	0010	5/7/04	144 102		62.0 yg/fP
WY FR11	0011	5/7/04	144 in²		<10.0 µg/#*
WY FR12	0012	5/7/04	144 in²		<10.0 µg/#*
WY FR13	0013	5/7/04	144 in <sup>2</sup>		10.0 µg/ft*
WY FR14	0014	5/7/04	144 in²		10.0 µg/ll²
WY FRIS	0015	5/7/04	144 in'		<10.0 µg/R*
WY FR16	0016	5/7/04	144.102		<10.0 µg/H²
WY FR17	0017	5/7/04	144 in*		*10.0 µg/N°
WY FR18	0018	5/7/04	144 in*		<19.0 µg/H²
WY 01	0019	5/7/04	144 in <sup>a</sup>		<10.0 µg/ft*
WY 02	6020	5/7/04	144 la³		<10.0 µg/ñ²
WY 03	0021	5/7/04	144 in <sup>2</sup>		12.0 µg//?

## EMSL Analytical

3 Cooper St., Westmost, NJ 99108

Phone: (856) 858-4800 Fax: (856) 858-4681 Email: akauliman@amst.com



Attro:

Non-Responsive

Fax:

Project: wyne,

Customer ID:

T580

Customer PO:

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EMSL Order:

200404876

EMSL Proj:

Lead in Wipes by Flame AAS (SW 848, 7420)

Client Sample Description	Lab ID	Analysed	Area Sumpled	Lead Concentration
WY 04	0022	5/7/04	144 in*	15.0 µg/ਜ਼ਿ*
WY 05	0023	5/7/04	144 in²	<10.0 µg/ft²
WY 06	0024	5/7/04	144 (0*	<10.0 µg/ñ²
WY 07	0025	5/7/04	144 in²	<10.0 µg/ft²
WY 06	0026	5/7/04	144 ln²	18.0 µg/fi²
WY 09	0027	5/7/04	144 jn*	<10.0 µg/fl*
WY 10	9028	5/7/04	144 ln³	<10.0 µg/ff <sup>2</sup>
WY 11	0029	5/7/04	144 in <sup>3</sup>	<10.0 µg/ff²
WY 12	9030	5/7/04	144 ln²	<10.0 µg/ff²

Non-Responsive

The GC data associated with the sample results included in this report meet the recovery and credition the converse each on. The test next the continued within this region meet the requirements of NELAC undependent the property of the continued of NELAC undependent the property of the

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## EMSL Analytical, Inc.

187 Haddon Ave., Westment, NJ 09108

Phona: (856) \$58-4900 Fax: (881) 858-4960 Emelt: ssiegel@EMSL.com



Albı

Non-Responsive

Fax: Project;

Customer ID: TS80

Customer PO:

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EMSL Order: EMSL Proj: 040407139

Analysis Date: 4/29/04

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

Sample				Non-Asbestos			Asbestos
	Location	Appearance	Treatment	%	Fibrous	% Non-Fibrous	% Type
WY-A018 040407138-0001	Wylie, TX	Tan/White Fibrous Helerogeneous	Chushed	15% 35%		50% Non-fibrous (other)	None Detected
WY-A02B-Tile 640407139-0002	Wylie, TX	Gray Non-Fibrous Heterogeneous	Dissolved No meetic	<1% 3%		97% Non-fibrous (other)	None Detected
WY-A038-Tile 648407139-0003	Wylle, TX	Gray Non-Fibrous Heterogeneous	Dissolved	2%	Callulose	95% Non-librous (other)	3% Chrysotlie
WY-A038-Mestic 040407139-0005	Wylie, TX	Tan Non-Fibrous Homogeneous	Dissolved	3% 2%		95% Non-fibrous (other)	None Detected
WY-A04B-Cove- base 640407139-0004	Wylie, TX	Gray Non-Fibrous	Dissolved	2%	Cellulose	98% Nan-librous (other)	None Detected
******		Heterogeneous	No mentic				

# Non-Responsive

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APPENDIX C

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MATRIX		INSTR	Limit)	Anno
	2000	Plame Atomic Absorption	0.01%	
ed Chips*	SW846-7420, 3050B Mod. / AOAC (974.02)	Panie Alone Auserpan		
	SW846-7420	Flame Atomic Absorption	0.4 mg/l water	
and Wastewater		ICP	40 mg/kg (prm) soil 0.1 mg/l water	
gad Soil -	or SW846-6010B	I K.P	10 mg/kg (prm) soil	
	NIOSH 7082 Mod.	Flame Atomic Absorption	4 ug/filter	
ead in Air***	or NIOSH 7300 Mod.	ICP	3.0 og/filter	
			10 ug/wipe	
sad in Wipt ASTM	SW846-7420 / HUD Appendix 14.2 Digest.	Flame Atomic Absorption	10 mg/miles	Michie !
is: Wipe Type	<b>-</b>		3.0 ug/wipe	
	or SW846-6010B	ICP	3.5 ag **	
	SW846-1311/7420	Flame Atomic Absorption	0.4 mg/l (ppr1)	i
CLP Lead **	"(" "	icp	0.1 mg/l (ppr1)	
	or SW846-6010B			
TLC Lead (Colfernic) e	CA Title 22 (626).176 /	Flame Atomic Absorption	0.4 mg/l (ppra)	
	SW846-7420 or SW846-6010B	ICP	0.1 mg/l (ppri)	
e: d to Air ****	NIOSH 7105 Mod.	Graphite Furnace Atomic	0.03 ug/filter	
er at 19 Auf		Absorption		- CO
end Wastewater	SW846-7421	Graphite Furnace Atomic Absorption	0.003 mg/l (ppm) water	20 35 S
			0.3 mg/kg (port) soil	10 E
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<sup>(</sup>A) The individual signing and relinquishing these samples to the laboratory assests to the accoracy of the information reporter, on this chain of custody.



EMSL Analytical, Inc. Revised 07/07/99

# CHAIN OF CUSTODY

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APPENDIX D



Photo #1; Armory front entrance.

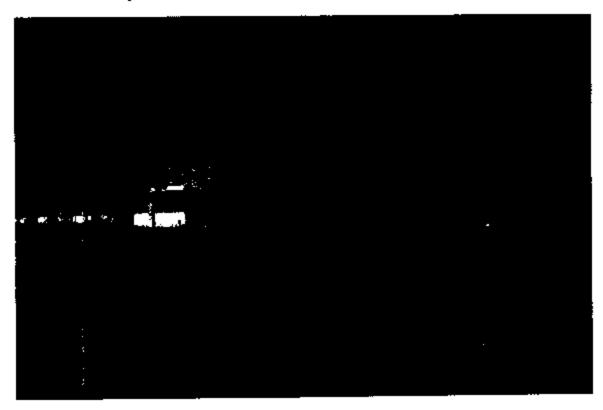


Photo #2: East side of the armory.

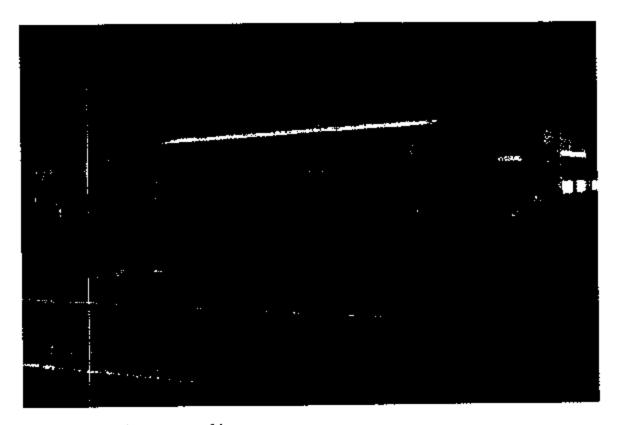


Photo #3: South west corner of the armory.



Photo #4: North side of the armory.



Photo #5: Drill hall facing northst.

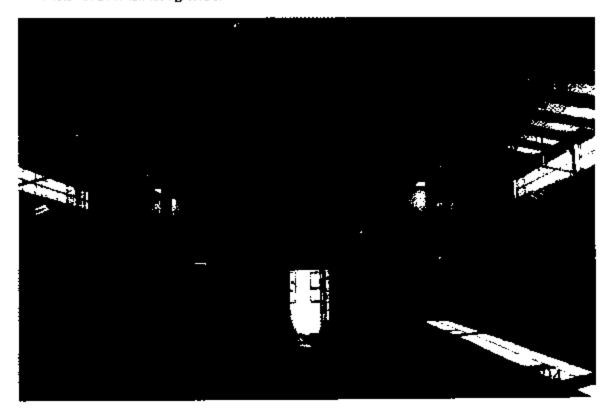
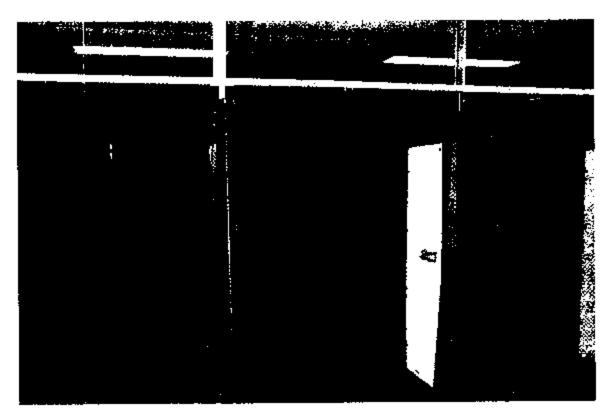


Photo #6: Drill hall facing south.



Photo#7: Indoor firing range facing bullet stop.

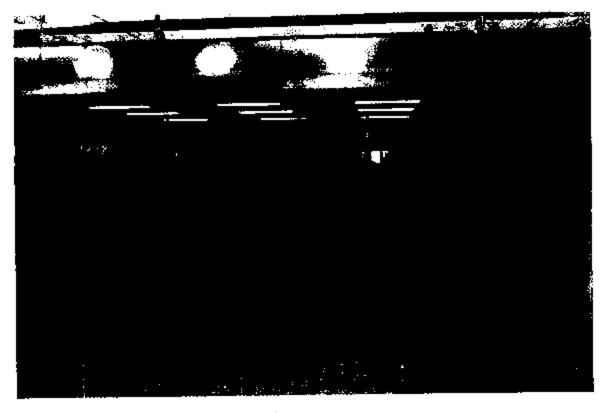


Photo #8: Indoor firing range facing firing line.

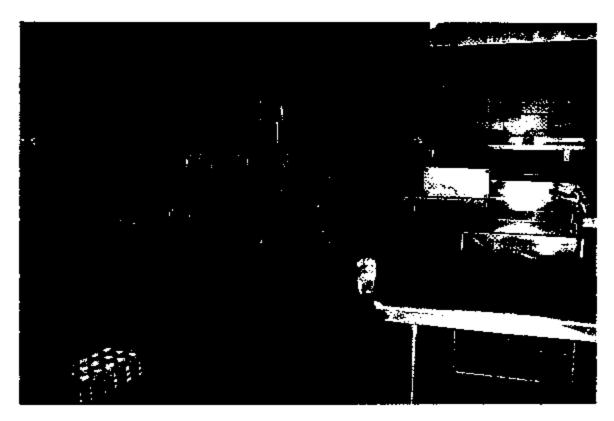


Photo #9: Armory's kitchen showing the sink.



Photo #10: Armory's water boiler.

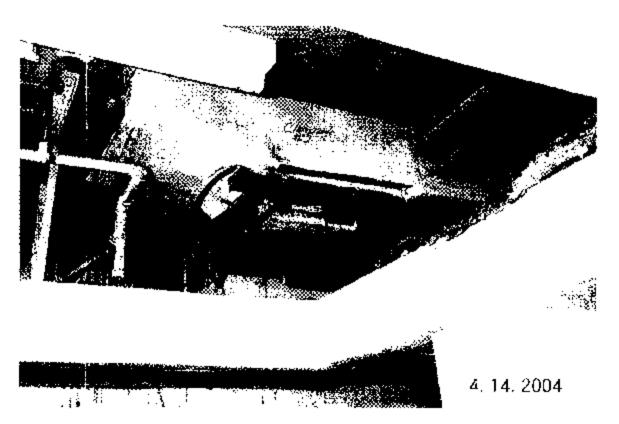


Photo #11: Water leaks on the ventilation ducts.



Photo #12: Water leaks on the ventilation ducts.