Name: UB

Date: 9/24/12

NES Job Number: 013.1H1374.60

Light Survey

Building	Location	Light - ft/c
Armory	Office @ Desk	53.5
	Office general Area	54.7
	Hallway	37.7
	Drill Floor (N)	30.2
	Drill Floor (S)	31.6
	Drill Floor (E)	32.7
	Drill Floor (W)	33.4
	Storage	24.9
	Lobby	27.7
↓		

Print Inventory

Print Inventory | Cancel

Unit: Kalispell AFRC Storage: POL Room - FL 01 Month: 1/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
A01	Spray Paint Gloss White	8010-00-290-6983	LHB So-Sure	BDVHM	4	can	12	V2
A02	Spray Paint Gloss Beige	8010-01-350-5252	LHB So-Sure	BYYPH	0	can	12	
A03	Spray Paint Mask Out	6850-00-N01-9403	Uline	BLHMJ	3	can	12	F3
A04	SPRAY ADHESIVE	8040-00-171-1535	STAG ENTERPRISE	BTSDC	4	CN	12	V3
	Description: SPRAY ADHESIVE							
A05	Deep Gloss		Johnson Diversey	114450001	1	CN		
A06	ECO SURE GLOSS BLACK PAINT	8010-01-331-6107	SKILCRAFT	BPPHT	1	CN		V3
	Description: GLOSS BLACK SPRAY PAINT WHIT LABEL							
B01	Adhesive Tent Patch	8040-00-264-3848	TACC International	BKCHP	3	can	12	F3
B02	Lube Oil Shredder	0	Fellows Mfg Corp		2	bottle		
B03	LSA	9150-00-687-4241	Castrol North America	BFLRX	3	qt	24	V6
B04	Paint, Oil Based, Gold		Rust-Oleum		3	1/2 pt		
B05	So Sure Black Paint	8010-00-616-9143	Skillcraft	BFJBJ	2	CN	12	F2
	Description: Black Spray Paint Rainbow Can Label							
B06	SO SURE TAN PAINT	8010-00-348-7713	SKILCRAFT	BJNWB	0	CN	12	F2
	Description: TAN SPRAY PAINT RAINBOW LABEL							
C01	Horizon Glass Cleaner	7930-00-F03-8660	SC Johnson Wax	BWVMH	6	GL	24	

Tektronix
Service Solutions

Certificate of Calibration

6209119

Instrument Identification

PO Number: Non-Responsive

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

Instrument ID: H225438
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive
Cal Date: 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 40.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.

Approved By: Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230826	17-1001C76	6 STEEL RULE	STARETT	C418R-72	10Jun2010	10Jun2012
1700279209	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

Tektronix
Service Solutions

DATASHEET

Manufacturer: **Minolta**
Model: **TL-1**
Description: **Illuminance Meter**

Workorder #: **602492**
Procedure: **Manufacture**
Date: **22-May-12**

ILLUMINANCE

Range	Nominal Value	As Found	Result	As Left	Result	Min	Max
30fC (resolution: .1 fC)	10.00	10.1	P	10.1	P	9.7	10.3
300 fC (resolution: 1 fC)	100.0	100.1	P	100	P	97	103
3000 fC (resolution: 10 fC)	1000.0	1000.0	P	999	P	970	1030

Note: Measurement Uncertainty = +/- 2.4% of Indication.

TSI - Customer Service report

Thank you for the opportunity to service your instrument.

RMA Number: 800235189

Ship-to party 5180406	Sold-to party 5180406
IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA	IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA

Service Information:
Purchase Order CC-[redacted]
Purchase Order Date 03/26/2012

Description Calibration of VelociCalc Plus 8386A

Equipment 57602 VELOCICALC Plus Air Velocity Meter
Serial Number 54110581
Material 8386A

Service Description:

Return Reason:
CALIBRATION OVERDUE

Findings:
Unit sent in for clean and calibration. The unit passed as found.

Action:
The unit was cleaned, calibrated, and a complete operational checkout

was performed.

TSI P/N 2980157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	68.4 (20.2)	°F (°C)
RELATIVE HUMIDITY	36	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☐ AS LEFT ☒ IN TOLERANCE
☒ AS FOUND ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

VELOCITY VERIFICATION — SYSTEM V-106 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	−3~3 (−0.02~0.02)	7	643 (3.26)	640 (3.25)	623~662 (3.17~3.36)
2	34 (0.17)	35 (0.18)	31~37 (0.16~0.19)	8	995 (5.06)	991 (5.03)	965~1025 (4.90~5.21)
3	64 (0.32)	64 (0.32)	61~67 (0.31~0.34)	9	1468 (7.45)	1476 (7.50)	1423~1512 (7.23~7.68)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2481 (12.60)	2463 (12.51)	2406~2555 (12.22~12.98)
5	160 (0.81)	159 (0.81)	155~164 (0.79~0.84)	11	4501 (22.87)	4440 (22.55)	4366~4636 (22.18~23.55)
6	328 (1.67)	325 (1.65)	318~338 (1.62~1.72)	12	8000 (40.64)	7943 (40.35)	7760~8240 (39.42~41.86)

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (−0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	−4.073 (−1014.2)	−4.084 (−1016.9)	−4.119~−4.027 (−1025.6~−1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY AS FOUND — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E004477	12-15-11	12-15-12	Temperature	E001644	01-20-12	07-20-12
Pressure	E001558	12-12-11	06-12-12	Pressure	E001560	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12	Barometric Pressure	E001992	04-08-11	04-08-12
Temperature	E001800	01-19-12	07-19-12	Temperature	E001799	01-19-12	07-19-12
Humidity	E003539	02-28-12	08-28-12				

Non-Responsive

March 27, 2012
DATE

DOC ID: CERT_DEFAULT

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

APPENDIX Q

FACILITY INFORMATION WORKSHEET

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Samples 01 through 05 were collected from the drill floor.
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	Yes, weapons are cleaned on the drill floor.
Additional lead **wipe** samples taken from 25% of the rest of the building - -(**on floor areas only**)	Samples 06, 07 and 08 were collected from 25% of the rest of the building.
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	Live firing range at the Armory. Samples 06 and 07 were collected from inside the IFR.
Is there any peeling **paint**? Take bulk sample if able.	No.
Are there any signs of water damage or **mold**?	No.
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	No suspected ACM. Building was new and recently constructed.
Quality of housekeeping	Great.
HVAC maintenance plan in place?	Yes, through the State.
Overall condition of HVAC system	New working condition.
Obtained **CO2, Temp, RH** monitoring	Attached to the report.
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Attached to the report. Inventory needs to be updated.
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	2 flammable lockers. No incompatibilities observed during the IHSAV.

Fire alarm in working condition - -not usually in place in older armories	Yes.
Fire extinguishers in place and properly identified and mounted	Yes.
Evidence of **monthly fire extinguisher inspections**	No evidence of monthly inspections.
Annual fire extinguisher inspections tags current	Annual fire extinguisher inspections due as of August 2012.
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A.
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	Yes, posted throughout the facility.
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Hazcom Training program in place.
Any Photo labs	N/A.
Any hazardous **noise** sources	No hazardous noise areas identified or observed during the IHSAV.
Light levels checked throughout building	Attached to report.
Breaker panels properly labeled with no exposed wiring	Breaker panels had proper labeling with no exposed wires.
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. 15 military personnel. 3 civilian personnel. 2. Infantry, training, supply, logistics, administrative.
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	CAP (Civilian Air Patrol) – occupy drill floor once a week. ASVAP testing occurs at the facility as well.
Obtain two **lead air samples**	On IHSW Request Only

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	Kitchen hood was compliant during IHSAV.
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	No hazardous noise areas.
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	
Name of Armory, **POC**, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Kalispell Armory Non-Responsive 2989 Highway 93 North Kalispell, MT 59901 Non-Responsive **(Add Checklist to Report)**

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04				0
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05				0
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09				0
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18				1
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18				1
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19				0
Number of ventilation systems which were evaluated by an IH	953-02-19				1
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			0
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			0

TSI P/N 2330157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition		
Temperature	69.1 (20.6)	°F (°C)
Relative Humidity	37	%RH
Barometric Pressure	28.61 (968.8)	inHg (hPa)

Model	8386A
Serial Number	54110581

☒ As Left ☐ As Found
☒ In Tolerance ☐ Out of Tolerance

– Calibration Verification Results –

Temperature Verification — System T-119 — Unit: °F (°C)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

Pressure Verification — System V-106 — Unit: inH_2O (Pa)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	-4.073 (-1014.2)	-4.084 (-1016.9)	-4.119~-4.027 (-1025.6~-1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

Humidity Verification — System H-102 — Unit: %RH

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

Velocity Verification — System V-110 — Unit: ft/min (m/s)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	648 (3.29)	646 (3.28)	629~667 (3.19~3.39)
2	35 (0.18)	34 (0.17)	32~38 (0.16~0.19)	8	996 (5.06)	997 (5.06)	966~1025 (4.91~5.21)
3	64 (0.33)	64 (0.32)	61~67 (0.31~0.34)	9	1476 (7.50)	1476 (7.50)	1432~1521 (7.27~7.72)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2476 (12.58)	2472 (12.56)	2401~2550 (12.20~12.95)
5	160 (0.81)	159 (0.81)	155~165 (0.79~0.84)	11	4498 (22.85)	4548 (23.10)	4363~4633 (22.17~23.54)
6	346 (1.76)	346 (1.76)	335~356 (1.70~1.81)	12	7988 (40.58)	8013 (40.71)	7748~8227 (39.36~41.80)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001800	01-19-12	07-19-12
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Humidity	E003539	02-28-12	08-28-12
Temperature	E004402	12-08-11	06-08-12
Pressure	E001721	12-13-11	06-13-12
Velocity	E003327	09-19-07	09-19-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001799	01-19-12	07-19-12
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
DC Voltage	E001658	06-28-11	12-28-12
Pressure	E001719	12-13-11	06-13-12
Barometric Pressure	E001992	04-08-11	04-08-12

Non-Responsive

March 27, 2012
Date

Doc ID: CERT_DEFAULT

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

Certificate of Calibration

Certificate No: 1095258 CDF020012

Submitted By: IHSW-NGB
10510 SUPERFORTRESS AVE.
MATHER, CA 95655

Serial Number: CDF020012
Customer ID:
Model: 2900 SLM

Test Conditions:
Temperature: 18°C to 29°C
Humidity: 20% to 80%
Barometric Pressure: 890 mbar to 1050 mbar

Date Received: 3/28/2012
Date Issued: 3/29/2012
Valid Until: 3/29/2013

Model Conditions:
As Found: IN TOLERANCE
As Left: IN TOLERANCE

SubAssemblies:

Description:	Serial Number:
MICROPHONE QE 7052 1/2 IN. ELECTRET	25923
TYPE 2 PREAMP	N/A

Calibration Procedure: 56V995

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
ET0000453	FLUKE 45 MULTIMETER	3/2/2011	3/2/2013
ET0000556	B&K ENSEMBLE	4/27/2011	4/27/2012

Measurement Uncertainty:
+/- 2.2% ACOUSTIC (0.190B)+/- 1.4% VAC +/- 0.1% VDC
Estimated at 95% Confidance Level (k=2)

Calibrated By: Non-Responsive 3/29/2012

Reviewed/Approved By: [redacted] 3/29/2012

This report certifies that all calibration equipment used in the test is traceable to NIST or other NMI, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of Quest Technologies.

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

Certificate of Calibration

Certificate No: 1095258CDF020012

(A) indicates out of tolerance condition

Test Type	Nominal	Tolerance-	Tolerance+	As Found	As Left	Unit
Calibration	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/125Hz	93.9	92.4	95.4	94.4	94.3	dB
A Weighting/250Hz	101.4	99.9	102.9	101.8	101.7	dB
A Weighting/500Hz	106.8	105.3	108.3	107.0	106.9	dB
A Weighting/1kHz	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/2kHz	111.2	109.2	113.2	111.5	111.4	dB
C Weighting/125Hz	109.8	108.3	111.3	110.6	110.5	dB
C Weighting/250Hz	110.0	108.5	111.5	110.7	110.5	dB
C Weighting/500Hz	110.0	108.5	111.5	110.5	110.3	dB
C Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
C Weighting/2kHz	109.8	107.8	111.8	110.2	110.1	dB
Lin Weighting/125Hz	110.0	108.5	111.5	110.8	110.7	dB
Lin Weighting/250Hz	110.0	108.5	111.5	110.7	110.6	dB
Lin Weighting/500Hz	110.0	108.5	111.5	110.5	110.4	dB
Lin Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
Lin Weighting/2kHz	110.0	108.0	112.0	110.4	110.3	dB
Lin/60 - 120/120	120.0	118.8	121.2	120.6	120.5	dB
Lin/60 - 120/110	110.0	109.5	110.5	110.1	110.0	dB
Lin/60 - 120/100	100.0	98.8	101.2	99.9	99.8	dB
Lin/60 - 120/90	90.0	88.8	91.2	90.0	89.9	dB
Lin/40 - 100/90	90.0	88.8	91.2	89.8	89.8	dB
Lin/40 - 100/80	80.0	78.8	81.2	79.9	79.8	dB
Peak/60 - 120/120	123.0	121.5	124.5	122.2	122.0	dB
Peak/60 - 120/110	113.0	111.5	114.5	113.1	112.9	dB
Peak/60 - 120/100	103.0	101.5	104.5	103.0	102.8	dB
Peak/60 - 120/90	93.0	91.5	94.5	93.1	93.0	dB
DC Out/120dB	1.000	0.950	1.050	1.008	1.005	VDC
AC Out/120dB	3.160	2.920	3.430	3.252	3.196	VAC

* indicates non accredited

MICRO PRECISION CALIBRATION
22535 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012 **Cert No.** 2008120221675

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3821
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8185	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2008120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90056761A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used In this Event

Procedure Name	Description
PARTICLE COUNTER	PARTICLE COUNTERS
971 TEMP/HUMIDITY METER	TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CAD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

TABLE 1

LEAD WIPE SAMPLE RESULTS
KALISPELL ARMORY
KALISPELL, MONTANA
SEPTEMBER 27, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG/HUD Standard ($\mu g/ft^2$)
92712-Kalispell-01	Drill Floor	Southeast corner of drill floor, floor area sample	< 2.5	≤ 40
92712-Kalispell-02	Drill Floor	Northeast corner of drill floor, floor area sample	< 2.5	≤ 40
92712-Kalispell-03	Drill Floor	Center, middle of drill floor, floor area sample	< 2.5	≤ 40
92712-Kalispell-04	Drill Floor	Northwest corner of drill floor, floor area sample	< 2.5	≤ 40
92712-Kalispell-05	Drill Floor	Southwest corner of drill floor, floor area sample	< 2.5	≤ 40
92712-Kalispell-06	Indoor Firing Range	North area of room floor sample	< 2.5	≤ 200
92712-Kalispell-07	Indoor Firing Range	South area of room floor sample	< 2.5	≤ 200
92712-Kalispell-08	Hallway	Middle of floor area sample	< 2.5	≤ 40

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
HUD = The US Department of Housing and Urban Development

ANALYTICAL REPORT

Report Date: October 15, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1228525
Client Project ID: 013.IH1374.60/Kalispell, MT
Purchase Order: 013.IH1374.60
Project Manager: Non-Responsive

Analytical Results

Sample ID: 92712-Kalispell-01	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525001	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012
Analyte	**ug/sample**	**ug/ft²**	**RL (ug/sample)**
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-02	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525002	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012
Analyte	**ug/sample**	**ug/ft²**	**RL (ug/sample)**
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-03	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525003	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012
Analyte	**ug/sample**	**ug/ft²**	**RL (ug/sample)**
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-04	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525004	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012
Analyte	**ug/sample**	**ug/ft²**	**RL (ug/sample)**
Lead	<2.5	<2.5	2.5

ANALYTICAL REPORT

Workorder: 34-1228525
Client Project ID: 013.IH1374.60/Kalispell, MT
Purchase Order: 013.IH1374.60
Project Manager: Non-Responsive

Analytical Results

Sample ID: 92712-Kalispell-05	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525005	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-06	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525006	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-07	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525007	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 92712-Kalispell-08	Media: Ghost Wipe		Collected: 09/27/2012
Lab ID: 1228525008	Sampling Location: Kalispell, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1228525
Client Project ID: 013.IH1374.60/Kalispell, MT
Purchase Order: 013.IH1374.60
Project Manager: Non-Responsive

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

W 1228525

ANALYTICAL REQUEST FORM

1228525

1. ☐ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 9/27/12 Purchase Order No. 013.1111374.600

3. Company Name NES

Address 1141 Sibley Street
Folsom, CA 95630

Person to C [redacted]

Telephone [redacted]

Fax Teleph [redacted]

E-mail Add [redacted]

Billing Address (if different from above)

4. Quote No.

ALS Project Manager [redacted]

5. Sample Collection

Sampling Site Kalispell, MT

Industrial Process Army National Guard

Date of Collection 9/27/12

Time Collected 11:00

Date of Shipment 10/9/2012

Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	92712-Kalispell-01	Filter wipe	1ft²	Lead Niosh 7300	
	92712-Kalispell-02				
	92712-Kalispell-03				
	92712-Kalispell-04				
	92712-Kalispell-05				
	92712-Kalispell-06				
	92712-Kalispell-07				
	92712-Kalispell-08				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of C [redacted]

Relinquished b [redacted] Date/Time 10/9/12 12:00pm

Received by [redacted] Date/Time 10/9/12 2:45 PM

Relinquished b [redacted] Date/Time

Received by [redacted] Date/Time 10/11/12 0915

960 West Levoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental

[redacted]

EMPLOYEE LIST

KALISPELL ARMORY
KALISPELL, MONTANA
SEPTEMBER 27, 2012

Rank	Last Name, First Name
Non-Responsive	Non-Responsive

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Kalispell Armory, Kalispell, MT

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTKALISPELL-92712 - 4.7.1	Chemical inventory out of date.	Armory - Flammable Lockers	4	Update the chemical inventories of the Flammable Lockers to represent the materials on hand at the facility.					29 CFR 1910.1200(b)(3)(ii)
MTKALISPELL-92712 - 4.11.2	No evidence of monthly fire extinguisher inspections.	Armory	3	Ensure that the fire extinguishers are inspected and documented on a monthly basis.					29 CFR 1910.157(e)(2)
MTKALISPELL-92712 - 4.11.2	Annual fire extinguisher inspections out of date as of August.	Armory	4	Have fire extinguishers inspected on an annual basis.					29 CFR 1910.157(e)(3)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

KALISPELL ARMORY
KALISPELL MONTANA
SEPTEMBER 27, 2012

N.1 **Introduction** – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for the Kalispell Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Findings and Recommendations; Item 2 – Painted Surface Evaluation).

N4.7.1 **Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)** – The chemical inventories were out of date for the chemicals stored. Update the chemical inventories of the Flammable Lockers to represent the materials on hand at the facility.

N4.11.2 **Safety Walk-Through** – There was no evidence of monthly fire extinguisher inspections at the Armory. Ensure that the fire extinguishers are inspected and documented on a monthly basis.

Annual fire extinguisher inspections are out of date as of August. Have fire extinguishers inspected on an annual basis to comply with OSHA standards.

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Lewistown Armory
863 Airport Road
Lewistown, MT 59457

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

7 January 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive (DSS), Montana Medical DET, Troop Medical Clinic Rm 1009, 1956 MT Majo Street, Fort Harrison, MT 59636

FOR Commander, Lewistown Armory 863 Airport Road, Lewistown, MT 59457

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Lewistown Armory, Montana conducted on 59457.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Lewistown Armory at 863 Airport Rd., Lewistown, MT on 04 OCT 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Lewistown Armory, Montana conducted on 59457.

a. A building inspection of the armory, for asbestos, should be provided and a management plan in place for personnel working at and on the facility should be written from that inspection. (para. 4.4) **(RAC 3)**

b. Converted IFR should be inspected for past water seepage/intrusion before winter snows start melting & spring rains commence. This discrepancy should be corrected and all water damaged materiel's replaced to help prevent a potential Indoor Air Quality issue. (para. 4.3) **(RAC 3)**

c. Personnel should clean entire Converted Indoor Firing Range (IFR) area, focusing on horizontal areas, by utilizing provided Armory Clean-Up SOP. This area should be below 200 ug/ft2 after implementing better housekeeping practices. (para. 4.1) **(RAC 3)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Lewistown Armory, Montana conducted on 59457.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene, Southwest
Hazard Inventory Log
Lewistown Armory - MT 59457

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLA-100412-4.1 ☐	High levels of lead above the Army National Guard standards.	Armory - Converted IFR	3	Clean entire Converted Indoor Firing Range area where high levels of lead were found. Review and utilize the lead clean-up SOP before cleaning the area.					29 CFR 1910.1025; NGP 420-15
MTLA-100412-4.3 ☐	Water damage/ flooding/ standing water in building	Armory - Converted IFR	3	Get Converted IFR area evaluated to determine what is allowing water seepage into this area. Acquire a sump pump to remove standing water from the converted IFR, if needed.					Prudent Industrial Hygiene Practices
MTLA-100412-4.4 ☐	No asbestos documentation located at the facility.	Armory	3	Consult with a Montana state-certified asbestos inspector to inspect the facility for any asbestos containing material. If there is ACM located at the Lewistown Armory, an asbestos Operations & Maintenance Plan should be written and communicated to employees.					29 CFR 1910.1001(b)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Appendices

1.0 INTRODUCTION

During October 4, 2012, Non-Responsive ndustrial Hygiene Field Technician of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Lewistown Armory located at 863 Airport Road in Lewistown, Montana 59457. The primary point of contact for information gathered during this survey was Non-Responsive hone: (406) 324-5595, email: Non-Responsive

1.1 IHSAV Objectives

The objective of the IHSAV is to evaluate the occupational environment of the administrative areas in the Armory to determine the presence of operational health and safety risks and make recommendations for corrective actions or follow-up work to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances, and;
- Conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Lewistown Armory has three full time guard members and one full time state employee. The Armory has offices used for administrative purposes and recruiting purposes. The Lewistown Armory contains a drill floor for Army National Guard member training functions. The Armory contains a converted indoor firing range (IFR) which is now used as a locker room and supply room. Classrooms are also located at the Armory and are used for varied purposes. Civilian functions are occasionally carried out in this Armory including temporary leases for events such as a dog training school which is only held throughout the summer months approximately once a week. The drill floor is occasionally used by Army National Guard members as a staging area to clean weapons.

3.0 METHODS

3.1 Lead Wipe Sampling

Metals wipe samples were collected on horizontal work and floor surfaces in various locations throughout the facility. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge tubes. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH Method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix E for a drawing of sample locations. See Appendix I, table 1 for lead wipe sampling analytical results. See Appendix J for laboratory reports.

3.2 Painted Surface Evaluation

The interior and exterior of the Armory was visually inspected for peeling paint on the walls and ceilings. No paint chip samples were collected in the interior because no peeling paint was encountered. All samples, if collected, are submitted to ALS Laboratory Group (ALS) in Salt Lake City, Utah. ALS analyzes the samples for lead using NIOSH 7300 modified method.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. Any water impacted areas noted was documented on a drawing for a follow-up evaluation.

3.4 Asbestos Documentation

An evaluation asbestos documentation was performed. This evaluation consisted of determining if an asbestos survey and assessment have been done. ~~If any suspected asbestos containing material (ACM) is suspected, bulk sampling is performed~~.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning systems that serve the Armory was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, and relative humidity were measured throughout the Armory using a TSI IAQ-Calc™ Meter, Model 8551. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. See Appendix E for IAQ data.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Lewistown Armory. The instrument used for the illumination survey was a Konica Minolta Light Meter, Model TL1. Measurements taken were obtained at typical working locations such as desks, computers, workstations and general working areas. See Appendix E for illumination data.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, i.e., flammable storage cabinets/rooms were also inspected as part of this IH Site Assistance Visit.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Exhaust Ventilation Survey

An exhaust ventilation survey was not conducted as access to the kitchen was not available at the time of the IHSAV.

3.10 Sound-Level Measurements

Sound-level measurements were not made on kitchen appliances as access to the kitchen was not available at the time of the IHSAV.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, ground fault circuit interrupter (GFCI) measurements and

inspection, if eyewash stations inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
TSI VelociCalc™ Plus Meter	8386A	54110581	03/2012
TSI IAQ-Calc™ Meter	8551	81380	11/2012
Konica Minolta Light Meter	TL1	002579029	05/2012

Please see Appendix H for a complete inventory of calibration certificates for equipment that may have been used during this IHSAV.

3.13 Quality Assurance

NES, employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs and;
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Lewistown Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of 7 Ghost Wipe™ lead samples were taken during the time of the IHSAV. The first five samples were collected from the drill floor surface areas. The 2 additional areas sampled were collected from the converted indoor firing range which now serves the purpose of a locker room and a storage area.

The analytical results for the drill floor areas were below the 40 $\mu g/ft^2$ criterion. The floor sample from the locker room area, at the north end of the converted indoor firing range was below the 200 $\mu g/ft^2$ criterion. The floor sample from inside the storage locker, south end of the converted IFR (previous area where the bullet trap was located in the IFR) was over the 200 $\mu g/ft^2$ criterion. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
10412-Lewistown-01	Drill Floor	Southwest corner of drill floor, floor area sample	5.1	40 $\mu g/ft^2$
10412-Lewistown-02	Drill Floor	Northwest corner of drill floor, floor area sample	2.7	40 $\mu g/ft^2$
10412-Lewistown-03	Drill Floor	Center, middle of drill floor, floor area sample	<2.5	40 $\mu g/ft^2$
10412-Lewistown-04	Drill Floor	Northeast corner of drill floor, floor area sample	<2.5	40 $\mu g/ft^2$
10412-Lewistown-05	Drill Floor	Southeast corner of drill floor, floor area sample	9.6	40 $\mu g/ft^2$
10412-Lewistown-06	Converted IFR	Floor sample from the north area of room	29	200 $\mu g/ft^2$
10412-Lewistown-07	Converted IFR	Floor sample from inside storage locker, south end of converted IFR (previous area where the bullet trap was located in the IFR)	440	**200 $\mu g/ft^2$**

See Table 1 in Appendix I for a table of results. The laboratory reports are supplied in Appendix J.

4.2 Painted Surface Evaluation

No paint chip samples were collected during the time of the IHSAV because no peeling paint was observed in the interior or the exterior of the building.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

During the inspection of the facility, water damage was a concern to the personnel who occupy the building. According to our POC Non-Responsive the converted IFR has flooding issues. The converted IFR is now a locker room and storage area. According to the employees, the flooding occurs yearly between winter and spring months when rain and snow accumulation are high. The converted IFR is located below ground level, but employees are unsure of point of entry for the water. During the IHSAV, there was no water damage evidence or where the water has been entering the building. Follow-up evaluations for drainage solutions and a mold evaluation should be considered.

4.4 Asbestos Documentation

No asbestos documentation was found at the facility.

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
LEWISTOWN ARMORY
LEWISTOWN, OREGON
OCTOBER 04, 2012

Photo 1: Exterior of Lewistown Armory, located in Lewistown, Montana.

Photo 2: Lead wipe floor sample 10412-Lewistown-01 from the northeast corner of the Drill Floor.

PHOTO LOG
LEWISTOWN ARMORY
LEWISTOWN, OREGON
OCTOBER 04, 2012

Photo 1: Exterior of Lewistown Armory, located in Lewistown, Montana.

Photo 2: Lead wipe floor sample 10412-Lewistown-01 from the northeast corner of the Drill Floor.

PHOTO LOG
LEWISTOWN ARMORY
LEWISTOWN, OREGON
OCTOBER 04, 2012

Photo 3: Lead wipe floor sample 10412-Lewistown-02 from the southeast corner of the Drill Floor.

Photo 4: Lead wipe floor sample 10412-Lewistown-03 from the center of the Drill Floor.

PHOTO LOG
LEWISTOWN ARMORY
LEWISTOWN, OREGON
OCTOBER 04, 2012

Photo 7: Lead wipe floor sample 10412-Lewistown-06 from the northern end of the converted Indoor Firing Range.

Photo 8: Lead wipe floor sample 10412-Lewistown-07 from the storage locker, south end of the converted Indoor Firing Range.

Print Inventory

Print Inventory | Cancel

Unit: DET 1 CO A 1st BN 163D IN Storage: FL 01 Month: 1/1/2012

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	ANTI-RUST PRIMER		COAST TO COAST		1	CAN		
	Automotive Grease		Battenfield		3	Tube		
	Baking soda		Liberty Chemicals	BLCYZ	6	BOX		
	CLP	9150-01-053-6688	Military		2	1 gal		
	CPC	8030-01-134-6513	F & L CO	CFDFB	1	CAN		
	Deisel Engine Oil **Description:** 15w40		Safety Clean System		1	1 qt		
	Fleet Charge **Description:** Antifreeze		Old Ward Industires		2	3.78 L		
	LUBE OIL 2 CYCLE		MCCOLLUGH		1	BOTTLE		
	PAINT, ENAMEL		COLUMBIA PAINT AND COATING		3	GAL		
	PAINT, ENAMEL		PPG		1	GAL		
	PAINT, ENAMEL		COLUMBIA PAINT AND COATING		1	5 GAL		

PAINT, LATEX		COLUMBIA PAINT AND COATING		1	5 GAL
PAINT, LATEX		VALSPAR		1	GAL
PAINT, LATEX		VALSPAR		1	QAURT
PAINT, LATEX		ACE		2	GAL
PAINT, LATEX		COLUMBIA PAINT AND COATING		1	QUART
PAINT, LATEX		COLUMBIA PAINT AND COATING		4	GAL
PAINT, LATEX (RED)		UNITED COATING		1	1/2 PINT
Scrub Wipes		Horizon		2	box of 300 sheets
Description: Cleaning Sheets					
SPARY PAINT		NONE		1	CAN
SPRAY PAINT (RED)		PAMIDA		1	CAN
SPRAY PAINT (WHITE)	8010-00-584-3150	LHB SO-SURE		1	CAN
TAP PRIMER		SCOTCH		1	CAN
WATER, REGEANT		AF SCIENTIFICS MANU.		3	GAL
SILCONE	6850-00-880-7616	FHIPPS PRODUCTS	BPHNP	1	TUBE

Print Inventory

Print Inventory | Cancel

Unit: DET 1 CO A 1st BN 163D IN Storage: SUPPLY RM 1 Month: 1/1/2012

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	A-33 DRY		ECOLAB		1	2.18 LBS		
	AJAX CLEANSER WITH CLORINE BLEACH		COLGATE/ POLMALIVE		3	21 OZ		
	AJAX SOFT CLEANSER		AJAX		20	21 OZ		
	AQUATRAZ		FRANKLIN CLEANING TECH		1	5 GAL		
	AWARD		AIRCHEM/ECOLAB		1	16.5 OZ		
	BETCO HI TECH FINISH		BETCO		11	GAL		
	BETCO TOILET CLEANER		BETCO		11	1 QT		
	BUFFER ALL		RMC		8	GA		
	CLEAN ALL PURPOSE CLEANER AND DEGREASER		LIGHT HOUSE FOR THE BLIND OF HUSTON		2	22 OZ		
	GOOD SENCE		JOHNSON DIVERSEY		3	14 OZ		
	GOOD SENCE TUFF		SC JONSON WAX		1	14 OZ		

ODERS

HI-LEX BLEACH		KIK INTER.	4	GAL
HORIZON 400		JOHNSON PROFESSIONAL	1	GAL
PENETREM		TREM CO	1	5 GAL
POWER TIME		RMC	4	GAL
QUICKSOLVE		AJAX	13	32 OZ
RENOWN FLOOR CLEANER		AMSAN	3	GAL
RENOWN SPECIAL GLASS CLEANER		AMSAN	4	GAL
SIMPLE GREEN		SUNSHINE MAKERS	3	24 OZ
SUNBONNET LEMON WAX		BUTCHERS	6	18 OZ
SUPER GREEN	7930-01-306-8369	NEW GEN. TECH	5	GAL
VANSOL		NATIONAL LAB	5	1 QT

Print Inventory

Print Inventory | Cancel

Unit: DET 1 CO A 1st BN 163D IN Storage: SUPPLY RM 2 Month: 1/1/2012

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	A-125 DRY		ECOLAB		1	5 GAL		
	AJAX CLEANSER WITH CLORINE BLEACH		COLGATE/ POLMALIVE		1	21 OZ		
	BECO EXPRESS 1 STEP		BECO CORP.		1	GAL		
	BUFFER ALL		RMC		2	1 gal		
	LIGHTNING		DIAMOND PROD.		1	GAL		
	PLEDGE		SC JONSON WAX		2	1 LBS		
	POLMALIVE DISH WASHING SOAP		COLGATE/ POLMALIVE		1	25 FLOZ		
	QUICKSOLVE		THOMPSON HAYWARD CHEM.		1	32 OZ		
	ROYAL SHEILD		ACE		1	GAL		
	SURE PAC	7930-01-481-1104	ECOLAB		1	45 OZ		

ILLUMINANCE SURVEY
LEWISTOWN ARMORY
LEWISTOWN, MONTANA
OCTOBER 4, 2012

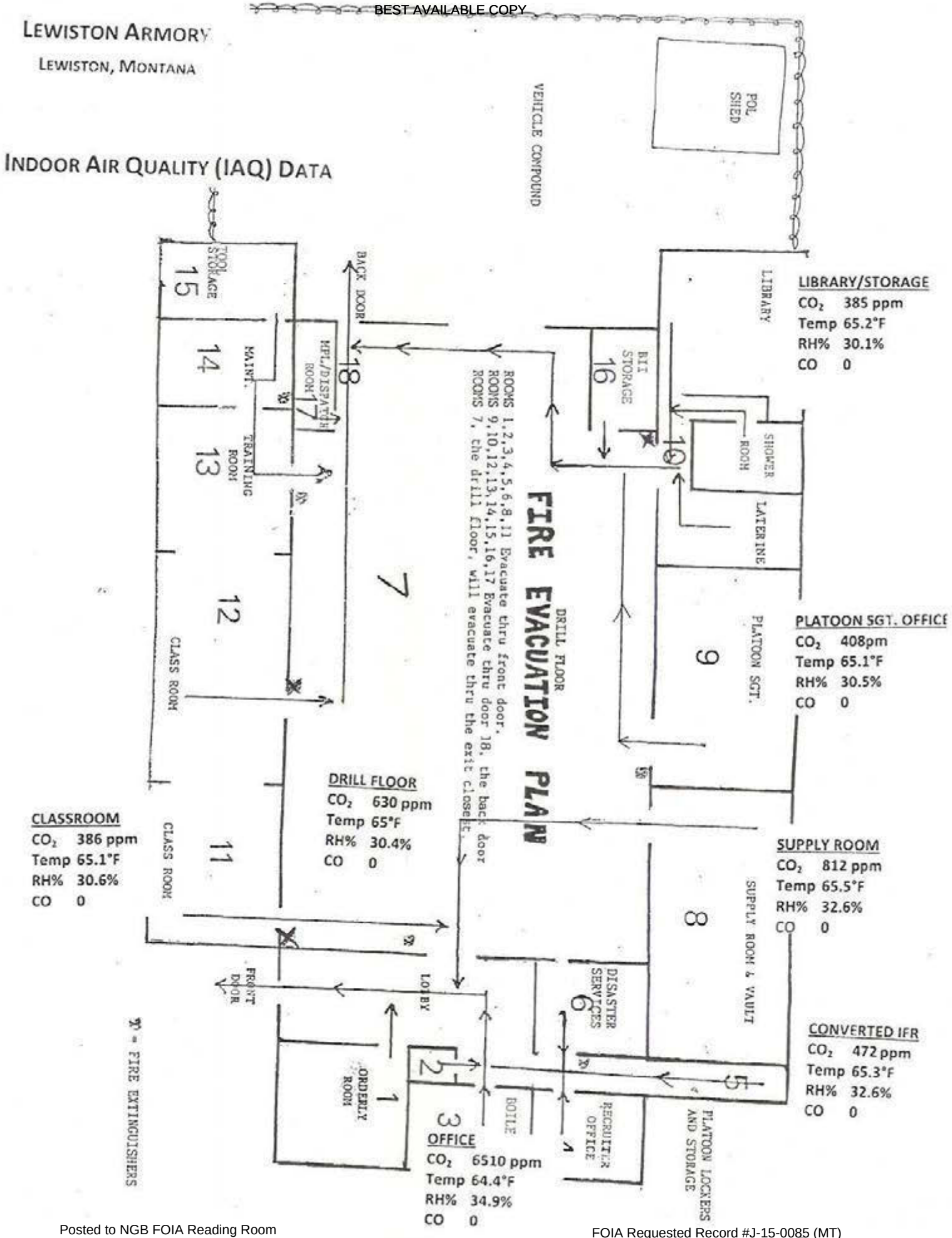
Building	Location	Light – FC*	Minimum lighting requirements – FC
Armory	Office at desk top	201	50
Armory	Drill Floor	62.8	30
Armory	Supply Room	59.8	30
Armory	Platoon SGT Office	103.1	50
Armory	Classroom	167.7	50
Armory	Converted IFR	55.6	30
Armory	Library	73.4	50
Armory	Recruiter Office	109.6	50

***FC = foot candle measurement**

LEWISTON ARMORY

LEWISTON, MONTANA

INDOOR AIR QUALITY (IAQ) DATA



LIBRARY/STORAGE
CO_2 385 ppm
Temp 65.2°F
RH% 30.1%
CO 0

PLATOON SGT. OFFICE
CO_2 408pm
Temp 65.1°F
RH% 30.5%
CO 0

SUPPLY ROOM
CO_2 812 ppm
Temp 65.5°F
RH% 32.6%
CO 0

CONVERTED IFR
CO_2 472 ppm
Temp 65.3°F
RH% 32.6%
CO 0

OFFICE
CO_2 6510 ppm
Temp 64.4°F
RH% 34.9%
CO 0

DRILL FLOOR
CO_2 630 ppm
Temp 65°F
RH% 30.4%
CO 0

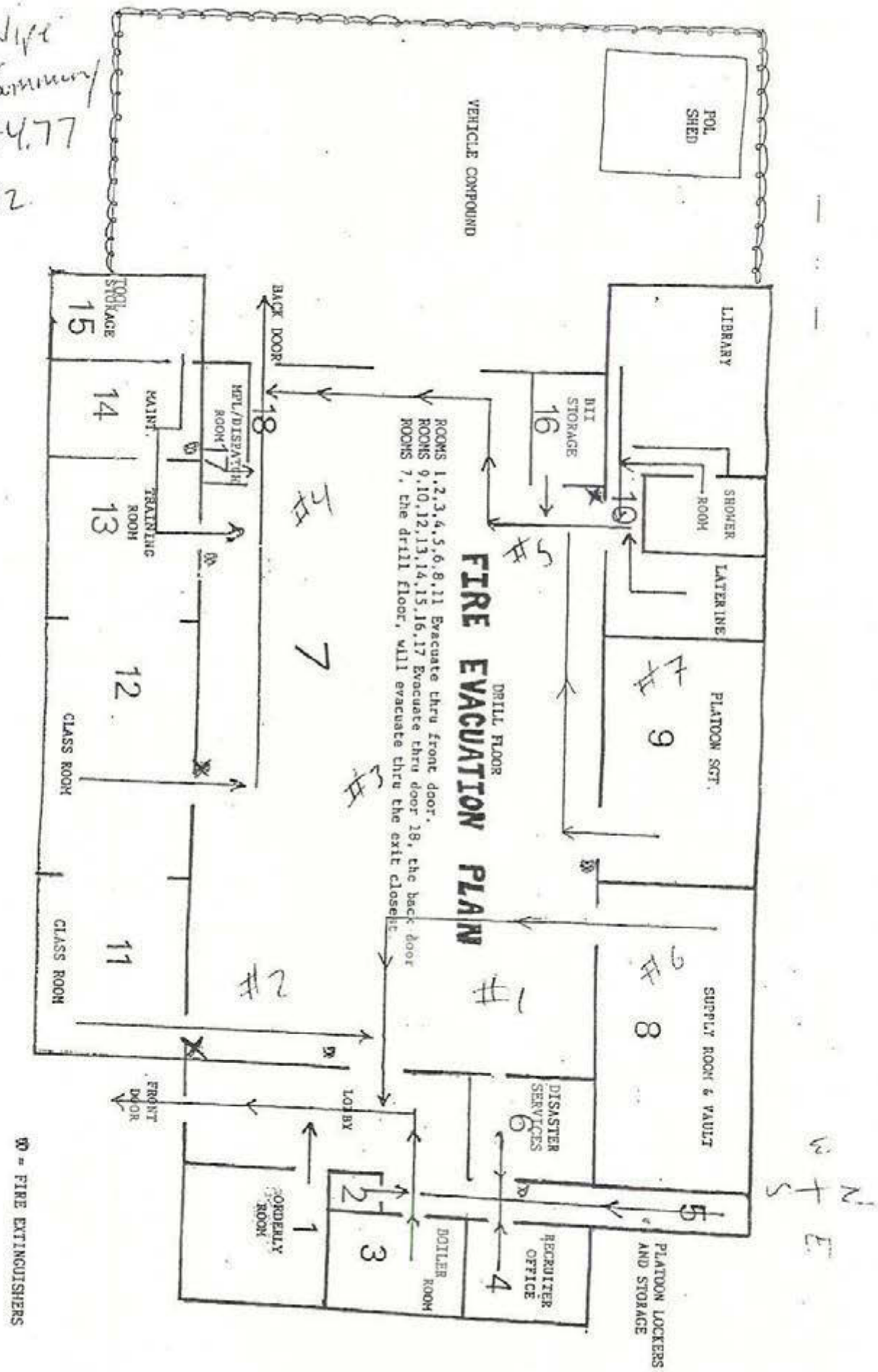
CLASSROOM
CO_2 386 ppm
Temp 65.1°F
RH% 30.6%
CO 0

10/4/2012

Lead Wire Sample Summary - .77

Sample #	Location
10412-Lewistown-01	Drill Floor, NE
-02	, SE
-03	Center
-04	, NW
-05	, SW
-06	Converted IER
-07	Converted IER

Lead Wipe
Sample Summary
CITH1374.77
10/4/2012



Name: UB

Date: 10/4/2012

NES Job Number: 013.1H1374.77

IAQ Data

Building	Location	CO_2	Temp	RH %	CO
Armory	Office	651	64.4°F	34.9	0
	Drill Floor	670	65°F	30.4	0
	Supply Room	812	65.5°F	32.6	0
	Platoon Sgt. office	408	65.1°F	30.5	0
	Classroom	386	65.1°F	30.6	0
	Library/ Storage	385	65.2°F	30.1	0
	Converted IFK	472	65.3°F	32.6	0

OUTDOOR CO_2 = 370

Name: LB

Date: 10/4/2012

NES Job Number: 013.1H1374.77

Light Survey

Building	Location	Light - ft/c
Armory	Office @ Desk	201 ft/c
	Drill Floor	62.8 ft/c
	Supply Room	59.9 ft/c
	Platoon Sgt. Office	103.1 ft/c
	Classroom	167.7 ft/c
	Converted Iff	55.6 ft/c
	Library	73.4 ft/c
	Recruiter Office	109.6 ft/c

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	✓ Drill Floor 01-05
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	Drill Floor
Additional lead wipe samples taken from 25% of the rest of the building - -(**on floor areas only**)	06-07
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	Yes, now a locker room, Storage
Is there any peeling **paint**? Take bulk sample if able.	[redacted] NO
Are there any signs of water damage or **mold**?	Possible Damage to Converted IFR
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	Built 1963 - No Asbestos
Quality of housekeeping	Great
HVAC maintenance plan in place?	State,
Overall condition of HVAC system	Yes, Proper
Obtained **CO2, Temp, RH** monitoring	✓ Attached
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	✓
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	1 flam locker, 1 shed outdoors

Fire alarm in working condition - -not usually in place in older armories	NO fire Alarm
Fire extinguishers in place and properly identified and mounted	√
Evidence of **monthly fire extinguisher inspections**	√
Annual fire extinguisher inspections tags current	Due OCT 2012
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	√
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	HAZcom – Hearing Conservation
Any Photo labs	N/A
Any hazardous **noise** sources	N/A
Light levels checked throughout building	√ √ Attached
Breaker panels properly labeled with no exposed wiring	√
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	(1) 3, 1 State (2) Infantry, Recruiter
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Not Currently 4-H - Day training School - once a month - Summer only
Obtain two **lead air samples**	On IHSW Request Only

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A No Kitchen
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A ↓
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Water/Flooding - Sprung Hose - Sump Pump work order in at State level.
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	
Name of Armory, POC, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Lewistown Armory Non-Responsive

903 Airport Road
Lewistown, MT

TSI - Customer Service report

Thank you for the opportunity to service your instrument.

RMA Number: 800235189

Ship-to party 5180406	Sold-to party 5180406
IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA	IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA

Service Information:
Purchase Order CC-[redacted]
Purchase Order Date 03/26/2012

Description Calibration of VelociCalc Plus 8386A

Equipment 57602 VELOCICALC Plus Air Velocity Meter
Serial Number 54110581
Material 8386A

Service Description:

Return Reason:
CALIBRATION OVERDUE

Findings:
Unit sent in for clean and calibration. The unit passed as found.

Action:
The unit was cleaned, calibrated, and a complete operational checkout

was performed.

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	68.4 (20.2)	°F (°C)
RELATIVE HUMIDITY	36	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☐ AS LEFT ☒ AS FOUND

☒ IN TOLERANCE ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

VELOCITY VERIFICATION — SYSTEM V-106 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	−3~3 (−0.02~0.02)	7	643 (3.26)	640 (3.25)	623~662 (3.17~3.36)
2	34 (0.17)	35 (0.18)	31~37 (0.16~0.19)	8	995 (5.06)	991 (5.03)	965~1025 (4.90~5.21)
3	64 (0.32)	64 (0.32)	61~67 (0.31~0.34)	9	1468 (7.45)	1476 (7.50)	1423~1512 (7.23~7.68)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2481 (12.60)	2463 (12.51)	2406~2555 (12.22~12.98)
5	160 (0.81)	159 (0.81)	155~164 (0.79~0.84)	11	4501 (22.87)	4440 (22.55)	4366~4636 (22.18~23.55)
6	328 (1.67)	325 (1.65)	318~338 (1.62~1.72)	12	8000 (40.64)	7943 (40.35)	7760~8240 (39.42~41.86)

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (−0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	−4.073 (−1014.2)	−4.084 (−1016.9)	−4.119~−4.027 (−1025.6~−1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY AS FOUND — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Temperature	E001800	01-19-12	07-19-12
Humidity	E003539	02-28-12	08-28-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
Temperature	E001799	01-19-12	07-19-12

Non-Responsive

March 27, 2012

DATE

Doc ID: CERT_DEFAULT

TSI P/N *

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition		
Temperature	69.1 (20.6)	°F (°C)
Relative Humidity	37	%RH
Barometric Pressure	28.61 (968.8)	inHg (hPa)

Model	8386A
Serial Number	54110581

☒ As Left ☐ As Found

☒ In Tolerance ☐ Out of Tolerance

– Calibration Verification Results –

Temperature Verification — System T-119 — Unit: °F (°C)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

Pressure Verification — System V-106 — Unit: inH_2O (Pa)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	-4.073 (-1014.2)	-4.084 (-1016.9)	-4.119~-4.027 (-1025.6~-1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

Humidity Verification — System H-102 — Unit: %RH

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

Velocity Verification — System V-110 — Unit: ft/min (m/s)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	648 (3.29)	646 (3.28)	629~667 (3.19~3.39)
2	35 (0.18)	34 (0.17)	32~38 (0.16~0.19)	8	996 (5.06)	997 (5.06)	966~1025 (4.91~5.21)
3	64 (0.33)	64 (0.32)	61~67 (0.31~0.34)	9	1476 (7.50)	1476 (7.50)	1432~1521 (7.27~7.72)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2476 (12.58)	2472 (12.56)	2401~2550 (12.20~12.95)
5	160 (0.81)	159 (0.81)	155~165 (0.79~0.84)	11	4498 (22.85)	4548 (23.10)	4363~4633 (22.17~23.54)
6	346 (1.76)	346 (1.76)	335~356 (1.70~1.81)	12	7988 (40.58)	8013 (40.71)	7748~8227 (39.36~41.80)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001800	01-19-12	07-19-12
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Humidity	E003539	02-28-12	08-28-12
Temperature	E004402	12-08-11	06-08-12
Pressure	E001721	12-13-11	06-13-12
Velocity	E003327	09-19-07	09-19-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001799	01-19-12	07-19-12
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
DC Voltage	E001658	06-28-11	12-28-12
Pressure	E001719	12-13-11	06-13-12
Barometric Pressure	E001992	04-08-11	04-08-12

Non-Responsive

March 27, 2012
Date

Doc ID: CERT_DEFAULT

Tektronix
Service Solutions

Certificate of Calibration

6209119

Certificate Page 1 of 1

Instrument Identification

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

PO Number: Non-Responsive

Instrument ID: H225438
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive
Cal Date: 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.

Approved By: Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230828	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700276206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4380	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

Tektronix
Service Solutions

DATASHEET

Manufacturer: Minolta
Model: TL-1
Description: Illuminance Meter

Workorder #: 602492
Procedure: Manufacture
Date: 22-May-12

ILLUMINANCE

Range	Nominal Value	As Found	Result	As Left	Result	Min	Max
30fC (resolution: .1 fC)	10.00	10.1	P	10.1	P	9.7	10.3
300 fC (resolution: 1 fC)	100.0	100.1	P	100	P	97	103
3000 fC (resolution: 10 fC)	1000.0	1000.0	P	999	P	970	1030

Note: Measurement Uncertainty = +/- 2.4% of Indication.

MICRO PRECISION CALIBRATION INC.

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1660

Certificate of Calibration

Date: Nov 20, 2012

Cert No. 2008120221675

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3921
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8185	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2008120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90058761A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used in this Event

Procedure Name	Description
PARTICLE COUNTER	PARTICLE COUNTERS
971 TEMP/HUMIDITY METER	TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported **expanded uncertainty of measurement** is stated as the **standard uncertainty of measurement** multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSO and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

TABLE 1
LEAD WIPE SAMPLE RESULTS
LEWISTOWN ARMORY
LEWISTOWN, MONTANA
OCTOBER 04, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
10412-Lewistown-01	Drill Floor	Southwest corner of drill floor, floor area sample	5.1	40 $\mu g/ft^2$
10412-Lewistown-02	Drill Floor	Northwest corner of drill floor, floor area sample	2.7	40 $\mu g/ft^2$
10412-Lewistown-03	Drill Floor	Center, middle of drill floor, floor area sample	<2.5	40 $\mu g/ft^2$
10412-Lewistown-04	Drill Floor	Northeast corner of drill floor, floor area sample	<2.5	40 $\mu g/ft^2$
10412-Lewistown-05	Drill Floor	Southeast corner of drill floor, floor area sample	9.6	40 $\mu g/ft^2$
10412-Lewistown-06	Converted IFR	Floor sample from the north area of room	29	200 $\mu g/ft^2$
10412-Lewistown-07	Converted IFR	Floor sample from inside storage locker, south end of converted IFR (previous area where the bullet trap was located in the IFR)	**440**	**200 $\mu g/ft^2$**

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard

ANALYTICAL REPORT

Report Date: October 15, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1228520
Client Project ID: 013.IH1374.77/Lewiston, MT
Purchase Order: 013.IH1374.77
Project Manager: Non-Responsive

Analytical Results

Sample ID: 10412-Lewiston-01	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520001	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5.1	5.1	2.5

Sample ID: 10412-Lewiston-02	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520002	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	2.7	2.7	2.5

Sample ID: 10412-Lewiston-03	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520003	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 10412-Lewiston-04	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520004	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

ANALYTICAL REPORT

Workorder: 34-1228520
Client Project ID: 013.IH1374.77/Lewiston, MT
Purchase Order: 013.IH1374.77
Project Manager: Non-Responsive

Analytical Results

Sample ID: 10412-Lewiston-05	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520005	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	9.6	9.6	2.5

Sample ID: 10412-Lewiston-06	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520006	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	29	29	2.5

Sample ID: 10412-Lewiston-07	Media: Ghost Wipe	Collected: 10/04/2012
Lab ID: 1228520007	Sampling Location: Lewiston, MT	Received: 10/11/2012
Method: NIOSH 7300 Mod.	**Sampling Parameter: Area 1 ft²**	**Prepared: 10/11/2012** **Analyzed: 10/12/2012**

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	440	440	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: **34-1228520**
Client Project ID: 013.IH1374.77/Lewiston, MT
Purchase Order: 013.IH1374.77
Project Manager: Non Responsive

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

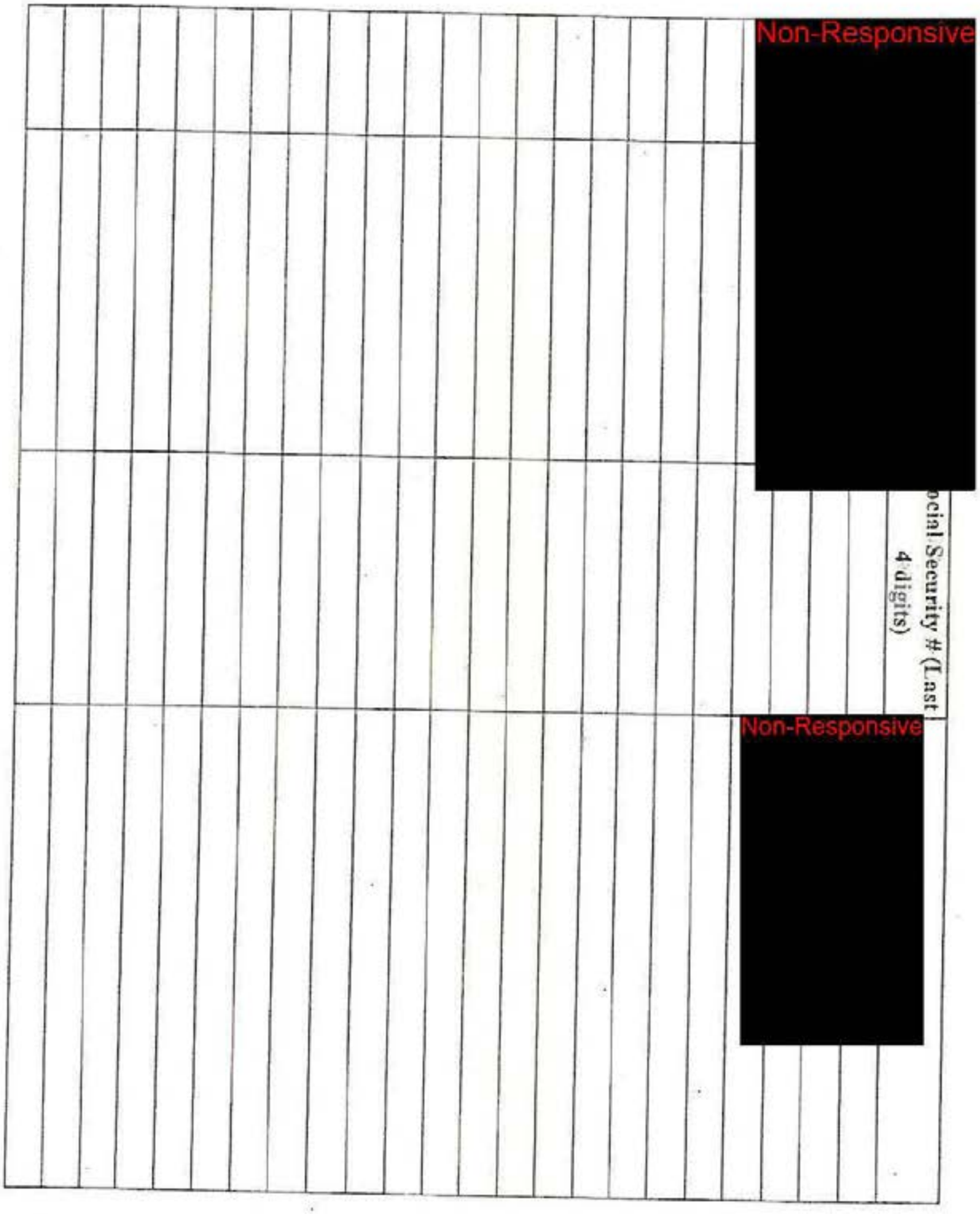
Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit. A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

Facility:
Location:
Date:

Employee List



Industrial Hygiene, Southwest
Hazard Inventory Log
Lewistown Armory - MT 59457

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLA-100412-4.1 ☐	High levels of lead above the Army National Guard standards.	Armory - Converted IFR	3	Clean entire Converted Indoor Firing Range area where high levels of lead were found. Review and utilize the lead clean-up SOP before cleaning the area.					29 CFR 1910.1025 NGP 420-15
MTLA-100412-4.3 ☐	Water damage/ flooding/ standing water in building	Armory - Converted IFR	3	Get Converted IFR area evaluated to determine what is allowing water seepage into this area. Acquire a sump pump to remove standing water from the converted IFR, if needed.					Prudent Industrial Hygiene Practices
MTLA-100412-4.4 ☐	No asbestos documentation located at the facility.	Armory	3	Consult with a Montana state-certified asbestos inspector to inspect the facility for any asbestos containing material. If there is ACM located at the Lewistown Armory, an asbestos Operations & Maintenance Plan should be written and communicated to employees.					29 CFR 1910.1001(b)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 **Introduction** – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Lewistown Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Findings and Recommendations; Item 2 – Painted Surface Evaluation).

N4.1 **Lead Wipe Sampling** – Clean areas of converted indoor firing range where high levels of lead dust were detected during the inspection. Clean areas thoroughly by referring to the lead clean-up SOP found in Appendix P.

N4.3 **Water Damage and limited Visual Fungal Growth Evaluation** – Acquire a sump-pump to remove standing water after flooding into the converted indoor firing range.

N4.4 **Asbestos Documentation** – Documentation should be obtained as to whether or not there is asbestos located in the building. A contactor should be used to see if materials in the building contain asbestos. If there is asbestos in the building, then an operations and maintenance plan should be written for the facility.

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Samples 10412-Lewistown-01, 02, 03, 04, 05.
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	Yes weapons are cleaned on the Drill Floor.
Additional lead **wipe** samples taken from 25% of the rest of the building - -**(on floor areas only)**	Samples 06 and 07 were collected from the converted IFR.
Is there **a converted indoor firing range?** If so collect additional wipe samples IAW the SOW.	Samples 06 and 07 were collected from the converted IFR which now is a locker room.
Is there any peeling **paint?** Take bulk sample if able.	No.
Are there any signs of water damage or **mold?**	Employees stated that the converted IFR periodically floods during the spring time due to possible poor irrigation from building.
Any suspected **ACM?** Where and what condition is it in. Bulk sample if able.	Possible ACM in flooring.
Quality of housekeeping	Great.
HVAC maintenance plan in place?	Yes through the state.
Overall condition of HVAC system	In proper working condition.
Obtained **CO2, Temp, RH** monitoring	Attached to report.
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Attached to report.
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	Inspected with no incompatibilities found.

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A. No kitchen.
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A. No high noise areas monitored.
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Done
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	Done
Name of Armory, **POC**, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	RR2 Lewistown Non-Responsive 406-324-5595 863 Airport Road Lewistown, MT **(Add Checklist to Report)**

/ 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
eathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04				0
eathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04				0
ımber of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05				0
ımber of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05				0
ımber of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06				0
ımber of Noise Sound Level samples collected >= 140 dBP	953-01-06				0
ımber of Noise Sound Level samples collected >= 140 dBP not controlled, that are commended for control	953-01-07				0
ımber of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07				0
ımber of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not ntrolled, that are recommended for control	953-01-08				0
ımber of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not ntrolled	953-01-08				0
ımber of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are commended for control	953-01-09				0
ımber of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09				0
ıtal number of DOEHRS-IH shops coded as Priority 1 which have at least one task rformed in the past 12 months	953-02-10	IHT			
ıtal number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
ımber of buildings for which all processes requiring a basic industrial hygiene aracterization have received one within the last 12 months	953-02-11	IHT			
ımber of buildings requiring a basic industrial hygiene characterization within the last 12 onths	953-02-11	IHT			
ımber of buildings for which all processes requiring a basic industrial hygiene aracterization have received one within the last 12 months	953-02-12	IHT			
ımber of buildings requiring an industrial hygiene exposure assessment within the last 12 onths	953-02-12	IHT			
ımber of processes that were assessed for potential inhalation exposure to employees ring this IH Visit	953-02-13	IHT			
ımber of processes that require an assessment for potential inhalation exposure to ıployees during this IH Visit	953-02-13	IHT			

umber of processes that were assessed for potential inhalation exposure to employees thin the last 12 months.	953-02-14	IHT			
lumber of processes that require an assessment for potential inhalation exposure to nployees within the last 12 months.	953-02-14	IHT			
umber of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			
umber of personnel who required reassessment by industrial hygiene within the last 12 onths.	953-02-15	IHT			
umber of processes which have been measured for potential hazardous noise levels with a ound level meter within the last 12 months.	953-02-16	IHT			
umber of processes which require measurement for potential hazardous noise levels using sound level meter within the last 12 months.	953-02-16	IHT			
umber of personnel for which noise dosimetry was collected during their complete work shift quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
umber of personnel who require work shift dosimetry to quantify their daily noise exposures thin the last 12 months.	953-02-17	IHT			
umber of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were spected and measured for airflow rates	953-02-18				0
umber of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require spection and measurement of airflow rates	953-02-18				0
umber of ventilation systems which require corrective action based on deficiencies identified uring an IH survey	953-02-19				0
umber of ventilation systems which were evaluated by an IH	953-02-19				0
umber of design review packages evaluated and addressed by an IH with recommendations pplicable to occupational health concerns	953-02-20	IHT			0
umber of design review packages which required IH evaluation and recommendations pplicable to occupational health concerns	953-02-20	IHT			0

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Libby Armory
Closed Indoor Firing Range
(Closed IFR)

1004 Treasure Ave
Libby, MT 59923

23 May 2014

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

16 JUN 2014

MEMORANDUM THRU Non-Responsive DSS, 1956 Mt. Majo St., Room 1009, Helena, MT 59636

FOR Commander, Libby Armory Closed Indoor Firing Range (CIFR) 1004 Treasure Ave Libby, MT 59923

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Libby Armory Closed Indoor Firing Range (CIFR) 1004 Treasure Ave Libby, MT on 23 MAY 2014.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Libby Armory Closed Indoor Firing Range (CIFR) 1004 Treasure Ave Libby, MT on 23 MAY 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the Industrial Hygiene report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached Industrial Hygienist report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Repair or replace kitchen hood ventilation system. (para. 4.7.2) **(RAC 4)**

b. RECURRING OBSERVATION: Post warning signage at the entryway(s) of the facility and on Closed

IFR door(s) to warn pregnant or nursing females and children under 7 years of age that there is a potential for a lead dust exposure in this facility/area. Make sure staff and maintenance personnel are aware of the associated hazards of lead exposure. (para. 4.1.3) (**RAC 3**)

c. Continue Acceptable Housekeeping Practices within the armory and utilize Clean-up SOP included in this report to help prevent migration of noted lead dust in this Closed IFR. With each episode of weapons cleaning utilize this same SOP to clean-up afterwards. (para. 4.11.1) (**RAC 4**)

d. RECURRING OBSERVATION: **Prohibit use of the Closed IFR** until the area is cleaned of lead below ARNG thresholds. Utilize NGP 420-15 Conversion of Indoor Firing Ranges as a guideline for conversion /Closure. Clean the areas noted to be high with lead dust in this report, and clean in accordance with the Armory Clean-Up SOP accompanying this report. Have follow-up testing conducted to meet acceptable concentrations. (para. 4.1) (**RAC 2**)

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

(1) Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

(2) Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

(3) Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

(4) Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

(5) The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (**RCAS-SOH**) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Libby Armory Closed Indoor Firing Range-Libby, MT

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
RECURRING EVENT MTLACIFR-052314-4.1.1	The analytical results for lead wipe sampling indicated levels greater than the 40 µg/ft2 criterion or the 200 µg/ft2 criterion specified by the IHSW SOP and the ARNG.	IFR	2	Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft2 and the 200 µg/ft2 IHSW SOP criterion level.					29 CFR 1910.1025(h)(1) and NG PAM 420-15
RECURRING EVENT MTLACIFR-052314-4.1.2	The IFR has not been properly cleaned or converted.	IFR	2	Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range.					NGR 385-15, Section 2-3(a) and NG PAM 420-15 (Conversion or Closure IFR)
RECURRING EVENT MTLACIFR-052314-4.1.3	The IFR hallway door is kept locked. However, there are not warning signs posted.	IFR	3	Post warning signs on Entryway doors for Potential Lead Dust Exposure to pregnant females, females or of child bearing age and children. Properly close or convert non-active Indoor Firing Ranges.					General Duty Clause 5(a)(1) and NG PAM 420-15
MTLACIFR-052314-4.6	MSDS files not updated to current SDS GHS Standard	Armory, Libby, MT	4	Update all MSDSs for the facility with the new SDS format.					Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
MTLACIFR-052314-4.7.1	Both of the exhaust ventilation drop flow rates measured in the maintenance bay did not meet the ARNG minimum recommended requirements for a 500 HP idling engine.	Maintenance Bay	3	Install ventilation system that draws 850 CFM for turbo charged vehicles.					ARNG-CSG-P Memo Dated 14 November 2013 (ARNG Maintenance Shop Local Exhaust Ventilation Measuremnts)

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Libby Armory Closed Indoor Firing Range-Libby, MT

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLACIFR-052314-4.7.2	The kitchen ventilation hood either did not operate when the switch was thrown or some other action needed to be taken.	Kitchen	4	Either repair the kitchen ventilation hood or post operating instructions indicating how to initiate the ventilation hood.					NFPA 96
MTLACIFR-052314-4.11	The eyewash station/deluge shower in the maintenance bay was not equipped with an alarm system.	Maintenance Bay	4	Install an alarm system on the eyewash stations/deluge shower.					ANSI Z358, 1-2009 and dg 415-1, C, 2.1.4.6.2

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

ARNG-CSG-P

17 JUNE 2014

MEMORANDUM FOR Non-Responsive The Adjutant General of Montana, P.O. Box 4789 (1956 Mt. Majo Street), Fort Harrison, MT 59636-4789

SUBJECT: Executive Summary for the Industrial Hygiene Survey of the Armory and Indoor Firing Range (IFR) at 1004 Treasure Avenue, Libby, MT 59923 on 23 MAY 2014

1. Purpose. Industrial Hygiene Southwest Region contracted to have an Annual Industrial Hygiene (IH) survey conducted which would identify, assess, and make recommendations for the reduction or elimination of potential health hazards present in the workplace. This EXSUM provides the most critical recommendations which need to be addressed promptly. The IH Report contains additional findings and recommendations which should be addressed as funding and manpower permit.

2. **Findings**.

a. The facility had the following high risk level findings:

1. There were no Risk Assessment Codes (RAC 1) identified during this Industrial Hygiene Survey.

2. There were two Risk Assessment Codes (RAC 2) identified during this Industrial Hygiene Survey.
   a. The analytical results for lead wipe sampling indicated levels greater than the 40 µg/ft2 criterion or the 200 µg/ft2 criterion specified by the IHSW SOP and the ARNG. Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft2 and the 200 µg/ft2 IHSW SOP criterion level. (para. 4.1) **(RAC 2)**

   b. The IFR has not been properly cleaned or converted. Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range. (para. 4.1) **(RAC 2)**

b. The full IH report contains information which can be used in correcting deficiencies, establishing priorities and developing suspense dates.

c. Some locations were not evaluated during this visit. However, additional IH services can be requested to monitor them for potential health hazards when operations are ongoing.

ARNG-CSG-P
SUBJECT: Executive Summary for the Industrial Hygiene Survey of the Libby Armory and Indoor Firing Range, Libby, MT on 23 MAY 2014

3. **Recommendations**. A risk assessment code (RAC) has been assigned to each health hazard identified in the report. Each type of RAC (health, safety, ergonomic) uses slightly different matrices to determine the overall severity, however a RAC 1 should be considered Critical; a RAC 2 is Serious. Follow all recommendations made in the attached IH survey report, the Violation Log as well as the following recommendations.

a. No RAC 1 hazard(s) were identified at this facility.

4. The technical point of contact is Non-Responsive at (775) 771-3956. For follow up information, contact the Deputy State Surgeon's Office Non-Responsive t (406) 324-3280.

Non-Responsive

Chief, Industrial Hygiene

CF
CFMO Non-Responsive 460 Fairview Dr, Carson City, NV 89701
ASO, 20,000 Army Aviation Dr, Reno, NV 89506

CF w/encl
DSS Non-Responsive P.O. Box 4789 (1956 Mt Majo Street), Fort Harrison, MT 59636-4789
Readiness NCO and Building Manager Armory and IFR Non-Responsive 004 Treasure Avenue, Libby, MT 59923

BEST AVAILABLE COPY

DEPARTMENT OF THE ARMY AND AIR FORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

17 June 2014

MEMORANDUM THRU Montana Army National Guard, Deputy State Surgeon (DSS), P.O. Box 4789 (1956 Mt Majo Street, Fort Harrison, MT 59636-4789

FOR Building Manager, Armory and Indoor Firing Range (IFR) – Detachment 1, 639th CSSC, 1004 Treasure Avenue, Libby MT 59923

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Armory and IFR Libby, 1004 Treasure Avenue, Libby, MT conducted on 23 May 2014.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Armory and Indoor Firing Range (IFR), Libby, MT on 23 MAY 2014.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. SSG Amy L. Good, Readiness NCO and Building Manager, went above and beyond expectations to assist the contractor by supplying information for review.

b. The facility was generally well organized, neat and well kept.

c. It was apparent the facility personnel were extremely knowledgeable in their roles and responsibilities regarding the Armory.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1 represents the 2.1 located within the contractors report.)

a. The analytical results for lead wipe sampling indicated levels greater than the 40 µg/ft2 criterion or the 200 µg/ft2 criterion specified by the IHSW SOP and the ARNG. Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft2 and the 200 µg/ft2 IHSW SOP criterion level. (para. 4.1) **(RAC 2)**

b. The IFR has not been properly cleaned or converted. Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range. (para. 4.1) **(RAC 2)**

c. The IFR hallway door is kept locked. However, there are not warning signs posted. Post warning signs on Entryway doors for Potential Lead Dust Exposure to pregnant females, females or of child bearing age and children. Properly close or convert non-active Indoor Firing Ranges. (para. 4.1) **(RAC 3)**

d. MSDS files not updated to current SDS GHS Standard. Update all MSDSs for the facility with the new SDS format. (para. 4.6) **(RAC 4)**

e. Both of the exhaust ventilation drop flow rates measured in the maintenance bay did not meet the ARNG minimum recommended requirements for a 500 HP idling engine. Install ventilation system that draws 850 CFM for turbo charged vehicles. (para. 4.7) **(RAC 3)**

f. The kitchen ventilation hood either did not operate when the switch was thrown or some other action needed to be taken. Either repair the kitchen ventilation hood or post operating instructions indicating how to initiate the ventilation hood. (para. 4.7) **(RAC 4)**

g. The eyewash station/deluge shower in the maintenance bay was not equipped with an alarm system. Install an alarm system on the eyewash stations/deluge shower. (para. 4.11) **(RAC 4)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected or closed for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel version of the Violation Correction Log Workbook we have provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit the assessments for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facility's operations. Additional operations can utilize this format to design HAs not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the California Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations, or Units, review and provide assistance with implementation of these recommendations. This will

educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Indoor Firing Range

Decontamination and Cleaning Protocol

(Periodic Cleaning and Conversion)

1. Ensuring that all procedures listed below comply with all federal, state, and local regulation. Consult with the Regional Industrial Hygiene Office and the States Environmental Office for future guidance.
2. **Ventilation System**

   The range ventilation system must be in operation during all cleaning activities. If no ventilation system is available all doors and windows must keep sealed to prevent contamination of other areas.
3. **Materials**

   I. A High Efficiency Particulate Air (HEPA) filtered vacuum system is the preferred method of cleanup. If a HEPA vacuum cannot be obtained a wet method, detailed below, should be utilized. **A high-pressured water system or dry sweeping may not be used.**

   II. A cleaning solution containing detergent and water is recommended. New solutions of detergent and water should be mixed frequently.

   III. Two containers should be used; one for wetting the applicator (rags, sponge, mop) and the other for rinsing once the dust has been wiped from the surfaces.

IV. Wastewater in containers can be left to evaporate. Any waste left in the buckets and applicators should be disposed of as hazardous waste**. Consult the Environmental Office for appropriate disposal instructions**.

V. Personal responsible for decontamination of the range and stored items be provided with a full face air purifying respirator with a N100 filter or HEPA filter cartridge providing that all requirements for placing employees in respiratory protection have been met as detailed in 29 1910.134. Employees should be provided with protective coveralls with hood and shoe covers (i.e. Tyvex TM full body suite). If cotton coveralls are provided then the employer must provide for laundering of protective clothing. Protective clothing should not be taken home. Prior to leaving the area, personnel should thoroughly HEPA vacuum the clothing to prevent lead dust from leaving the area. Work and street clothing should not be stored together.

4. Order of Cleaning

I. A progression of cleaning form top to bottom and from behind the steel backstop to the firing line should be used. All surface areas in the range must be cleaned. Stored items must be decontaminated prior to removal.

II. After removing the sand/or the steel backstop, areas in front of and behind the bullet trap, along with the steel backstop plates should be cleaned.

III. The ceilings, lights, baffles, retrieval system, heating system, and ventilation ducts should be cleaned.

IV. Acoustical material should be vacuumed and removed instead of being painted over. A toxic Characteristic Leaching Procedure (TCLP) test may be used for acoustical material to determine if the material needs to be classified as hazardous and disposed of according lt. The Environmental Office should be contacted regarding this testing.

V. The floor should be the last surface cleaned starting at the bullet trap and ending behind the firing line, to include the plenum area. Concrete floors should be sealed with deck enamel, or lead paint sealant.

VI. All walls should be painted, preferably with a lead sealant paint, which will help prevent any leaching of lead after covering.

VII. Following the wet cleaning of the area and after all surfaces have been allowed to dry thoroughly, a HEPA vacuum should be used on all surfaces, until no dust or residue can be seen. A thorough inspection to detect surface lead dust should be made following cleanup.

VIII. The Regional Industrial Hygiene Office should be contacted for clearance sampling and to approve the range for converted use.

5. Decontamination of Stored Items

I. All stored items must be decontaminated before removing from the range, stored equipment next to the bullet trap and firing line should be decontaminated first.

II. A HEPA vacuum or wet cleaning method should be used. Every attempt should be made to clean the item before disposing as hazardous waste to reduce cost and waste.

III. Porous items such as canvas tents or other fabrics may be laundered at companies, which specialize in industrial laundry services. Office partitions and carpeting present during firing should be considered grossly contaminated and disposed of as hazardous waste. Consult the Environmental Office before removing and disposing of items.

6. Medical Surveillance

A pre-placement medical examination is required for all individuals involved with range cleanup operations.

7. Air Monitoring

Worker breathing zone air samples must be collected during range cleanup to ensure that workers are not overexposed and to evaluate clean-up procedures.

8. Hazard Training

A training program must be instituted for all individuals who are subject to exposure to lead at or above the action levels, or for whom the possibility of skin or eye irritations exits. This training should be provided for all personal currently involved in range cleanup operations, at least annually. As required by 29 CFR 1910.1025(l)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

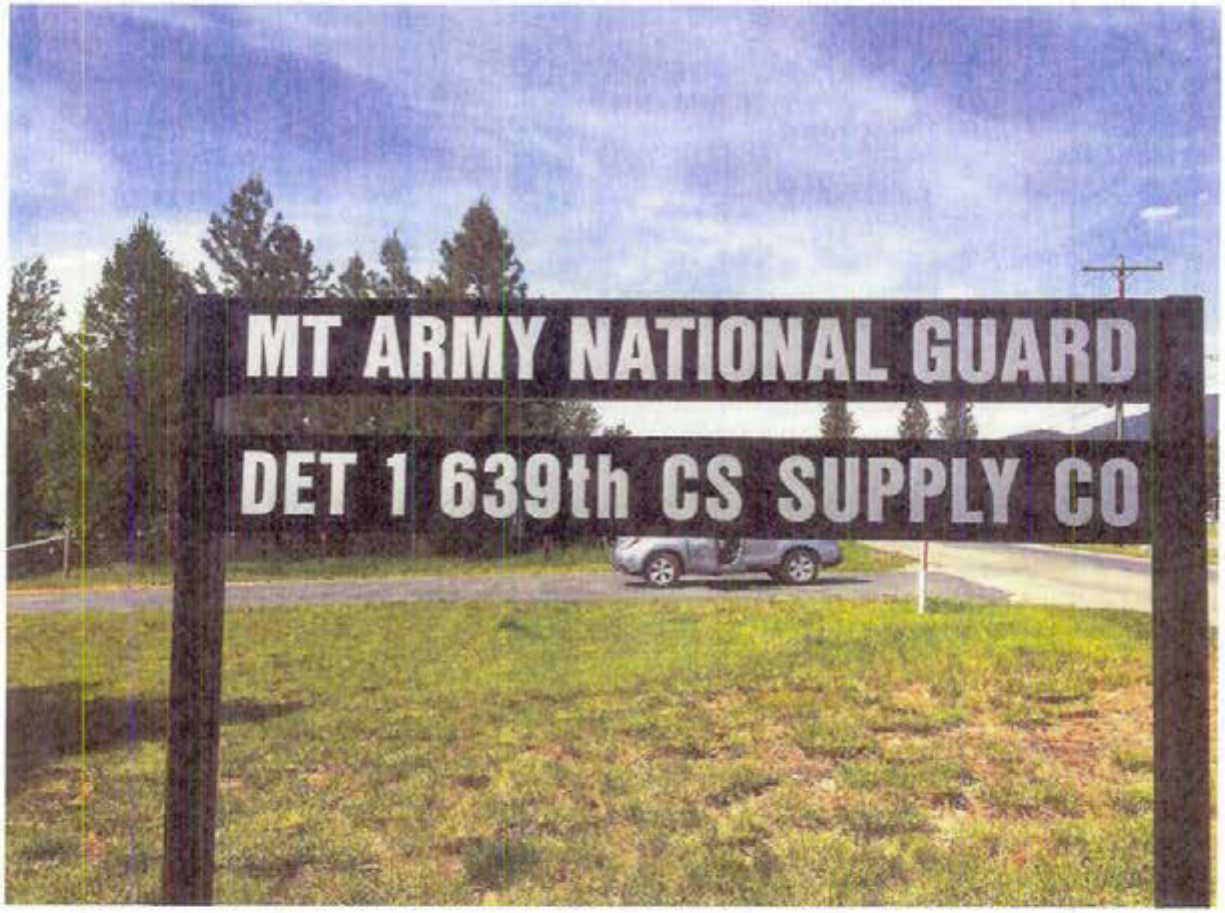
If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST

Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit



Armory, Libby, Montana

1004 Treasure Avenue
Libby, Montana 59923

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

DETACHMENT 1, 639TH CSSC ARMORY
1004 TREASURE AVENUE
LIBBY, MONTANA 59923

23 May 2014

Prepared for:

National Guard Bureau
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:

R & R Environmental, Inc.
47 West 9000 South, Suite #2
Sandy, Utah 84070

***R & R* Job Number: RR-140432-1**

Reviewed by:

Non-Responsive

R & R Environmental, Inc.
Vice President

Prepared by:

Non-Responsive

R & R Environmental, Inc.
Environmental Engineer/Scientist

TABLE OF CONTENTS

Appendices:

EXECUTIVE SUMMARY

During the period of 23 May 2014, Non-Responsive CSP, Industrial Hygienist, Environmental Engineer, and Environmental Scientist of R&R Environmental, Inc., conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Detachment 1, 639th CSSC Armory, located at 1004 Treasure Avenue, Libby, Montana 59923. The primary point of contact for information gathered during this survey was the Readiness NCO and Building Manage Non-Responsive 406-324-5270 email Non-Responsive

The objectives of this IH Site Assistance Visit were to:

- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor sound level measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards;
- Review safety policies/programs, training, and record keeping; and
- Conduct Hazard Based Assessments (HA's) and provide supporting monitoring analysis for recommendations.

Significant findings for this IH Assistance Visit can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, workspace locations, regulatory requirements, and additional recommendations.

Commendable: Non-Responsive Readiness NCO and Building Manager went above and beyond expectations to assist R&R Environmental, Inc. by supplying information to review and escorting the hygienist. The entire facility was extremely well organized, neat, and well kept. Additionally, it was apparent Non-Responsive was extremely knowledgeable in her role and responsibility and willing to assist.

1.0 Introduction

During the period of 23 May 2014, Non-Responsive CSP, Industrial Hygienist, Environmental Engineer, and Environmental Scientist with R & R Environmental, Inc. (R&R) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Detachment 1, 639th CSSC Armory, located at 1004 Treasure Avenue, Libby, Montana 59923. The Readiness NCO and Building Manager of the facility is Non-Responsive phone: 406-324-5270, email: Non-Responsive so served as the primary point of contact for information gathered during this survey.

1.1 Objective

The primary goal and focus for the fiscal year 2014 IHSAVs is to be a Hazard Based Evaluation and allow for recommendations as it relates to the processes and activities located at the facility.

The overall purpose of the IHSAV is to identify, measure, and provide recommended methods to control the existence and extent of potentially hazardous operations or conditions at the Army National Guard Facility. The IHSAV is designed to establish baseline and Hazard Assessments (HA's) of workplace and process conditions or update/validate previous baseline/HA so a worker's history of exposures, or potential exposures is provided for each civilian and military employee.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the facility for water damage and the presence of fungal growth;
- Review the asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the configuration of hazardous material storage and use procedures;

- Review safety training and record keeping;
- Measure the volumetric flow of exhaust ventilation systems;
- Monitor and measure sound level;
- Measure illumination levels;
- Evaluate safety hazards with a safety walkthrough; and
- Review safety policies/programs, training, and record keeping.

2.0 Process Description

The Libby Armory operates in one building. The building is approximately 35,000 square feet in area, was estimated to be built in the 1995 with the addition of the maintenance bay in 2003. The building is constructed of concrete masonry units (CMU) with a brick and mortar veneer exterior and some metal siding. The roof is a standard commercial roofing system. The facility consists of a drill floor, kitchen area, multiple administration offices and classrooms, and an indoor firing range (IFR) on the west side of the building. A concrete approach apron is east of the building connecting an asphalt parking area to the street. Parking for the employees is located east of the building with a motor pool to the north. Access to the facility is via Treasure Avenue to the east.

The only unit assigned to the facility is Detachment 1 of the 639th CSSC (UIC: Non-Responsive The total number of full time personnel assigned to the facility is two and both are AGR. The work schedule of the facility is Monday through Friday from 0800 - 1700. On drill weekends which is usually one weekend per month, the remaining members of the Detachment consisting of mostly M-day soldiers will attend drill at the facility. The facility is used occasionally for non-National Guard activities or civilian activities in the form of banquets and local dinner gatherings. It was indicated the IFR was only used for a year or so until notice was given to secure it and not enter.

3.0 METHODS

This section indicates methodologies intended to be used upon initial investigation of the facility. Any deviations from the methodologies indicated in this section are indicated in the corresponding sections of Section 4 of this report.

3.1 Lead Wipe Sampling

Lead residue (dust) wipe samples were collected on horizontal surfaces specifically such as work surfaces and floors throughout the facility to determine housekeeping standards. A total of five lead wipe samples were collected at the facility. Ghost Wipe™ brand wipes were used to obtain the samples using a one square foot template. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. The collected wipe samples were placed in clean and labeled plastic containers. Samples were submitted to ALS Laboratory Group in Salt Lake City, Utah for analysis, using NIOSH Method 7300 modified for Ghost Wipes™. See Appendix I for sample locations and Appendix J for laboratory results. Photographs of the sampling points are located in Appendix C.

The Mather, California office of IHSW has developed a Standard Operating Procedure (SOP) for lead, which is a combination of the Occupational Safety and Health Administration (OSHA), U.S. Department of Housing and Urban Development (HUD), and Army regulations. This SOP sets forth a criterion of 40 micrograms per square foot ($\mu g/ft^2$) for converted indoor firing ranges, break rooms, floor surfaces, or any area that might be used for non-military functions. Additionally, a 200 $\mu g/ft^2$ criterion has been established for tool rooms, maintenance bays, furnace rooms, boiler rooms, storage closets, and other areas where general public access is not expected. Areas of the facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by OSHA 29 CFR 1910.1025 (h)(1).

3.2 Painted Surface Evaluation

The interior of the building was visually inspected by the on-site Industrial Hygienist for peeling paint on the walls, ceilings, and floors. Bulk samples are obtained from paint that is peeling away from the substrate.

3.3 Moisture Intrusion and Limited Visual Fungal Growth Evaluation

Microbial growth (e.g., mold or fungus) on building materials may occur when excess moisture is present. Porous building materials such as gypsum board, insulation in walls and ceilings, and carpeting retain moisture and become microbial growth sites if moisture sources are not controlled or mitigated. Potential sources of moisture include rainwater intrusion, groundwater intrusion, condensation on cold surfaces, and water leaks from building systems (e.g., plumbing leaks, HVAC system leaks, overflowing drains, etc.). Inadequate ventilation of clothes dryers and shower stalls may also result in excess moisture conditions. Microbial growth may be clearly visible (e.g., ceramic tile mortar in shower stalls) or may be concealed with no visible evidence of its existence (e.g., inside wall cavities).

During the site reconnaissance a limited visual water intrusion screening survey for readily observable conditions conducive to water intrusion at the property was conducted. The screening consisted of limited interview, document review, and physical observations.

It should be noted that this was a non-intrusive investigation and it is possible that water damaged materials and fungal growth may be present in other areas of the building. This includes, but is not limited to, wallboard, wall cavities, pipe/duct insulation above ceilings and in chases, and wall insulation. In addition, if water damaged building material including sheetrock ceilings and walls are not replaced a favorable environment for microbial growth will be created.

3.4 Asbestos Management

Facility personnel were asked if an asbestos survey and assessment had been conducted and whether there was a written Operations and Maintenance Program for the facility. The Industrial Hygienist also attempted to review any asbestos awareness training records, if they were available.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation and air-conditioning (HVAC) systems that serve the facility was completed. This evaluation consisted of a visual inspection of the system to note any obvious issues and a review of the facility maintenance plan, if one was available.

Carbon dioxide (CO_2), carbon monoxide (CO), temperature, and relative humidity were measured throughout the facility using a TSI VelociCalc Meter Model 9555-P (SN 9555P1013022) connected to a Model 982 Probe (SN P07190021). The unit was calibrated prior to use with certified zero gas and 1,000-ppm CO_2, 35-ppm CO span gas. A copy of the annual calibration certificates for these instruments is located in Appendix H.

CO_2 is a normal constituent of exhaled breath and is commonly measured as a screening technique to evaluate whether adequate quantities of fresh outdoor air are being introduced and evenly distributed to interior occupied spaces. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (ppm) above outdoor levels. If typical CO_2 levels within a building are maintained at or less than 1,000 ppm with appropriate temperature and humidity levels, complaints about indoor air quality should be minimized (American Society for Testing and Materials (ASTM) – International D6245-12, Using Indoor Carbon Dioxide Concentrations to Evaluate Indoor Air Quality). If a building exceeds this guideline it should not necessarily be interpreted as an unhealthy or hazardous situation. An elevated CO_2 level is usually an indication that the amount of outside air being brought into a building may be inadequate or poorly distributed. Outside CO_2 concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO_2concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bioeffluents (body odors). ASHRAE also recommends an outside air supply rate of 20 cubic feet per minute (CFM) per building occupant in office spaces, and, at that ventilation rate, CO_2concentrations should not increase over time.

The OSHA PEL for CO is 50 ppm and the ACGIH Threshold Limit Value (TLV) for CO is 25 ppm calculated as an 8-hour TWA. Given these exposure limits, the Department of the Army (DA) Occupational Exposure Limit (OEL) for CO is 25 ppm measured as an 8-hour TWA. ASHRAE recommends temperatures be between 68 and 75 degrees Fahrenheit (°F) also with a relative humidity range of 20 to 60 percent.

In building areas where there are potential sources of CO_2 other than exhaled breath, the guidelines above cannot be used. The OSHA standard for CO_2 should be used in these instances. The OSHA standard is an eight-hour time weighted average (TWA) of 5,000 ppm with a short-term 15-minute average limit of 30,000 ppm.

3.6 Hazard Communication and Hazardous Materials Storage

A review of the facility's chemical inventory and Safety Data Sheet (SDS) file was accomplished, if available. Accessible chemical storage areas such as flammable storage cabinets and containers were also inspected.

3.7 Ventilation Survey

Duct velocity measurements were performed on the facility ventilation devices using a TSI VelociCalc Meter Model 9555-P (SN 9555P1013022) connected to a Model 964 Probe (SN P07180039). A copy of the annual calibration certificates for these instruments is located in Appendix H. For round ducts, 12 velocity measurements are made across the duct opening. Six measurements were made along the diameter at a 90° angle to the first set of measurements. For square or rectangular ducts, 16 velocity measurements are made in a grid pattern. The flow velocities were indicated in lineal feet by the meter and flow rates were calculated by multiplying the average face velocity by the cross-sectional area of the opening. General air flow movement of each building was obtained using a smoke tube. Copies of the general air flow direction can be found in Appendix F.

3.8 Personal Noise Dosimetry and Sound-Level Measurements

3M Edge 5 dosimeters are typically used to collect personal noise exposure levels of facility personnel conducting work that may expose them to greater than the OSHA PEL for noise. If high noise level operations are not occurring during the site visit and noise data is not collected it is noted in Section 4.8 of this report. Dosimeters are calibrated prior to and following each noise measurement using a 3M QC-10 calibrator (SN QIH110257), which was factory calibrated. Each dosimeter is configured with a 3 dBA exchange rate and dose criterion level of 85 dBA in accordance with the Industrial Hygiene Southwest (IHSW) Statement of Work (SOW). The dosimeter and attached microphones are placed at approximately shoulder level of each person being tested and activated to a monitoring status. Once monitoring is completed, the dosimeters are post calibrated using the QC-10 Calibrator and the logged data was recorded on a DD2214 with associated testing data. Calibration certificates can be found in Appendix H.

A Casella CEL-254 (SN 2/06426134) dosimeter is typically used to collect noise exposure levels of specific areas and functions occurring at the facility. The dosimeter is calibrated prior to and following each noise measurement using a Casella CEL-110/2 calibrator (SN 074445). Each dosimeter is configured with a 3 dBA exchange rate and dose criterion level of 85 dBA in accordance with the IHSW SOW. The dosimeter and attached microphone is placed at approximately ear level for each activity being tested and then collected at a distance of approximately ten feet from the activity. Once monitoring is completed, the dosimeter is post calibrated using the CEL-110/2 Calibrator, and the logged data was recorded on a DD2214 with associated testing data. Calibration certificates can be found in Appendix H.

The Army DA PAM 40-501, Hearing Conservation requirements noise criterion of 85 dBA with and exchange rate of 3 dBA is used to compare the noise monitoring results. Additionally, the OSHA Permissible Exposure Limit (PEL) of 90 dBA and the OSHA action level of 85 dBA is used to compare the results.

3.9 Illumination Level Monitoring

Illumination measurements are typically obtained in most areas of the facility using a Testo Light Meter, model Testo 540 (SN 39041581/307). Measurements are obtained at typical work locations, such as the tops of desks and near workstations. To provide information on the overall lighting conditions in the remainder of the facility, measurements are obtained from the surfaces of typical work locations and at waist level from selected locations. See the drawing in Appendix E for complete survey information. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.10 Safety Training and Recordkeeping

An inspection of safety training programs and documentation was performed to determine if the facility's site specific training programs and annual documentation were current.

3.11 General Safety Walk-Through

A limited Fire Life Safety walk-through evaluation of the facility was performed to:

- Document the presence of fire alarms,

- Determine if fire extinguishers are properly mounted and current on their monthly and annual inspections,
- Determine if eyewash stations are available, and
- Document fire or safety hazards in the facility

3.12 Equipment Used

The following equipment was available for this survey.

Type	Model Number	Serial Number	Calibration Date
TSI VelociCalc	9555-P	9555P1013022	9/04/2013
TSI Velocity Probe	964	P07180039	9/04/2013
TSI Air Quality Probe	982	P07190021	9/04/2013
Testo Illumination Meter	Testo 540	39041581/307	3/09/2014
Casella Sound-Level Meter	CEL-254	2/06426134	11/12/2013
Casella Acoustic Calibrator	CEL-110/2	074445	11/12/2013
3M Dosimeter	Edge 5	ESK100116	12/02/2013
3M Dosimeter	Edge 5	ESK100117	12/02/2013
3M Dosimeter	Edge 5	ESK100118	12/02/2013
3M Dosimeter	Edge 5	ESK100119	12/02/2013
3M Dosimeter	Edge 5	ESK080082	9/03/2013
3M dBA Calibrator	QC-10	QIH110257	11/11/2013

Please see Appendix H for a complete inventory of calibration certificates that may have been used during this IHSAV.

3.13 Quality Assurance

R & R Environmental, Inc. employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 Observations and Recommendations

4.1 Lead Wipe Sampling

Six surface locations were sampled for lead as indicated by the table below. The analytical results for lead wipe sampling indicated four of the samples were greater than the 40 µg/ft^2 criterion or the 200 µg/ft^2 criterion specified by the IHSW SOP and the ARNG. Since the armory is used occasionally for civilian events, the drill hall floor criterion is 40 µg/ft^2. See Appendix I and below for a data table and drawing showing the sample locations and Appendix J for the laboratory reports. Photographs taken of the sampling points are presented in Appendix C. This IFR has not been properly cleaned or converted. The IFR hallway door is kept locked. However, there are not warning signs posted.

Sample Number	Sample Location	Sample Results (µg/ft^2)	ARNG standard (µg/ft^2)
W1	Drill Hall Floor (Center)	6.6	40
W2	Drill Hall Floor (Near Armory Entrance)	19	40
W3	Drill Hall Floor (Near IFR Entrance)	**44**	40
W4	Hallway to the IFR	**47,000**	200
W5	IFR Firing Line	**24,000**	40
W6	IFR Target Area	**42,000**	40

µg/ft^2 = micrograms per square foot
< = Less than laboratory detection limit
Bold = Greater than ARNG Standard

Recommendation

1. Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft^2 and the 200 µg/ft^2 IHSW SOP criterion level. The Armory cleanup SOP is included in Appendix N.

2. Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range IAW NGP 420-15.
3. Post warning signs on entryway doors for Potential Lead Dust Exposure to pregnant women or those of (child bearing age) and children. Properly close or convert non-active Indoor Firing Ranges.

4.2 Painted Surface Evaluation

No locations inspected were identified to have peeling paint. Therefore, bulk paint chip samples were not obtained.

For reference, the Housing and Urban Development (HUD) has a Lead-based Paint (LBP) standard of 5,000 mg/kg. HUD is not the governing authority for government maintenance facilities. However, the HUD standard is typically used to determine if lead in paint can be a hazard.

Recommendation

None

4.3 Moisture Intrusion and Limited Visual Fungal Growth Evaluation

No areas of moisture intrusion were noted by the Industrial Hygienist, nor were any moisture intrusion issues reported to exist at the property. It should be noted that water stained areas with no visible mold impact does not mean that mold growth is not present in these areas.

Recommendation

None

4.4 Asbestos Management

An asbestos survey was not located during the site visit. Non-Responsive 406-324-5270 indicated the building was constructed in 1995 with an addition in 2003 and did not have an asbestos survey. Non-Responsive indicated she believed the building was free of asbestos-containing materials (ACM). Additionally, based on the date of construction ACM is most likely not present for the facility.

Recommendation

None

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The HVAC system for the facility consists of a ground-mounted compressor unit and forced air heating for the administrative area and additional gas-fired heating units in the maintenance bay area. The system is serviced by a non-DOD maintenance contract.

The average outdoor CO_2 concentration at the time of the survey from the exterior of the building was 440 ppm. The highest CO_2 concentration measured in the facility was 530 ppm. This level of CO_2 should not result in indoor air quality complaints.

The highest CO concentration measured in the building during the IHSAV was 1.1 ppm which indicates the CO levels are well below the DA OEL of 25 ppm as an 8-hour TWA.

Building air temperatures ranged from 67°F to 74°F and the relative humidity ranged from 38.5% to 46.9% during the testing period. Air temperatures were generally in the recommended comfort range of 68°F to 75°F. The relative humidity was in the recommended ASHRAE comfort range of 30% and 60%. Humidity levels above 60% can result in proliferation of bacteria and fungi, while levels below 30% can cause dry eyes, skin, and mucous membranes. However, weather reports for the area during the time of the survey were consistent with what was found in the buildings and the buildings was operating in a closed door configuration.

Recommendation

None

4.6 Hazard Communication and Hazardous Material Storage

A Hazard Communication (HazCom) Plan was kept on file in the Readiness NCO's office. Initial HazCom training was listed for both employees. The last listed HazCom refresher training was dated September 2013 which is current. An additional course identified in the HazCom Plan was the OSHA for First Line Supervisors Course.

Chemicals for equipment maintenance and janitorial uses are maintained at the facility in minimal quantities. A master chemical inventory listing for the facility is maintained in the readiness NCO's office. A copy of this list can be found in Appendix D. The SDS file is

still listed as MSDS since the Globally Harmonized System (GHS) Classification of Labeling Chemicals has just taken effect and the documents are still MSDS documents. An SDS binder is located in the shop area. The master list matched the individual SDS binder and the SDS binder was representative of what was located in each of the individual cabinets. Approximately 10% of the chemicals stored were verified against the SDS binder.

A POL flammable storage room was located in the northeast corner of the building. There is a fire extinguisher located in the POL room.

Recommendation

Update all MSDS for the facility with the new SDS format.

4.7 Ventilation Survey

The facility provides level 10 maintenance for a small number of vehicles. The maintenance bay is equipped with two vehicle exhaust drops with a flexible hose that can be extended to reach the vehicle exhaust outlet. The flow rate for each of the exhaust drops is listed in Appendix F. The flow rates were 284 cubic feet per minute (cfm) from the vent drop on the north side of the maintenance bay and 511 CFM from the vent drop on the south side of the maintenance bay. The north exhaust drop was torn.

The connections at the end of the hoses are circular metal of 10 inches in diameter. These connections do not fit many exhaust configurations. ACGIH recommends a local vehicle exhaust system that exhausts 400-1,200 cfm for diesel-powered trucks and 1,400-2,200 cfm for turbocharged vehicles. The exhaust flow rate range is dependent on the engine rpm where the lower range is for and idling engine. The U.S. Army Corps of Engineers (USACE) recommends a minimum flow rate of 400 cfm for a 300 HP engine, 600 cfm for a 500 HP engine, 1,000 cfm for a 700 HP engine, and 1,400 cfm for a turbocharged diesel engine up to 500 HP.

The US Army Corps of Engineers' specifications for minimum exhaust rates by engine horsepower are as follows:

Diesel Engines Up To:	Required cfm
200 Hp	300
300 Hp	400
500 Hp	600

700 Hp	1,000
500 Hp (Turbo-charged)	1,400

The ARNG-CSG-P Memorandum for Record, ARNG Maintenance Shop Local Exhaust Ventilation Measurements indicates an acceptable level of 850 CFM for vehicles and allows for future size increases in vehicles and system deterioration over time.

Both of the exhaust ventilation drop flow rates measured in the maintenance bay did not meet the ARNG minimum recommended requirements for a 500 HP idling engine. A list of vehicles serviced in this facility is listed in Appendix Q in addition to the facility information.

The other vent mechanism identified was the kitchen ventilation hood. The vent either did not operate when the switch was thrown or some other action needed to be taken. Therefore, ventilation measurements were not obtained from the kitchen hood.

Since the buildings were in the closed door configuration, air flow generally followed a stagnant pattern.

Recommendation

1. Upgrade the exhaust ventilation in the maintenance bays to meet the ARNG minimum requirements for the type of engines serviced in the bays per the ARNG Memorandum for Record and repair the north exhaust drop tear.
2. Either repair the kitchen ventilation hood or post operating instructions indicating how to initiate the ventilation hood.

4.8 Personal Noise Dosimetry and Sound-Level Measurements

None of the full time personnel conducted operations that required hearing protection according to Non-Responsive phone 406-324-5270. Therefore, no sound level testing or noise dosimetry was performed.

Recommendation

None

4.9 Illumination Level Monitoring

Illumination levels measured throughout the facility can be found in Appendix E. The numbers represent the measured illumination levels in foot-candles (ftc). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or a bench were taken at waist level. Supplemental lighting is used for specific work in darker areas, such as under the hoods of vehicles.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 ftc is the minimum lighting requirement for the performance of tasks where reading is required, 30 ftc is required for work areas where reading is not required, 10 ftc is required for non-work areas, such as aisles and corridors, and 5 ftc is required for walking surfaces such as mechanical spaces.

Based on the above criteria the general lighting in all areas measured is adequate for the tasks performed.

Recommendation

None

4.10 Safety Training and Documentation

The following safety policies, procedures and training were identified at the facility:

- The Army Safety Program, AR 385-10
- System Safety Management Guide, DA Pam 385-16
- Small Unit Safety Officer/NCO Guide, DA Pam 385-1
- Emergency Evacuation Plan
- Initial HazCom Training
- HazCom Refresher Training
- Army National Guard Safety Program, NGR 385-10

Recommendation

None

4.11 General Safety Walk-Through

1. Housekeeping throughout the facility was good.

2. There were fire alarms present in this facility.

3. Fire extinguishers are strategically located throughout the facility. The monthly inspections were current for each fire extinguisher identified and fire extinguisher arrows were also present. The annual inspections were current.

4. Fire evacuations routes were posted in the rooms of the facility.

5. An eyewash/deluge shower stations is located in the maintenance bay. The annual and weekly inspections were current for the station. The eyewash station/deluge shower was not equipped with an alarm system.

6. Electrical panels are closed and labeled and observed junction boxes were sealed.

7. Electrical outlets were labeled with voltage limits.

8. Emergency lighting is installed in the facility. Each emergency lighting unit was functional and an inspection checklist was posted.

Recommendation

Install an alarm system on the eyewash stations/deluge showers in the shop area and lube bay.

4.12 Battery Storage and Charging

Battery storage and charging does not occur at the facility according to Non-Responsive phone 406-324-5270.

Recommendation

None

4.13 Brake Relining/Changing Operations

Brake relining/changing operations do not occur at the facility according to Non-Responsive Non-Responsive hone 406-324-5270.

Recommendation

None

4.14 Flammable Storage Cabinets

There are two flammable storage cabinets located at the facility in the northeast corner of the building. These lockers were inspected and no storage incompatibilities or leaking materials were identified. The lockers were in good condition and all doors were noted to close properly. Each locker was labeled with the appropriate NFPA label, flammable sign, and a no smoking signs.

Recommendation

None

4.15 Petroleum, Oil, Lubrication Area

The petroleum, oil, and lubrication (POL) area is located in the northeast corner of the building. The POL is very minimal. The POL room is properly labeled with the NFPA label and a no smoking sign. The POL storage room is very neat and well kept. Approximately 10% of the storage buildings contents were verified against the MSDS folder kept in the maintenance shop and each of the materials verified had corresponding sheets in the binder.

Recommendation

None

4.16 Hazardous Waste Accumulation

Hazardous waste accumulation does not occur at the facility since only 10 level maintenance occurs at the facility according to Non-Responsive phone 406-324-5270.

Recommendation

None

4.17 Oily Rags

Oily rags are collected in a metal container in the shop area. When the satellite area container becomes full, the materials/wastes are transferred to the FMS or CSMS in the container for disposal.

Recommendation

None

4.18 Personal Breathing Zone Air Sampling

No maintenance activities were performed involving chemicals that warranted personal air sampling.

Recommendation

None

4.19 Small Arms Cleaning

No small arms cleaning are performed at this facility as indicated by Non-Responsive

Recommendation

None

4.20 Fuel Storage and Refueling

Fuel storage and refueling does not occur at this facility and are performed on the economy as indicated by Non-Responsive

Recommendation

None

5.0 Recurring Observations

1. The analytical results for lead wipe sampling indicated four samples were greater than the 40 µg/ft^2 criterion or the 200 µg/ft^2 criterion specified by the IHSW SOP and the ARNG.
2. The IFR has not been properly cleaned or converted.
3. The IFR hallway door is kept locked. However, there are not warning signs posted.

6.0 Project Limitations

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, R&R Environmental's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. R&R Environmental, Inc. assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of R&R Environmental, Inc., or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since R&R Environmental, Inc. is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

7.0 Project Approval

This IHSAV was reviewed and approved by:

Non-Responsive CSP Date: June 17, 2014
R & R Environmental, Inc.
Vice President

Technical Assistance: For technical assistance regarding information found in this report or the performed survey; please contact R&R Environmental, Inc. at 801-352-2380 or Non-Responsive Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-854-1491. Contact the State Safety and Occupational Health Office, the State Industrial Hygiene Technician, and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information. The rates were also compared to the ARNG-CSG-P Memorandum, dated November 2013 (ARNG Maintenance Shop Local Exhaust Ventilation Measurements)

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 1: Libby, Montana Armory.

Photo 2: Armory Motor Pool.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 3: Armory Flammable Materials Storage.

Photo 4: Drill Floor (Gym) Area.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 5: Maintenance Bay.

Photo 6: Eyewash/Deluge Shower with no Alarm.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 7: Tear in North Exhaust Vent.

Photo 8: IFR Entrance Door.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

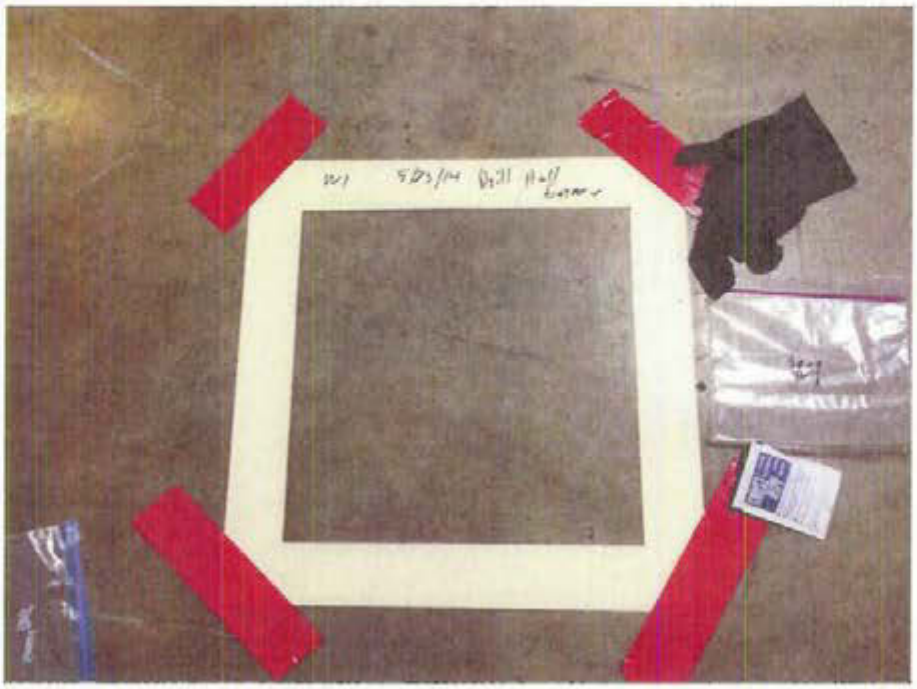


Photo 11: Lead Wipe Sample W1; Drill Hall Floor - Entrance.

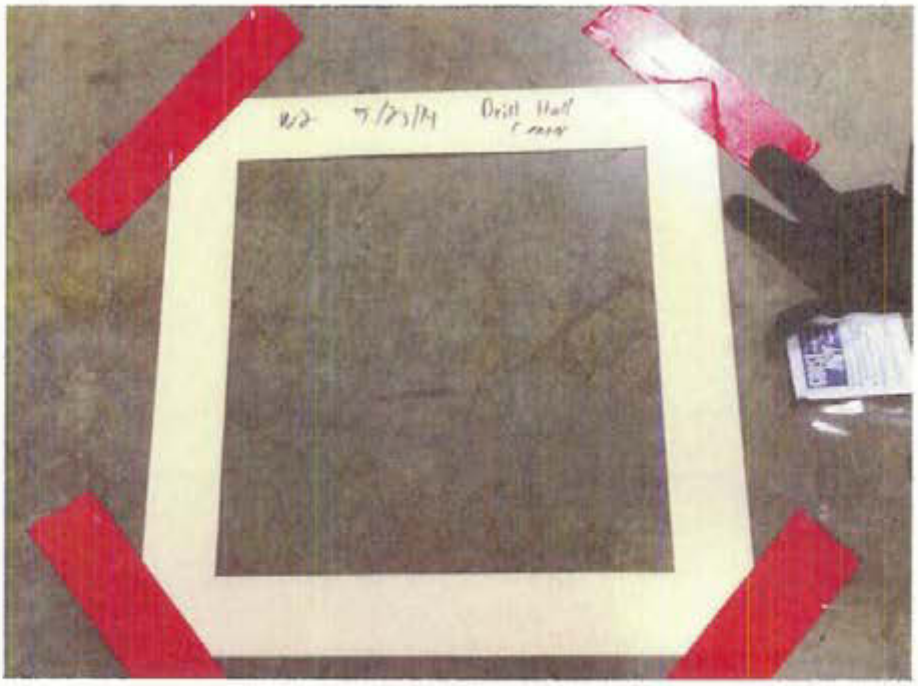


Photo 12: Lead Wipe Sample W2; Drill Hall Floor – Center.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 13: Lead Wipe Sample W3; Drill Hall Near IFR Exit Door.

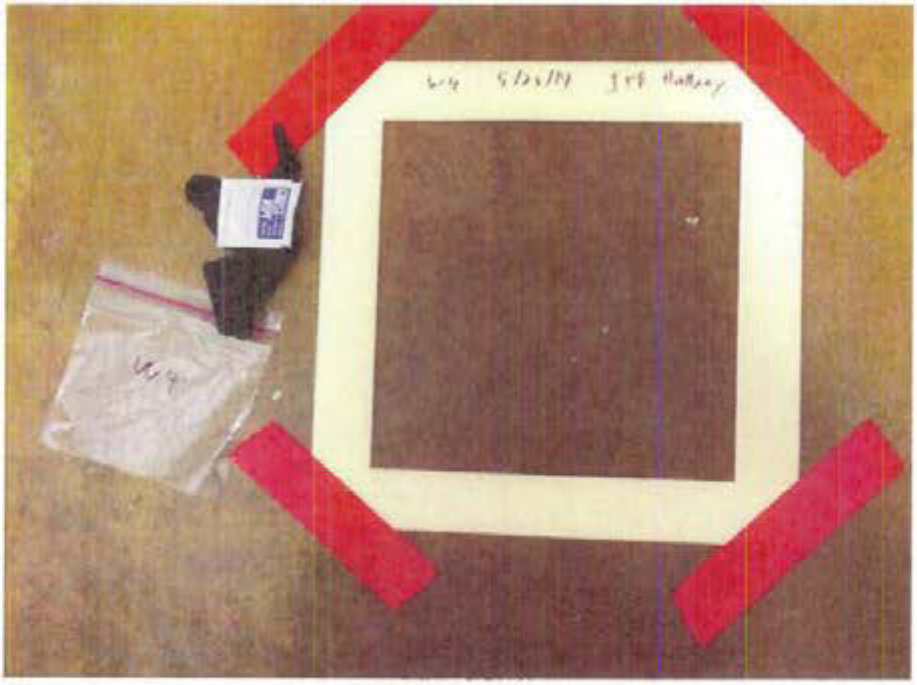


Photo 14: Lead Wipe Sample W4; IFR Hallway.

PHOTO LOG
LIBBY ARMORY
LIBBY, MONTANA
23 MAY 2014

Photo 15: Lead Wipe Sample W5; IFR Firing Line.

Photo 16: Lead Wipe Sample W6; IFR Target End.

Hazardous Materials Center

Item Search

Print Inventory | Cancel

Libby Readiness Center / DET 1
639th Quartermasters

Download to Excel

Cleaning Closet - Floor - 1/2014

SLN	Product Name		NSN	Manufacturer	Description	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC	Excess
	Concrete Sealer	0		Tough guy			2	5 Gal box			
	Floor Stripper	0		Hillyard Industries			1	5 gal			
	Ice Melter	0		Premiere Pro			1	50lb box			
	Ice Melter	0		Scotwood IND			2	50lb bucket			

Cleaning Closet - Shelf 1 - 1/2014

SLN	Product Name	NSN	Manufacturer	Description	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC	Excess
	Air Freshener	0	Spray Pak			3	15oz cans			
	Floor Sealer	0	Betco		607	2	Gal			
	Floor Wax	0	Betco		610	2	Gal			
	Pine-Sol	0	Clorox			1	Gal			
	Powe Time Clingling Foam Cleaner	0	RMC			1	Gal			
	Shower Cleaner	0	Co-Star			1	1 Gal.			
	Urinal Block w/screen	0	RMC			4	4 oz blocks			
	Urinal Blocks	0	Krystal			4	4 oz blocks			
B02	Scouring Powder	7930-00-721-8592	Fitzpatrick Brothers		BFMGK	28	21 oz can	24	N1	
C01	Soap Toilet	8520-00-634-0335	unknown			11	bars			
D01	Toilet Cleaner, Pull	0	Betco Co.			12	1 qt bottles			
E01	Ajax Quik Solv	0	Colgate Palmolive			1	1 qt bottle			
E02	Glass Cleaner	0	AmSan			2	Gal			

Cleaning Closet - Shelf 2 - 1/2014

SLN	Product Name	NSN	Manufacturer	Description	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC	Excess
B02	Sunbonnet Lemon Wax	0	The Butcher Co.			2	can			

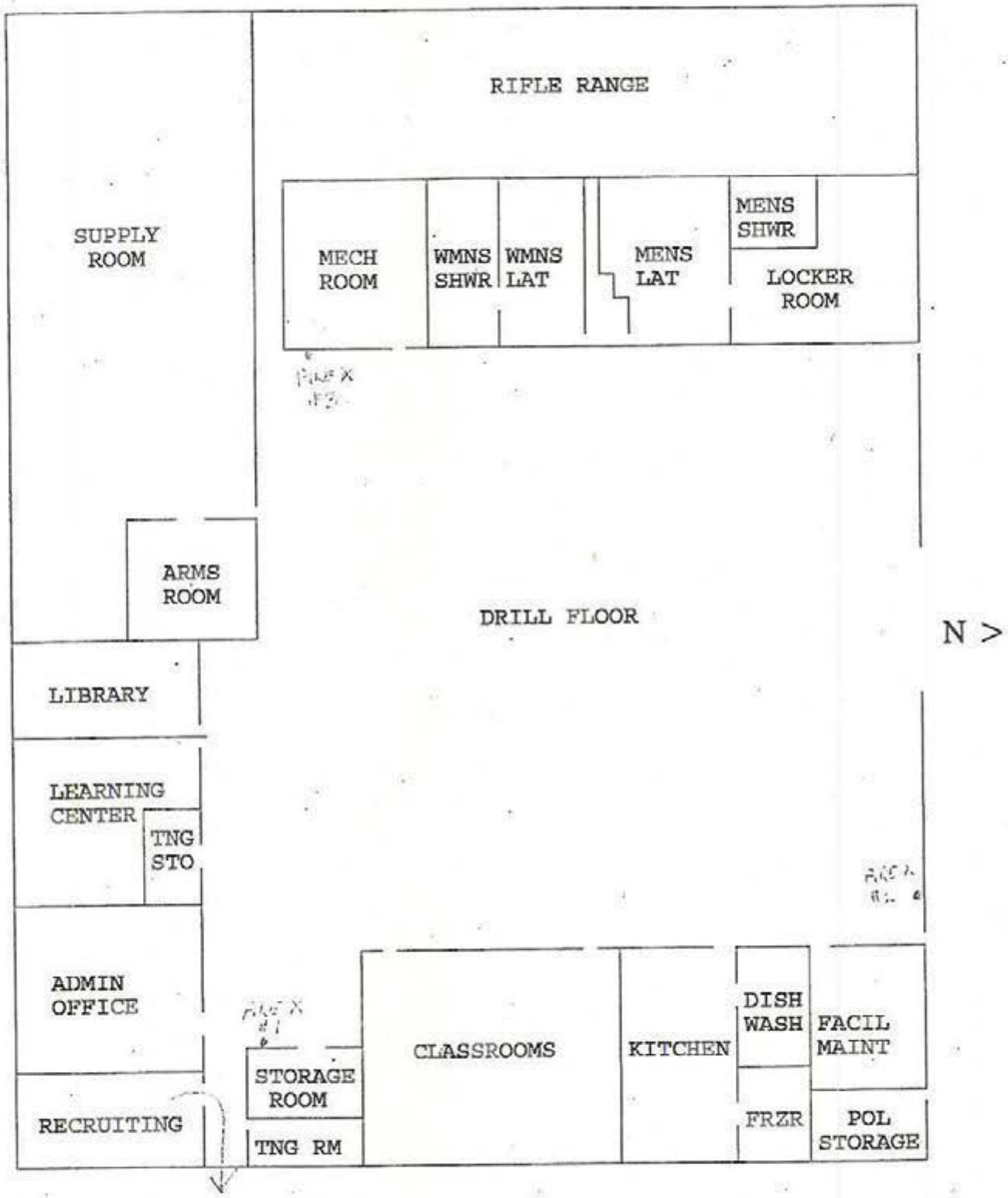
Flammable Cabinet 01 - 1/2014

SLN	Product Name	NSN	Manufacturer	Description	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC	Excess
	WD40	0	WD40			1	11 oz can			
	SPRAY PAINT BLACK		BALL			7	10 oz can			
	Graffitti and Spray Paint Remover	0	Tough Guy			2	10oz. Can			
	Grease In A Can	0	Ball			1	14oz. Can			
	Spray Paint Fluorescent Yellow	0	ACE			2	12oz. Can			
	Spray Paint Pumpkin Orange	0	Krylon			2	12oz. Can			
	Spray Paint Yellow Enamel	0	ACE			2	12oz. Can			
	Wasp & Hornet Killer	0	Ace			0	14oz can			
A01	3M Super Trim Adhesvie	8040-00-F01-9788	3M Trade Division		BNJCL	1	18 oz can			
A02	Tape Primer	8040-00-N00-0142	3M Trade Division		BCDTR	3	15 oz can			
B03	Ace Paint Striper	8010-00-N05-6585	Ace Speciality Division			1	12 oz can			

Flammable Cabinet 02 - 1/2014

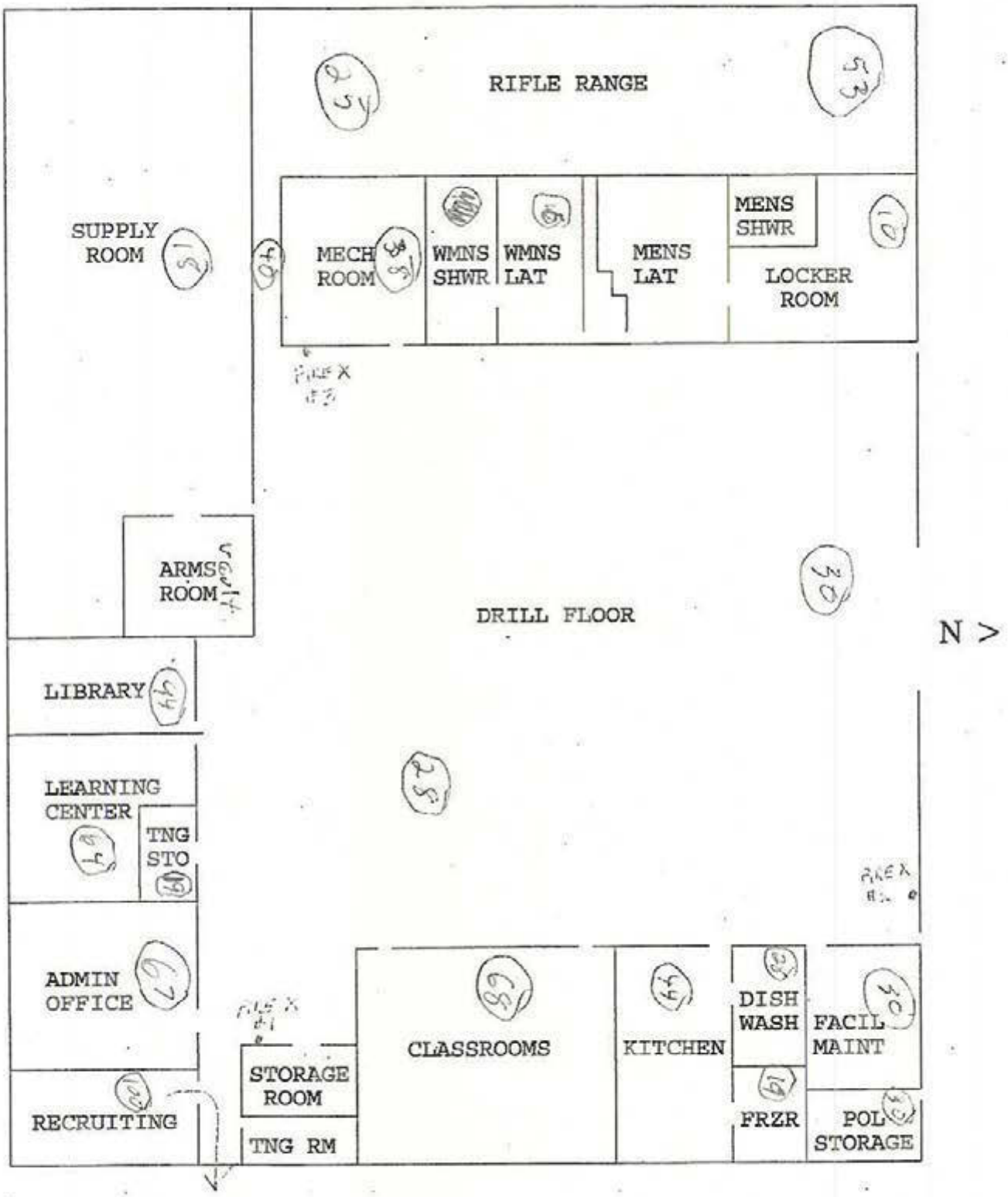
SLN	Product Name	NSN	Manufacturer	Description	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC	Excess
	ATF	0	Dextron VI			2	1 qt bottle			
	Cleaning Compound Windshield	6850-00-926-2275	Rite-Kern Inc			4	16oz bottles			
	Coolant/Antifreeze	6850-01-464-9125	Fleetcharge			1	Gallon			
	Grease/Auto Artillery	9150-00-190-0907	Sowes Co			1	5Gal. Bucket			
	Grease/Auto Artillery	9150-00-197-7692	Sowes Co.			1	5Gal. Bucket			
	Hydralic Fluid	0	NA			3	Gal			
	Power Steering Fluid	0	Pyroil			2	12fl oz cans			
A04	Engine Starting Fluid	2910-01-128-9537	Kold-Ban International LTD			4	can			
A05	Grease/Auto Artillery	9150-01-197-7693	Southwest Petro Chem Div			16	14oz. Tubes			

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



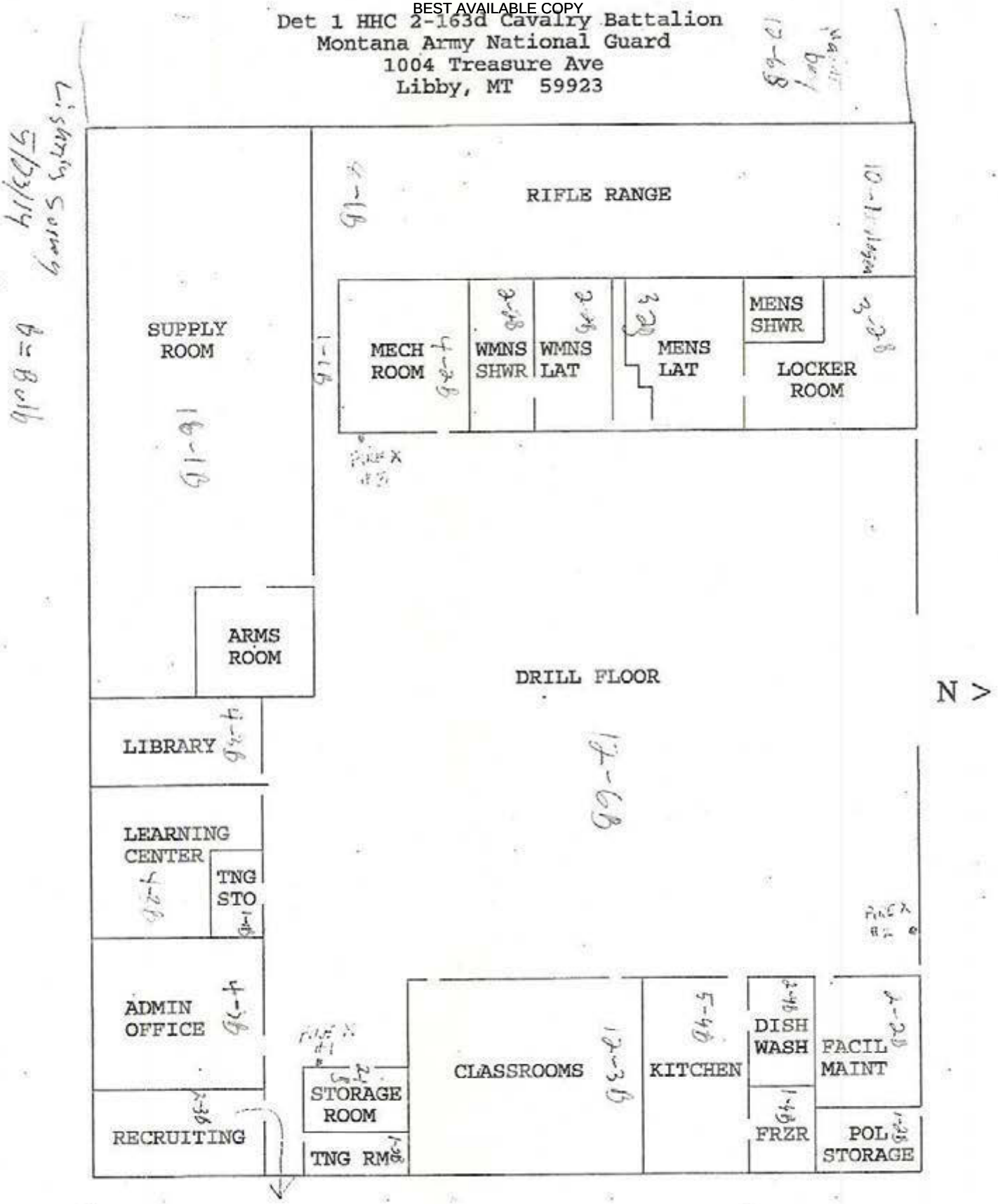
FIRE EVACUATION PLAN

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



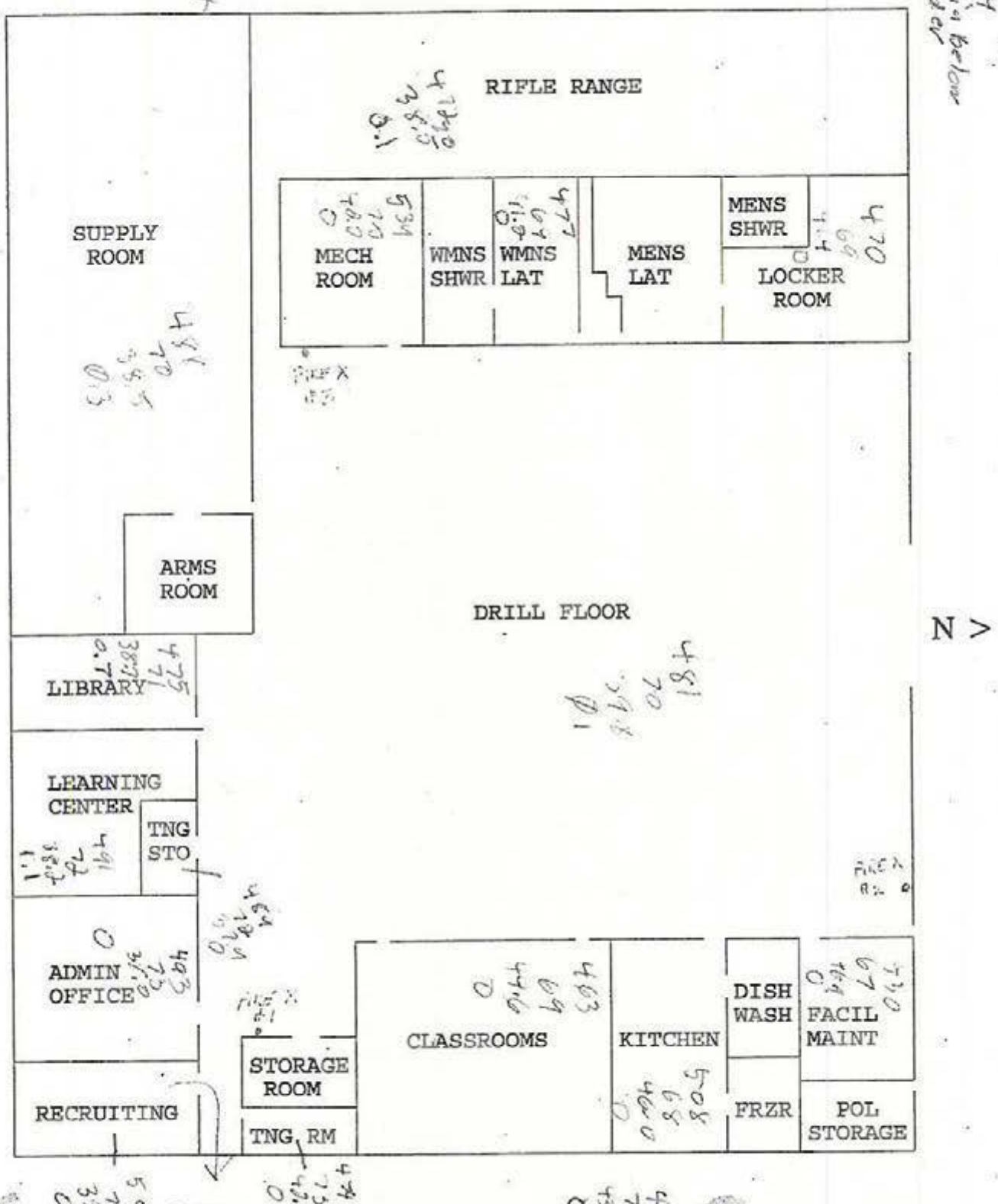
FIRE EVACUATION PLAN

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



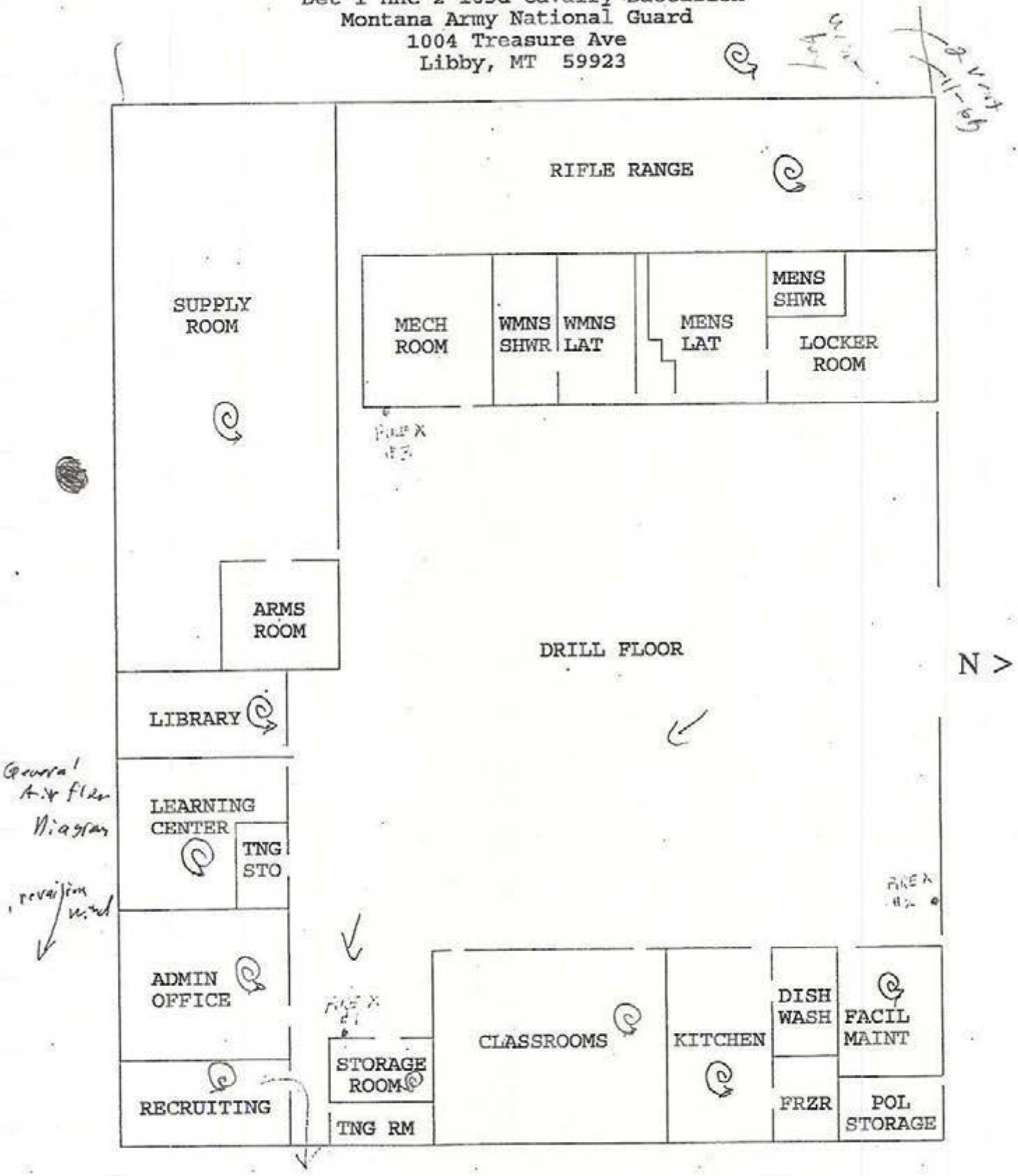
FIRE EVACUATION PLAN

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



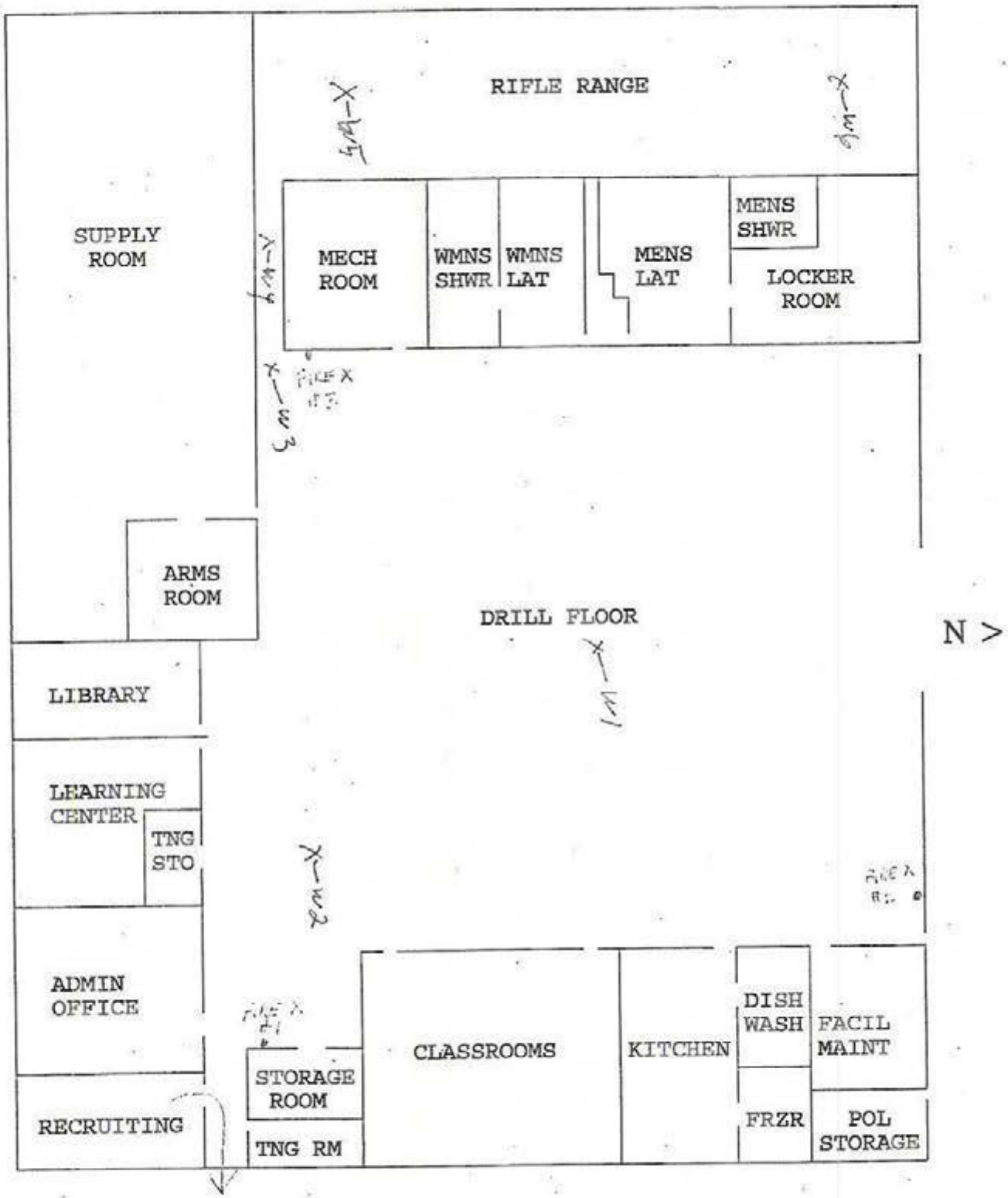
FIRE EVACUATION PLAN

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



FIRE EVACUATION PLAN

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



FIRE EVACUATION PLAN

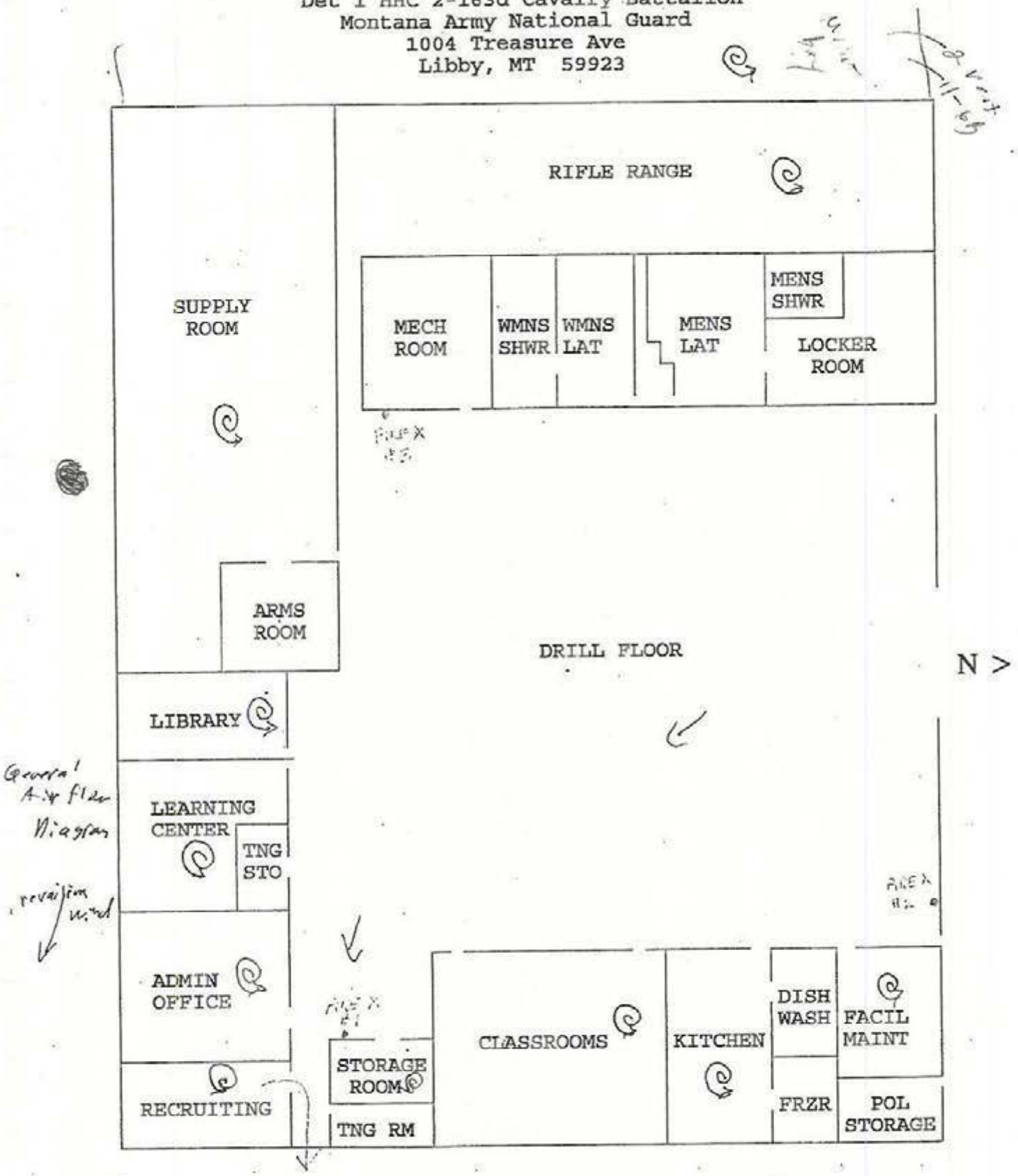
LOCAL EXHAUST VENTILATION SYSTEM MEASUREMENTS
ARMORY – LIBBY, MONTANA
23 MAY 2014

Monitoring Location	Area of Flow ft^2	Velocity ln ft/min	Flow Rate ft^3/min
Vehicle Exhaust Vent - North – 6" dia	0.196	1,502	294
Vehicle Exhaust Vent - South – 6" dia	0.196	2,607	511
Kitchen Vent Hood 3'x 6'	Not Measured	N/A	N/A

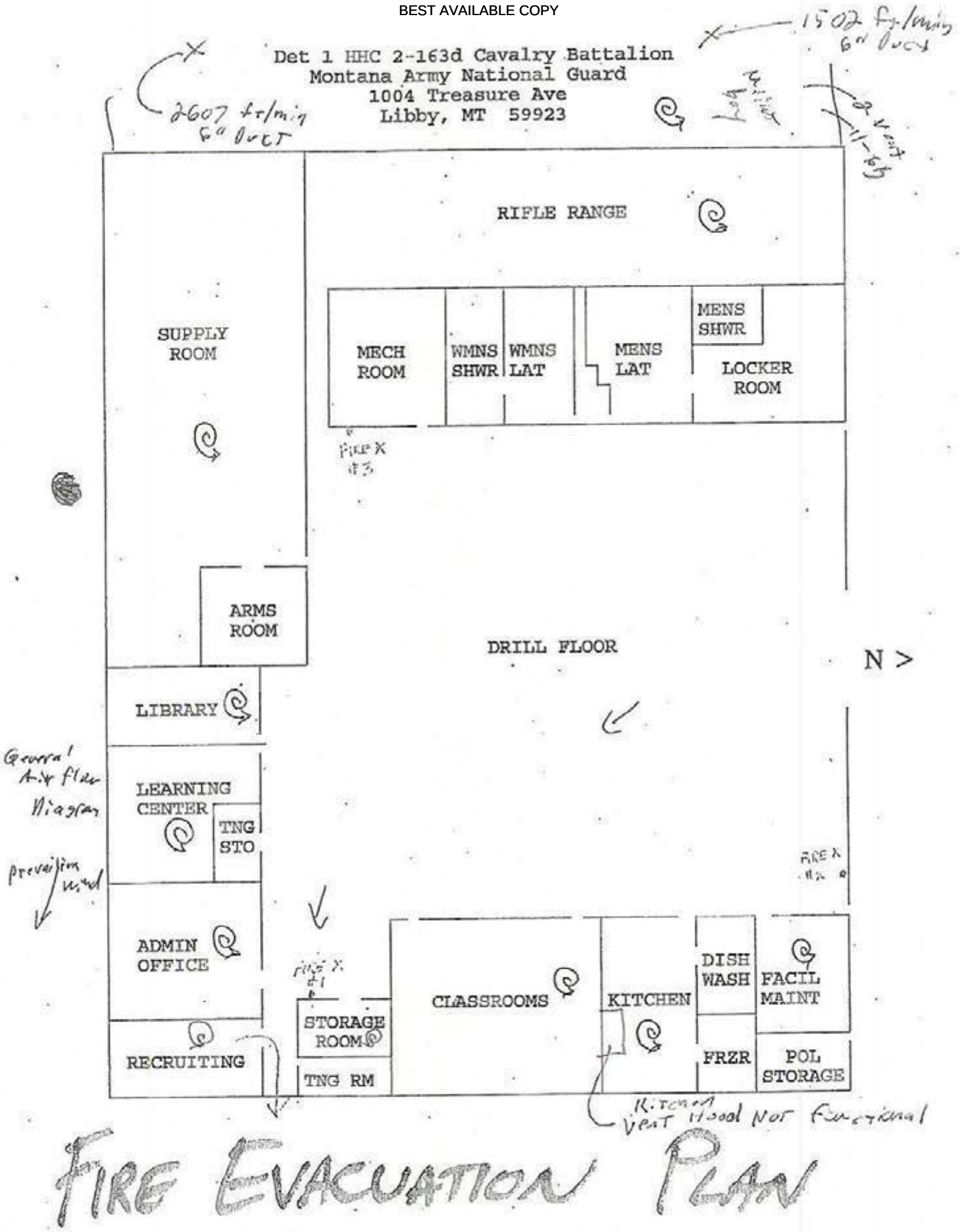
* $Q = A \times V$

Where: A = Area in ft^2, V = Velocity in ln ft/min, Q = Flow Rate in ft^3/min

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



FIRE EVACUATION PLAN



SSG Amy L. Good Amy.L.Good8.mil@Mail.mil
406-324-5270
Readiness NCO + Building Mgr.
Det 1 634 TG CSSC UIC: WPRHA1

→ Yearly Civil Home Functions
→ 10-lvl. Main on site
→ Main Bldg in 95 > 35K sq ft
Maint Bay in 2003

- Amy Good - 9045
- Steve Beary - Supply 1905
- No ACM Based on date of construction
- LMTV
  LHS
  FMTV (0)
  HMMWV
  Forklifts

- No Break Jobs
- No Break Rooms
- IPR Not used
- Fire Extinguishers
- MSDS Yes No SDS
- Propane Heat off site
- HVAC = off site contracted Preventative Maintenance
- POL

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition		
Temperature	67.3 (19.6)	°F (°C)
Relative Humidity	40	%RH
Barometric Pressure	28.77 (974.3)	inHg (hPa)

Model	9555-P
Serial Number	9555P1013022

☒ As Left ☐ As Found
☒ In Tolerance ☐ Out of Tolerance

–Calibration Verification Results–

Thermo Couple — System PRESSURE01-02 — Unit: °F (°C)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	70.0 (21.1)	70.1 (21.2)	68.1–71.9 (20.1–22.2)				

Differential Pressure — System PRESSURE01-02 — Unit: inH_2O (Pa)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	-3.670 (-913.8)	-3.688 (-918.3)	-3.711–-3.629 (-924.0–-903.6)	3	7.979 (1986.8)	7.980 (1987.0)	7.895–8.063 (1965.9–2007.7)
2	1.864 (464.1)	1.861 (463.4)	1.841–1.887 (458.4–469.9)	4	13.783 (3432.0)	13.793 (3434.5)	13.641–13.925 (3396.6–3467.3)

Barometric Pressure — System PRESSURE01-02 — Unit: inHg (hPa)

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	19.95 (675.6)	19.95 (675.6)	19.55–20.35 (662.0–689.1)	3	35.57 (1204.5)	35.56 (1204.2)	34.86–36.28 (1180.5–1228.6)
2	28.87 (977.7)	28.87 (977.7)	28.29–29.45 (958.0–997.3)				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E002827	02-06-13	02-06-14	Pressure	E003984	10-03-12	10-03-13
Pressure	E003982	03-21-13	09-21-13	DC Voltage	E003493	03-14-13	03-14-14

Non-Responsive

September 4, 2013
Date

CERTIFICATE MAY BE COPIED
RETURN ORIGINAL

TSI P/N 2300157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	74.1 (23.4)	°F (°C)
RELATIVE HUMIDITY	53	%RH
BAROMETRIC PRESSURE	29.09 (985.1)	inHg (hPa)

MODEL	982
SERIAL NUMBER	P07190021

☒ AS LEFT ☐ AS FOUND
☒ IN TOLERANCE ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

TEMPERATURE VERIFICATION — SYSTEM T-101 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.6 (0.3)	31.0~33.0 (-0.6~0.6)	2	140.0 (60.0)	140.7 (60.4)	139.0~141.0 (59.4~60.6)

HUMIDITY VERIFICATION — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	9.5	7.0~13.0	4	70.0	69.3	67.0~73.0
2	30.0	29.8	27.0~33.0	5	90.0	88.4	87.0~93.0
3	49.9	49.7	46.9~52.9				

CO_2 GAS VERIFICATION — SYSTEM G-101 — *Unit: ppm*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0	0	0~50	4	3000	3021	2910~3090
2	506	497	456~556	5	4980	5011	4831~5129
3	1003	1012	953~1053				

CO GAS VERIFICATION — SYSTEM G-101 — *Unit: ppm*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	35	36	32~38	2	100	100	97~103

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003986	04-12-13	10-12-13
Humidity	E003539	08-21-13	08-21-14
200 CO	EB0014717	07-08-13	06-03-21
Air	T-0158	08-15-13	06-20-16
Flow	E003298	07-08-13	07-08-14
Flow	E003525	03-12-13	03-12-14
100 C4H8	EB0004721	08-23-12	08-22-15

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003987	04-12-13	10-12-13
5000 CO_2	k100246125	07-22-13	07-02-16
N2	28210	08-20-13	08-08-18
Flow	E004631	07-08-13	07-08-14
Flow	E003981	11-14-12	11-14-13
2000 C4H8	EB0028230	05-25-12	05-18-15

Non-Responsive

September 4, 2013
DATE

Doc. ID: CERT_GEN_WCC

BEST AVAILABLE COPY

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	74.1 (23.4)	°F (°C)
RELATIVE HUMIDITY	52	%RH
BAROMETRIC PRESSURE	29.08 (984.8)	inHg (hPa)

MODEL	964
SERIAL NUMBER	P07180039

☒ AS LEFT ☐ AS FOUND
☒ IN TOLERANCE ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

TEMPERATURE VERIFICATION — SYSTEM T-101 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.2 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

HUMIDITY VERIFICATION — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	10.2	7.0~13.0	4	70.0	70.2	67.0~73.0
2	30.0	30.1	27.0~33.0	5	90.0	89.4	87.0~93.0
3	49.9	50.3	46.9~52.9				

VELOCITY VERIFICATION — SYSTEM V-107 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	651 (3.30)	648 (3.29)	631~670 (3.21~3.40)
2	35 (0.18)	36 (0.18)	32~38 (0.16~0.20)	8	1002 (5.09)	1003 (5.09)	972~1032 (4.94~5.24)
3	66 (0.33)	65 (0.33)	63~69 (0.32~0.35)	9	1471 (7.47)	1478 (7.51)	1427~1515 (7.25~7.70)
4	101 (0.51)	99 (0.50)	97~104 (0.50~0.53)	10	2501 (12.71)	2485 (12.62)	2426~2576 (12.33~13.09)
5	161 (0.82)	161 (0.82)	156~166 (0.79~0.84)	11	4502 (22.87)	4484 (22.78)	4367~4637 (22.18~23.55)
6	331 (1.68)	330 (1.68)	321~341 (1.63~1.73)	12	8013 (40.71)	7991 (40.59)	7773~8254 (39.49~41.93)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003986	04-12-13	10-12-13
Humidity	E003539	08-21-13	08-21-14
Barometric Pressure	E001992	04-04-13	04-04-14
Pressure	E001718	05-23-13	11-23-13
Velocity	E004603	09-19-12	09-19-17

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E003987	04-12-13	10-12-13
DC Voltage	E001653	07-12-12	01-12-14
Temperature	E001643	05-23-13	11-23-13
Pressure	E002389	08-27-13	02-27-14

Non-Responsive

September 4, 2013
DATE

Doc. ID: CERT_GEN_WOG

BEST AVAILABLE COPY

GASCO AFFILIATES, LLC.

320 Scarlet Blvd.
Oldsmar, FL 34677
(800) 910-0051
Fax: (866) 755-8920
www.gascogas.com

CERTIFICATE OF ANALYSIS

Date: January 2, 2014
Order Number: 729-1
Lot Number: MAN-1-10

Customer: RAECO Rents,LLC

Use Before: 01/02/2018

Component	Specification	Analytical Result (+/- 2%)
Oxygen	20.9% vol.	20.9% vol. THC <0.1 PPM
Nitrogen	Balance	Balance

Cylinder Size: 3.6 Cu. Ft.
Contents: 103 Liter

Valve: 5/8" -18UNF
Pressure: 1000 psig

The calibration gas prepared by Gasco is considered a certified standard. It is prepared by gravimetric, or partial pressure techniques. The calibration standard provided is certified against Gasco's G.M.I.S. (Gas Manufacturer's Intermediate Standard) which is either prepared by weights traceable to the National Institute of Standards and Technology (NIST) or by using NIST Standard Reference Materials where available.

Non-Responsive

Certificate of Conformance

CASELLA CEL

Model: CEL-254   Serial No: 2106426134

The instrument identified above has been manufactured, inspected and tested, in accordance with company drawings and specifications, and conforms to the standard(s) indicated below.

IEC-61672: 2002 Class 1	☐	Class 2	☑		
IEC-60651: 1979 Type 1	☐	Type 2	☑		
IEC-60804: 2000 Type 1	☐	Type 2	☐		
ANSI S1.4: 1997 Type S(1)	☐	Type S(2)	☑	ANSI S1.11: 1986 (R1998) Type 0	☐
IEC-1260: Class 2	☐	Class 0	☐	ANSI S1.11: 1986 (R1998) Type 2	☐
IEC-1252: 1993	☐			ANSI S1.25: 1991 Class 2	☐
Manufacturers specification	☐				

Company test equipment and acoustic working standards, used for conformance testing, are subject to periodic calibration, traceable to UK national standards, in accordance with the company's ISO 9001 Quality System.

Sig[redacted] CEL 3 Date: 12 NOV 2013

CEL and Dawe instrumentation is manufactured by Casella CEL,

Regent House, Wolseley Road, Kempston, Bedford, MK42 7JY, UK
Phone: +44 (0) 1234 844100, Fax: +44 (0) 1234 841490, E-mail: info@casellacel.com

17 Old Nashua Road, #15, Amherst, NH03031, U.S.A.
Phone: +1 800 356 2966, Fax: +1 603 572 8053, E-mail: info@casellausa.com

BEST AVAILABLE COPY

Certificate of Conformance

CASELLA CEL

CEL 110 Acoustic Calibrator

Model: CEL-110/2   Serial No: 074445
Firmware: 2.000

The instrument identified above has been manufactured, inspected and tested, in accordance with company drawings and specifications, and conforms to the standard(s) indicated below.

CEL-110/1 Class 1	☐	IEC 60942: 2003	☐
CEL-110/2 Class 2C	☐	ANSI S1.40: 1984 (R1997)	☐

Company test equipment and acoustic working standards, used for conformance testing, are subject to periodic calibration, traceable to UK national standards, in accordance with the company's ISO 9001 Quality System.

Signa[redacted]te: 12 NOV 2013

060352

3M Oconomowoc
Personal Safety Division

3M Detection Solutions
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.3M.com/detection
262 567 9157 800 245 0779
262 567 4047 Fax

An ISO 9001 Registered Company

Certificate of Calibration

Certificate No: 5502360ESK100117

Submitted By: RAECO-LIC, L.L.C.
135 BERNICE DRIVE
BENSENVILLE, IL 60106

Serial Number: ESK100117
Customer ID:
Model: EDGE 5 DOSIMETER

Date Received: 11/20/2013
Date Issued: 12/2/2013
Valid Until: 12/2/2014

Test Conditions:
Temperature: 18°C to 29°C
Humidity: 20% to 80%
Barometric Pressure: 890 mbar to 1050 mbar

Model Conditions:
As Found: IN TOLERANCE
As Left: IN TOLERANCE

SubAssemblies:
Description: MICROPHONE BSWA MP418

Serial Number: 493726

Calibrated per Procedure: 53V735

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
ET0000556	B&K ENSEMBLE	5/10/2013	5/10/2014

Measurement Uncertainty:
+/- 2.2% ACOUSTIC (0.19DB)
Estimated at 95% Confidence Level (k=2)

Calibrated By: Non-Responsive /2/2013

This report certifies that all calibration equipment used in the test is traceable to NIST, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of 3M Detection Solutions.

CERTIFICATE MAY
BE COPIED
RETURN ORIGINAL

098-393 Rev. B

3M Oconomowoc
Personal Safety Division

3M Detection Solutions
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.3M.com/detection
262 567 9157 800 245 0779
262 567 4047 Fax

Certificate of Calibration

Certificate No: 5502360ESK100118

Submitted By: RAECO-LIC, L.L.C.
135 BERNICE DRIVE
BENSENVILLE, IL 60106

Serial Number: ESK100118
Customer ID:
Model: EDGE 5 DOSIMETER

Date Received: 11/20/2013
Date Issued: 12/2/2013
Valid Until: 12/2/2014

Test Conditions:
Temperature: 18°C to 29°C
Humidity: 20% to 80%
Barometric Pressure: 890 mbar to 1050 mbar

Model Conditions:
As Found: IN TOLERANCE
As Left: IN TOLERANCE

SubAssemblies:

Description:	Serial Number:
MICROPHONE BSWA MP418	493666

Calibrated per Procedure: 53V735

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
ET0000556	B&K ENSEMBLE	5/10/2013	5/10/2014

Measurement Uncertainty:
+/- 2.2% ACOUSTIC (0.19DB)
Estimated at 95% Confidence Level (k=2)

Calibrated By: Non-Responsive 12/2/2013

This report certifies that all calibration equipment used in the test is traceable to NIST, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of 3M Detection Solutions.

CERTIFICATE MAY
BE COPIED
RETURN ORIGINAL

098-393 Rev. B

TABLE 1
WIPE SAMPLING FOR LEAD
INDOOR FIRING RANGE
ARMORY, LIBBY, MONTANA
MAY 23, 2014

Sample Number	Sample Location	Sample Results ($\mu g/ft^2$)	ARNG standard ($\mu g/ft^2$)
W1	Drill Hall Floor – Entrance	6.6	40
W2	Drill Hall Floor – Center	19	40
W3	Drill Hall Near IFR Exit Door	44	40
W4	IFR Hallway Floor	47,000	200
W5	IFR Firing Line Floor	24,000	40
W6	IFR Target End Floor	42,000	40

$\mu g/ft^2$ = micrograms per square foot
< = not detected above the laboratory analytical limit
Bold = results above the ARNG standard

ANALYTICAL REPORT

Report Date: June 02, 2014

Non-Responsive
R & R Environmental, Inc.
47 West 9000 South #2
Sandy, UT 84094

Phone: (801) 541-1035
Fax: (801) 492-7751
Non-Responsive

Workorder: 34-1414458
Client Project ID: Libby, MT Armory
Purchase Order: NA
Project Manager: Non-Responsive

Analytical Results

Sample ID: W1				Collected: 05/23/2014
Lab ID: 1414458001	Sampling Location: Libby, MT Armory			Received: 05/24/2014
Method: NIOSH 7300 Mod.	Media: Ghost Wipe Sampling Parameter: Area 1 ft²			Prepared: 05/30/2014 Analyzed: 05/30/2014
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	6.6	6.6	1.3	

Sample ID: W2				Collected: 05/23/2014
Lab ID: 1414458002	Sampling Location: Libby, MT Armory			Received: 05/24/2014
Method: NIOSH 7300 Mod.	Media: Ghost Wipe Sampling Parameter: Area 1 ft²			Prepared: 05/30/2014 Analyzed: 05/30/2014
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	19	19	1.3	

Sample ID: W3				Collected: 05/23/2014
Lab ID: 1414458003	Sampling Location: Libby, MT Armory			Received: 05/24/2014
Method: NIOSH 7300 Mod.	Media: Ghost Wipe Sampling Parameter: Area 1 ft²			Prepared: 05/30/2014 Analyzed: 05/30/2014
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	44	44	1.3	

Sample ID: W4				Collected: 05/23/2014
Lab ID: 1414458004	Sampling Location: Libby, MT Armory			Received: 05/24/2014
Method: NIOSH 7300 Mod.	Media: Ghost Wipe Sampling Parameter: Area 1 ft²			Prepared: 05/30/2014 Analyzed: 06/02/2014
Analyte	ug/sample	ug/ft²	RL (ug/sample)	
Lead	47000	47000	25	

1414458

ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status 141458

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/23/14 Purchase Order No. _____

3. Company Name R&R Environmental
Address 47 West 9000 South, Suite 2
Sandy, UT 84070
Person to [redacted]
Telephone [redacted]
Fax Telep [redacted]
E-mail Ad [redacted]
Billing Ad [redacted]

4. Quote No. _____
ALS Project Manager _____

5. Sample Collection
Sampling Site Libby, MT Armory
Industrial Process #
Date of Collection 5/23/14
Time Collected 1000
Date of Shipment Hand carry
Chain of Custody No. _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	W1	Wipe	1 ft²	Total Lead	1
	W2	Wipe	1 ft²	Total Lead	1
	W3	Wipe	1 ft²	Total Lead	1
	W4	Wipe	1 ft²	Total Lead	1
	W5	Wipe	1 ft²	Total Lead	1
	W6	Wipe	1 ft²	Total Lead	1

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other
** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of C [redacted]

Relinquished [redacted] Date/Time 5/23/14 2100
Received by [redacted] Date/Time 5/24/14 900
Relinquished [redacted] Date/Time _____
Received by [redacted] Date/Time _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

Employee List

Non-Responsive

BEST AVAILABLE COPY

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Libby Armory Closed Indoor Firing Range-Libby, MT

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
RECURRING EVENT MTLACIFR-052314-4.1.1	The analytical results for lead wipe sampling indicated levels greater than the 40 µg/ft2 criterion or the 200 µg/ft2 criterion specified by the IHSW SOP and the ARNG.	IFR	2	Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft2 and the 200 µg/ft2 IHSW SOP criterion level.					29 CFR 1910.1025(h)(1) and NG PAM 420-15
RECURRING EVENT MTLACIFR-052314-4.1.2	The IFR has not been properly cleaned or converted.	IFR	2	Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range.					NGR 385-15, Section 2-3(a) and NG PAM 420-15 (Conversion or Closure IFR)
RECURRING EVENT MTLACIFR-052314-4.1.3	The IFR hallway door is kept locked. However, there are not warning signs posted.	IFR	3	Post warning signs on Entryway doors for Potential Lead Dust Exposure to pregnant females, females or of child bearing age and children. Properly close or convert non-active Indoor Firing Ranges.					General Duty Clause 5(a)(1) and NG PAM 420-15
MTLACIFR-052314-4.6	MSDS files not updated to current SDS GHS Standard	Armory, Libby, MT	4	Update all MSDSs for the facility with the new SDS format.					Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
MTLACIFR-052314-4.7.1	Both of the exhaust ventilation drop flow rates measured in the maintenance bay did not meet the ARNG minimum recommended requirements for a 500 HP idling engine.	Maintenance Bay	3	Install ventilation system that draws 850 CFM for turbo charged vehicles.					ARNG-CSG-P Memo Dated 14 November 2013 (ARNG Maintenance Shop Local Exhaust Ventilation Measuremnts)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

Introduction – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for the facility. The paragraphs are numbered to correspond to the report sections where noted.

4.1.1 Lead Wipe Sampling - The analytical results for lead wipe sampling indicated levels greater than the 40 µg/ft2 criterion or the 200 µg/ft2 criterion specified by the IHSW SOP and the ARNG.

Clean the IFR and floor areas exceeding the IHSW clean-up standard in accordance with the IHSW Armory Clean-up SOP to reduce lead concentrations below the 40 µg/ft2 and the 200 µg/ft2 IHSW SOP criterion level. **This is a recurring event**.

4.1.2 Lead Wipe Sampling - The IFR has not been properly cleaned or converted.

Indoor firing ranges shall not be used for any purpose other than firing (i.e., they shall not be used for classrooms, exercise rooms, storage, etc.). Close or convert Indoor Firing Range. **This is a recurring event**.

4.1.3 Lead Wipe Sampling - The IFR hallway door is kept locked. However, there are not warning signs posted.

Post warning signs on Entryway doors for Potential Lead Dust Exposure to pregnant or females or of child bearing age and children. Properly close or convert non-active Indoor Firing Ranges. **This is a recurring event**.

4.6 Hazard Communication and Hazardous Materials Storage – The SDS file is still listed as MSDS since the Globally Harmonized System (GHS) Classification of Labeling Chemicals has just taken effect on January 1, 2014 and the documents are still MSDS documents.

Update all MSDS for the facility with the new SDS format.

4.7.1 Ventilation Survey – Both of the exhaust ventilation drop flow rates measured in the maintenance bay did not meet the ARNG minimum recommended requirements for a 500 HP idling engine.

Install ventilation system that draws 850 CFM for turbo charged vehicles.

4.7.2 Ventilation Survey – The kitchen ventilation hood either did not operate when the switch was thrown or some other action needed to be taken.

Either repair the kitchen ventilation hood or post operating instructions indicating how to initiate the ventilation hood.

4.11 General Safety Walkthrough – The eyewash station/deluge shower in the shop area is not equipped with an alarm system.

Install an alarm system on the eyewash station/deluge shower in the shop area.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash ACU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Data Element Description for IH Site Visit	Intellicode	IH Visit Qty	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	0			X	
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	0			X	
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	0			X	
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	0			X	
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	0			X	
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	0			X	
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	0			X	
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	0			X	
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	0			X	
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	0			X	
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	0			X	
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	0			X	
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	N/A	N/A	N/A	N/A	N/A
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	N/A	N/A	N/A	N/A	N/A
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT	IHT	IHT	IHT	IHT
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT	IHT	IHT	IHT	IHT
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT	IHT	IHT	IHT	IHT
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	0			X	

Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	0			X	
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	0			X	
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	0			X	
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	0			X	
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	0			X	
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	0			X	
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	0			X	
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	0			X	
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	0			X	
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	3			X	
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	3			X	
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	3			X	
Number of ventilation systems which were evaluated by an IH	953-02-19	3			X	
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	0			X	
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	0			X	

DEPARTMENT OF THE ARMY
MONTANA ARMY NATIONAL GUARD
Armory
1004 Treasure Avenue
Libby, Montana 59923

1. Date Prepared: 23 MAY 2014

2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: Non-Responsive &R Environmental, Inc., 47 West 9000 South, Suite #2, Sandy, Utah 84070

3. Facility Name and Brief Summary of Primary Activities Conducted at Facility: Armory, Drill assemblies and Level 10 maintenance and inspections of National Guard vehicles.

4. Facility Address: 1004 Treasure Avenue, Libby, MT 59923

5. Primary Unit Assigned to Facility: Detachment 1, 639th CSSC Non-Responsive

6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL): None

7. Square Ft. Area of Facility: 35,000.

8. Work Schedule: Mon-Fri, 0700-1630 Monday through Friday

9. Number of work bays: 2 work bays

10. Equipment Density and Type:

    a. List Equipment Nomenclature Serviced or Maintained at Facility: See Attached

    b. List Total Number for Each Nomenclature Serviced or Maintained at Facility: See Attached

11. Total Number of Personnel: 2

12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): 2 AGR

13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): 0

14. Total Number of Personnel Enrolled in the Hearing Conservation Program: 0

15. Total Number of Personnel Enrolled in the Respiratory Protection Program: 0

SEC	VEH MODEL #	BUMP NO	VEH ON HAND Y/N	RADIO MT INST Y/N	SN#	REG #	LIN	RADIO SET	RADIO SER #	RADIO MT SER #	AMP SER #
108	M1097 HMWV	QM8A1	Y	Y	194358	NG50FB	T61494/T07679	AN/VRC-90F(C	260484	41991	185836
109	M1097 HMWV	QM9A1	Y	Y	194351	NG50F6	T61494/T07679	AN/VRC-90F(C	260488	42000	192712
109	M1087A1 EXPANDO	QM9B2	Y	Y	10TANHFF8CS743090	NL2CRU	T41271/T67139	AN/VRC-90F(C	260489	42001	193027
109	POWERPLANT 30KW	QM9G1	Y		T-96-078-129	VC1MCF	P42126				
110	M1078A1P2 LMTV	QM10B1	Y		10TBMAUS4BS723197	NH25AU	T60081/TS9448	AN/VRC-88F(C	260503	42019	NA
110	M1078 LMTV	QM10B2	Y		AT020196BFDN	NH07AE	T60081	AN/VRC-88F(C	260504	42020	NA
110	M1088 TRCTR	QM10B3	Y		T0202258FDN	NL1GTL	T61239	AN/VRC-90F(C	260507	42009	319704
110	M1120A2 LHS	QM10C3	Y		10T-GJ6Y1X8S101179	NP1ZQQ	T39518	AN/VRC-90F(C	260490	42002	193084
110	M1120A2R1 LHS	QM10C4	Y		10T-2K1J25H1031836	NP1WMB	T39518	AN/VRC-90F(C	260499	42003	193129
110	M1120A2R1 LHS	QM10C5	Y		10T-2K1J27J1035991	NP1WML	T39518	AN/VRC-90F(C	260500	42004	193194
110	FORK LIFT 10K	QM10F1	Y		10KB1182	WL0LT2	T73347				
110	FORK LIFT 4K	QM10F2	N		U002760	NP0AA0	T49255/T49119				
110	M871 step deck TRL	QM10T1	Y		5SV-2412A-X-85900896	NX14H7	S70027				
110	M1076 PLS TRL	QM10T2	Y		1112660	NW278G	T45465/T93761				
110	M1076 PLS TRL	QM10T3	N								
110	M1076 PLS TRL	QM10T4	N								
110	RT240/ RTCH	QM10R1	N								
111	M1120A2 LHS	QM11C1	N								
111	M1120A2 LHS	QM11C2	N								
111	FORK LIFT 4K	QM11F1	N								
111	M1076 PLS TRL	QM11T1	Y		1112319	NW27EZ	T45465				
111	M1076 PLS TRL	QM11T2	N								
112	M1078 LMTV	QM12B1	Y		AT 009189BDEG	NH04MR	T60081	AN/VRC-90F(C	260536	42012	319952
112	M1088 TRCTR	QM12B2	Y		T020224BPDN	NL1GTK	T61239	AN/VRC-90F(C	260541	42016	319958
112	FORK LIFT 6K	QM12F01	Y		6000M3A2093	WL0D68	T73347/T48944				
112	FORK LIFT 4K	QM12F02	N								
112	M817 STEP DECK TRL	QM12T1	Y		13N-2412A-S-55926859	NX11JP	S70027				
113	M1097 HMWV	QM13A1	Y		507971	NZ1A66	T61494	AN/VRC-90F(C	025499A	42018	319963
113	M1101 TRL	QM13T1	Y		26875	NW2B1M	T95992				

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Done
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	No
Additional lead **wipe** samples taken from 25% of the rest of the building - -**(on floor areas only)**	NA
Is there **a converted indoor firing range?** If so collect additional wipe samples IAW the SOW.	IFR Not converted Done
Is there any peeling **paint?** Take bulk sample if able.	Not
Are there any signs of water damage or **mold?**	No
Any suspected **ACM?** Where and what condition is it in. Bulk sample if able.	Yes -
Quality of housekeeping	Excellent
HVAC maintenance plan in place?	Yes Sub contract
Overall condition of HVAC system	Good
Obtained **CO2, Temp, RH** monitoring	Done
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Yes
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	Yes

Fire alarm in working condition - -not usually in place in older armories	Yes
Fire extinguishers in place and properly identified and mounted	Yes
Evidence of **monthly fire extinguisher inspections**	Yes
Annual fire extinguisher inspections tags current	Yes
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	Yes
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	Yes
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	No Haz Com
Any Photo labs	No
Any hazardous **noise** sources	N/A
Light levels checked throughout building	Done
Breaker panels properly labeled with no exposed wiring	checked
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	2 AGR 1 Recruiter 9 civ Admin
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Yes Occasionally
Obtain two **lead air samples**	On IHSW Request Only

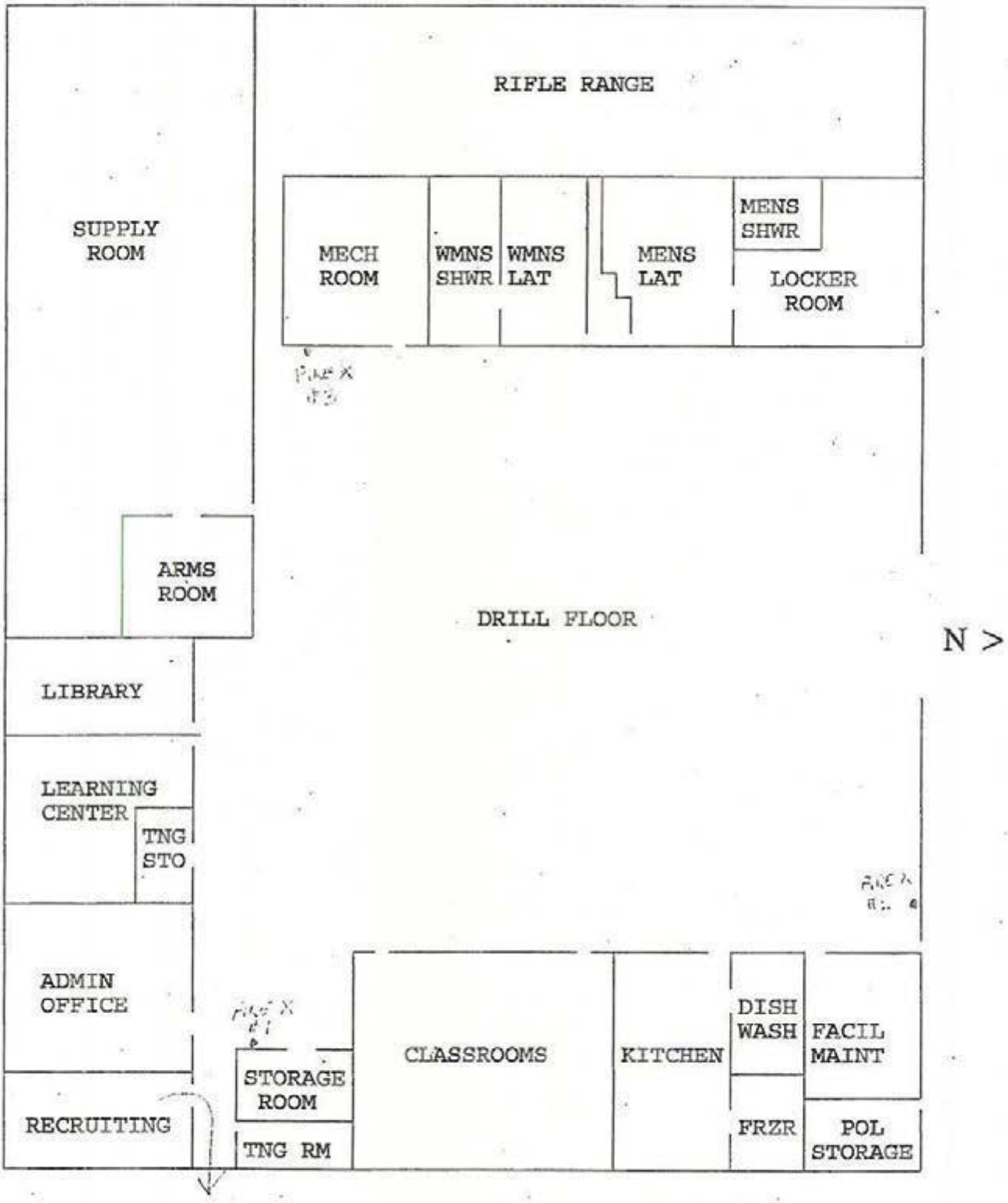
Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	Could Not Get to Onsite
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	↗
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Done
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	Done
Name of Armory, **POC, phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	obtained **(Add Checklist to Report)**

Army National Guard IAQ Checklist

General Info – Name and address of facility with Zip code, POC's name, phone #, Military organization.	Obtained
Shop Layout – clearly depicting location of operation identified in the survey. Fire evacuation plan.	Done
Mechanical Room: check for --- dampness, bird/mice droppings, general cleanliness, make-up airflow, chemical/disinfectant storage, etc., spills, leaks (oil, steam), Operating schedule (up and down times), Humidification and what kind.	Good
HVAC system: check - -drip pan (dampness, mold, etc.), filters, coils, dampers (bird screens)	Good
Outside building: check - -prevailing winds, outside air vents for HVAC, traffic near vents	Done
Inside building: check—Temp (69-79 F), RH (30-60%), CO2 (700ppm+ outside reading) should not exceed this, CO (0-2ppm), Outside Airflow (20cfm/person)	Done
Additional Inside building info: check—partitions blocking airflow, ceiling tile (dampness, stains, breaking down), diffusers (open, blocked, diverted), smells (mold, perfume, chemical, etc.), new furniture, additions, carpet, carpet cleaning, new cleaning products (general housekeeping practices), to hot, cold, dry, moist.	Checked
Ventilation – survey of all general and local ventilation systems	Good.
Overall condition of HVAC system and maintenance plan.	Good
Obtained **CO2, Temp, RH** monitoring	Done
Provide **Photographs** of exterior / interior of each facility, each ventilation system any other areas or conditions pertinent to the survey	Done

Check **building occupancy:** How many military personnel, how many civilian personnel	3 AGR 0 Civ
Any **civilian activities** in facility (cub scouts, classes, day care, parties etc)	Yes Occasional Parties
Conduct a **safety walkthrough** of entire facility document any safety deficiencies found.	None
Sampling – (Air) shall be conducted to ensure employees are not being exposed to any occupational health hazards – (**Bulk**) whenever applicable, e.g., paint chips, carpet, paneling – (**Wipe**) whenever applicable, e.g., floors (break room, general work), **Scotch Tape** samples for molds	Lead Wipe only
Submit **final written report** within 30 days after receipt of sample results. Which includes: 4 comb bound **final reports** with attachments, CD of each facility surveyed, **POC, phone #** and facility **address** included in Introduction portion.	✓
Appendices – should include: Shop layout with locations of measurements of local and general exhaust fan; sampling & ventilation data and **this Checklist**	✓

Det 1 HHC 2-163d Cavalry Battalion
Montana Army National Guard
1004 Treasure Ave
Libby, MT 59923



FIRE EVACUATION PLAN

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Livingston Armory
Indoor Firing Range (IFR)
24 Fleshman Creek Rd.
Livingston, MT 59230

13 AUG 2013

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

22 October 2013

MEMORANDUM THR Non-Responsive **SS, 1956 Mt. Majo St., Room 1009, Helena, MT 59636**

FOR Commander Livingston Armory Indoor Firing Range (IFR) at 24 Fleshman Creek Rd, Livingston, MT on 13 AUG 2013

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Livingston Armory Indoor Firing Range (IFR) at 24 Fleshman Creek Rd, Livingston, MT on 13 AUG 2013.

1. **References**. See survey report.

2. **General.**

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Livingston Armory Indoor Firing Range (IFR) at 24 Fleshman Creek Rd, Livingston, MT on 13 AUG 2013.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. **Findings.** See survey report.

4. **Commendable.**

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. **Observations / Recommendations.**

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Livingston Armory Converted Indoor Firing Range (IFR) at 24 Fleshman Creek Rd, Livingston, MT on 13 AUG 2013

a. Follow NGP 420-15 on Conversion of Indoor Firing Ranges (IFR), that which states ventilation systems, backstop (bullet trap), and anything on the walls or floors should be removed during conversion. Remove lockers, backstop, target retrieval system and stored items, Cleaning of stored items is required, prior to removal, to prevent migration of lead. Clean all of the IFR and areas identified during the SAV as being above 40 ug/ft2. Once this has been cleaned, clean-up wipe samples should be taken to ensure the 40 ug/ft2 or less is acquired. The proper sealant should then be applied & painted then additional samples should be taken by your Industrial Hygiene Technician, or a impartial person or your Regional Industrial Hygiene office. (para. 4.1.5) **(RAC 2)**

b. Record fire extinguishers inspections which should be done monthly and annually, with documentation on extinguisher tag. (para. 5.6.1) **(RAC 4)**

c. Post warning signage at the entryway(s) of the facility and on Converted IFR door(s) to warn pregnant or nursing females and children under 7 years of age that there is a potential for a lead dust exposure in this facility/area. Make sure staff and maintenance personnel are aware of the associated hazards of lead exposure. (para 4.1.10 & 4.1.8) **(RAC 3)**

d. Improve housekeeping practices and utilize SOP included to help prevent migration of noted lead dust in this Converted IFR. A **thorough cleaning of the IFR** should be accomplished before continuous use of this Converted IFR. Areas noted to be above 40 ug/ft2 should get special attention and areas should be retested once thoroughly cleaned as noted in NG Pam 420-15 (Conversion of Indoor Firing Ranges). (para. 5.3) **(RAC 2)**

e. Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color to help improve lighting in Converted IFR. (para. 4.1.2) **(RAC 4)**

f. Determine the source of the water damage in the Converted IFR and if repairs are necessary. Perform repairs as needed with the knowledge of potentially lead impregnated materials if repairs or removal of materials happens. (para. 4.2.2) **(RAC 4)**

g. Ensure the staff and anybody going into the Converted IFR are aware of the associated hazards for lead.

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (**RCAS-SOH**) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will

ARNG-CSG-P
SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Livingston Armory Indoor Firing Range (IFR) at 24 Fleshman Creek Rd, Livingston, MT on 13 AUG 2013

educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston IFR, Livingston MT

CONTROL NUMBER CLOSED [X]	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLVIFR-081313-4.1.2	Illumination is insufficient	IFR	4	Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					NGR 385-15 2-2 c (1)(b);
MTLVIFR-081313-4.1.5	Lockers and excess office and kitchen equipment is stored in the range	IFR	3	Remove lockers and stored items, until the IFR is officially converted. Cleaning of stored items is required, prior to removal to prevent migration of lead.					NGR 385-15 2-3 b
MTLVIFR-081313-5.3	Recurring Observation: Lead concentrations exceed established concentration.	IFR	2	Clean the entire IFR and materials stored within using cleaning procedures outlined in NGR 385-15, 5-4. Improve housekeeping practices to help prevent migration of lead dust related to IFR and potentially periodic weapons cleaning episodes.					29 CFR 1910.1025 (h)(1) & General Duty Clause 5 (a)(1)
MTLVIFR-081313-4.1.6	Dry sweeping is performed in the range every two weeks.	IFR	2	Do not dry sweep the range. Use the housekeeping procedures outlined in NGR 385-15, 5-4 to perform cleaning. Utilize Armory Clean-Up SOP included in this report.					NGR 385-15 2-4 e
MTLVIFR-100912-4.1.10	Staff were not aware of lead hazards in the IFR.	IFR	3	Ensure that staff or maintenance entering the IFR are aware of the associated hazards including lead.					29 CFR 1910.1200; 29 CFR 1910.1025
MTLVIFR-100912-4.4.1	Fire extinguisher past due for monthly inspections	IFR	4	Perform and document monthly inspections of fire extinguishers as required.					29 CFR 1910.157 (e)(2)

Reference DA FORM 4754
VER: 15 OCT 2009

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston IFR, Livingston MT

CONTROL NUMBER CLOSED [X]	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLVIFR-100912-5.c Executive Summary	Potential lead exposure	Armory	3	Warning signs should be posted on facility entryway doors and the Converted IFR doors, in order to help protect personnel mainly children under 7 years of age and pregnant or nursing females					General Duty Clause 5 (a)(1) & 29 CFR 1910.1025 (h)(1)
MTLVIFR-100912-4.4.2	Water damaged ceiling tiles	IFR	3	Determine the source of the water damage and if repairs are necessary. Perform repairs as needed with the knowledge of lead contamination in the ceiling tiles material.					Prudent Industrial Hygiene Practice; ANSI Z4.1-1986

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

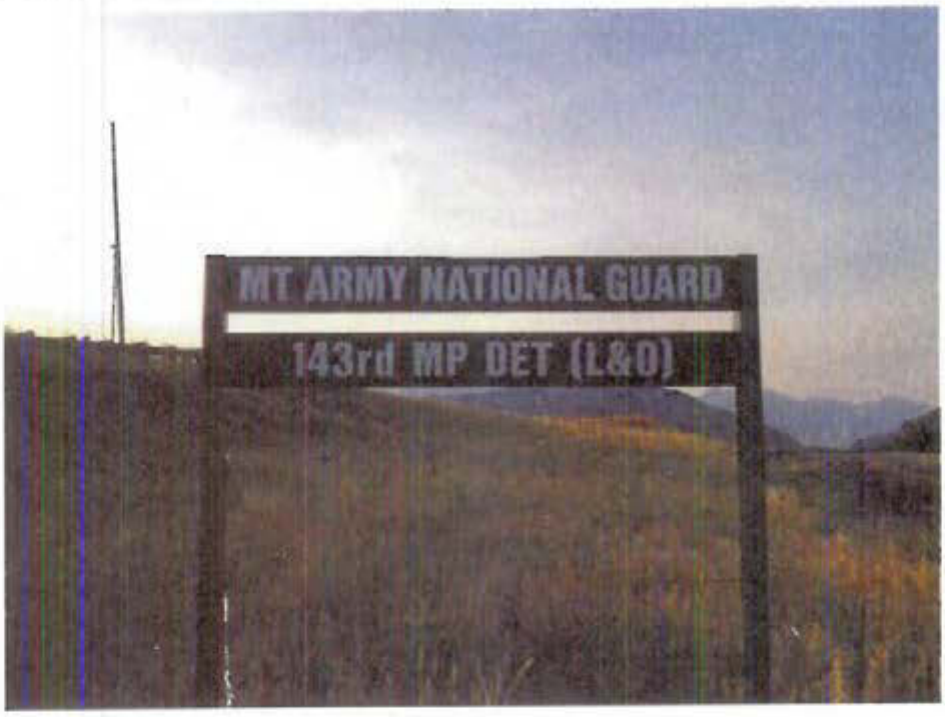
NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Industrial Hygiene Site Assistance Visit
Livingston IFR
Livingston, Montana
13 August 2013



NES
www.nesglobal.net

ARMY NATIONAL GUARD

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

LIVINGSTON INDOOR FIRING RANGE (IFR)
24 FLESHMAN CREEK ROAD
LIVINGSTON, MONTANA 59230

August 13, 2013

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1449.13**

Non-Responsive

Environmental Health and Safety Specialist

Non-Responsive

Industrial Hygienist

Reviewed by:

Non-Responsive

Senior Industrial Hygienist

Non-Responsive

Industrial Hygienist
Program Manager

BEST AVAILABLE COPY

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

On August 13, 2013, Non-Responsive ssociate Industrial Hygienist, and Non-Responsive Certified Industrial Hygienist (CIH) of Network Environmental Systems, Inc. (*NES*), conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Livingston Indoor Firing Range (IFR), located at 24 Fleshman Creek Road in Livingston, Montana. The primary point of contact (POC) for information gathered during this survey was Non-Responsive who can be reached by phone at (406) 324-5060 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate work processes conducted within the facility;
- Collect metal surface wipe samples;
- Assess the IFR;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards; and
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive vent above and beyond expectations to assist *NES* and provide information necessary to complete the IHSAV.

1.0 INTRODUCTION

On August 13, 2013, Non-Responsive ssociate Industrial Hygienist, an Non-Responsive Certified Industrial Hygienist (CIH) of Network Environmental Systems, Inc. (*NES*), conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Livingston Indoor Firing Range (IFR), located at 24 Fleshman Creek Road in Livingston, Montana. The primary point of contact (POC) for information gathered during this survey was Non-Responsive who can be reached by phone at (406) 324-5060 or by email at Non-Responsive

1.1 Objectives

The primary objective of the IHSAV was to conduct hazard evaluations of work processes and asses the IFR. Processes and activities at the facilities were evaluated and recommendations to control the existence and extent of potentially hazardous operations or conditions at the Army National Guard (ARNG) facility were documented accordingly (Reference Appendix M – Hazard Assessments). This IHSAV will serve to establish a baseline Hazard Assessments (HA) / Job Safety Analysis (JSA) of workplace and process conditions or update/validate a previous HA/JSA so a worker's history of exposures, or potential exposures is provided for each civilian and military employee.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Evaluate work processes conducted within the facility;
- Collect metal surface wipe samples;
- Assess the IFR;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards; and
- Review safety policies/programs, training, and record keeping.

2.0 PROCESS DESCRIPTION

The Livingston IFR is located within the Livingston Armory. The Armory was constructed in approximately 1989. The 143rd Military Police Detachment is assigned to the Livingston Armory, Unit Identification Code [redacted] Forty five (45) personnel are authorized for and employed at the Armory. The facility work schedule is Monday through Friday 0800 to 1700. The Livingston Armory administrative personnel consist of two Active Guard Reservists. The IFR is not actively used as a firing range. Personnel have converted the space to a locker room and storage area. However, lead wipe samples indicate the space has not been sufficiently cleaned of lead prior to repurposing.

3.0 METHODS

3.1 Personal Breathing Zone Air Sampling

Personal breathing zone air sampling was not conducted during the ISHAV.

3.2 Ventilation

The IFR has a plenum wall where air is blown into the space. The air velocity at the 5 shooting lanes was evaluated during the IHSAV. Air velocity measurements were obtained using a TSI VelociCalc Plus, model 8386A. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.3 Lead Wipe Sampling

Lead wipe samples were collected from horizontal work and floor surfaces in various locations throughout the IFR. Ghost Wipe™ brand wipes were used by wiping a one (1) square foot (ft^2) template. The collected wipe samples were placed in clean and labeled plastic centrifuge tubes and promptly sealed upon collection. Samples were submitted to ALS Environmental Laboratory, located in Salt Lake City, Utah to be analyzed for lead in accordance with NIOSH method 7300. The wipes used conform to American Standards for Testing Materials E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust.

The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

3.4 Illumination

Illumination measurements were taken throughout the Livingston IFR using a Konica Minolta light meter, model TL-1. To provide information on the overall lighting conditions

in the IFR, measurements were taken from the surfaces of typical work locations and at waist level from selected locations. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.5 Indoor Air Quality

Carbon dioxide (CO_2), temperature, and relative humidity were measured using a TSI IAQ Calc, model 7545. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bioeffluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (700 ppm) above outdoor levels. Outside CO_2 concentrations typically range from 300 to 400 ppm. Providing sufficient ventilation to maintain steady-state CO_2 concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bioeffluents (body odors). A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.6 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
Konica Minolta Illuminance Meter	TL-1	90480719	05/2013
TSI VelociCalc Plus	8386A	54110581	03/2013
TSI IAQ-Calc	7545	T75450846008	11/2012

Please see Appendix H for a complete inventory of calibration certificates that may have been used during this IHSAV.

3.7 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;

- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 OBSERVATIONS AND RECOMMENDATIONS

The Indoor Firing Range Inspection Checklist provided by the Army National Guard was used extensively in the preparation of this section. A copy of the Checklist can be found in Appendix Q. In general, several aspects of the IFR were found to be in non-compliance with existing standards for IFRs. However, the IFR is not currently used as a live fire range. Items of non-compliance with IFR standards are provided in the event the facility decides to utilize the space as an operational IFR in the future. In such instance, the items of non-compliance would need to be addressed prior to operation of the IFR.

4.1 Physical Safety Inspection

4.1.1 Building Envelope

The building envelope was reviewed as part of the Indoor Firing Range Inspection Checklist established by the Army National Guard. Each of the five firing lanes was measured to be at least four feet wide as required. Pipes, conduits and walls are sealed and baffled or covered to prevent the migration of lead and ricochets. Open floor drains were not observed. There are no carpets, drapes or fiber-like material in the range. Excluding the access door behind the plenum wall, there are no doors or windows in front of the firing line. There are no protruding edges on the floor, walls or ceiling, and the interior mortar joints are flush with the interior surface. The walls and roof of the IFR provide ballistic security. The plenum wall was supported and thick enough to avoid flexing of the wall. The entrance door to the range is weather-stripped, however one corner of the stripping has deteriorated and allows light to pass through.

4.1.2 Range Lighting

Illumination was measured at the targets and found to range between 6.39 and 34.0 foot candles (FC), less than the 100 FC required for IFRs. Illumination in other areas in the IFR ranged between 3.39 and 24.5 FC, less than the minimum of 30 FC required for IFRs. Light fixtures are protected with baffles and are installed in a manner to not obstruct the shooter's view down range. However, lockers have been installed downrange and blocks lighting between lanes. Down range lighting begins at thirteen feet from the firing line, however, the lights were not functioning at the time of the IHSAV. The downrange lighting ends approximately eight feet from the target line. Emergency lights are provided behind the firing line and are in working condition. An exit light is installed above the door. No electrical hazards were observed during the IHSAV.

4.1.3 Bullet Traps

Bullet traps appear to be of commercial design and are permanently installed. The thickness of the bullet trap is sufficient to slow the maximum caliber of ammunition authorized to be fired at the range. The bottom plate of the bullet trap inclines upwards at approximately 45°, the upper plate of the bullet trap declines downwards at approximately 45°. The bullet trap is designed in a manner to prevent ricochets. The steel plates of the bullet traps were not bowed, punctured or severely pitted. The plates in the bullet trap were flush with other plates. The seams between the plates were protected with a cover which protruded above the surface of the plates.

4.1.4 Targets and Target Carriers

The electronic target retrieval system was not operating at the time of the IHSAV. The retrieval system is constructed in a manner as to minimize flat surfaces exposed to the firing line. It is unknown as to what types of targets are used in the Livingston IFR as the range is not actively used.

4.1.5 Range Use

The IFR is currently used as a locker room and as storage space. Excess office equipment, furniture, and kitchen supplies (cups and trays) were observed in the range behind the shooters' area and at the plenum wall. Lockers have been installed in the firing lanes. It is unknown if additional clothing and equipment are brought into the range. The area in front of the plenum wall was being used as a storage area at the IHSAV. It is unknown if pellets, BBs, magnum and armor piercing rounds are permitted in the range. Safety signage indicates "soft point ammo" is permitted. The ventilation system was not functioning at the time of the IHSAV. It is unknown if individuals other than maintenance and inspection personnel are allowed to walk downrange. This facility has an ABC-type hand-held fire extinguisher mounted on the wall next to the IFR door.

4.1.6 Range Maintenance

Brooms were not located within the range. Dry sweeping is performed approximately every two weeks. SFC Simanton was advised not to dry sweep the range as the range had been identified in the 2012 IHSAV as having excessive concentrations of lead. A range custodian (range control officer) has been not been appointed for the range.

4.1.7 Personal Protective Equipment (PPE)

It is unknown if individuals utilizing the range are required to wear approved eye and hearing protection as the range is not actively used for firing of weapons.

4.1.8 Posting of Signs

The Livingston IFR has a sign posted which indicates the following is permitted, "rifles or pistols using soft point ammo velocities and energies under 2200 ft/sec and 2200 ft/lbs respectively." There is no additional safety signage posted at this facility.

The firing lanes are numbered downrange on the target carriers, not at the bullet trap. See the photo log for a photo of the firing lane's view down range. The Livingston IFR does not have an illuminated warning sign which is interlocked with the range ventilation switch to alert individuals that the range is in use. This facility does not have a warning sign posted outside of the access door to the bullet trap to warn personnel not to enter.

4.1.9 Range SOP

The Livingston IFR is inactive and is not used as a firing range. This facility does not have a current site specific SOP for the range. A copy of the Army's general SOP for ranges was available. A range custodian was last identified in a 2003 range SOP.

4.1.10 Record Keeping

The Livingston IFR is not actively used as a firing range. A visitors log is not maintained for the IFR. Copies of previous inspections for the IFR were not available. An OSHA compliance program was not available at the time of the IHSAV. Armory staff is not trained regarding lead hazards present in the IFR. The Livingston IFR does not have a designated range safety officer.

4.2 Ventilation Inspection

The ventilation system for the range was not operational at the time of the IHSAV. Therefore, ventilation velocity measurements were unable to be performed. For informational purposes aspects of the ventilation were evaluated.

To prevent contamination of other ventilation systems, the exhaust for the range ventilation system is installed away from other air supply systems. The ventilation system is designed to introduce make-up air into the range from behind the shooters. However, this feature could not be tested. If the system was functional it appears that air would be exhausted at or behind the bullet trap. It is unknown if a HEPA filter with a reliable back-up filter is installed. The

ventilation system does not appear to recirculate air. It is unknown if the power system is designed so that the make-up and exhaust fans are electronically interlocked. It is not known if the exhaust fan will start first followed by the make-up fan.

4.3 Recommendations

The Livingston IFR was found to have several items that were not compliant with existing IFR standards. The IFR should be used as an active indoor firing range until each item of non-compliance has been sufficiently addressed. A complete list of items that must be addressed before the IFR can be utilized as an active IFR is provided in Appendix N, Recommendations.

5.0 SAMPLING RESULTS

5.1 Personal Breathing Zone Sampling

Personal breathing zone air sampling was not conducted during the ISHAV.

5.2 Ventilation

Air flow velocity measurements were not conducted as part of this IHSAV as the ventilation system was not functional.

5.3 Lead Wipe Sampling

A total of seven (7) lead wipe samples were collected at the Livingston IFR to be analyzed in accordance with NIOSH Method 7300, modified for Ghost Wipes™. The analytical results are summarized in the table below. Laboratory results are attached in Appendix J.

Analytical results for samples which exceed the acceptable concentration are shown in bold. Six of the seven samples were found to exceed the ARNG standard of 200µg/ft^2. Results indicate that the range was not sufficiently cleaned prior to re-purposing the IFR as a locker room and the personnel occupying the space are likely to be exposed to lead.

Sample Number	Sample Area	Sample Location	Results (µg/ft^2)	Blank Corrected Results (µg/ft^2)	ARNG/HUD Standard (µg/ft^2)
081313-LVSTIFR-01	**IFR**	**Food tray**	**330**	**328.5**	**≤ 40**
081313-LVSTIFR-02	**Locker #41**	**Floor, under locker**	**3600**	**3598.5**	**≤ 200**
081313-LVSTIFR-03	**Bullet trap**	**Floor, between lanes 2 and 3**	**98000**	**97998.5**	**≤ 200**
081313-LVSTIFR-04	Locker #43	Top of locker	190	188.5	≤ 200
081313-LVSTIFR-05	**Plenum wall**	**Wall, vertical**	**390**	**388.5**	**≤ 200**
081313-LVSTIFR-06	**Door to IFR**	**Floor**	**580**	**578.5**	**≤ 200**
081313-LVSTIFR-07	**Lane #4**	**Shooter's table**	**27000**	**26998.5**	**≤ 200**

Bold = Denotes sample results were greater than the allowable level set by ARNG

5.4 Illumination

Illumination levels were measured throughout the IFR. Measurements were collected in foot-candles (FC). In general, the measurements were taken at task surface level. Measurements not taken on a desk or workbench were taken at waist level. The illumination measurements were compared with IFR standards. In general, 100 FC is the minimum lighting requirements for the targets and 30 FC is required in all other areas of the IFR.

Lighting at the targets ranged 3.39 and 24.5 FC. The illumination at other locations within the IFR ranged from 3.39 to 24.5 FC. See Appendix E for a table of illumination measurements.

5.5 Indoor Air Quality

The average outdoor carbon dioxide concentration was measured to be 198 parts per million (ppm); therefore, the maximum indoor CO_2 concentration recommended by ASHRAE would be 900 ppm. The CO_2 concentrations from inside the IFR ranged between 219 to 266 ppm, within the acceptable limit.

ASHRAE recommends maintaining temperatures between 68 and 75°F and relative humidity between 30% and 60% relative humidity to minimize the growth of allergenic or pathogenic organisms. Temperatures inside the IFR ranged between 69.7 and 70.0 °F. Relative humidity ranged from 39.6 to 40.4%. The facility was within the recommended ranges for temperature and relative humidity. A table of the sample locations and corresponding IAQ measurements is available in Appendix E.

5.6 Other Observations

1. Monthly inspection of the range fire extinguisher was out of date. The fire extinguisher was last inspected on October 10, 2012.
2. Water damage was observed on six ceiling tiles (approximately ten square feet) in the southern portion of the range ceiling.

6.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES*' professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

7.0 PROJECT APPROVAL

This IHSAV was reviewed and approved by:

Non-Responsive

October 24, 2013
Date

Senior Industrial Hygienist

Non-Responsive

October 17, 2013
Date

Industrial Hygiene Program Manager

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

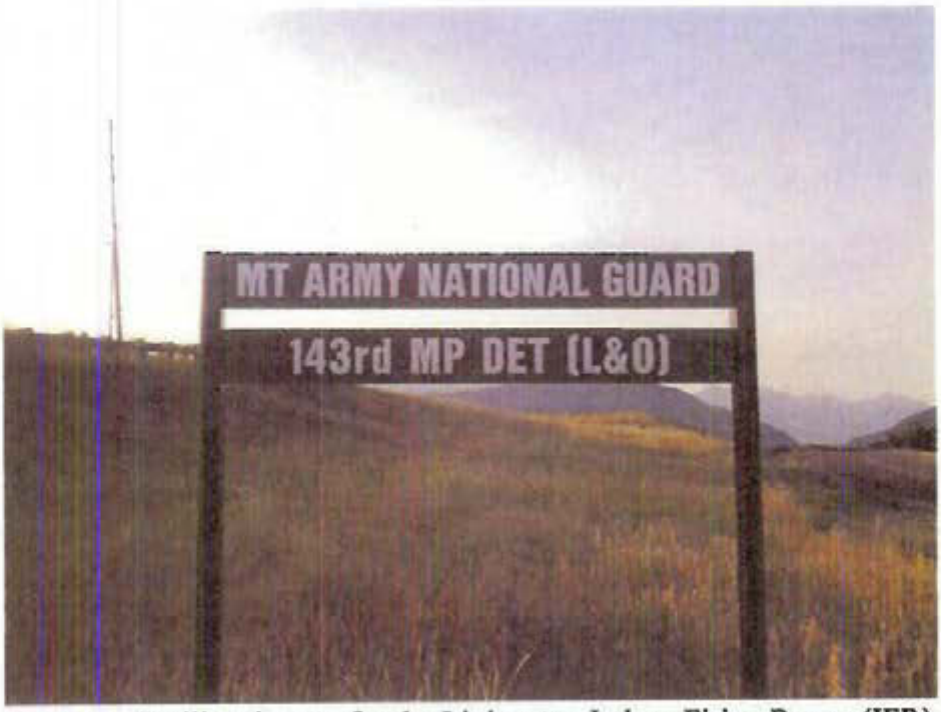


Photo 1: Facility signage for the Livingston Indoor Firing Range (IFR).

Photo 2: Entrance to IFR labeled "Locker Room".

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

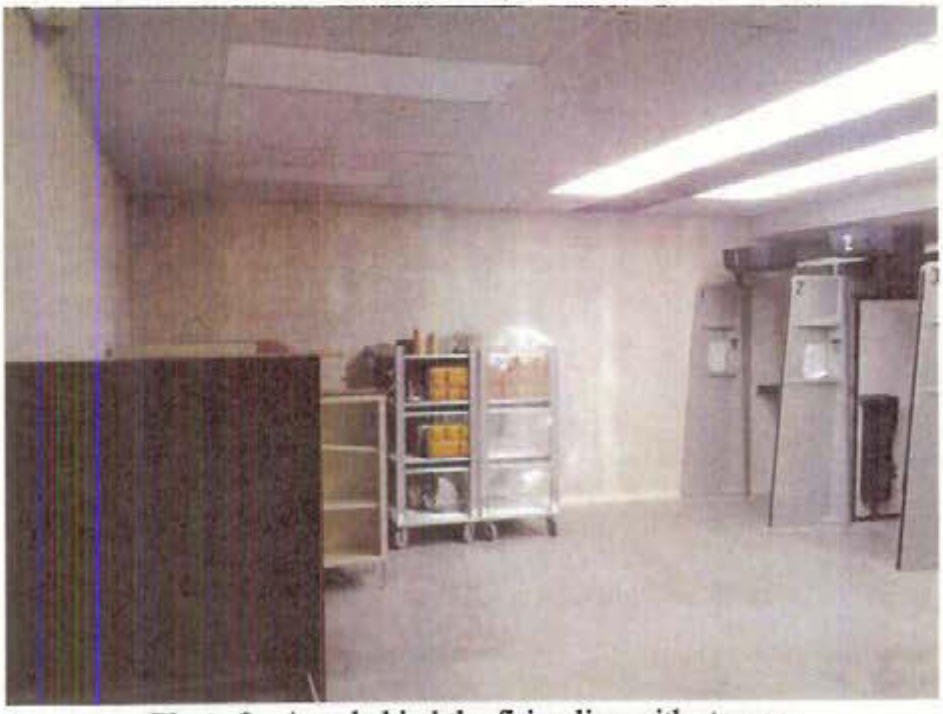


Photo 3: Area behind the firing line with storage.

Photo 4: Firing lanes 1-3, view downrange.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 5: Firing lanes 3-5, view downrange.

Photo 6: Fire extinguisher inspection tag, past due for monthly inspections.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 7: Bullet trap.

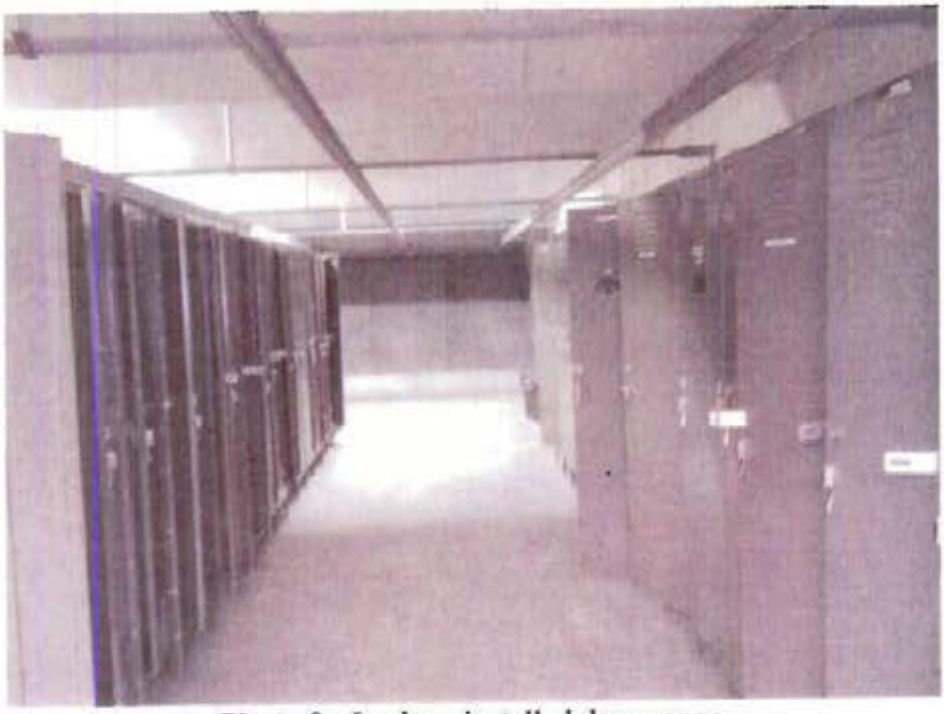


Photo 8: Lockers installed downrange.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 9: Facility safety signage.

Photo 10: Door to the bullet trap area is blocked, and no safety signage posted.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 11: Water stained ceiling tiles.

Photo 12: Protective strip over bullet trap plates, extends beyond the height of the plates.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 13: Electronic component of nonoperational target retrieval system.

Photo 14: Dust debris, evidence of dry sweeping in the IFR trash receptacle.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

Photo 15: Lead wipe sample 81313-LVSTIFR-01 collected from a food tray stored behind the firing line.

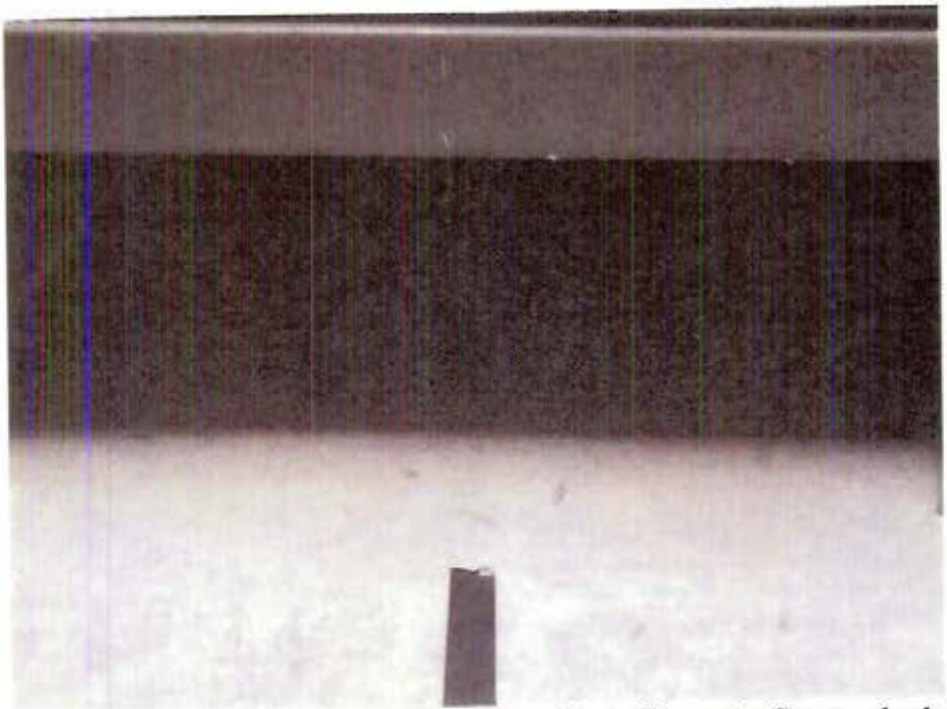


Photo 16: Lead wipe sample 81313-LVSTIFR-02 collected from the floor under locker #41.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

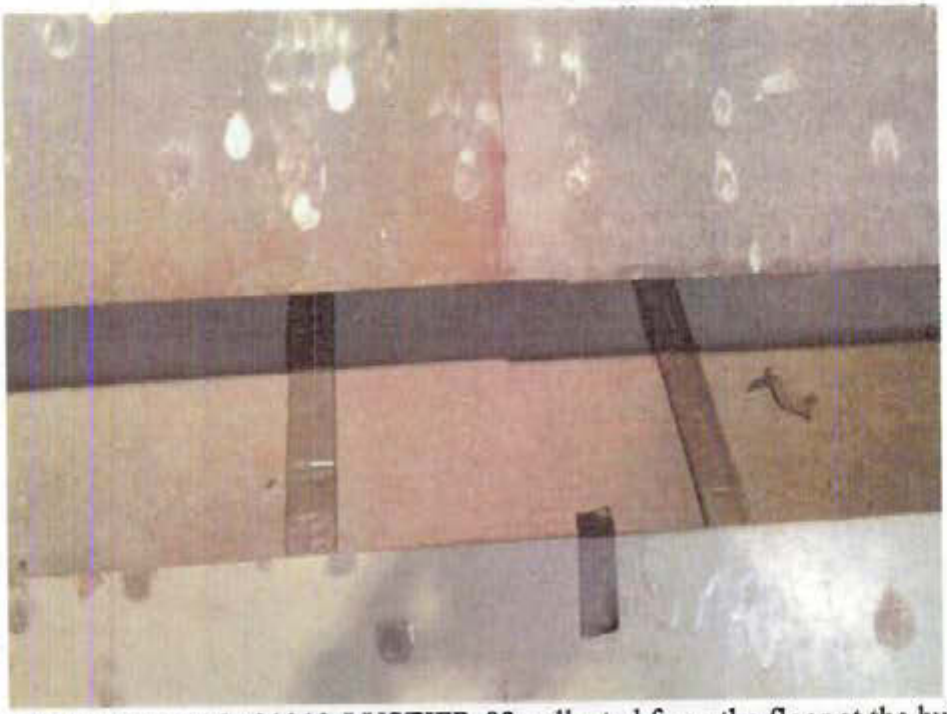


Photo 17: Lead wipe sample 81313-LVSTIFR-03 collected from the floor at the bullet trap, between lanes #2 and 3.

Photo 17: Lead wipe sample 81313-LVSTIFR-04 collected from the top of locker #43.

PHOTO LOG
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MONTANA
AUGUST 13, 2013

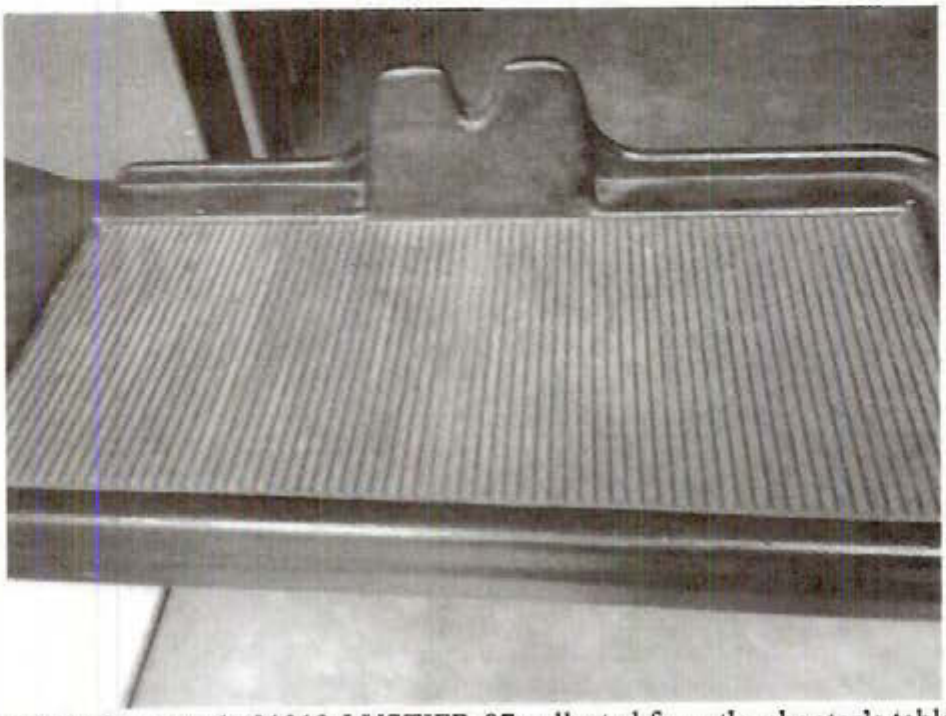
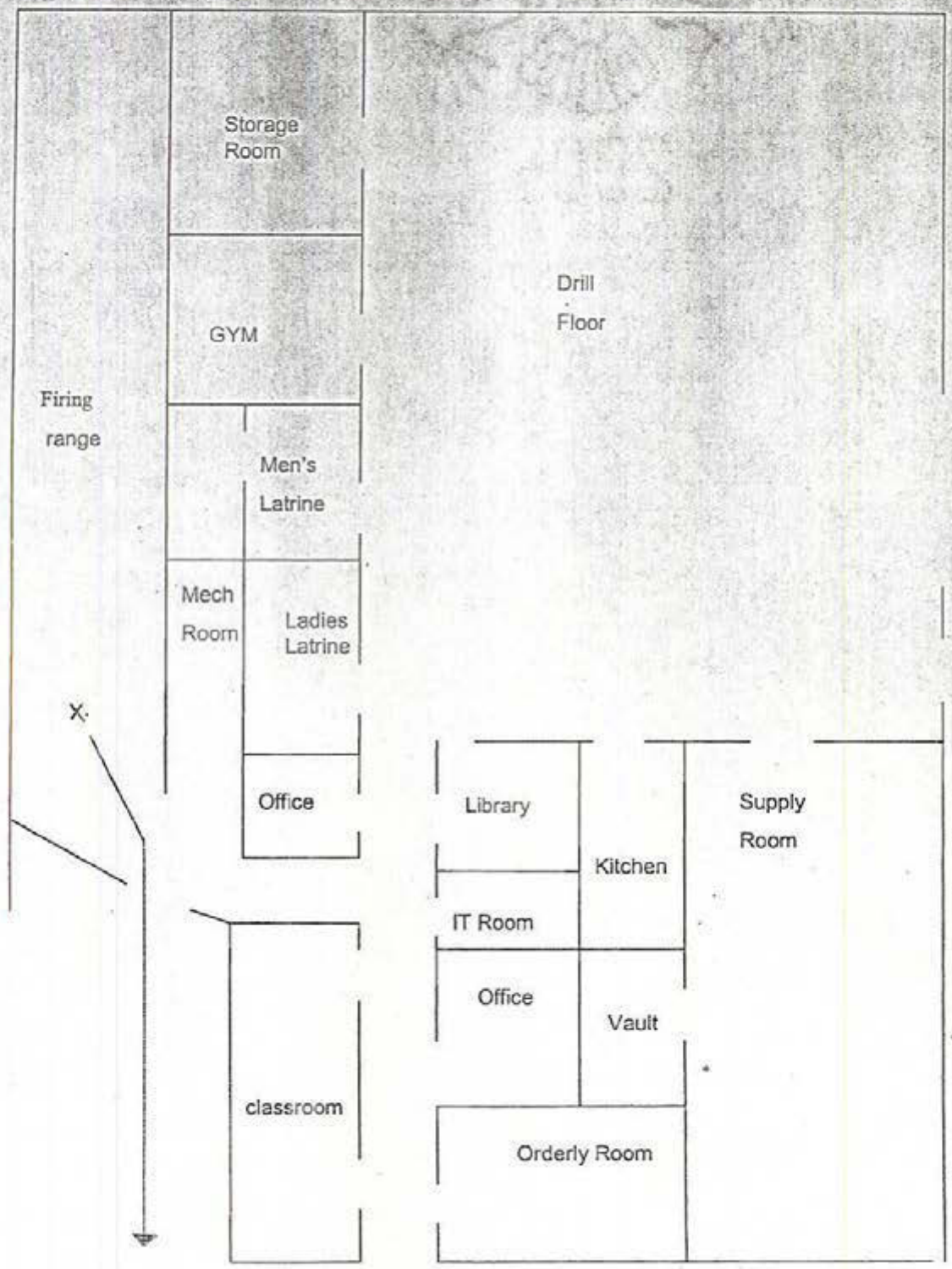


Photo 18: Lead wipe sample 81313-LVSTIFR-07 collected from the shooter's table at firing lane #4.

Livingston Armory Fire Evacuation Plan



X You are Here

ILLUMINATION SURVEY

LIVINGSTON IFR
LIVINGSTON, MONTANA
AUGUST 13, 2013

Location	Light – FC	Minimum lighting requirements – FC
Target, Lane #1	**6.39**	≥ 100
Target, Lane #2	**34.0**	≥ 100
Target, Lane #3	**7.11**	≥ 100
Target, Lane #4	**11.96**	≥ 100
Target, Lane #5	**31.1**	≥ 100
Approximately 15 feet from bullet trap, west side	**24.5**	≥ 30
Approximately 15 feet from bullet trap, east side	**19.7**	≥ 30
Approximately 30 feet from bullet trap, west side	**23.9**	≥ 30
Approximately 30 feet from bullet trap, east side	**3.39**	≥ 30

FC = foot candle measurement
Bold = Below Minimum Lighting Requirements

IAQ MEASUREMENTS

LIVINGSTON IFR
LIVINGSTON, MONTANA
AUGUST 13TH, 2013

Location	CO_2 max permissible concentration 898 ppm	Temperature permissible range 65 – 80°F	RH% permissible range 30-60%
Outside	198	NA	NA
IFR Entrance	266	70.0	40.4
Center of Range	220	69.9	40.3
Adjacent to Bullet Trap	219	69.7	39.6

CO_2 = Carbon Dioxide
ppm = Parts per Million
°F = Degrees Fahrenheit
RH = Relative Humidity
CO = Carbon Monoxide
STEL = Short Term Exposure Limit
N/A = Not Applicable
Bold = Outside of Permissible Range

8/13/13 013.IH1419.13 Livingston IFR

Photo Log

#1 Signage for facility
#2 View downrange Lanes 1-3
#3 View downrange Lanes 3-5
#4 Entrance to IFR "Locker Room"
#5 View to west wall with stored items
#6 Fire inspection tag - out of date last inspected
#7 Row of lockers between Lanes 4 & 5
#8 Bullet Trap
#9 Row of lockers between Lanes 1 & 2
#10 Safety signage
#11 Bullet trap access from storage room
#12 Exhaust fans on exterior of building
#13 ~~Make up~~ Heated air source - ceiling - ~~plenum~~ (above shooter position)
#14 Rear plenum (behind shooter position)
#15 Duct to rear plenum wall
#16 Water damaged ceiling tiles behind shooter's area
#17 Centered view of seam of bullet trap
#18 Angled view of seam of bullet trap
#19 Target retrieval panel at shooter position with instructions
#20 Vantage II Gas heating system IR radiant tube heater above shooter, with open junction box (top left
#21 Fire extinguisher for range not located in recessed cabinet
#22 Possible dry sweeping debris in range garbage can

#23 Lead wipe sample #1 9313-LVSTIFR-01 Food tray stand in range between under locker

" " #2 -02 #41 ~~plenum wall~~ Lane 2+3

" " #3 -03 at bullet trap between lane 2+3 ~~under locker #41, center~~

" " #4 -04 top of locker #43"

" " #5 -05 plenums wall

#6 -06 at entrance door

#7 -07 shooter's table Lane #4

Wipe Sampling Summary Form

NES Job # 013.IA1449.13

Collected By Non-Responsive

Sample # 81313-LVSTIFR-01

Analyte Lead

Sample Collected From Food tray stored in range

Wipe Area 1 ft² units ug/ft² Date 8/13/13 Time ____

Sample # 81313-LVSTIFR-02

Analyte Lead

Sample Collected From Floor under locker #41 between lanes 2 & 3

Wipe Area 1 sq ft units ug/ft² Date 8/13/13 Time ____

Sample # 81313-LVSTIFR-03

Analyte Lead

Sample Collected From Bullet trap between lanes 2 & 3

Wipe Area 1 ft2 units ug/ft² Date 8/13/13 Time ____

Sample # 81313-LVSTIFR-04

Analyte Lead

Sample Collected From Top of lock # 43 between lanes 2 & 3

Wipe Area 1 ft² units ug/ft² Date 8/13/13 Time ____

Sample # 81313-LVSTIFR-05

Analyte Lead

Sample Collected From Plenum wall

Wipe Area 1 ft² units ug/ft² Date 8/13/13 Time ____

Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, California 95630

Wipe Sampling Summary Form

NES Job # 013.JH1449.13

Collected By [redacted]

Sample # 8/13/13-LVSTIFR-06

Analyte Lead

Sample Collected From Floor at entrance door

Wipe Area 1 ft² units ug/ft² Date 8/13/13 Time ____

Sample # 8/13/13-LVSTIFR-07

Analyte Lead

Sample Collected From Shooters table Lane #4

Wipe Area 1 ft² units ug/ft² Date 8/13/13 Time ____

Sample # 8/13/13-LVSTIFR-Blank

Analyte Lead

Sample Collected From NA

Wipe Area NA units ug/sample Date 8/13/13 Time ____

Sample # ____

Analyte ____

Sample Collected From ____

Wipe Area ____ units ____ Date ____ Time ____

Sample # ____

Analyte ____

Sample Collected From ____

Wipe Area ____ units ____ Date ____ Time ____

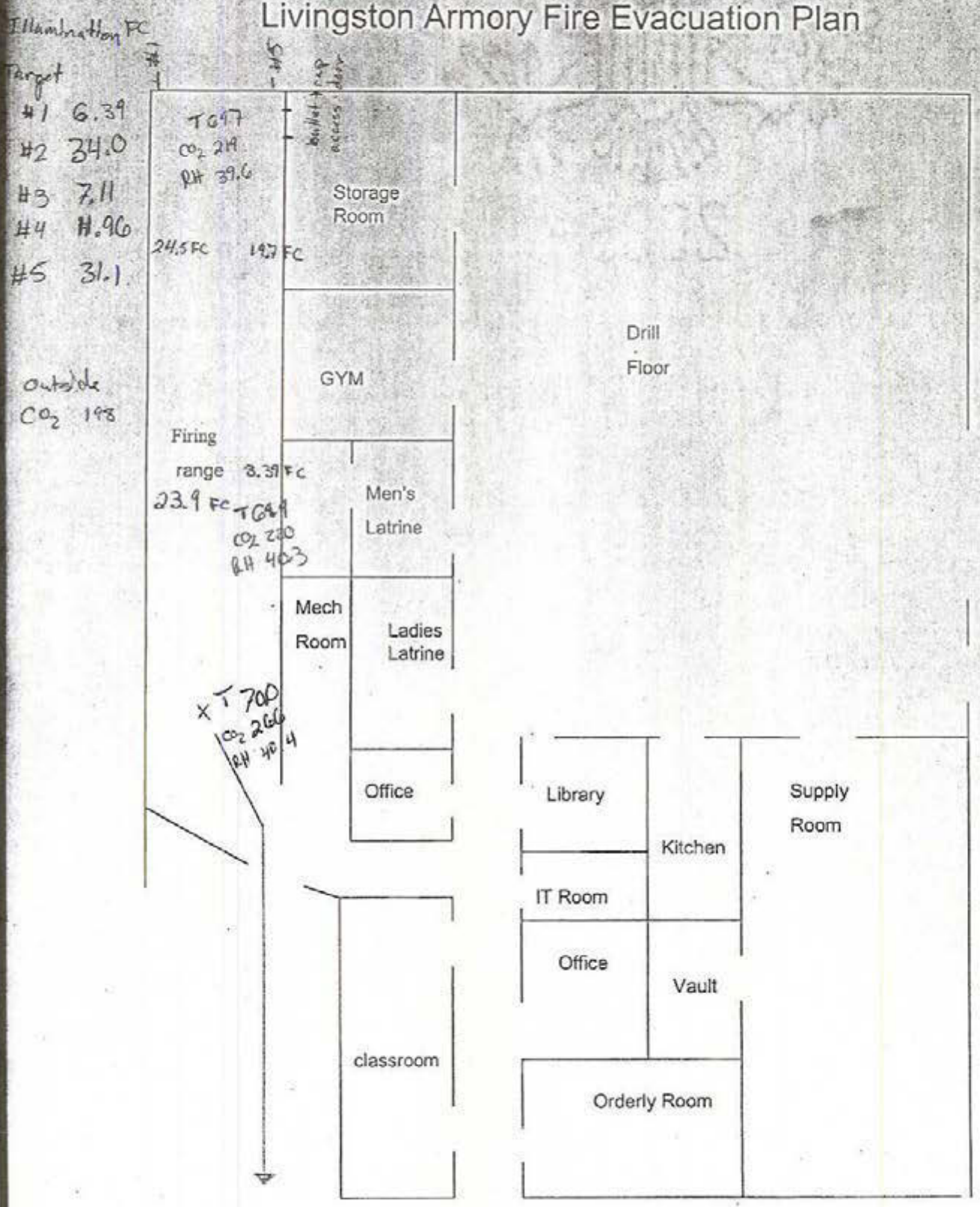
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, California 95630

Army National Guard IAQ Checklist

General Info – Name and address of facility with Zip code, POC's name, phone #, Military organization.	Livingston JFR
Shop Layout – clearly depicting location of operation identified in the survey. Fire evacuation plan.	Yes See map
~~Mechanical~~ **Room:** check for --- dampness, bird/mice droppings, general cleanliness, make-up airflow, chemical/disinfectant storage, etc., spills, leaks (oil, steam), Operating schedule (up and down times), Humidification and what kind.	Water damaged ceiling tiles in 10 ft² (6 tiles)
HVAC system: check - -drip pan (dampness, mold, etc.), filters, coils, dampers (bird screens)	NA
Outside building: check - -prevailing winds, outside air vents for HVAC, traffic near vents	NA
Inside ~~building~~: check—Temp (69-79 F), RH (30-60%), CO2 (700ppm+ outside reading) should not exceed this, CO (0-2ppm), Outside Airflow (20cfm/person)	See map
Additional Inside building info: check—partitions blocking airflow, ceiling tile (dampness, stains, breaking down), diffusers (open, blocked, diverted), smells (mold, perfume, chemical, etc.), new furniture, additions, carpet, carpet cleaning, new cleaning products (general housekeeping practices), to hot, cold, dry, moist.	Damaged ceiling tiles
Ventilation – survey of all general and local ventilation systems	Not Functional
Overall condition of HVAC system and maintenance plan.	Unknown
Obtained **CO2, Temp, RH** monitoring	See map
Provide **Photographs** of exterior / interior of each facility, each ventilation system any other areas or conditions pertinent to the survey	Yes

Check **building occupancy:** How many military personnel, how many civilian personnel	45 authorized for armory
Any **civilian activities** in facility (cub scouts, classes, day care, parties etc) IFR	No
Conduct a **safety walkthrough** of entire ~~facility~~ document any safety deficiencies found. IFR	Yes
Sampling – (**Air**) shall be conducted to ensure employees are not being exposed to any occupational health hazards – (**Bulk**) whenever applicable, e.g., paint chips, carpet, paneling – (**Wipe**) whenever applicable, e.g., floors (break room, general work), **Scotch Tape** samples for molds	NA
Submit **final written report** within 30 days after receipt of sample results. Which includes: **4** comb bound **final reports** with attachments, **CD** of each facility surveyed, **POC, phone #** and facility **address** included in Introduction portion.	
Appendices – should include: Shop layout with locations of measurements of local and general exhaust fan; sampling & ventilation data and **this Checklist**	

Livingston Armory Fire Evacuation Plan



X You are Here

IAO & Illumination Plan

Tektronix

Certificate of Calibration

7323038

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE
SUITE C
MATHER, CA 95655

PO Number: Non-Responsive

Instrument ID: 90480719
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 90480719

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: LEFT AS FOUND
Procedure: 33K4-4-564-1 ILLUMINANCE LIGHT METER

Technician: Non-Responsive
Cal Date 02May2013
Cal Due Date: 02May2014
Interval: 12 MONTHS
Temperature: 23.0 C
Humidity: 47.0 %

Remarks:

Tektronix certifies the performance of the above instrument has been verified using test equipment of known accuracy, which is traceable to National Metrology Institutes (NIST, NPL, PTB) that are linked to the International System of Units (SI). The policies and procedures used comply with ANSI/NCSL Z540.1-1994 (R2002).

Approved By: Non-Responsive
Service Representative

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700284966	17-1001075	6 STEEL RULE	STARETT	C416R-72	22Mar2013	22Mar2015
1700282698	17-1001081	LUMINANCE STD	OPTRONIC LABS	OL 455-4	31Jul2012	31Jul2013
1700293531	17-2007787	1000W LIGHT BULB	GOOCH HOUSEGO	OL FEL-P-K	30Jan2013	30Jan2014
1700285565	4083RC	MULTIMETER	FLUKE	8842A	06Aug2012	26Aug2013

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

MICRO PRECISION CALIBRATION INC.

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012 **Cert No.** 2008120221718

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3925
Asset ID:	1307
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	7545
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	T75450846008
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description.	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8185	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2008120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90058761A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used in this Event

Procedure Name	Description
PARTICLE COUNTER 35519-045 VWR TEMP-HUM	PARTICLE COUNTERS INSTRUCTIONS

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

TSI - Customer Service report

Thank you for the opportunity to service your instrument.

RMA Number: 800235189

Ship-to party 5180406	Sold-to party 5180406
IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA	IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA

Service Information:
Purchase Order CC-[redacted]
Purchase Order Date 03/26/2012

Description Calibration of VelociCalc Plus 8386A

Equipment 57602 VELOCICALC Plus Air Velocity Meter
Serial Number 54110581
Material 8386A

Service Description:

Return Reason:
CALIBRATION OVERDUE

Findings:
Unit sent in for clean and calibration. The unit passed as found.

Action:
The unit was cleaned, calibrated, and a complete operational checkout

was performed.

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	68.4 (20.2)	°F (°C)
RELATIVE HUMIDITY	36	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☐ AS LEFT ☒ IN TOLERANCE
☒ AS FOUND ☐ OUT OF TOLERANCE

- CALIBRATION VERIFICATION RESULTS -

VELOCITY VERIFICATION — SYSTEM V-106 — *Unit: f/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	643 (3.26)	640 (3.25)	623~662 (3.17~3.36)
2	34 (0.17)	35 (0.18)	31~37 (0.16~0.19)	8	995 (5.06)	991 (5.03)	965~1025 (4.90~5.21)
3	64 (0.32)	64 (0.32)	61~67 (0.31~0.34)	9	1468 (7.45)	1476 (7.50)	1423~1512 (7.23~7.68)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2481 (12.60)	2463 (12.51)	2406~2555 (12.22~12.98)
5	160 (0.81)	159 (0.81)	155~164 (0.79~0.84)	11	4501 (22.87)	4440 (22.55)	4366~4636 (22.18~23.55)
6	328 (1.67)	325 (1.65)	318~338 (1.62~1.72)	12	8000 (40.64)	7943 (40.35)	7760~8240 (39.42~41.86)

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	-4.073 (-1014.2)	-4.084 (-1016.9)	-4.119~-4.027 (-1025.6~-1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY AS FOUND — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Temperature	E001800	01-19-12	07-19-12
Humidity	E003539	02-28-12	08-28-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
Temperature	E001799	01-19-12	07-19-12

Non-Responsive

March 27, 2012
DATE

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	69.1 (20.6)	°F (°C)
RELATIVE HUMIDITY	37	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☒ AS LEFT ☐ AS FOUND

☒ IN TOLERANCE ☐ OUT OF TOLERANCE

- CALIBRATION VERIFICATION RESULTS -

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	-4.073 (-1014.2)	-4.084 (-1016.9)	-4.119~-4.027 (-1025.6~-1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY VERIFICATION — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

VELOCITY VERIFICATION — SYSTEM V-110 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	648 (3.29)	646 (3.28)	629~667 (3.19~3.39)
2	35 (0.18)	34 (0.17)	32~38 (0.16~0.19)	8	996 (5.06)	997 (5.06)	966~1025 (4.91~5.21)
3	64 (0.33)	64 (0.32)	61~67 (0.31~0.34)	9	1476 (7.50)	1476 (7.50)	1432~1521 (7.27~7.72)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2476 (12.58)	2472 (12.56)	2401~2550 (12.20~12.95)
5	160 (0.81)	159 (0.81)	155~165 (0.79~0.84)	11	4498 (22.85)	4548 (23.10)	4363~4633 (22.17~23.54)
6	346 (1.76)	346 (1.76)	335~356 (1.70~1.81)	12	7988 (40.58)	8013 (40.71)	7748~8227 (39.36~41.80)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001800	01-19-12	07-19-12
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Humidity	E003539	02-28-12	08-28-12
Temperature	E004402	12-08-11	06-08-12
Pressure	E001721	12-13-11	06-13-12
Velocity	E003327	09-19-07	09-19-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001799	01-19-12	07-19-12
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
DC Voltage	E001658	06-28-11	12-28-12
Pressure	E001719	12-13-11	06-13-12
Barometric Pressure	E001992	04-08-11	04-08-12

Non-Responsive

March 27, 2012
DATE

TABLE 1
LEAD WIPE SAMPLE RESULTS
LIVINGSTON INDOOR FIRING RANGE
LIVINGSTON, MT
AUGUST 13, 2013

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	Blank Corrected Results ($\mu g/ft^2$)	ARNG/HUD Standard ($\mu g/ft^2$)
081313-LVSTIFR-01	IFR	Food tray	**330**	**328.5**	≤ 40
081313-LVSTIFR -02	Locker #41	Floor, under locker	**3600**	**3598.5**	≤ 200
081313-LVSTIFR -03	Bullet trap	Floor, between lanes 2 and 3	**98000**	**97998.5**	≤ 200
081313-LVSTIFR -04	Locker #43	Top of locker	190	188.5	≤ 200
081313-LVSTIFR -05	Plenum wall	Wall, vertical	**390**	**388.5**	≤ 200
081313-LVSTIFR -06	Door to IFR	Floor	**580**	578.5	≤ 200
081313-LVSTIFR -07	Lane #4	Shooter's table	**27000**	**26998.5**	≤ 200

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
HUD = US Department of Housing and Urban Development
Bold = Above ARNG Standard limit

ANALYTICAL REPORT

Report Date: August 26, 2013

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1323130
Client Project ID: 013.IH14219.13/Livingston IFR
Purchase Order: 013.IH14219.13
Project Manager: Non-Responsive

Analytical Results

Sample ID: 81313-LVSTIFR-01	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130001	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	330	330	6.3

Sample ID: 81313-LVSTIFR-02	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130002	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	3600	3600	2.5

Sample ID: 81313-LVSTIFR-03	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130003	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	98000	98000	63

Sample ID: 81313-LVSTIFR-04	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130004	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	190	190	6.3

ANALYTICAL REPORT

Workorder: 34-1323130
Client Project ID: 013.IH14219.13/Livingston IFR
Purchase Order: 013.IH14219.13
Project Manager: [redacted]

Analytical Results

Sample ID: 81313-LVSTIFR-05 | Media: Ghost Wipe | Collected: 08/13/2013
Lab ID: 1323130005 | Sampling Location: Livingston IFR | Received: 08/19/2013
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	390	390	6.3

Sample ID: 81313-LVSTIFR-06 | Media: Ghost Wipe | Collected: 08/13/2013
Lab ID: 1323130006 | Sampling Location: Livingston IFR | Received: 08/19/2013
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	580	580	6.3

Sample ID: 81313-LVSTIFR-07 | Media: Ghost Wipe | Collected: 08/13/2013
Lab ID: 1323130007 | Sampling Location: Livingston IFR | Received: 08/19/2013
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	27000	27000	25

Sample ID: 81313-LVSTIFR-Blank | Media: Ghost Wipe | Collected: 08/13/2013
Lab ID: 1323130008 | Sampling Location: Livingston IFR | Received: 08/19/2013
Method: NIOSH 7300 Mod. | Sampling Parameter: Area Not Applicable | Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	1.5	NA	1.3

Comments

Sample: 1323130001

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130002

Lead was reported from 2X dilution data for this sample in order to obtain a response within the linear range for lead. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130003

Lead was reported from 50X dilution data for this sample in order to obtain a response within the linear range for lead. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130004

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

ANALYTICAL REPORT

Workorder: 34-1323130
Client Project ID: 013.IH14219.13/Livingston IFR
Purchase Order: 013.IH14219.13
Project Manager: Non-Responsive

Analytical Results

Sample ID: 81313-LVSTIFR-05	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130005	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	390	390	6.3

Sample ID: 81313-LVSTIFR-06	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130006	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	580	580	6.3

Sample ID: 81313-LVSTIFR-07	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130007	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	27000	27000	25

Sample ID: 81313-LVSTIFR-Blank	Media: Ghost Wipe	Collected: 08/13/2013
Lab ID: 1323130008	Sampling Location: Livingston IFR	Received: 08/19/2013
Method: NIOSH 7300 Mod.	Sampling Parameter: Area Not Applicable	Prepared: 08/20/2013 Analyzed: 08/22/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	1.5	NA	1.3

Comments

Sample: 1323130001

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130002

Lead was reported from 2X dilution data for this sample in order to obtain a response within the linear range for lead. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130003

Lead was reported from 50X dilution data for this sample in order to obtain a response within the linear range for lead. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130004

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

ANALYTICAL REPORT

Workorder: 34-1323130
Client Project ID: 013.IH14219.13/Livingston IFR
Purchase Order: 013.IH14219.13
Project Manager: Non-Responsive

Comments

Sample: 1323130005

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130006

Lead was reported from 5X dilution data for this sample because of interferences. The reporting limit was raised proportionately to the reported dilution level.

Sample: 1323130007

Lead was reported from 20X dilution data for this sample in order to obtain a response within the linear range for lead. The reporting limit was raised proportionately to the reported dilution level.

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1323130
Client Project ID: 013.IH14219.13/Livingston IFR
Purchase Order: 013.IH14219.13
Project Manager: Non-Responsive

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

W 1323130

ANALYTICAL REQUEST FORM

1323130

1. [X] REGULAR Status

[ ] RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 8/13/13 Purchase Order No. 013.I111449.13

3. Company Name NES

Address 1141 Sibley Street
Folsom CA 95630

Pers [redacted]
Tele
Fax
E-m
Billi

4. Quote No. _____
ALS Project Mana [redacted]

5. Sample Collectio [redacted]
Sampling Site Livingston IFR
Industrial Process _____
Date of Collection 8/13/13
Time Collected _____
Date of Shipment 8/15/13
Chain of Custody No. _____

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	8/13/13-LIVSTIFR-01	Sheet	1 ft²	NIOSH 7300 - Lead	ug/ft²
	" " -02	↓	↓	↓	↓
	" " -03				
	" " -04				
	" " -05				
	" " -06				
	" " -07	↓	↓	↓	↓
	- Blank				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ug/ft² (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamin [redacted]

7. Chain of Custo [redacted]

Relinquished by		Date/Time 8/15/13
Received by		Date/Time 8/19/13 1930
Relinquished by		Date/Time
Received by		Date/Time

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

[redacted]

Unit Name: 143RD MILITARY POLICE DET

Name	Rank
Non-Responsive	Non-Responsive
Non-Responsive	Non-Responsive
Non-Responsive	Non-Responsive

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston IFR, Livingston MT

CONTROL NUMBER CLOSED [X]	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLVIFR-081313-4.1.2	Illumination is insufficient	IFR	4	Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					NGR 385-15 2-2 c (1)(b);
MTLVIFR-081313-4.1.5	Lockers and excess office and kitchen equipment is stored in the range	IFR	3	Remove lockers and stored items, until the IFR is officially converted. Cleaning of stored items is required, prior to removal to prevent migration of lead.					NGR 385-15 2-3 b
MTLVIFR-081313-5.3	Recurring Observation: Lead concentrations exceed established concentration.	IFR	2	Clean the entire IFR and materials stored within using cleaning procedures outlined in NGR 385-15, 5-4. Improve housekeeping practices to help prevent migration of lead dust related to IFR and potentially periodic weapons cleaning episodes.					29 CFR 1910.1025 (h)(1) & General Duty Clause 5 (a)(1)
MTLVIFR-081313-4.1.6	Dry sweeping is performed in the range every two weeks.	IFR	2	**Do not dry sweep the range.** Use the housekeeping procedures outlined in NGR 385-15, 5-4 to perform cleaning. Utilize Armory Clean-Up SOP included in this report.					NGR 385-15 2-4 e
MTLVIFR-100912-4.1.10	Staff were not aware of lead hazards in the IFR.	IFR	3	Ensure that staff or maintenance entering the IFR are aware of the associated hazards including lead.					29 CFR 1910.1200; 29 CFR 1910.1025
MTLVIFR-100912-4.4.1	Fire extinguisher past due for monthly inspections	IFR	4	Perform and document monthly inspections of fire extinguishers as required.					29 CFR 1910.157 (e)(2)

Reference DA FORM 4754

VER: 15 OCT 2009

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston IFR, Livingston MT

CONTROL NUMBER CLOSED [X]	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLVIFR-100912-5.c Executive Summary	Potential lead exposure	Armory	3	Warning signs should be posted on facility entryway doors and the Converted IFR doors, in order to help protect personnel mainly children under 7 years of age and pregnant or nursing females					General Duty Clause 5 (a)(1) & 29 CFR 1910.1025 (h)(1)
MTLVIFR-100912-4.4.2	Water damaged ceiling tiles	IFR	3	Determine the source of the water damage and if repairs are necessary. Perform repairs as needed with the knowledge of lead contamination in the ceiling tiles material.					Prudent Industrial Hygiene Practice; ANSI Z4.1-1986

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 Introduction – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Livingston IFR. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 -- Observations and Recommendations; Item 2 – Ventilation Inspection).

INDOOR FIRING RANGE RECOMMENDATIONS

The following recommendations must be addressed if, and only if, the IFR is to be used as an active firing range again. These recommendations must be addressed prior to using the range.

N4.1.1 Building Envelope – Replace the deteriorated weather stripping around the door to the IFR.

N4.1.2 Range Lighting – Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.

N4.1.3 Bullet Traps – Determine if the protective cover over plate seams of the bullet trap need reconfiguration.

N4.1.4 Target and Target Carriers – Have the target retrieval system serviced or repaired.

N4.1.5 Range Use – Do not use the range for any purpose except for firing. Cleaning of stored items is required, prior to removal to prevent migration of lead.

N4.1.6 Range Maintenance – Do not dry sweep the range. Use the housekeeping procedures outlined in NGR 385-15, 5-4 to perform cleaning. Utilize Armory Clean-up SOP included in this report. Appoint a range control officer. Ensure the range custodian is trained and is aware of their responsibilities.

N4.1.8 Posting of Signs – Post the required safety signs in or in the vicinity of the range. Install an illuminated warning sign interlocked with the range ventilation switch located outside of the firing range to alert individuals that the range is in use. Label each firing lane at the bullet trap. Post a sign at the bullet trap access door which warns personnel not to enter during range operation.

N4.1.9 Range SOP – Develop and implement a site specific range SOP.

N4.1.10 Record Keeping – Maintain copies of past inspections at the facility.

N4.2 **Ventilation** – Have the ventilation system serviced or repaired.

FACILITY RECOMMENDATIONS

N4.1.6 Range Maintenance – Strictly prohibit any and all dry sweeping within the IFR / locker room until the space has been sufficiently cleaned.

N4.1.8 Signage – Update the signage to accurately communicate current conditions. If the space is to be cleaned and re-purposed, signage communicating hazards associated with an IFR should be removed.

N4.1.10 Record Keeping – Ensure all staff within the facility have been properly and sufficiently educated on the existing lead hazards associated with the IFR / locker room.

N5.3 Lead Wipe Sampling – Clean the entire IFR and materials currently stored within using cleaning procedures outlined in NGR 385-15 5-4. Access to the IFR / locker room should be strictly prohibited to clean-up personnel until appropriate lead wipe samples have been collected and indicate the space is safe to enter.

N5.6 **Other Observations –**

1. Perform and document monthly inspections of fire extinguishers as required.
2. Determine the source of the water damage and whether repairs are necessary. Perform repairs as needed.

FY 13 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	NA	NA	NA	0
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	NA	NA	NA	0
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	NA	NA	NA	0
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	NA	NA	NA	0
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	NA	NA	NA	0
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	NA	NA	NA	0
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	NA	NA	NA	0
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	NA	NA	NA	0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	NA	NA	NA	0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	NA	NA	NA	0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	NA	NA	NA	0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	NA	NA	NA	0
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT	IHT	IHT	IHT
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT	IHT	IHT	IHT
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT	IHT	IHT	IHT
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT	IHT	IHT	IHT
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT	IHT	IHT	IHT
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT	IHT	IHT	IHT

FY 13 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT	IHT	IHT	IHT
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT	IHT	IHT	IHT
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT	IHT	IHT	IHT
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT	IHT	IHT	IHT
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT	IHT	IHT	IHT
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT	IHT	IHT	IHT
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	NA	NA	NA	0
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	NA	NA	NA	1
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	NA	NA	NA	1
Number of ventilation systems which were evaluated by an IH	953-02-19	NA	NA	NA	1
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT	IHT	IHT	IHT
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT	IHT	IHT	IHT

FACILITY INFORMATION

(Information listed in First Section)
(1st Few Paragraphs/Pages of Report)

1. Date Prepared: **13 August 2013**

2. Names (and Company Name) of Personnel Conducting Industrial Hygiene Site Assistance Visit: Non-Responsive

3. Facility Name and Brief Summary of Primary Activities Conducted at Facility:
   Livingston Armory

4. Facility Address: **24 Fleshman Creek Road, Livingston, MT 59230**

5. Primary Unit Assigned to Facility (Ensure to capture and provide Unit Identification Code (UIC)): **143rd MP Det. UIC:** Non-Responsive

6. Co-Tenant Units Assigned or Working Within Facility (LIST ALL): **None**

7. Square Ft. Area of Facility: **Unknown**

8. Work Schedule: **Monday-Friday, 8 AM to 5 PM**

9. Number of work bays: **0**

10. Equipment Density and Type: **N/A**

    a. List Equipment Nomenclature Serviced or Maintained at Facility:

    b. List Total Number for Each Nomenclature Serviced or Maintained at Facility:

11. Total Number of Personnel: **45 Authorized**

12. No. of Admin. Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **2 AGR**

13. No. of Maintenance Personnel (Include Status – AGR, Fed. Tech., IDT, State or Contract Employee): **0**

14. Total Number of Personnel Enrolled in the Hearing Conservation Program: **0**

15. Total Number of Personnel Enrolled in the Respiratory Protection Program: **0**

16. Total Number of Personnel Enrolled in the Medical Surveillance Program: **0**

17. Total Number of Personnel Enrolled in the Vision Program: **0**

18. Facility Commander: Non-Responsive

    a. Email address, Commercial Telephone Number and Unit Assigned to:
    143 MP Commander PH: (406) 324-5061

19. Safety Officer: Non-Responsive

    a. Email Address, Commercial Telephone Number and Unit Assigned to:
    Non-Responsive **PH: (406) 324-5060**

20. Facility Telephone Number: **(406) 324-5060**

(1)

INDOOR FIRING RANGE INSPECTION CHECKLIST

See paragraphs 1-23 through 1-25 of this regulation for inspection requirements. For the range to be considered safe each of the following statements shall be true and air-sampling results shall be below the standard for Lead. The information in parentheses after each statement denotes the location of the requirement in this or other regulations.

Location of the Range Livingston, Montana Date Aug 13, 2013 (ABVKLW)

Range Custodian None identified Teleph[redacted]

Built 1984

Part 1, Physical Safety Inspection

A. Building Envelope

Yes 1 Each firing lane is at least 4 feet wide. [1 -17a(1)(a)] Yes, 5 lanes

Yes 2 Pipes, conduits, and other projecting surfaces are baffled or covered by a material that shall protect these items and prevent ricochets. [1 -17a(1)(b)] Yes

Yes 3. No windows or doors are located in front of the firing line. (Except access door to the back of the bullet trap) [1 -17a(1)(d)] Access door to bullet trap located [illegible]

Yes 4 There are no open floor drains in the range [1 -17a(2)(c)] No floor drains in the range

Yes 5. There is no carpet, drapes or other fiber-like material in the range [1 -17a(2)(d)] Correct

Yes 6 Pipes, conduits and walls are sealed to prevent leakage of Lead dust from the range into other areas. [1-17a(2)(b)] Correct

Yes 7 The interior surfaces or the range floor, walls, and ceiling have no protruding edges or devices [DG 415-1, App.A, 3-1d] Correct

Yes 8. The roof provides ballistic security [DG 415-1, App. A, 3-1e(1)] Correct, concrete

Yes 9 The walls provide ballistic security [DG 415-1, App A, 3-1f(1)] Correct, CMU block

Yes 10 Interior mortar joints are flush with the interior surface [DG 415-1, App A, 3-1f(2)] Correct

Yes 11 The plenum wall is adequately supported and thick enough to avoid flexing [DG 415-1 App A 3-1f(4)] [illegible]

Yes 12 The entrance door to the range is weather-stripped unless the door acts as passive make-up air intake [DG 415-1 App A 3-1h] Correct, [illegible]

B. Range Lighting

* [illegible]

Yes 1 Lighting is uniform, non-glaring and does not cause shadows. [1-17c(1)(a)]

Yes 2. Illumination is at least 1 00 foot candles on the targets and 30 foot candles in all other areas. [1-17c(1)(b)]

Yes 3. All lighting is protected by baffles and placed so that the shooter has an unobstructed view down range. [1-17c(1)(c)]

Yes 4 Downrange lighting begins approximately 18 feet from the firing line and ends approximately 8 feet from the largel line. [1 -17c(1)(d)]

Yes 5 Emergency lights are provided behind the firing line and are in working condition. [1-17c(1)(e)]

Yes 6. Exit lights are provided and working as required. [1-17c(1)(f)]

Yes 7 Lighting of at least 30 foot-candles is provided behind the bullet trap for maintenance (if applicable). [1-17c(1)(g)]

Yes 8 No known electrical hazards exist in the range. [1-17c(2)(c)]

C. Bullet Traps

Yes 1 A bullet trap is permanently installed in the range. [1 -17d(1)(a)]

Yes 2 Bullet traps are of a commercial design, which is in compliance with the requirements of CEHND 1110-1 -18, NGB-ARI, NG PAM 385-6, Chapter 4 and this regulation. [1 -17d(1)(b)]

Yes 3. The thickness of inclined plate/sand trap type bullet trap shall be adequate to attenuate the maximum caliber of ammunition authorized to be fired on the range [1-17d(1)(c)]

Yes 4. All plate/sand trap type bullet traps are designed to prevent ricochets by directing the projectiles in the same direction they are traveling. [1-17d(1)(d)]

Yes 5 Sandpits in plate/sand trap type backstops extend to a point directly below the leading edge of the sloped plate. [1 -17d(1)(e)]

Yes 6 Forward edges in a louver or venetian blind type bullet trap are maintained in a knife edge condition to prevent, ricochets. [1 -1 7d(1)(f)]

Yes 7 Steel bullet traps are not bowed, punctured or severely pitted. [1 -17d(2)(a)]

Yes 8 Plates in the bullet trap are flush with the other plates Mold seams are ground smooth [1-17d(2)(b)]

D. Targets and Target Carriers

Yes 1 A target retrieval system is operable in all lanes. [1-17e(1)(a)] (Any one firing lane without a retrieval system shall not be used for firing)

Yes 2 The target retrieval system is constructed in such a manner as to minimize flat surfaces exposed to the firing line. [1-17e(1)(a)]

Yes 3 Only paper targets are used in the range [1-17e(1)(b)]

E. Range Use

Yes 1 The range is not used for any purpose other than firing. [1-18a]

Yes 2 No equipment or furniture is stored or maintained in the range, plenum area or behind the bullet trap. [1-17d]

Yes 3. No additional clothing or equipment is brought into the range. [1-19h]

Yes 4 Personnel are not permitted in the plenum area during firing even if designed for observation. [1-19a]

Yes 5 Individuals other than maintenance and inspection personnel are not allowed to walk downrange. (Except in regularly cleaned area as needed to pick up brass) [1-19f]

Yes 6 All areas directly in front of the plenum walls are kept clear at all times. [1 -19c]

Yes 7 Pellets, BBs, magnum and armor piercing rounds are not used in the range [1 -1 9g]

Yes 8 The ventilation system is in operation at all times during firing or cleaning. [1 -18c]

Yes 9 A hand-held ABC-type fire extinguisher is located in a recessed cabinet near the entrance door, inside of the firing range [DG 415-1, App A, 4-5]

F. Range Maintenance

Yes 1 Dry sweeping does not occur in the range [1 -1 9e]

Yes 2 No brooms are located in the range [1 -19e]

Yes 3 A range custodian is appointed for the range who is fully trained and aware of his/her responsibilities [1-13c]

G. Personnel Protective Equipment

Yes 1. All personnel in the rangeduring firing wear ANSI approved eye protection. [1-20a]

Yes 2. All personnel in the range during firing wear ANSI approved hearing protection. [1-20b]

H. Posting of Signs

1 The following signs are posted in or in the vicinity of the range. [1-21a]

Yes a Eating, Drinking and Smoking are *Prohibited*
Yes b Dry Sweeping is *Prohibited*
Yes c Wash Hands and Face Immediately Following Firing
Yes d The Following Ammunition is authorized for use on this Range
Yes e Hearing Protection *shall be* Properly worn during firing
Yes f. Proper Safety Glasses/Goggles *shall be* worn during firing
Yes g. No Furniture or Storage of Items Permitted in the Range

2 The following signs are posted on the entrance door to the range: [1-21b]

Yes a. Noise Hazardous Area
Yes b. Danger Lead Hazard Area
Yes c. Pregnant women are not permitted in this Area

3 An illuminated warning sign, which is interlocked with the range ventilation switch, is located outside of the firing range to alert individuals that the range is in use. [1 -21c]

4 Each firing lane is numbered at the firing line and at the bullet trap visible to all shooters [1 -21c]

5 A warning sign is posted outside of the access door to the bullet trap, which warn personnel not to enter. [1 -21e]

I. Range SOP

Yes 1 The indoor firing range has a written SOP, which is approved by the State Safety and Occupational Health Office. [1-10e]

2 The range SOP includes as a minimum the following. [1-22b]

Yes a The requirement for establishment and maintenance of a log of visitors for the indoor firing range
Yes b The requirement for and contents of a mandatory safety briefing for all individuals prior to entering the range to be given by a designated competent range safety officer
Yes c Work practices including required recommended permissible and banned practices as specified by this regulation
Yes d Instructive guidance for all range procedures

Yes e. Personnel responsibilities for performing the procedures, for supervising them, and reviewing and updating the SOP.
Yes f. Authorized ammunition for the range.
Yes g. The requirement for posting of signs IAW section 1-21 of this regulation.
Yes h. Cleaning and maintenance requirements.
Yes i. Personal protective equipment requirements for maintenance, firing and cleaning

J. Recordkeeping

1. A visitors log is maintained which includes the following information for all visitors/shooters: [1-14c] Range is inactive

Yes a. Name and age of shooter.
Yes b. Organization (if civilian, include address and phone number).
Yes c. Sign in and sign out times
Yes d. Type of ammunition used and number of rounds fired

Yes 2. Copies of initial and other previous inspections are available. [1-24a] None available

Yes 3. The initial inspection report includes air-sampling data. [1-24b] None available

Yes 4. An OSHA compliance program is in place, which covers the required aspects. [1-30a] Not applicable to Army

Yes 5. All individuals using the indoor firing range have been provided with a copy of the range SOP or been briefed on the requirements of the SOP, and have signed an agreement to follow the rules stated therein. [1-13h] not active

Yes 6. State maintenance officers/custodians have documentation to show that they have been educated to the health effects from exposure to Lead dust. [29 CFR 1910.1200 and 29 CFR 1910.1025] shall not lead firearms

Yes 7. Range safety officer(s) is/are designated. [1-13c] Not active

K. New and Renovated Ranges

Yes 1. No doors are installed in the plenum wall

Yes 2. Plenum area is at least 4 feet deep

Yes 3. An access door is installed behind the bullet trap

Yes 4. Only escalator or rubber bullet traps are installed

Part 2, Ventilation Inspection

A. Existing Ranges

Yes 1. The range has an operational mechanical ventilation system. [1-17b(1)(a)]

Yes 2. The minimum ventilation rate at the firing line in each firing lane is 50 fpm at all levels [117b(1)(b)]

Yes 3. One hundred percent of air is exhausted at or behind the bullet trap. [1 -17b(1)(c)]

Yes 4. Make-up air is introduced into the range behind the shooters [1 -17b(1)(d)]

Yes 5. Air that is introduced through vents into the plenum does not exceed a velocity of 600 fpm.[1 -17b(1)(e)]

Yes 6. Air exiting through holes in the plenum wall has a velocity between 400 and 600 fpm [1-17b(1)(f)]

Yes 7. The ventilation system is so constructed that air exhausted from the indoor firing range does not enter into another part of the building or any other air supply system [1-17b(1)(g)]

Yes 8. The exhaust exceeds the make-up air by approximately 10% to form a negative air pressure in the range in relation to adjoining areas. [1-17b(1)(h)]

Yes 9. If air is re-circulated in the range, it is installed with a HEPA filter with a reliable back-up filter. [29 CFR 1910.1025(e)(4)(ii)]

Yes 10. If air is re-circulated in the range, controls to monitor the concentration of Lead and Carbon Monoxide levels are installed and programmed to bypass the recirculation system automatically if the filter system fails. [29 CFR 1910.1025(e)(4)(ii)]

Yes 11. The fan(s) in the ventilation system is a single speed fan only [DG 415-1, App A, 3-2a]

Yes 12. A smoke test of the range shows laminar air flow and no turbulence in the range (See NG PAM 385-16, Appendix E for troubleshooting guidance) [1-18b(1)(k)]

Yes 13. In non-powered systems, the supply air louvers and exhaust fan are electrically interlocked. [1-17b(1)(l)]

Yes 14. In power systems, the supply and exhaust fans are electrically interlocked. The make-up air fan should start slightly after the exhaust fan [1-17b(1)(m)]

Yes 15. Range air temperature is between 65 degrees and 80 degrees Fahrenheit [1-17b(1)(n)]

B. New and Renovated Ranges

Yes 1 A manometer is installed leading into the exhaust fan, which is capable of measuring at least 20 inches of static pressure

Yes 2 Supply and exhaust fans are electrically interlocked with the downrange lighting

Yes 3 The face velocity on supplied make-up and exhaust ducts does not exceed 2000 cfm per square foot of duct space

Yes 4 Passive supply systems have opposing blade louvers.

Yes 5 Turning vanes are installed in all duct elbows, which have between 60° and 90° angles

Part 3, Air Sampling

Yes 1. The physical safety inspection, Part 1 of the range inspection checklist, was completed and all requirements met on

Yes 2 The ventilation inspection, Part 2 of the range inspection checklist, was completed and all requirements met on

3. Air sampling has been scheduled for

Print and sign _____

Position: _____

4. Air sampling was completed on.

5. Air sample results do not exceed _____ mg/m³ (results are attached) for the following types of ammunition

6 For military personnel exposed less than 30 days per year, this range is classified as: SAFE

7 For military personnel exposed more than 30 days per year and for all non-DoD personnel, this range is classified as SAFE

Print and sign _____

Position _____

Date _____

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE, SOUTHWEST
10510 Superfortress Ave, Suite C
Mather, CA 95655

ARNG-CSG-IHSW 8 January 2013

MEMORANDUM FOR

Montana Army National Guard, ATTN: Deputy State Surgeon, Montana Medical Detachment, 1956 Mt Majo Street, Fort Harrison, MT 59636-4789

SUBJECT: Industrial Hygiene Site Assistance Visits for FY13

1. The National Guard Bureau, Industrial Hygiene – Southwest (IHSW) will be conducting annual Industrial Hygiene Site Assistance Visits, to include a cursory review of safety related items, for

-Hamilton Armory & Indoor Firing Range (IFR)(CL), 910 West Main Street, Hamilton, MT 59840
-Glasgow Armory & Indoor Firing Range (IFR)(CL), 81 Airport Road, Glasgow, MT 59230
-Indoor Firing Range (IFR)
(CL) 1008 U.S. 191, Malta, MT 59538
(CL) Dawson County Fairgrounds, P.O. Box 1323, Glendive, MT 59330
(CL) 2190 West Holly Street, Sidney, MT 59270
(A) 24 Fleshman Creek Road, Livingston, MT 59407
(A) 350 Airport Road, Belgrade, MT 59714
(CL) 600 Gilman Avenue, Butte, MT 59701
(A) 1900 William Street, Fort Harrison, Helena, MT 59636
(CL) RR2, 773 Airport Road, Lewistown, MT 59457
(A) 1840 U.S. 93, Kalispell, MT 59901

2. The primary purpose of this memorandum is to notify you of the anticipated site visits. We ask that you contact the facilities and coordinate the tentative dates for the site visits. Attached are a Request for Information (RFI)-(IH Site Assistance Visit Questionnaire) and a Memorandum of Instruction (MOI) outlining a tentative schedule and the objectives of our visit and should be forwarded to each facility POC.

3. Secondly, we ask that you contact the contractor within 20 working days to coordinate a tentative schedule. The contractor information is as follows: Non-Responsive of Network Environmental Systems (NES), Non-Responsive 916-353-2360.

4. Finally, we ask that you provide IHSW personnel with a copy of the finalized schedule and facility POCs.

ARNG-CSG-IHSW

SUBJECT: Industrial Hygiene Site Assistance Visits for FY13

5. Questions or comments may be directed to Non-Responsive Non-Responsive 854-1490/ (916) 812-5838 or Non-Responsive (916) 854-1492, Non-Responsive

Non-Responsive
NGB, IHSW, CIV
Industrial Hygiene

CF:
FMO
OHN
SSO

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Livingston Armory

24 Fleshman Creek Rd.
Livingston, MT 59047

01 NOV 2012

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

23 April 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive SS), Montana Medical Det Troop Medical Clinic, Room 1009, 1956 MT Majo Street, Fort Harrison, MT 59636-4789

FOR Commander Livingston Armory, 24 Fleshman Creek Rd, Livingston, MT 59047

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Livingston Armory, 24 Fleshman Creek Rd, Livingston, Montana conducted on 01 November 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Livingston Armory at 24 Fleshman Creek Rd, Livingston, MT on 01 NOV 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to

correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. A building inspection of the armory, for **asbestos**, should be provided and a management plan in place for personnel working at and on the facility, this should be written from that inspection. (para. 4.4) **(RAC 3)**

b. Record fire extinguishers inspections which should be done monthly and annually with documentation on extinguisher. (para. 4.11) **(RAC 4)**

c. Housekeeping practices should be improved to help prevent migration of lead dust. Personnel should clean-up after themselves during each episode of weapons cleaning. Utilize the Armory Clean-up SOP included in this report to help improve housekeeping practices. The floor inside of the locker room should be thoroughly cleaned as noted in NG Pam 420-15 (Conversion of Indoor Firing Ranges) (para. 4.1) **(RAC 3)**

d. Post warning signage at the entryway(s) to warn pregnant, or nursing women and children under 7 years of age that there is a potential for a lead dust exposure in this facility. (para 4.1) **(RAC 3)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Livingston Armory, 24 Fleshman Creek Rd, Livingston, Montana conducted on 01 November 2012.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health (**RCAS-SOH**) Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Livingston Armory, 24 Fleshman Creek Rd, Livingston, Montana conducted on 01 November 2012.

organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston Armory, Montana

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLA-110112-4.1	The lead dust levels on floors in the locker room, converted from an old firing range, exceed acceptable concentrations	Drill floor, Locker room	3	Housekeeping practices need to be improved. The floor inside the locker room should be thoroughly cleaned utilizing NGR 385-15 for IFR cleaning procedures.					29 CFR 1910.1025 NG PAM 420-15
MTLA-110112-4.1	Lead dust exposure	Drill floor, Locker room	3	Post warning signage at the entry for potential lead dust exposure to pregnant females or females of child bearing age and to children.					General duty clause 5(a)(1) & NG PAM 420-15
MTLA-110112-4.4	Building asbestos survey report was not available.	Armory	3	Consult with MT state certified inspector to evaluate the facility for ACM.					General Duty Clause 5(a)(1) & 29 CFR 1910.1001 & 29 CFR 1926.1101
MTLA-110112-4.4	Asbestos O/M plan was not available.	Armory	3	Develop and implement a written asbestos Operations and Management plan.					General Duty Clause 5(a)(1); 29 CFR 1910.1001; 29 CFR 1926.1101; TB MED 513
MTLA-110112-4.5	Humidity below ASHRAE recommendations	Armory	4	Increase building humidity to the ASHRAE suggested levels of 20-60%.					ASRAE Standard 55-1992
MTLA-110112-4.6	Insufficient illumination	Locker room	4	Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston Armory, Montana

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLVAR-110112-4.8	No written program for blood born pathogens	Armory		Develop and implement a blood borne pathogen program.					29 CFR 1910.1030(d)(3); 29 CFR 1910.1030(h)(2); DA PAM 385-10 14-6

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Industrial Hygiene Site Assistance Visit
Livingston Armory
Livingston, Montana
1 November, 2012

NES
www.nesglobal.net

ARMY NATIONAL GUARD

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

LIVINGSTON ARMORY
24 FLESHMAN CREEK ROAD
LIVINGSTON, MONTANA 59047

November 1, 2012

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1374.68**

Prepared by:

Non-Responsive

Senior Industrial Hygienist

Reviewed by:

Non-Responsive

Table of Contents

Appendices

EXECUTIVE SUMMARY

On November 1, 2012, Non-Responsive dustrial Hygienist of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Livingston Armory located at 24 Fleshman Creek Road in Livingston, Montana. The primary point of contact for information gathered during this survey was Non-Responsive l may be reached by phone at (406) 222-1381 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate configuration of battery storage and charging facilities;
- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor employee noise exposures through noise dosimetry and source measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards; and,
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive went above and beyond expectations to help *NES* complete the IHSAV.

1.0 INTRODUCTION

On November 1, 2012, Non-Responsive dustrial Hygienist of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Livingston Armory located at 24 Fleshman Creek Road in Livingston, Montana. The primary point of contact for information gathered during this survey was Non-Responsive may be reached by phone at (406) 222-1381 or by email at patrick.muhill@us.army.mil.

1.1 IHSAV Objectives

The objective of the IHSAV is to evaluate the occupational environment of the administrative areas in the Armory to determine the presence of operational health and safety risks and make recommendations for corrective actions or follow-up work to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances; and,
- Conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Livingston Armory has one full time guard member. The 143rd Military Police Detachment is assigned to this facility. The Armory has offices used for administrative purposes. The building also contains the following: a drill floor; gym; storage rooms; a kitchen; and a locker room. The locker room was formerly the indoor firing range (IFR). A janitorial service cleans and services the floors every six months. The janitorial service is the only civilian activity that takes place at the Livingston Armory. The supply room is occasionally used by Army National Guard members as a staging area to clean weapons.

3.0 METHODS

3.1 Lead Wipe Sampling

Lead wipe samples were collected on horizontal work and floor surfaces in various locations throughout the Livingston Armory. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge tubes. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust.

3.2 Painted Surface Evaluation

The interior and exterior of the Armory was visually inspected for peeling paint on the walls and ceilings. No paint chip samples were collected because peeling paint was not encountered during the IHSAV.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. Water impacted areas, if observed, were noted for a follow-up evaluation.

3.4 Asbestos Documentation

An evaluation of asbestos documentation was performed. This evaluation consisted of determining if an asbestos building survey and assessment have been done.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning systems that serve the Armory was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, and relative humidity were measured throughout the Armory using a TSI Model 8551 IAQ-Calc™ Monitor. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Livingston Armory. The instrument used for the illumination survey was a Konica Minolta Illuminance Meter, model TL-1. Measurements taken were obtained at typical working locations such as desks, computers, workstations and general working areas. See Appendix E for illumination data.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, i.e., flammable storage cabinets/rooms were also inspected as part of this IHSAV.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Exhaust Ventilation Survey

Air velocity and flow measurements were not conducted at the Livingston Armory. The ducting, for the three canopy hoods in the kitchen, was blocked-off.

3.10 Sound-Level Measurements

Sound-level measurements were made on kitchen appliances using a Quest Model 210 Sound Level Meter in the A weighted decibel (DBA) range, using a slow meter response. DD Forms 2214 are provided in Appendix O.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, inspection of ground fault circuit interrupter (GFCI) electrical outlets, if eyewash stations inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
Konica Minolta Illuminance Meter	TL-1	00279029	May 2012
TSI IAQ-Calc™ Meter	8551	51380	November 2012
Quest Sound Level Meter	210	DCF01012	March 2012

Please see Appendix H for a complete inventory of calibration certificates used during this IHSAV.

3.13 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Livingston Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of ten Ghost Wipe™ lead samples were taken during the time of the IHSAV. The first five samples were collected from the center and the four corners of the drill floor surface areas. The analytical result for the sample collected from the center of the drill floor was 71 $\mu g/ft^2$. This value exceeds the 40 $\mu g/ft^2$ criterion.

Additional lead wipe sampling was taken from approximately 25% of the rest of the building. The four additional areas sampled were the following: the converted IFR floor (NW corner); the converted IFR floor (NE corner); the storage room floor; and the IT room floor. The analytical results for the storage room floor and the IT room floor were below the 200 $\mu g/ft^2$ criterion. The two lead wipe samples that were collected from the locker room (converted firing range) floor were exceeded the 200 $\mu g/ft^2$ criterion. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard ($\mu g/ft^2$)
110112-AFCR-LIV-01	Drill Floor	Southeast corner, floor sample	3.9	≤ 40
110112-AFCR-LIV-02	Drill Floor	Southwest corner, floor sample	17	≤ 40
110112-AFCR-LIV-03	Drill Floor	Northwest corner, floor sample	5.6	≤ 40
110112-AFCR-LIV-04	Drill Floor	Center, floor sample	71	≤ 40

110112-AFCR-LIV-05	Drill Floor	East side at bay door, floor sample	25	≤ 40
110112-AFCR-LIV-06	Locker Room (converted IFR)	Northeast corner, floor sample	**910**	≤ 200
110112-AFCR-LIV-07	Locker Room (converted IFR)	Northwest corner, floor sample	**1,100**	≤ 200
110112-AFCR-LIV-08	Storage Room	North center, floor sample	26	≤ 200
110112-AFCR-LIV-09	IT Room	At entrance to room, floor sample	16	≤ 200
110112-AFCR-LIV-10	Blank Control Sample	—	< 2.5	NA

See Appendix I, table 1 for lead wipe sampling analytical results. Analytical laboratory reports are available in Appendix J.

4.2 Painted Surface Evaluation

No paint chip samples were collected in the interior because no peeling paint was observed.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

During the inspection of the facility minor water staining of the ceiling tiles was observed in various locations. These stains appeared to be old and showed no current signs of water intrusion. Our primary point of contact stated that the roof of the facility was replaced approximately two years ago. Our point of contact indicated that since the replacement of the roof there have been no issues with water leaks.

4.4 Asbestos Documentation

At the time of the IHSAV, the building asbestos survey and asbestos operations and management documentation could not be produced. The Livingston Armory contains suspected asbestos containing materials including: the 12" floor tiles; the mastic; and the 2' x 4' ceiling tiles.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The heating ventilation and air-conditioning (HVAC) systems were all functioning and up to date on maintenance and inspections during the time of the IHSAV. All heating and cooling air is direct-ducted to the offices and the drill floor. Additionally, there are radiant heaters supplied by a gas fired boiler located in the orderly room, front hallway and the classroom.

The average outdoor carbon dioxide concentration at the time of the IHSAV was 262 ppm. Therefore, the maximum indoor CO_2 level recommended by the ASHRAE Standard would be 862 ppm. Carbon dioxide concentrations throughout the facility were below 862 ppm. The highest CO_2 concentration measured was 314 ppm in the classroom.

ASHRAE recommends maintaining temperatures between 68 and 75°F. Relative humidity should be maintained between 30% and 60% to minimize the growth of allergenic or pathogenic organisms. Building air temperatures ranged from 69.7 to 74.9°F and relative humidity measured between 20.2% and 24.8% during the testing period.

IAQ data is included in Appendix E.

4.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. The numbers represent the illumination level in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Illumination on the drill floor ranged between 36.1 and 45.7 FC. Illumination in the classroom, library and offices measured between 79.2 and 154.7 FC. The illumination in the locker room (converted indoor firing range) ranged from 8.5 to 147.6 FC. Based on the above criteria, the lighting in the locker room (converted indoor firing range) is inadequate for tasks being performed.

4.7 Hazardous Material Storage and Use Procedures

4.7.1 Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)

Inventories of all hazardous materials used by the Livingston Armory along with their associated Material Safety Data Sheets (MSDSs) are maintained in a master binder located in the storage room. The master chemical inventory and MSDS binder is arranged by a Federal Stock Class and National Stock Number (NSN). The inventories and MSDSs are arranged by product location on the shelf, using alphanumeric designations. Copies of the Armory's chemical inventories are provided in Appendix D.

4.9 Exhaust Ventilation Survey

Air velocity measurements were not collected from the kitchen canopy hoods because they were sealed shut and not being used.

4.10 Sound-Level Measurements

Sound-level measurements were verified on kitchen appliances and the kitchen door closing. The following lists the noise level measurements obtained during this visit:

Noise Source	Noise Level Measurement
Kitchen Appliances	68-69.2 dBA at operator ear level
Door Shutting Abruptly (Mechanical Room)	82.4 dBA at operator ear level
Mechanical Room	62.4 dBA at operator ear level

DD Forms 2214 are provided in Appendix O.

4.11 Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. Fire extinguishers are strategically located in the hallway and throughout the drill floor. Fire extinguishers were up to date for annual inspections as of Nov 2012.
3. The fire evacuation plan is prominently posted throughout the building. Egress routes are marked on the fire evacuation plan.
4. GFCI electrical outlets functioned properly when tested.
5. Ear plugs, a first aid kit, and a defibrillator unit were properly mounted and accessible on the wall in the drill floor area.
6. A brown colored, fine grain, soil was identified accumulating around window and exterior door openings. A sample was taken and analyzed for naturally occurring asbestos. Laboratory results showed the soil sample was negative for asbestos.

Sample Number	Sample Description	Sample Location	% Asbestos
110112-AFCR-LIV-11	Fine grain soil, brown in color	Collected from exterior door openings and windows	ND

ND = none detected at or above the analytical detection limit

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).
OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
ARMORY, LIVINGSTON
LIVINGSTON, MT
NOVEMBER 1, 2012

Photo 1: Exterior of the Livingston Armory building.

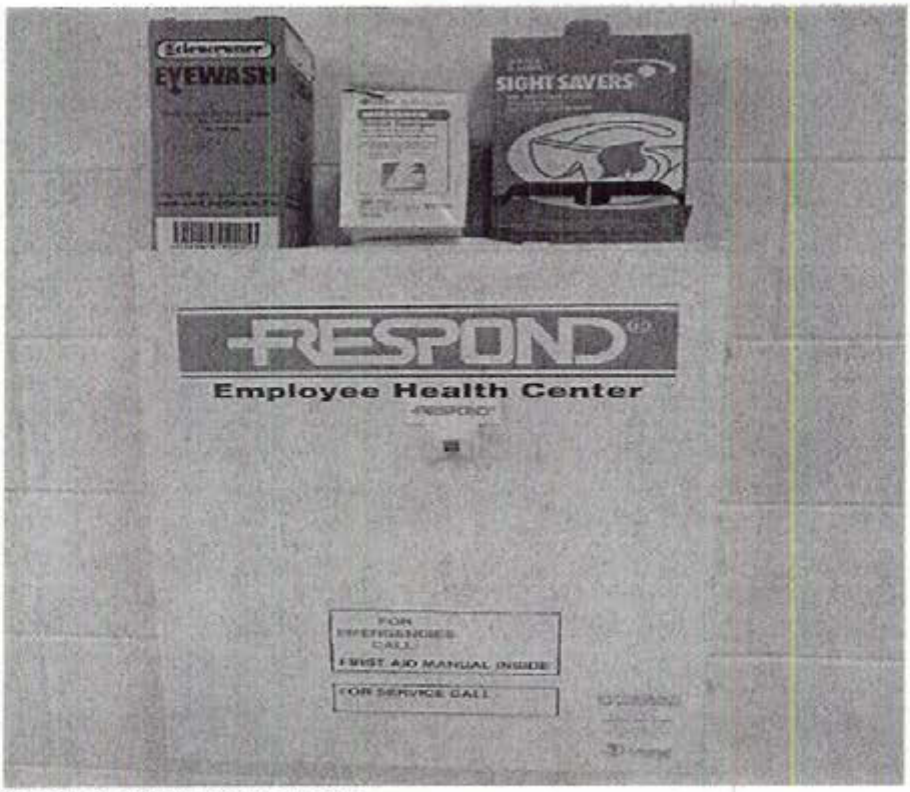


Photo 2: First aid kit station.

PHOTO LOG
ARMORY, LIVINGSTON
LIVINGSTON, MT
NOVEMBER 1, 2012

Photo 3: Storage room.

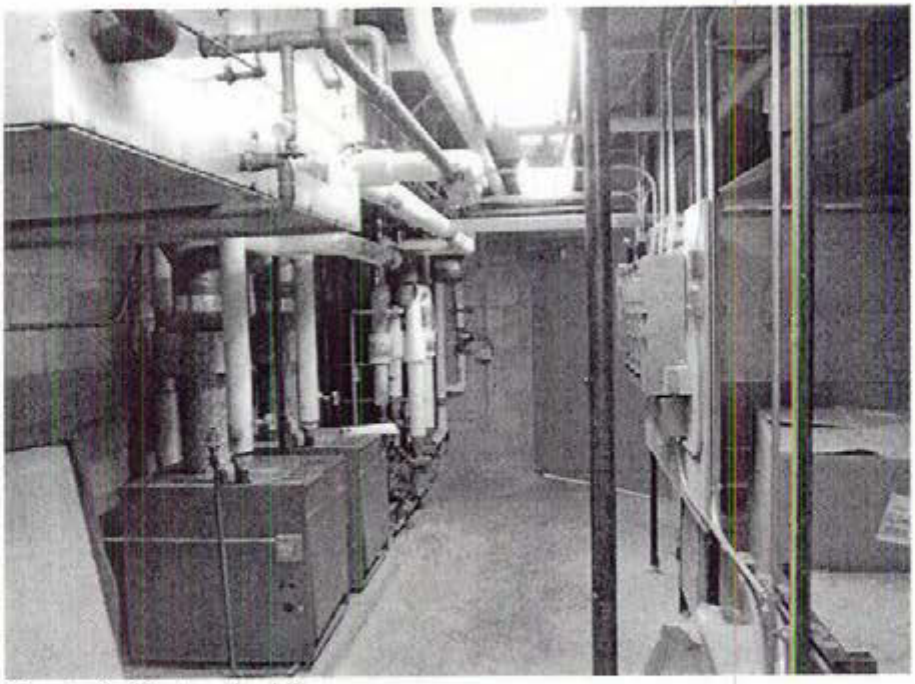


Photo 4: Mechanical Room.

PHOTO LOG
ARMORY, LIVINGSTON
LIVINGSTON, MT
NOVEMBER 1, 2012

Photo 5: Drill floor.

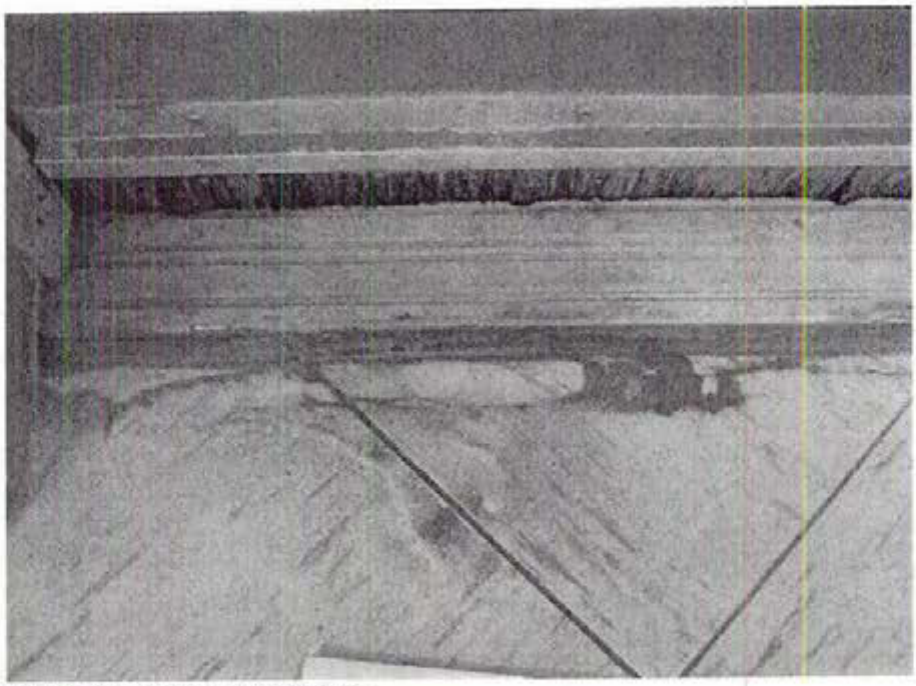


Photo 6: Accumulated dust.

PHOTO LOG
ARMORY, LIVINGSTON
LIVINGSTON, MT
NOVEMBER 1, 2012

Photo 7: Locker room which was previously a firing range.

Photo 8: Blocked kitchen hood.

PHOTO LOG
ARMORY, LIVINGSTON
LIVINGSTON, MT
NOVEMBER 1, 2012

Photo 9: Small blocked off kitchen hood.

Print Inventory

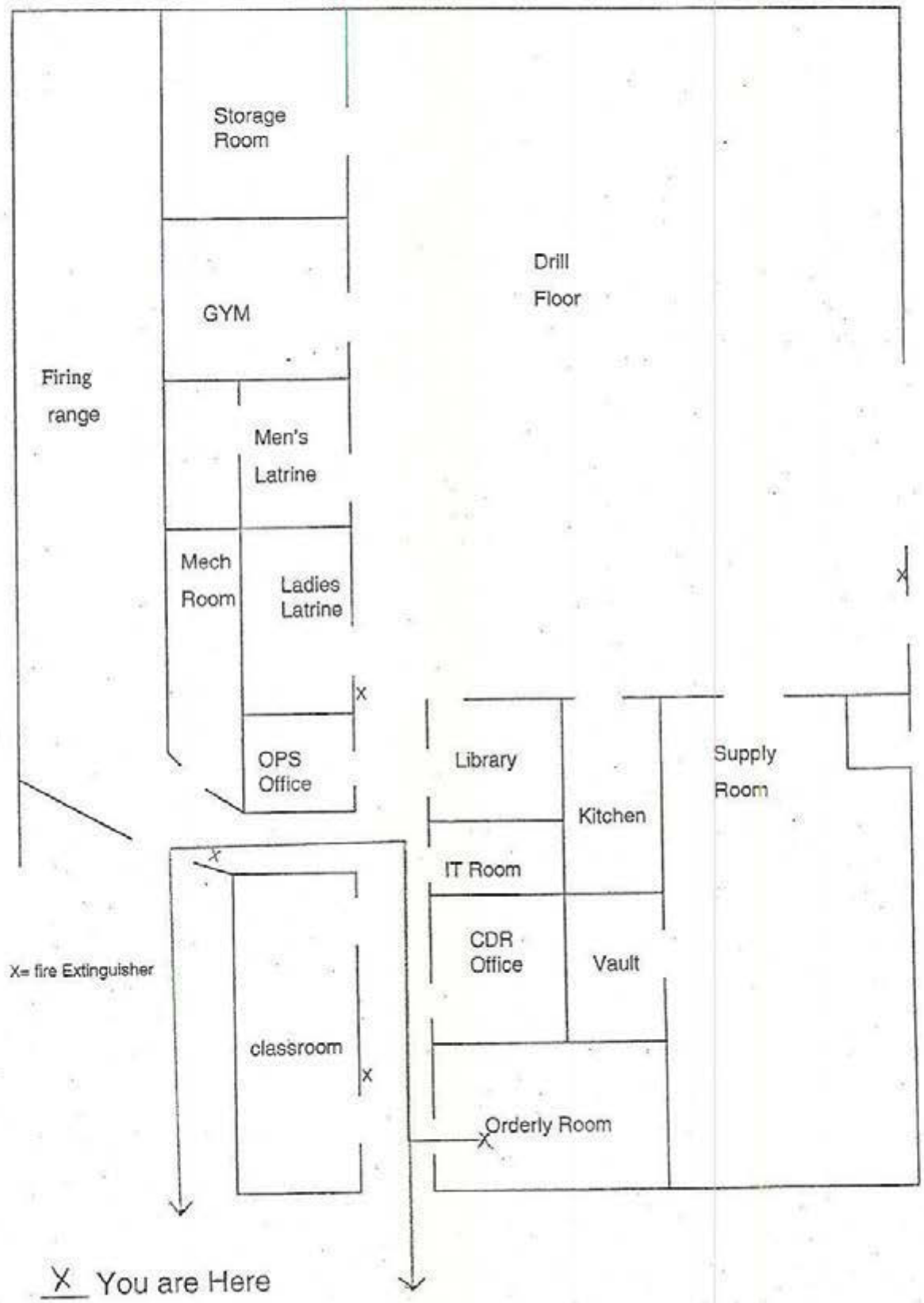
Print Inventory | Cancel

Unit: 143rd MP DET Storage: STORAGE ROOM Month: 12/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	Aerosol laquer, black	8010-00-582-5382	So-Sure		2	Can		
	Aerosol laquer, Grey	8010-00-721-9750	So-Sure		1	Can		
	All Purpose Cleaner	7930-00-926-5280	Skillcraft		46	bottles		
	Bowl cleaner	unk	Vani-Sol		5	Bottles		
	CLP	9150-01-053-0688	Unknown		2	Bottles		
	Concentrated Cleaner	unk	Simple Green		6	bottle		
	Disinfectant Cleaner	6840013424143	Skillcraft		20	Bottle		
	Floor Finish	unk	Maintenance One		1	Gal		
	Floor Finish	7930-01-131-5648	Metalist		5	Gallon		
	Floor Stripper	Unk	Butchers		1	can		
	Floor/Mop Treatment	local purchase	Montana Deluxe		2	Gal		
	General Purpose Cleaner	local purchase	SC Johnson		1	Gal		
	Interior Acrylic Finish	unk	Columbia		1	can		

Odor Counteracting Spray	unk	Good Sense	3	can
paint, aerosol, black	8010-01-331-6108	Skillcraft Industrial	11	Can
paint, aerosol, white	8010-01-331-6106	Skillcraft Industrial	11	Can
Paint, appple cider	unk	Columbia	1	can
paint, green	21-011-NB	Columbia	1	can
paint, satin	unk	Krylon Fusion	1	Can
paint, white	02-042-WB	Columbia	1	Can
Paint, White	B21-W-221	Sherwin Williams	2	can
Powdered Hand Soap	unk	Pepco 418	3	box
Primer/Sealer	unk	Columbia	1	can
Primer/Sealer	unk	Insl-x	1	can
Quick-Solv	7930-00-F01-6389	Ajax	6	Bottle
Renown Furniture polish	unk	Am San	3	Can
Skin Cleanser	unk	Betco	3	Gal
Special Glass Cleaner	unk	Am San	2	Gal
Toilet Soap	8520-00-228-0598	LHB	4	GAL
Wax Stripper	unk	Masterpiece	2	Gal

Livingston Armory Fire Evacuation Plan



ILLUMINANCE SURVEY

LIVINGSTON ARMORY
LIVINGSTON, MT
NOVEMBER 1, 2012

Building	Location	Light – FC	Minimum lighting requirements – FC
Armory	Northeast Corner of Drill Floor	36.1	30
Armory	Southwest Corner of Drill Floor	45.7	30
Armory	Storage Room	36.1	30
Armory	Gym	38.9	30
Armory	North side of Locker Room	8.5	10
Armory	Center of Locker Room	147.6	30
Armory	OPS Office	116.4	50
Armory	Hallway South of OPS Office	55.8	10
Armory	IT Room	44.8	50
Armory	Kitchen	140.8	50
Armory	Supply Room	34.8	30
Armory	Classroom	57.2	50

*FC= foot candle measurement

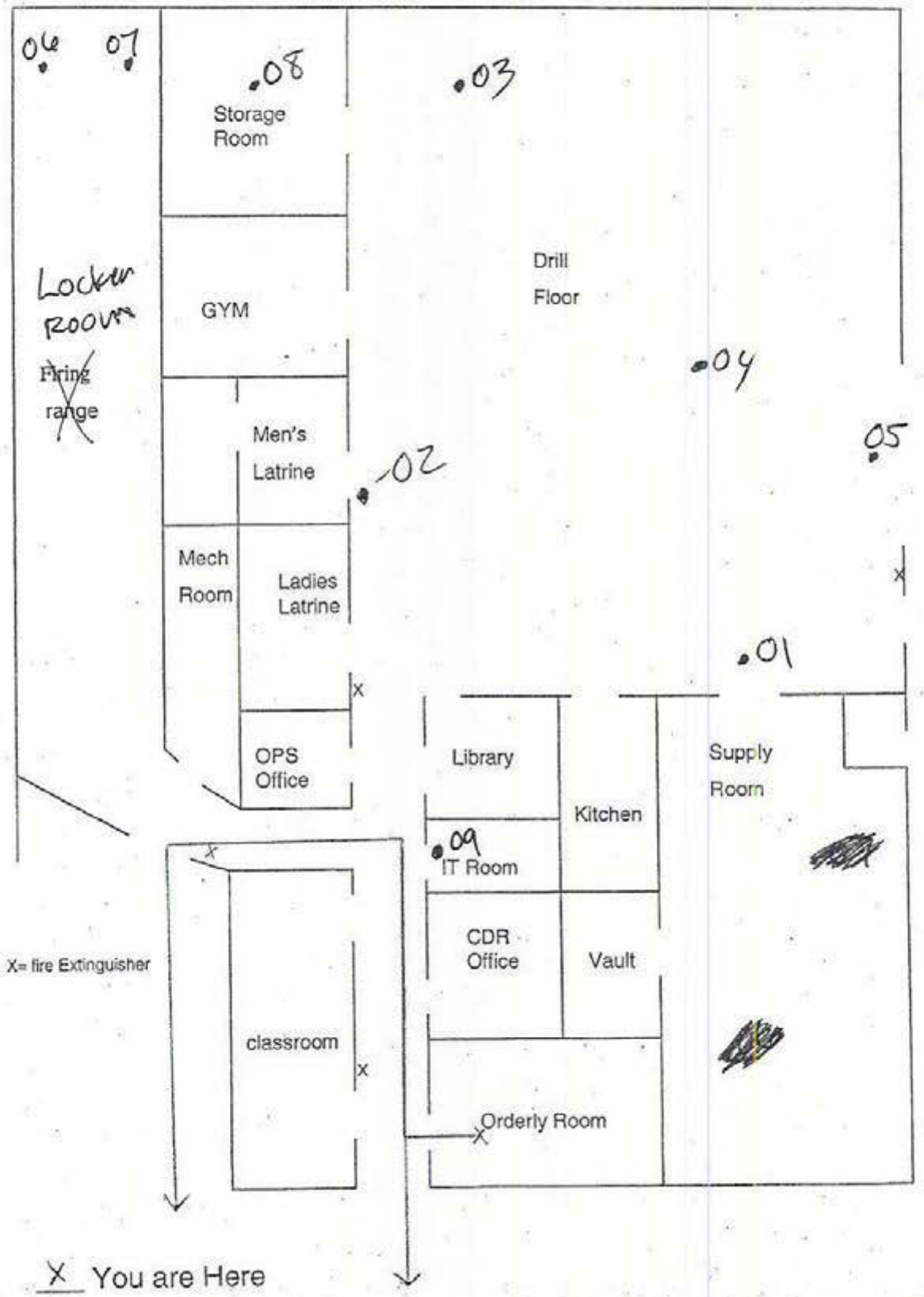
IAQ MEASUREMENTS

LIVINGSTON ARMORY
LIVINGSTON, MT
NOVEMBER 1, 2012

Location	CO_2 max permissible level 862 ppm	Temperature permissible range 68 - 75 ⊕F	RH% permissible range 30-60%
Drill Floor	278	74.1	20.2
Storage Room	279	72.4	22.4
Gym	280	73.4	21.7
Mechanical Room	295	73.9	22.0
Locker Room	280	73.4	20.8
OPS Office	280	73.9	20.5
IT Room	284	74.3	20.5
Kitchen	280	69.7	24.8
Supply Room	281	70.1	24.6
Classroom	314	74.9	22.4
Outside	262	64.8	20.3

CO_2 = Carbon Dioxide
°F = Fahrenheit
RH = Relative Humidity
CO = Carbon Monoxide
STEL = Short Term Exposure Limit

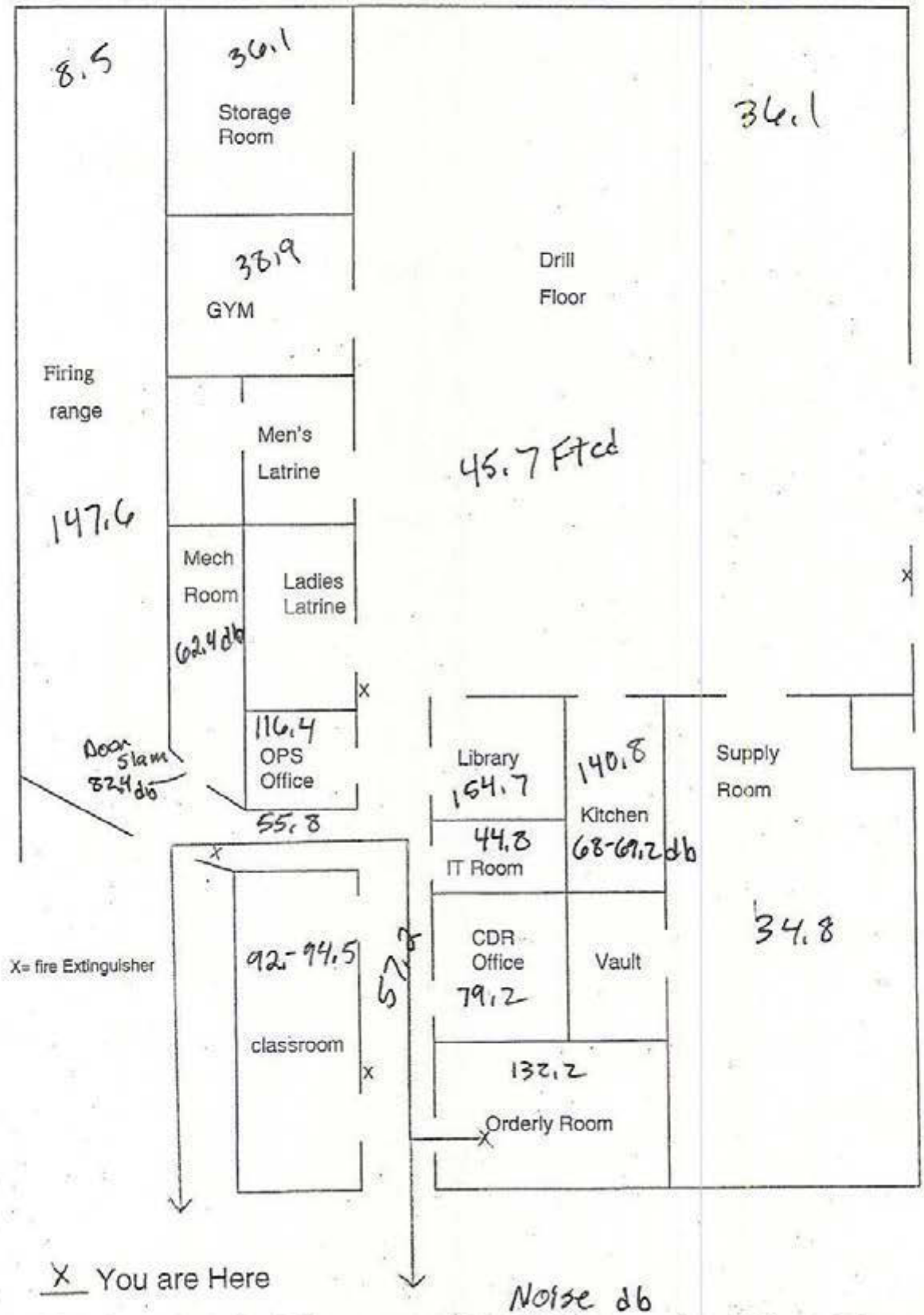
Livingston Armory Fire Evacuation Plan



013, IH 1374.68

Lead wipe samples

Livingston Armory Fire Evacuation Plan



013. IH1374.68 Livingston MT 11-1-12

3 Vehicles - Hummers & 3 cargo trailers
No vehicle maintenance performed here
used only 3 or 4 times a year
No weapons fired - firing range has been converted to a locker room
Weapons cleaned in supply room

3 Canopy vents in kitchen but are all blocked off & not used, Kitchen stove not used.

Storage Room - 1 Flam cabinet w/inventory list & MSDS, Also 3 lockers w/ cleaning supplies & chemicals

Suspect ACM - 12" Floor tile, cove mastic, 2x4 CT

Heat is radiant heat from gas fired boilers
radiant heat in orderly rm, front Hall, lg classroom
Central HVAC provides AC & Heat
} All good cond.

Maintained by State facilities Management Dept.

Noise - air compressor in mech room - but looks disconnected & Admin says never used

Livingston MT 11-1-12

Haz log -

No ACM survey / mgt plan

Pb warning signage in locker Rm needed

No Blood borne pathogen SOP program

ARNG Site Assistance Visit Checklist

General Information

Facility: Armory - Livingston MT

Physical Address: 24 Fleshman creek Rd

Number of Employees: 1 Fulltime Dates: 11-1-12

Standard Items

IAQ: ✓ Illumination: ✓ Lasers: NO

Jack Stands: none observed CO Monitors: Yes

Bloodborne Pathogens: No Confined Space: No confined spaces

LOTO: Equipment available: N/A Equipment used: Office equipment

Cranes/Hoists: N/A Fall Protection:

Respirators: Not used

Hearing Protection: located in drill floor area

Flammables Cabinets: 1 in supply room - mods, inventory list & cabinet OK

Radon Detectors: none

Fire Extinguishers serviced: OK Inspected: OK

Ventilation

Paint Booth: N/A Work Bays: Door open on positive Welding: N/A

Soldering: none Carpenter: N/A Other?:

Noise

Noise Dosimetry: NO

SPL Measurements: Pneumatics: N/A

Welding: N/A

Machinery: N/A

Vehicles: Not being used at time of inspection

Sampling

Welding: MIG: N/A
TIG: N/A
Stick: N/A
Plasma Cutting: N/A
Stainless: N/A
Galvanized: N/A

Painting: CARC: N/A
Chromates: N/A
Solvents: N/A

Lead: Wipes: Yes — 9 wipes + Blank
Soldering: N/A
Paint Removal: N/A

Particulates: Wood Working: N/A

Solvents: Lubrication: N/A

Documentation Army Safety Programs AR-385-10

Fire Prevention and Evacuation Plan: In every room posted & written program

Respiratory Protection: Spirometry: No Fit tests: No
Written program only

Hazard Communication: Yes, included in 143rd Military Police Det (US Army Safety Binder on site) Safety Program SOP

Hearing Protection: yes.

Protective Eyewear: yes

Job Safety Analysis / Hazard Assessments: yes

Hazmat
PPE
LO/TO Procedures
Confined space
Lead-Acid Battery safety
Ergonomics

No BbP Procedures/training in SOP

Tektronix
Service Solutions

Certificate of Calibration

6209119
Certificate Page 1 of 1

Instrument Identification

Company ID: 607229
INDUSTRIAL HYGIENE SW
[redacted]
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

PO Number: Non-Responsive [redacted]

Instrument ID: H225438
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive [redacted]
Cal Date [redacted]
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.
This certificate shall not be reproduced, except in full, without the written consent of Tektronix Service Solutions.

Approved By: Non-Responsive [redacted]
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Due Due
1700230826	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700276206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

Tektronix
Service Solutions

DATASHEET

Manufacturer: **Minolta**
Model: **TL-1**
Description: **Illuminance Meter**

Workorder #: **602492**
Procedure: **Manufacture**
Date: **22-May-12**

ILLUMINANCE

Range	Nominal Value	As Found	Result	As Left	Result	Min	Max
30fC (resolution: .1 fC)	10.00	10.1	P	10.1	P	9.7	10.3
300 fC (resolution: 1 fC)	100.0	100.1	P	100	P	97	103
3000 fC (resolution: 10 fC)	1000.0	1000.0	P	999	P	970	1030

Note: Measurement Uncertainty = +/- 2.4% of Indication.

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012

Cert No. 2008120221675

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3921
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D:	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8185	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2006120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	900587B1A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used in this Event

Procedure Name	Description
PARTICLE COUNTER 071 TEMP/HUMIDITY METER	PARTICLE COUNTERS TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSO and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established system of accuracy. The information on this record, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the Testing MPC lab.

(CERT, Rev 3)

3M Occupational Health ·i
Environmental Safety D. .on

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

QUEST TECHNOLOGIES now part of 3M

Certificate of Calibration

Certificate No: 1095258DCF010012

Submitted By: IHSW-NGB
10510 SUPERFORTRESS AVE.
MATHER, CA 95655

Serial Number:	DCF010012	Date Received:	3/28/2012
Customer ID:		Date Issued:	3/29/2012
Model:	210 SLM	Valid Until:	3/29/2013
Test Conditions:		**Model Conditions:**	
Temperature:	18°C to 29°C	As Found:	IN TOLERANCE
Humidity:	20% to 80%	As Left:	IN TOLERANCE
Barometric Pressure:	890 mbar to 1050 mbar		

SubAssemblies:

Description:	Serial Number:

Calibration Procedure: 53V904

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
ET0000453	FLUKE 45 MULTIMETER	3/2/2011	3/2/2013
ET0000556	B&K ENSEMBLE	4/27/2011	4/27/2012

Measurement Uncertainty:

+/- 2.2% ACOUSTIC (0.190B)+/- 1.4% VAC +/- 0.1% VDC
Estimated at 95% Confidence Level (k=2)

Calibrated By: Non-Responsive [redacted] 3/29/2012

Reviewed/Approved By: [redacted] 3/29/2012

This report certifies that all calibration equipment used in the test is traceable to NIST or other NMI, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of Quest Technologies.

An ISO 9001 Registered Company
ISO 17025 Accredited Calibration Laboratory

ACCREDITED Calibration Laboratory

3M Occupational Health ·d
Environmental Safety D. ion

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

Certificate of Calibration

Certificate No: 1095258DCF010012

(A) indicates out of tolerance condition

Test Type	Nominal	Tolerance-	Tolerance+	As Found	As Left	Unit
Calibration	110.0	109.5	110.5	110.0	110.0	dB
A Weighting/125Hz	93.9	92.4	95.4	94.5	94.5	dB
A Weighting/250Hz	101.4	99.9	102.9	102.1	102.1	dB
A Weighting/500Hz	106.8	105.3	108.3	107.2	107.2	dB
A Weighting/1kHz	110.0	109.5	110.5	110.0	110.0	dB
A Weighting/2kHz	111.2	109.7	112.7	111.4	111.4	dB
60 to 130/120	120.0	118.8	121.2	119.9	119.9	dB
60 to 130/110	110.0	109.5	110.5	110.0	110.0	dB
60 to 130/100	100.0	98.8	101.2	100.0	100.0	dB
50 to 120/90	90.0	88.8	91.2	90.0	90.0	dB
40 to 110/80	80.0	78.8	81.2	80.0	80.0	dB
AC out	0.750	0.427	1.072	0.754	0.754	VAC
DC out	1.420	1.353	1.487	1.478	1.478	VDC

* indicates non accredited

TABLE 1
LEAD WIPE SAMPLE RESULTS
LIVINGSTON ARMORY
NOVEMBER 1, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
110112-AFCR-LIV-01	Drill Floor	Southeast corner, floor sample	3.9	≤ 40
110112-AFCR-LIV-02	Drill Floor	Southwest corner, floor sample	17	≤ 40
110112-AFCR-LIV-03	Drill Floor	Northwest corner, floor sample	5.6	≤ 40
110112-AFCR-LIV-04	Drill Floor	Center, floor sample	**71**	≤ 40
110112-AFCR-LIV-05	Drill Floor	East side at bay door, floor sample	25	≤ 40
110112-AFCR-LIV-06	Locker Room (converted IFR)	Northeast corner, floor sample	**910**	≤ 200
110112-AFCR-LIV-07	Locker Room (converted IFR)	Northwest corner, floor sample	**1,100**	≤ 200
110112-AFCR-LIV-08	Storage Room	North center, floor sample	26	≤ 200
110112-AFCR-LIV-09	IT Room	At entrance to room, floor sample	16	≤ 200
110112-AFCR-LIV-10	Blank Control Sample	—	< 2.5	NA

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
ND = none detected at or above the analytical detection limit
Bold = Above ARNG Standard limit

ANALYTICAL REPORT

Workorder: 34-1231122
Client Project ID: 013.IH1374.68/Livingston MT
Purchase Order: 013.IH1374.68
Project Manager: Non-Responsive

Analytical Results

Sample ID: 110112-AFCR-LIV-05	Media: Ghost Wipe	Collected: 11/01/2012
Lab ID: 1231122005	Sampling Location: Livingston MT	Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	25	25	2.5

Sample ID: 110112-AFCR-LIV-06	Media: Ghost Wipe	Collected: 11/01/2012
Lab ID: 1231122006	Sampling Location: Livingston MT	Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	910	910	2.5

Sample ID: 110112-AFCR-LIV-07	Media: Ghost Wipe	Collected: 11/01/2012
Lab ID: 1231122007	Sampling Location: Livingston MT	Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	1100	1100	2.5

Sample ID: 110112-AFCR-LIV-08	Media: Ghost Wipe	Collected: 11/01/2012
Lab ID: 1231122008	Sampling Location: Livingston MT	Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	26	26	2.5

Sample ID: 110112-AFCR-LIV-09	Media: Ghost Wipe	Collected: 11/01/2012
Lab ID: 1231122009	Sampling Location: Livingston MT	Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	16	16	2.5

ANALYTICAL REPORT

Workorder: 34-1231122
Client Project ID: 013.IH1374.68/Livingston MT
Purchase Order: 013.IH1374.68
Project Manager: Non-Responsive

Analytical Results

Sample ID: 110112-AFCR-LIV-10	Media: Ghost Wipe		Collected: 11/01/2012
Lab ID: 1231122010	Sampling Location: Livingston MT		Received: 11/06/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 11/06/2012 Analyzed: 11/07/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 110112-AFCR-LIV-11	Media: Bulk		Collected: 11/01/2012
Lab ID: 1231122011	Sampling Location: Livingston MT		Received: 11/06/2012
Method: NIOSH 9002			Analyzed: 11/07/2012

Analyte	%	RL (%)
Chrysotile	ND	1.0
Amosite	ND	1.0
Crocidolite	ND	1.0
Actinolite/Tremolite	ND	1.0
Anthophyllite	ND	1.0

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive
NIOSH 9002		

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Livingston Armory, Montana

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTLA-110112-4.1	The lead dust levels on floors in the locker room, converted from an old firing range, exceed acceptable concentrations	Drill floor, Locker room	3	Housekeeping practices need to be improved. The floor inside the locker room should be thoroughly cleaned utilizing NGR 385-15 for IFR cleaning procedures.					29 CFR 1910.1025 NG PAM 420-15
MTLA-110112-4.1	Lead dust exposure	Drill floor, Locker room	3	Post warning signage at the entry for potential lead dust exposure to pregnant females or females of child bearing age and to children.					General duty clause 5(a)(1) & NG PAM 420-15
MTLA-110112-4.4	Building asbestos survey report was not available.	Armory	3	Consult with MT state certified inspector to evaluate the facility for ACM.					General Duty Clause 5(a)(1) & 29 CFR 1910.1001 & 29 CFR 1926.1101
MTLA-110112-4.4	Asbestos O/M plan was not available.	Armory	3	Develop and implement a written asbestos Operations and Management plan.					General Duty Clause 5(a)(1); 29 CFR 1910.1001; 29 CFR 1926.1101; TB MED 513
MTLA-110112-4.5	Humidity below ASHRAE recommendations	Armory	4	Increase building humidity to the ASHRAE suggested levels of 20-60%.					ASRAE Standard 55-1992
MTLA-110112-4.6	Insufficient illumination	Locker room	4	Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107
MTLVAR-110112-4.8	No written program for blood born pathogens	Armory		Develop and implement a blood borne pathogen program.					29 CFR 1910.1030(d)(3); 29 CFR 1910.1030(h)(2); DA PAM 385-10 14-6

Reference DA FORM 4754

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 Introduction – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Livingston Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Findings and Recommendations; Item 2 – Painted Surface Evaluation).

N4.1 Lead Wipe Sampling

Housekeeping practices need to be improved. Review the Armory SOP for lead cleanup and follow-up housekeeping recommendations. Follow the guidelines for cleaning. Have follow-up testing conducted to ensure lead concentrations have dropped to acceptable levels.

Post warning signage at the entry for potential lead dust exposure to pregnant females or females of child bearing age and to children.

N4.4 Asbestos Documentation

Consult with MT state certified inspector to evaluate the facility for ACM.

Develop and implement a written asbestos Operations and Management plan.

N4.5 Heating, Ventilation, and Air-Conditioning (HVAC) Systems and Indoor Air Quality

Increase building humidity using a humidifier.

N4.6 Illumination

Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.

N4.8 Safety Training and Record Keeping

Develop and implement a blood borne pathogen program.

NOISE SURVEY
(SOUND LEVEL METER SURVEY)

1. DATE (YYYYMMDD)	20120926
2. TYPE SURVEY (ENTER CODE)	01
	1 – INITIAL SURVEY 2 – RE-SURVEY 3 - OTHER

3. SOUND LEVEL METER		4. MICROPHONE		5. CALIBRATOR	
A. MANUFACTURE QUEST TECHNOLOGIES		A. MANUFACTURE ATTACHED TO SOUND LEVEL METER		A. MANUFACTURE QUEST TECHNOLOGIES	
B. MODEL 210	C. SERIAL NO. DCF01012	B. MODEL	C. SERIAL NO.	D. MODEL QC-10	E. SERIAL NO. QIC060087
D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD) 20120300		D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD)		D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD) 201203	

6. WIND SCREEN (X ONE)				7. MEASUREMENTS OBTAINED (X ONE)			
	USED	X	NOT USED	X	INDOORS		OUTDOORS

8. DESCRIPTION OF AREA/DUTIES WHERE NOISE SURVEY CONDUCTED (*Illustrate on additional sheet and attach to form*)

Evaluation of mechanical room

9. PRIMARY SOURCE OF NOISE

10. SECONDARY SOURCE OF NOISE

11. SOUND LEVEL DATA / 12. PROTECTION REQUIRED (*RE: dBA + LEVEL*)

A. LOCATION	B. METER ACTION	C. dBC	D. dBA	E. RISK ASSESSMENT CODE	A. NONE (<85 dBA)	B. PLUG OR MUFF (85-105)	C. PLUG AND MUFF (106-116)	D. PLUG + MUFF + TIME LIMIT (>116)
Mechanical Room	S		62.4		X			
Door Shutting Abruptly (Mechanical Room)	S		82.4		X			

Notes: Range of levels noted by /; i.e., 102/109. At operator stations, measure at ear level,
Meter Action: Enter F for fast meter action and S for slow meter action.

14. MORE DETAILED NOISE EVALUATION REQUIRED:		YES	X	NO (*if "Yes," identify type evaluation needed.*)

13. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (*Use additional sheet if more space is needed and attach to form*)

16. SUPERVISOR OF NOISE-HAZARDOUS AREA OF OPERATION

	B. TELEPHONE (*Include area code*)	C. ORGANIZATION
Non-Responsive [redacted]	406-222-1387	LIVINGSTON ARMORY, LIVINGSTON, MT

, MI)	18. HEARING CONVERSATION MONITOR (*Last Name, First, MI*)

NOISE SURVEY
(SOUND LEVEL METER SURVEY)

1. DATE (YYYYMMDD): 20121101

2. TYPE SURVEY (ENTER CODE): 01
1 – INITIAL SURVEY 2 – RE-SURVEY 3 - OTHER

3. SOUND LEVEL METER
A. MANUFACTURE: QUEST TECHNOLOGIES
B. MODEL: 210
C. SERIAL NO.: DCF01012
D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD): 20120300

4. MICROPHONE
A. MANUFACTURE
ATTACHED TO SOUND LEVEL METER
B. MODEL
C. SERIAL NO.
D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD)

5. CALIBRATOR
A. MANUFACTURE: QUEST TECHNOLOGIES
D. MODEL: QC-10
E. SERIAL NO.: QIC060087
D. LAST ELECTROACOUSTIC CALIB. DATE (YYYYMMDD): 201203

6. WIND SCREEN (X ONE)

	USED	X	NOT USED
		X	

7. MEASUREMENTS OBTAINED (X ONE)

X	INDOORS		OUTDOORS

8. DESCRIPTION OF AREA/DUTIES WHERE NOISE SURVEY CONDUCTED
(Illustrate on additional sheet and attach to form)

Evaluation of kitchen appliances

9. PRIMARY SOURCE OF NOISE: MECHANICAL

10. SECONDARY SOURCE OF NOISE

11. SOUND LEVEL DATA / 12. PROTECTION REQUIRED (*RE: dBA + LEVEL*)

A. LOCATION	B. METER ACTION	C. dBC	D. dBA	E. RISK ASSESSMENT CODE	12. A. NONE (<85 dBA)	B. PLUG OR MUFF (85-108)	C. PLUG AND MUFF (108-118)	D. PLUG + MUFF + TIME LIMIT (>118)
Kitchen Refrigerator	**S**		**68.0-69.2**		X			

Notes: Range of levels noted by /; I.e., 102/109. At operator stations, measure at ear level.
Meter Action: Enter F for fast meter action and S for slow meter action.

14. MORE DETAILED NOISE EVALUATION REQUIRED:

	YES	X	NO (*If "Yes," identify type evaluation needed.*)

13. NAME(S) OF PERSON(S) IDENTIFIED FOR AUDIOMETRIC MONITORING (*Use additional sheet if more space is needed and attach to form*)

16. SUPERVISOR OF NOISE-HAZARDOUS AREA OF OPERATION

A. NAME (*Last, First, Middle Initial*)	B. TELEPHONE (*Include area code*)	C. ORGANIZATION
Non-Responsive	406-222-1387	LIVINGSTON ARMORY, LIVINGSTON, MT

17. (*Name, First, MI*)

18. HEARING CONVERSATION MONITOR (*Last Name, First, MI*)

BEST AVAILABLE COPY

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down. moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and is **not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Yes. Samples 110112-AFCR-LIV-01, 02, 03, 04, & 05
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	Yes. The supply room.
Additional lead **wipe** samples taken from 25% of the rest of the building - -(**on floor areas only**)	Yes. Samples 110112-AFCR-LIV-06, 07, 08, 09, & 10
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	Yes, Now a locker room.
Is there any peeling **paint**? Take bulk sample if able.	No
Are there any signs of water damage or **mold**?	Yes. Water damage on ceiling tiles. New roof installed 2 years ago.
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	Asbestos Management Plan was not available on-site. Possible Asbestos in 12" floor tiles, mastic, and 2'x4' ceiling tiles.
Quality of housekeeping	Good
HVAC maintenance plan in place?	Yes
Overall condition of HVAC system	Good working condition
Obtained **CO2, Temp, RH** monitoring	Yes
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Yes
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	All good condition.

Fire alarm in working condition - -not usually in place in older armories	No Fire Alarm. Smoke Detectors/CO_2 alarms in main hall and workout room.
Fire extinguishers in place and properly identified and mounted	Yes
Evidence of **monthly fire extinguisher inspections**	Yes
Annual fire extinguisher inspections tags current	Yes
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	Yes. Posted in all rooms.
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Yes.
Any Photo labs	No
Any hazardous **noise** sources	No
Light levels checked throughout building	Yes
Breaker panels properly labeled with no exposed wiring	Breaker panel boxes locked. No access available.
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. (1) full-time military personnel/ 0- civilian personnel 2. Military Police Unit
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	No
Obtain two **lead air samples**	On IHSW Request Only

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	No. Blocked off; not used.
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	None found
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	No Hazards
Name of Armory, **POC**, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Livingston Armory 24 Fleshman Creek Road Livingston, MT 59047 Non-Responsive 143rd MP Detachment (406) 222-1381 **(Add Checklist to Report)**

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	0			
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	0			
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	0			
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	0			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	0			
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	0			
Number of ventilation systems which were evaluated by an IH	953-02-19	0			
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Malta Armory
1008 US 191
Malta, MT 59538

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

Industrial Hygiene Southwest's mission is to ensure all military personnel and military leadership is provided the specialized technical expertise, consultation and assistance to ensure all military operations and processes are conducted in a healthy manner

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1491

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

8 January 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive SS), Montana Medical DET, Troop Medical Clinic Room 1009, 1956 MT Majo Street, Fort Harrison, MT 59636

FOR Commander, Malta Armory 1008 US 191, Malta, MT 59538

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Malta Armory, 1008 US 191, Malta, Montana conducted on 04 October 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Malta Armory at 1008 US 191, Malta, MT on 04 OCT 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. A building inspection of the armory, for asbestos, should be provided and a management plan in

place for personnel working at and on the facility should be written from that inspection. (para. 4.4) **(RAC 3)**

b. Record fire extinguishers inspections which should be done monthly and annually with documentation on extinguisher. (para. 4.11) **(RAC 4)**

c. A current Chemical Inventory should be done and MSDS's acquired for these chemicals and placed in a centrally located binder for easy access. A HazCom program should be incorporated and annual training documented and kept in individuals personal records. (para. 4.7.1) **(RAC 4)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Malta Armory, 1008 US 191, Malta, Montana conducted on 04 October 2012.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene, Southwest
Hazard Inventory Log
Malta Armory - MT 59538

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTMA-100412-4.4 ☐	No asbestos documentation on file at the facility	Armory	3	A Montana state-certified asbestos inspector should be consulted to identify any area of the building that contains asbestos. Documentation should be kept on file of the survey at the facility. If the facility does contain asbestos, then an Operations & Maintenance Plan should be written and communicated to employees working at the facility.					29 CFR 1910.1001(b) & 29 CFR 1926.1101
MTMA-100412-4.6 ☐	Illumination levels are insufficient in the classroom and drill floor.	Armory	4	Increase illumination by increasing thenumber or wattage of the light fixtures, replace any burnt out bulbs, painting the walls a brighter, more reflective color, or using task lighting in poorly lit areas.					ASHRAE, Standard 55-1192
MTMA-100412-4.7.1 ☐	Not all MSDS's available in Hazmat storage area	Armory	4	Maintain copies of all MSDS sheets in the areas where hazardous chemicals are stored.					29 CFR 1910.1200(b)(3)(ii)
MTMA-100412-4.11 ☐	No evidence of monthly fire extinguisher inspections	Armory	4	Document fire extinguisher inspections on a monthly basis.					29 CFR 1910.157(e)(3)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

MALTA ARMORY
1008 US HIGHWAY 191 SOUTH
MALTA, MONTANA 59538

October 4, 2012

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1374.63**

Prepared by:

Luke Bucklin

Luke Bucklin
Industrial Hygiene Technician

Reviewed by:

David B. Durst

David B. Durst, CIH, CSP, CAC, CPEA
Principal-In-Charge

Table of Contents

Appendices

EXECUTIVE SUMMARY

On October 4, 2012, Non-Responsive Industrial Hygiene Field Technician of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Malta Armory located at 1008 US Highway 191 South, in Malta Montana. The primary point of contact for information gathered during this survey was Jason Ness, phone: (406) 324-5540, email: Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate configuration of battery storage and charging facilities;
- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor employee noise exposures through noise dosimetry and source measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards; and,
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Jason Ness went above and beyond expectations to help *NES* complete the IHSAV.

1.0 INTRODUCTION

During October 4, 2012 Non-Responsive Industrial Hygiene Field Technician of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Malta Armory located at 1008 US Highway 191 South, in Malta Montana. The primary point of contact for information gathered during this survey was Non-Responsive phone: (406) 324-5540, email: Non-Responsive

1.1 IHSAV Objectives

The objectives of the IHSAV are to evaluate the occupational environment of the administrative areas in the Armory, to determine the presence of operational health and safety risks, and to make recommendations for corrective actions or follow-up work to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances; and,
- Conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Malta Armory has one part-time Army National Guard member. The Armory has offices used for administrative purposes. The Malta Armory contains a drill floor, storage rooms, a converted indoor firing range and a supply shed. The Armory has a kitchen which was condemned and is no longer in use. There are no civilian employees at this Armory. Civilian functions are carried out in this Armory approximately twice a year for blood drives. The drill floor is occasionally used by Army National Guard members as a staging area but no weapons are cleaned at the facility.

3.0 METHODS

3.1 Lead Wipe Sampling

Metals wipe samples were collected on horizontal work and floor surfaces in various locations throughout the facility. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge tubes. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH Method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix E for a drawing of sample locations. See Appendix I, table 1 for lead wipe sampling analytical results. See Appendix J for laboratory reports.

3.2 Painted Surface Evaluation

The interior and exterior of the building was visually inspected for peeling paint on the wall and ceilings. Paint chip samples were not collected from the building as there was no peeling paint observed during this IHSAV.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. Any water impacted areas noted were documented on a drawing for a follow-up evaluation.

3.4 Asbestos Documentation

An evaluation asbestos documentation was performed. This evaluation consisted of determining if an asbestos survey and assessment have been done.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning systems that serve the facility was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, relative humidity and Carbon monoxide (CO) were measured using a TSI Q-Trak™ IAQ Monitor model 8551. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bio effluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (700 ppm) above outdoor levels. Outside CO_2 concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO_2 concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bio effluents (body odors). ASHRAE also recommends an outside air supply rate of 20 cubic feet per minute (20 cfm) per building occupant in office spaces, and, at that ventilation rate, CO_2 concentrations should not increase over time. Outside air supply rates were not measured during this IHSAV since CO_2 concentrations were within an acceptable range. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Armory. The instrument used for the illumination survey was a Konica Minolta light meter, Model TL1. Measurements taken were obtained at typical working locations such as desks, computers, drill floor, classroom and general working areas. See Appendix E for illumination data.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, i.e., flammable storage cabinets/rooms were also inspected as part of this IH Site Assistance Visit.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Exhaust Ventilation Survey

No air velocity or flow measurements were measured on the kitchen hood because there was no kitchen located at the Armory.

3.10 Sound-Level Measurements

No sound level measurements were taken at the Malta Armory because no high noise areas were identified during the visit.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, ground fault circuit interrupter (GFCI) measurements and inspection, if eyewash stations inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
TSI VelociCalc™ Plus Meter	8386A	54110581	June 2012
TSI IAQ-Calc™ Meter	8551	81380	Jan. 2012
Konica Minolta Light Meter	TL1	002579029	May 2012

Please see Appendix H for a complete inventory of calibration certificates that may have been used during this IHSAV.

3.13 Quality Assurance

NES, employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Malta Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of 7 Ghost Wipe™ lead samples were taken during the time of the IHSAV. The first five samples were collected from the drill floor surface areas. The drill floor (southwest corner); the drill floor (northwest corner); the (middle) of the drill floor; the drill floor (southeast corner); and the drill floor (northeast corner) is where the samples were collected.

Additional lead wipe sampling was taken from approximately 25% of the rest of the building. The 2 additional areas that were sampled were collected from the following areas: the exercise area and the locker room which is a converted indoor firing range.

The analytical results for each of the aforementioned areas were below the 40 $\mu g/ft^2$ criterion. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
10412-Malta-01	Drill Floor	Northeast corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-02	Drill Floor	Southeast corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-03	Drill Floor	Center, middle of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-04	Drill Floor	Northwest corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-05	Drill Floor	Southwest corner of drill floor, floor area sample	7.2	< 40 $\mu g/ft^2$
10412-Malta-06	Gym/converted IFR	Center of room	14	< 40 $\mu g/ft^2$
10412-Malta-07	Locker room/converted IFR	Center of room	< 2.5	< 40 $\mu g/ft^2$

See Table 1 in Appendix I for a table of results. The laboratory reports are supplied in Appendix J.

4.2 Painted Surface Evaluation

No peeling paint was observed in the interior or the exterior of the building during the site visit; therefore no bulk samples were taken. Paint was in overall good condition during the IHSAV.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

During the inspection of the facility there were no water damaged areas observed.

4.4 Asbestos Documentation

No asbestos documentation was present during the time of the IHSAV.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The HVAC systems were all functioning and up to date on maintenance and inspections during the time of the IHSAV.

The average outdoor carbon dioxide concentration at the time of the survey was approximately 375 ppm; therefore, the maximum indoor CO_2 level recommended by the ASHRAE Standard would be 1,075 ppm. Carbon dioxide concentrations throughout the facility were lower than 1,075 ppm; the highest CO_2 concentration measured was 670 ppm in the main office.

Building air temperatures ranged from 65°F to 66°F and relative humidity was between 39% and 50% during the testing period. ASHRAE recommends maintaining temperatures between 68 and 75°F. Relative humidity should be maintained between 30% and 60% to minimize the growth of allergenic or pathogenic organisms.

4.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. The numbers represent the illumination level in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-

1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Based on the above criterion, the lighting in the classroom as well as the western and center portions of the Drill Floor were inadequate to meet the 50 FC criteria. See Appendix E for data table.

4.7 Hazardous Material Storage and Use Procedures

4.7.1 Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)

Inventories of all hazardous materials used by the Armory along with their associated Material Safety Data Sheets (MSDSs) are maintained in a master binder. It is also recommended that inventories and MSDSs be maintained in separate binders, one for each satellite storage location (i.e. flammable storage room or cabinet). Copies of chemical inventories are provided in Appendix D.

4.7.2 Flammable Storage Cabinets

There is one HAZMAT storage locker and one flammable storage locker located at the Armory. The flammable storage locker was located in the interior of the building in a well-ventilated area. This flammable locker was inspected and no storage incompatibilities or leaking materials were found. The lockers were in good condition and all doors were noted to close properly.

4.7.3 Flammable and POL Storage

Not applicable to the facility as stated by Jason Ness.

4.8 Safety Training and Record Keeping

The following training documentation was found at the site:

- Hazcom Training

4.9 Ventilation Survey

There is no kitchen stove hood located at the Malta Armory; therefore a ventilation survey was not conducted.

4.10 Sound-Level Measurements

Sound level measurements were not taken at the Malta Armory because no high noise or hazardous noise areas were observed.

4.11 Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. Fire extinguishers are strategically located throughout the shop. All extinguishers were up to date for annual inspections as of October 2012. However, there wasn't evidence of monthly inspections of fire extinguishers. A log of monthly fire extinguisher inspections should be documented on the fire extinguishers.
3. Fire evacuation plan is documented, visual throughout the building and seems to be communicated to all personnel. Egress routes are marked of the fire evacuation plan.
4. The ground fault circuit interrupter (GFCI) outlets that were tested were functioned properly.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, Company professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. Company assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of Company, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since Company is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IHSAV was reviewed and approved by:

Non-Responsive

November 29, 2012
Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact Non-Responsive 16-353-2360, or Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
MALTA ARMORY
MALTA, MONTANA
OCTOBER 04, 2012

Photo 1: Malta Armory located in Malta, Montana.

Photo 2: Lead sample 10412-Malta-01 from Drill Floor, northeast corner.

PHOTO LOG
MALTA ARMORY
MALTA, MONTANA
OCTOBER 04, 2012

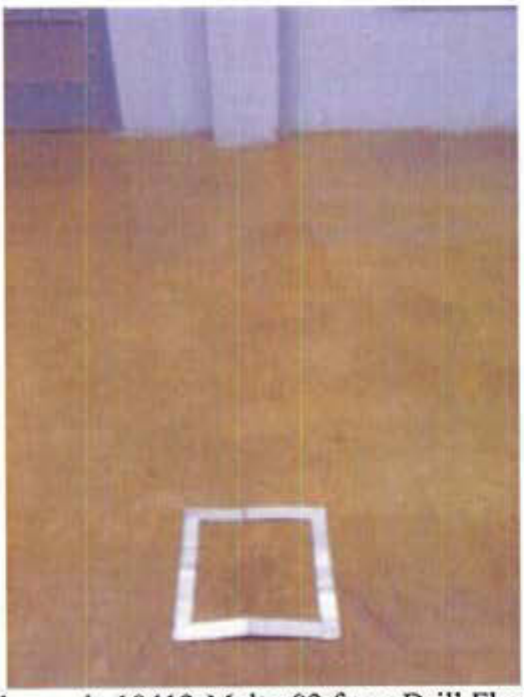


Photo 3: Lead sample 10412-Malta-02 from Drill Floor, southeast corner.

Photo 4: Lead sample 10412-Malta-03 from Drill Floor, center of floor area.

PHOTO LOG
MALTA ARMORY
MALTA, MONTANA
OCTOBER 04, 2012

Photo 5: Lead sample 10412-Malta-04 from Drill Floor, northwest corner.

Photo 6: Lead sample 10412-Malta-05 from Drill Floor, southwest corner.

PHOTO LOG
MALTA ARMORY
MALTA, MONTANA
OCTOBER 04, 2012

Photo 7: Lead sample 10412-Malta-06 from gym area floor in the Converted IFR.

Photo 8: Lead sample 10412-Malta-07 from locker room floor in the Converted IFR.

Print Inventory

Print Inventory Cancel

Unit: 484th MP (-) Storage: Boiler Room Cleaning Shelf Month: 1/1/2010

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
B01	Pepco 418	LP	Peck Products Co.		1	Carton	4	N1
B02	Vanl-Sol Bowl Cleanse; ED-212	7930-00-234-1945	Sterling Drug Inc.	BDLHV	6	qt	4	C1
C01	Dishwashing Compound	7930-00-880-4454	LHB	BNTLZ	1	Gal	6	N1
C01	Power Time	7930-01-436-8045	Rochester Midland	CFDNN	2	Gal	4	N1
C02	TJ-00501 Tuff Job	7930-01-336-7197	Cooke Industries Inc.	BPYNG	1	Gal	6	B3
C03	Star Glass Cleaner RTU	7930-00-184-9423	Space Chemical Inc.	BXNWV	3	Gal	7	V4
D01	A-125 Dry	6840-01-313-1901	Airkem (div of Ecolab)	CDJTG	2	3 gal	0	B3
D02	A-33 Dry	6840-00-238-9225	Airkem Professional (Div of Ecolab Inc)	BHYHL	3	Can	4	T4
D03	Wall Cleaner	LP	DAP		1	Gal	4	
D04	Descaler/Delimer	LP	Daimond Products		1	Gal	4	

Print Inventory

Print Inventory | Cancel

Unit: 484th MP (-) Storage: Drill Floor FL 01 Month: 1/1/2010

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	CLP	9150-01-054-6453	ROYAL LUBRICANTS		6	PT		
	ENAMEL BROWN	8010-00-348-7715	LHB		12	CN		
	ENAMEL FLAT BLACK	8010-01-331-6108	LHB		6	CN		
	ENAMEL OLIVE DRAB	8010-01-331-6113	LHB		5	CN		
	GLASS CLEANER	7930-01-326-8110	LHB		3	PT		
	ISOPROPYL ALCOHOL	6810-01-382-2904	TELECHEM INTERNATIONAL		1	BX	0	E2
	TENT PATCH	8040-00-264-3848	CLIFTON ADHESIVE INC.	BKHKY	1	CN		F2
A04	Brushing Lacquer	8010-00-085-0559	Eastman Kodak Co.	BJJNF	1	Bottle	0	F2
A05	So-Sure Corrosion Preventive Compound	8030-00-938-1947	LHB Inc.	BTSXS	5	Can	6	V2
A06	Nortech Adhesive 2289	8040-00-543-7170	Nortech Adhesive Corp	BLJVP	2	Can	4	F3
A08	Foam Fast 74 Spray Adhesive	8040-00-181-7761	3M Company	BDGMP	1	Can	4	V3
A11	5227; High Performance Acrylic Coating-National Blue	8010-00-D00-4816	Rust-Oleum	BYSNJ	1	Can	0	N1

B01	Paint Latex Green	LP	Hardware Hank		1	qt	4	N1
B02	Paint Latex Tan	LP	Our Own Hardware		1	qt	4	N1
B03	Kingsford Odorless Charcoal Lighter	9110-00-N01-7391	Clorox Co.	CFNNX	1	qt	6	F4
B07	Heet Gas-Line Antifreeze and water remover	LP	Good Eagle Co.		1	Bottle	M	F4
B08	Braycote 646	9150-00-687-4241	Bray Oil Co. for Castrol Inc.	CJPGM	1	Qt	6	V5
B10	Sllco Battery Terminal Protector	6850-00-N04-5243	CRC Ind. Inc.	BTPQX	1	Can	0	V3
B13	20606/206007; Government Insecticide	6840-01-412-4634	Airosol Co. Inc.	BYHDD	28	Can	0	V2
B15	Royco 22MS; Lubricating Grease	9150-00-181-7724	Anderol Inc.	BJLDJ	1	Tube	6	V6
B17	Starting Fluid	LP	RADIATOR SPECIALTY		1	Can	0	V3
B18	WD-40 Aerosol	8030-01-439-0681	WD-40 Co.	CFVZS	5	can	0	V3
C01	Super Pinnacle XL Finish	LP	Montana Broom and Brush Co.		3	Gal		
C04	Final or Erase Rat & Mouse Bait	6840-00-753-4973	Bell Laboratories Inc.	BFNFY	1	Can	4	T5
C06	2 Cycle Engine Oil	LP	Lawn-Boy Inc		1	Pint	M	F4

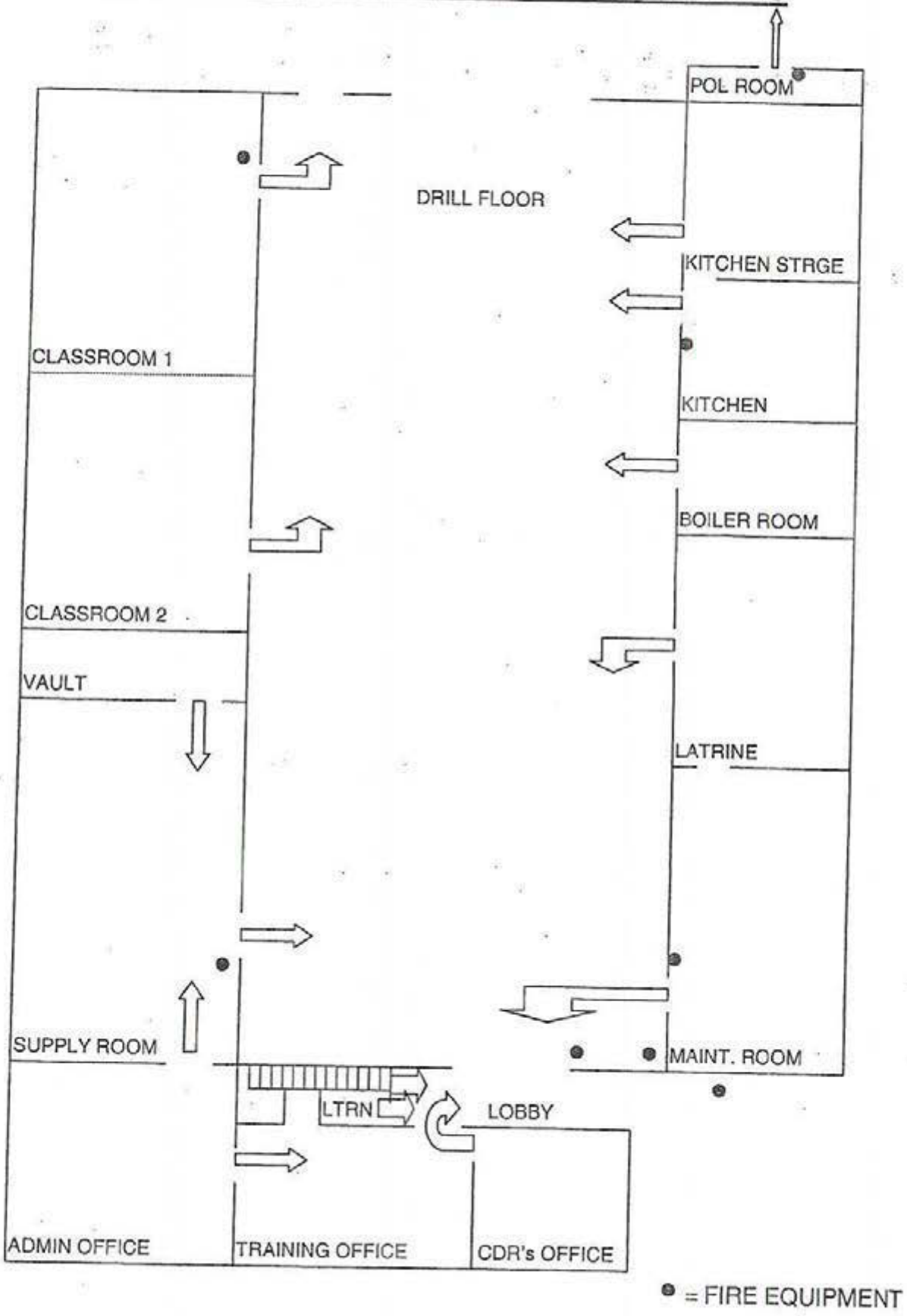
Print Inventory

Print Inventory | Cancel

Unit: 484th MP (-) Storage: DRILL FLOOR FL02 Month: 1/1/2010

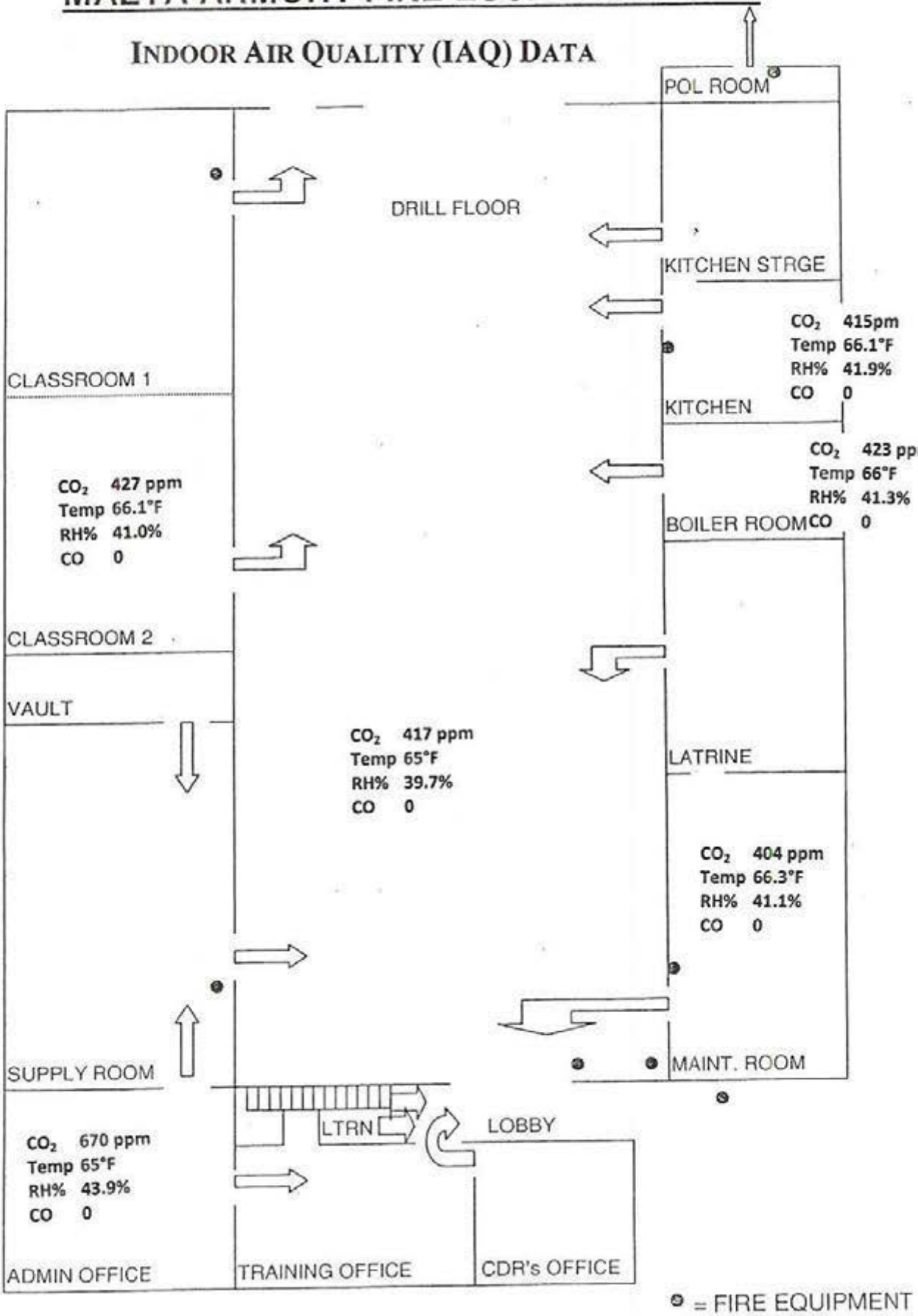
SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	ARMOR ALL CLEANER	FL02-07	M-KESSEN	BBNMW	2	QT		N1
	SEALING COMPOUND	8030-01-103-2868	HOME OIL CO.	CPXNR	4	PT		V5
A01	Sunbonnet Lemon Wax	7930-00-N04-6699	The Butcher Co.	BSHGM	8	Can	4	F3
A02	Good Sense	7930-00-N05-8443	S C Johnson Wax	BXCZX	14	Can	4	N1
A04	Foam Plus	8135-00-N02-1515	Insta Foam Products	CBBHM	1	Can	0	V3
A06	Turpentine	8010-00-F03-6166	Klean-Strip div Barr W M & Co.	BTVJY	1	qt	4	F2
A08	Paint Latex Yellow	LP	Hardware Hank		2	Gal	4	N1
B03	Plastic Polish Liquid PP560B	7930-00-935-3794	Ralrube Inc.	BWDZN	26	qt	6	F4
B05	Paint Latex Blue	8010-00-B22-0015	Valspar Corp	BKLXP	1	Gal	4	N1
B06	Paint Oil Base Grey	LP	Columbia		3	Gal	4	F3
C04	Toilet Soap	8250-00-228-0598	LHB	CFMYL	4	Gal	6	N1

MALTA ARMORY FIRE ESCAPE ROUTES



MALTA ARMORY FIRE ESCAPE ROUTES

INDOOR AIR QUALITY (IAQ) DATA



ILLUMINANCE SURVEY
MALTA ARMORY
MALTA, MONTANA
OCTOBER 4, 2012

Building	Location	Light – FC*
Armory	Training Room at desktop	82.7
Armory	Supply Room at desktop	64.9
Armory	Drill Floor, east	37.5
Armory	Drill Floor, center	33.4
Armory	Drill Floor, west	56.0
Armory	Maintenance/Storage Room	18.7
Armory	Classroom	32.8
Armory	Converted IFR/Locker Room	36.7
Armory	Lobby	26.2

*FC= foot candle measurement

Malta - Armor . 63 10/4/12

Lead Wipe Sample Locations

Sample #	Location
10412-Malta-01	Drill Floor, NE
-02	, SE
-03	, Center
-04	, NW
-05	, SW
-06	IFR / Locker Room
-07	↓

Name: Luke Bucklin

Date: 10/4/2012

NES Job Number: 013.1H1374.63

Light Survey

Building	Location	Light - ft/c
Armory	Training Room @ Desktop	82.7 ft/c
	Supply Room @ Desk	64.9 ft/c
	Drill Floor (E)	37.5 ft/c
	Drill Floor (Center)	33.4 ft/c
	Drill Floor (W)	56.0 ft/c
	Maintenance/Storage	18.7 ft/c
	Classroom	32.8 ft/c
	Boiler Room	31.0 ft/c
	Converted IFR/ Locker room	36.7 ft/c
	Lobby	26.2 ft/c

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	01-05
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	NO.
Additional lead **wipe** samples taken from 25% of the rest of the building - -**(on floor areas only**)	06-07 IFR
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	Yes, Now locker room, Storage
Is there any peeling **paint**? Take bulk sample if able.	NO
Are there any signs of water damage or **mold**?	NO
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	NO
Quality of housekeeping	Good.
HVAC maintenance plan in place?	State.
Overall condition of HVAC system	Good.
Obtained **CO2, Temp, RH** monitoring	√ Attached
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	√ Update inventory
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	√

Fire alarm in working condition - -not usually in place in older armories	- No
Fire extinguishers in place and properly identified and mounted	✓
Evidence of **monthly fire extinguisher inspections**	NO (VZ1)
Annual fire extinguisher inspections tags current	Feb 2013 - Due -
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	✓
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Hazcom ✓
Any Photo labs	N/A
Any hazardous **noise** sources	N/A
Light levels checked throughout building	✓ Attached
Breaker panels properly labeled with no exposed wiring	✓
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	(1) Part time - Non-Responsive (1) MP Company.
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Occasionally, 2 times a year - Community Blood drive - end of April.
Obtain two **lead air samples**	On IHSW Request Only

BEST AVAILABLE COPY

2010

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A - Memo - Kitchen Condemned
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	—
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	
Name of Armory, **POC, phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Armory HC72 malta 406-324-5540 1008 US 191 **(Add Checklist to Report)**

Non-Responsive

MP Company

VCL

- MSDS inventory / MSDS
- Fire Extinguishers

BEST AVAILABLE COPY

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

QUEST TECHNOLOGIES
now part of 3M

Certificate of Calibration

Certificate No: 1095258CDF020012

Submitted By: IHSW-NGB
10510 SUPERFORTRESS AVE.
MATHER, CA 95655

Serial Number:	CDF020012	**Date Received:**	3/28/2012
Customer ID:		**Date Issued:**	3/29/2012
Model:	2900 SLM	**Valid Until:**	3/29/2013

Test Conditions:

Temperature:	18°C to 29°C
Humidity:	20% to 80%
Barometric Pressure:	890 mbar to 1050 mbar

Model Conditions:

As Found:	IN TOLERANCE
As Left:	IN TOLERANCE

SubAssemblies:

Description:	Serial Number:
MICROPHONE QE 7052 1/2 IN. ELECTRET	25923
TYPE 2 PREAMP	N/A

Calibration Procedure: 56V996

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
ET0000453	FLUKE 45 MULTIMETER	3/2/2011	3/2/2013
ET0000556	B&K ENSEMBLE	4/27/2011	4/27/2012

Measurement Uncertainty:

+/- 2.2% ACOUSTIC (0.19DB)+/- 1.4% VAC +/- 0.1% VDC
Estimated at 95% Confidence Level (k=2)

Calibrated By: Non-Responsive 3/29/2012

Reviewed/Approved By: [redacted] /29/2012

This report certifies that all calibration equipment used in the test is traceable to NIST or other NMI, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of Quest Technologies.

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

QUEST TECHNOLOGIES
now part of 3M

Certificate of Calibration

Certificate No: 1095258CDF020012

(A) indicates out of tolerance condition

Test Type	Nominal	Tolerance-	Tolerance+	As Found	As Left	Unit
Calibration	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/125Hz	93.9	92.4	95.4	94.4	94.3	dB
A Weighting/250Hz	101.4	99.9	102.9	101.8	101.7	dB
A Weighting/500Hz	106.8	105.3	108.3	107.0	106.9	dB
A Weighting/1kHz	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/2kHz	111.2	109.2	113.2	111.5	111.4	dB
C Weighting/125Hz	109.8	108.3	111.3	110.6	110.5	dB
C Weighting/250Hz	110.0	108.5	111.5	110.7	110.5	dB
C Weighting/500Hz	110.0	108.5	111.5	110.5	110.3	dB
C Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
C Weighting/2kHz	109.8	107.8	111.8	110.2	110.1	dB
Lin Weighting/125Hz	110.0	108.5	111.5	110.8	110.7	dB
Lin Weighting/250Hz	110.0	108.5	111.5	110.7	110.6	dB
Lin Weighting/500Hz	110.0	108.5	111.5	110.5	110.4	dB
Lin Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
Lin Weighting/2kHz	110.0	108.0	112.0	110.4	110.3	dB
Lin/60 - 120/120	120.0	118.8	121.2	120.6	120.5	dB
Lin/60 - 120/110	110.0	109.5	110.5	110.1	110.0	dB
Lin/60 - 120/100	100.0	98.8	101.2	99.9	99.8	dB
Lin/60 - 120/90	90.0	88.8	91.2	90.0	89.9	dB
Lin/40 - 100/90	90.0	88.8	91.2	89.8	89.8	dB
Lin/40 - 100/80	80.0	78.8	81.2	79.9	79.8	dB
Peak/60 - 120/120	123.0	121.5	124.5	122.2	122.0	dB
Peak/60 - 120/110	113.0	111.5	114.5	113.1	112.9	dB
Peak/60 - 120/100	103.0	101.5	104.5	103.0	102.8	dB
Peak/60 - 120/90	93.0	91.5	94.5	93.1	93.0	dB
DC Out/120dB	1.000	0.950	1.050	1.008	1.005	VDC
AC Out/120dB	3.160	2.920	3.430	3.252	3.196	VAC

*** indicates non accredited**

An ISO 9001 Registered Company
ISO 17025 Accredited Calibration Laboratory

A2LA ACCREDITED Calibration Laboratory CERT #1326.01

TSI - Customer Service report

Thank you for the opportunity to service your instrument.

RMA Number: 800235189

Ship-to party 5180406	Sold-to party 5180406
IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA	IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA

Service Information:
Purchase Order CC [redacted]
Purchase Order Date 03/26/2012

Description Calibration of VelociCalc Plus 8386A

Equipment 57602 VELOCICALC Plus Air Velocity Meter
Serial Number 54110581
Material 8386A

Service Description:

Return Reason:
CALIBRATION OVERDUE

Findings:
Unit sent in for clean and calibration. The unit passed as found.

Action:
The unit was cleaned, calibrated, and a complete operational checkout

was performed.

TSI P/N 23...

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	68.4 (20.2)	°F (°C)
RELATIVE HUMIDITY	36	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☐ AS LEFT ☒ IN TOLERANCE
☒ AS FOUND ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

VELOCITY VERIFICATION — SYSTEM V-106 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	−3~3 (−0.02~0.02)	7	643 (3.26)	640 (3.25)	623~662 (3.17~3.36)
2	34 (0.17)	35 (0.18)	31~37 (0.16~0.19)	8	995 (5.06)	991 (5.03)	965~1025 (4.90~5.21)
3	64 (0.32)	64 (0.32)	61~67 (0.31~0.34)	9	1468 (7.45)	1476 (7.50)	1423~1512 (7.23~7.68)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2481 (12.60)	2463 (12.51)	2406~2555 (12.22~12.98)
5	160 (0.81)	159 (0.81)	155~164 (0.79~0.84)	11	4501 (22.87)	4440 (22.55)	4366~4636 (22.18~23.55)
6	328 (1.67)	325 (1.65)	318~338 (1.62~1.72)	12	8000 (40.64)	7943 (40.35)	7760~8240 (39.42~41.86)

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (−0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	−4.073 (−1014.2)	−4.084 (−1016.9)	−4.119~−4.027 (−1025.6~−1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY AS FOUND — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E004477	12-13-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Temperature	E001800	01-19-12	07-19-12
Humidity	E003539	02-28-12	08-28-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
Temperature	E001799	01-19-12	07-19-12

Non-Responsive

VERIFIED

March 27, 2012
DATE

Doc ID: CERT_DEFAULT

TSI P/N 23

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	69.1 (20.6)	°F (°C)
RELATIVE HUMIDITY	37	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☒ AS LEFT ☒ IN TOLERANCE
☐ AS FOUND ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

TEMPERATURE VERIFICATION				SYSTEM T-119			Unit: °F (°C)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (-0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION				SYSTEM V-106			Unit: inH_2O (Pa)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	-4.073 (-1014.2)	-4.084 (-1016.9)	-4.119~-4.027 (-1025.6~-1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY VERIFICATION			SYSTEM H-102			Unit: %RH
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

VELOCITY VERIFICATION				SYSTEM V-110			Unit: ft/min (m/s)
#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	-3~3 (-0.02~0.02)	7	648 (3.29)	646 (3.28)	629~667 (3.19~3.39)
2	35 (0.18)	34 (0.17)	32~38 (0.16~0.19)	8	996 (5.06)	997 (5.06)	966~1025 (4.91~5.21)
3	64 (0.33)	64 (0.32)	61~67 (0.31~0.34)	9	1476 (7.50)	1476 (7.50)	1432~1521 (7.27~7.72)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2476 (12.58)	2472 (12.56)	2401~2550 (12.20~12.95)
5	160 (0.81)	159 (0.81)	155~165 (0.79~0.84)	11	4498 (22.85)	4548 (23.10)	4363~4633 (22.17~23.54)
6	346 (1.76)	346 (1.76)	335~356 (1.70~1.81)	12	7988 (40.58)	8013 (40.71)	7748~8227 (39.36~41.80)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001800	01-19-12	07-19-12
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Humidity	E003539	02-28-12	08-28-12
Temperature	E004402	12-08-11	06-08-12
Pressure	E001721	12-13-11	06-13-12
Velocity	E003327	09-19-07	09-19-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001799	01-19-12	07-19-12
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
DC Voltage	E001658	06-28-11	12-28-12
Pressure	E001719	12-13-11	06-13-12
Barometric Pressure	E001992	04-08-11	04-08-12

Non-Responsive

March 27, 2012
DATE

DOC ID: CERT_DEFAULT

Tektronix
Service Solutions

Certificate of Calibration

6209119

Certificate Page 1 of 1

Instrument Identification

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

PO Number: Non-Responsive

Instrument ID: **H225438**
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive
Cal Date 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.

Approved By: Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230826	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700276206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

Tektronix
Service Solutions

DATASHEET

Manufacturer: **Minolta**
Workorder #: **602492**
Model: **TL-1**
Procedure: **Manufacture**
Description: **Illuminance Meter**
Date: **22-May-12**

ILLUMINANCE

Range	Nominal Value	As Found	Result	As Left	Result	Min	Max
30fC (resolution: .1 fC)	10.00	10.1	P	10.1	P	9.7	10.3
300 fC (resolution: 1 fC)	100.0	100.1	P	100	P	97	103
3000 fC (resolution: 10 fC)	1000.0	1000.0	P	999	P	970	1030

Note: Measurement Uncertainty = +/- 2.4% of Indication.

MICRO PRECISION CALIBRATION INC.

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012 **Cert No.** 2008120221675

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3921
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8165	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2008120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90058761A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used in this Event

Procedure Name	Description
PARTICLE COUNTER	PARTICLE COUNTERS
971 TEMP/HUMIDITY METER	TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

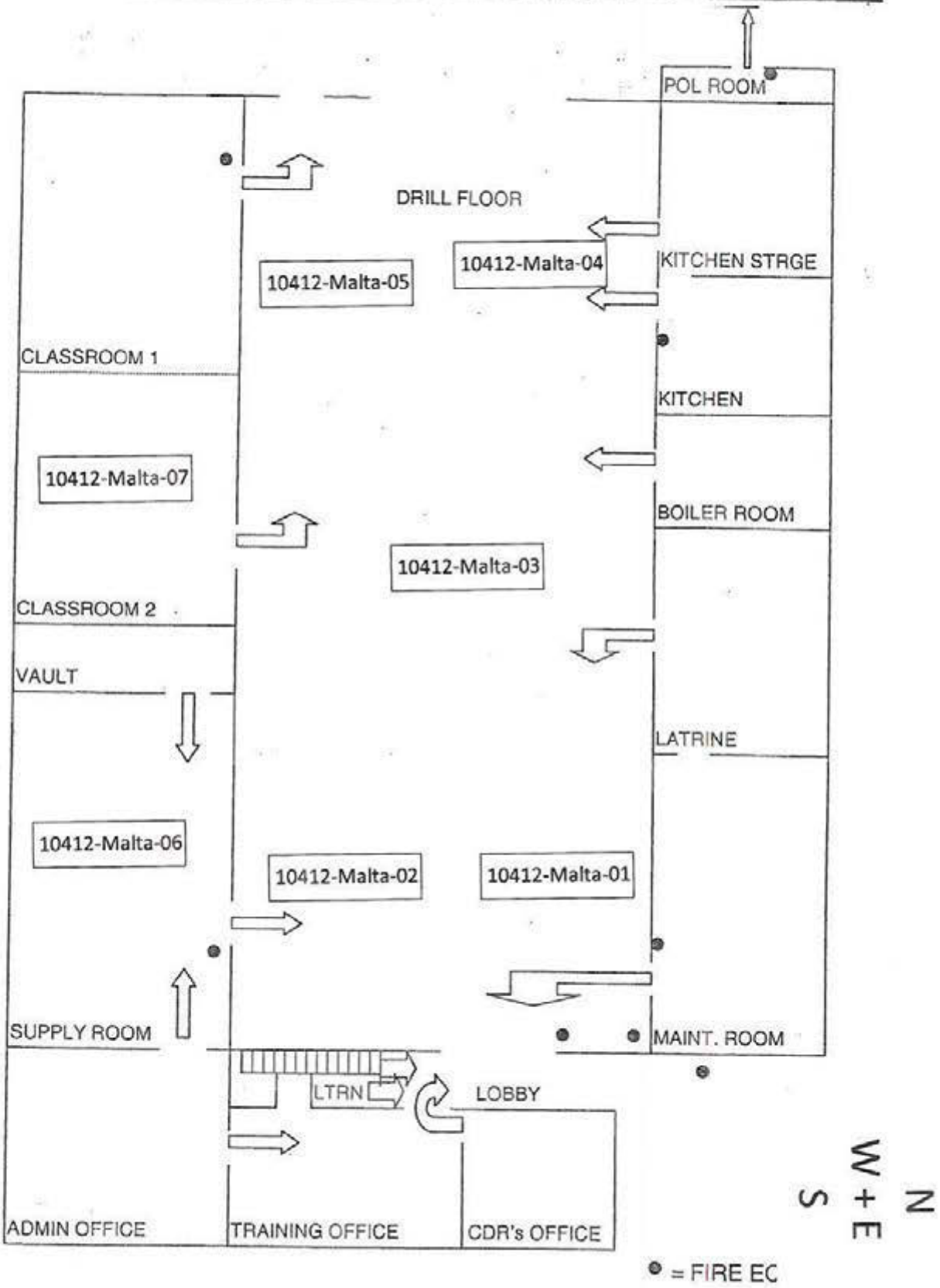
TABLE 1
LEAD WIPE SAMPLE RESULTS
MALTA ARMORY
OCTOBER 4, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
10412-Malta-01	Drill Floor	Northeast corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-02	Drill Floor	Southeast corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-03	Drill Floor	Center, middle of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-04	Drill Floor	Northwest corner of drill floor, floor area sample	< 2.5	< 40 $\mu g/ft^2$
10412-Malta-05	Drill Floor	Southwest corner of drill floor, floor area sample	7.2	< 40 $\mu g/ft^2$
10412-Malta-06	Gym/converted IFR	Center of room	14	< 40 $\mu g/ft^2$
10412-Malta-07	Locker room/converted IFR	Center of room	< 2.5	< 40 $\mu g/ft^2$

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard

Lead Wipe Sample Locations

MALTA ARMORY FIRE ESCAPE ROUTES



1228526

ANALYTICAL REQUEST FORM

1228526

1. ☐ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 10/4/2012 Purchase Order No. 013.1H12.74.63

3. Company Name NES

Address 1141 Sibley Street
Folsom, CA 95630

Person to Contact Non-Responsive

Telephone ( )

Fax Telephone (

E-mail Address

Billing Address (if different from above)

4. Quote No.

ALS Project Manager Non-Responsive

5. Sample Collection

Sampling Site Malta, MT

Industrial Process National Guard Armory

Date of Collection 10/4/2012

Time Collected 9:00 am

Date of Shipment 10/9/12

Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	10412-Malta-01	Ghost-Wipe	1ft²	Lead NIOSH 7300	
	10412-Malta-02	↓	↓	↓	
	10412-Malta-03				
	10412-Malta-04				
	10412-Malta-05				
	10412-Malta-06				
	10412-Malta-07				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished	Non-Responsive	Date/Time	10/9/12 12:00 pm
Received by		Date/Time	10/9/12 2:44 P.M.
Relinquished		Date/Time	
Received by		Date/Time	10/11/12 0915

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental

Non-Responsive

BEST AVAILABLE COPY

ANALYTICAL REPORT

Report Date: October 15, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1228526
Client Project ID: 013.IH1374.63/Malta, MT
Purchase Order: 013.IH1374.63
Project Manager: Non-Responsive

Analytical Results

Sample ID: 10412-Malta-01 | Media: Ghost Wipe | Collected: 10/04/2012
Lab ID: 1228526001 | Sampling Location: Malta, MT | Received: 10/11/2012
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 10/12/2012 | Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 10412-Malta-02 | Media: Ghost Wipe | Collected: 10/04/2012
Lab ID: 1228526002 | Sampling Location: Malta, MT | Received: 10/11/2012
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 10/12/2012 | Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 10412-Malta-03 | Media: Ghost Wipe | Collected: 10/04/2012
Lab ID: 1228526003 | Sampling Location: Malta, MT | Received: 10/11/2012
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 10/12/2012 | Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 10412-Malta-04 | Media: Ghost Wipe | Collected: 10/04/2012
Lab ID: 1228526004 | Sampling Location: Malta, MT | Received: 10/11/2012
Method: NIOSH 7300 Mod. | Sampling Parameter: Area 1 ft² | Prepared: 10/12/2012 | Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

ANALYTICAL REPORT

Workorder: 34-1228526
Client Project ID: 013.IH1374.63/Malta, MT
Purchase Order: 013.IH1374.63
Project Manager: [redacted]

Analytical Results

Sample ID: 10412-Malta-05	Media: Ghost Wipe		Collected: 10/04/2012
Lab ID: 1228526005	Sampling Location: Malta, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	7.2	7.2	2.5

Sample ID: 10412-Malta-06	Media: Ghost Wipe		Collected: 10/04/2012
Lab ID: 1228526006	Sampling Location: Malta, MT		Received: 10/11/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	14	14	2.5

Sample ID: 10412-Malta-07	Media: Ghost Wipe		Collected: 10/04/2012
Lab ID: 1228526007	Sampling Location: Malta, MT		Received: 10/11/2012
ethod: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/12/2012 Analyzed: 10/15/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	[redacted]	[redacted]

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: 34-1228526
Client Project ID: 013.IH1374.63/Malta, MT
Purchase Order: 013.IH1374.63
Project Manager: Non-Responsive

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

1228526

ANALYTICAL REQUEST FORM

1228526

1. ☐ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 10/4/2012 Purchase Order No. 013.1H12.74.63

3. Company Name NES

Address 1141 Sibley Street
Folsom, CA 95630

Person to Co[illegible] Non-Responsive

Telephone (

Fax Telephon

E-mail Addres

Billing Address (if different from above)

4. Quote No.

ALS Project Manager Non-Responsive

5. Sample Collection

Sampling Site Malta, MT

Industrial Process National Guard Armory

Date of Collection 10/4/2012

Time Collected 9:00 AM

Date of Shipment 10/9/12

Chain of Custody No.

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	10412-Malta-01	Ghost-Wipe	1FT²	Lead NIOSH 7300	
	10412-Malta-02	↓	↓	↓	
	10412-Malta-03				
	10412-Malta-04				
	10412-Malta-05				
	10412-Malta-06				
	10412-Malta-07				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Cha[illegible] Non-Responsive

Relinq		Date/Time	10/9/12 12:00 pm
Receiv		Date/Time	10/9/12 2:44 P.M.
Relinqu		Date/Time	
Receiv		Date/Time	10/11/12 0915

[illegible]84123 800-356-9135 or 801-268-7700 / FAX: 801-268-9992

ALS Environmental

Non-Responsive

BEST AVAILABLE COPY

Industrial Hygiene, Southwest
Hazard Inventory Log
Malta Armory - MT 59538

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTMA-100412-4.4	No asbestos documentation on file at the facility	Armory	3	A Montana state-certified asbestos inspector should be consulted to identify any area of the building that contains asbestos. Documentation should be kept on file of the survey at the facility. If the facility does contain asbestos, then an Operations & Maintenance Plan should be written and communicated to employees working at the facility.					29 CFR 1910.1001(b) & 29 CFR 1926.1101
MTMA-100412-4.6	Illumination levels are insufficient in the classroom and drill floor.	Armory	4	Increase illumination by increasing thenumber or wattage of the light fixtures, replace any burnt out bulbs, painting the walls a brighter, more reflective color, or using task lighting in poorly lit areas.					ASHRAE, Standard 55-1192
MTMA-100412-4.7.1	Not all MSDS's available in Hazmat storage area	Armory	4	Maintain copies of all MSDS sheets in the areas where hazardous chemicals are stored.					29 CFR 1910.1200(b)(3)(ii)
MTMA-100412-4.11	No evidence of monthly fire extinguisher inspections	Armory	4	Document fire extinguisher inspections on a monthly basis.					29 CFR 1910.157(e)(3)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 **Introduction** – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Malta Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Observations; Item 2 – Painted Surface Evaluation).

N4.4 **Asbestos Documentation** – A Montana state-certified asbestos inspector should be consulted to identify any area of the building that contains asbestos. Documentation should be kept on file of the survey at the facility. If the facility does contain asbestos, then an Operations & Maintenance Plan should be written and communicated to employees working at the facility.

N4.5 **Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality** – Increase the temperature of the Malta Armory to 68°F–75°F, per ASHRAE recommended levels.

N4.6 **Illumination Level Monitoring** – Increase illumination levels in classroom and Drill Floor by increasing the number or wattage of the light fixtures, replace any burnt out bulbs, painting the walls a brighter, more reflective color, or using task lighting in poorly lit areas.

N4.7.1 **Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)** – Inventories and MSDSs should be maintained in separate binders, one for each satellite storage location (i.e. flammable storage room or cabinet). Copies of chemical inventories are provided in Appendix D.

N4.11 **Safety Walk–Through** – A log of monthly fire extinguisher inspections should be documented on the fire extinguishers.

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Samples 01 through 05 were collected from various floor surface areas on the Drill Floor.
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	No.
Additional lead **wipe** samples taken from 25% of the rest of the building - -(**on floor areas only**)	Samples 06 and 07.
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	Yes there is a converted IFR; Which is now a locker room and storage room. Samples 06 and 07 were collected from these areas.
Is there any peeling **paint**? Take bulk sample if able.	No.
Are there any signs of water damage or **mold**?	No.
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	No.
Quality of housekeeping	Good.
HVAC maintenance plan in place?	Yes through the state.
Overall condition of HVAC system	Good working condition.
Obtained **CO2, Temp, RH** monitoring	Attached to report.
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Inventory on hand. However needs to be updated.
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	No incompatibilities observed during the IHSAV.

Fire alarm in working condition - -not usually in place in older armories	No fire alarm.
Fire extinguishers in place and properly identified and mounted	Yes.
Evidence of **monthly fire extinguisher inspections**	No evidence of monthly fire extinguisher inspections.
Annual fire extinguisher inspections tags current	Current; due in February 2013.
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A.
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	Yes, posted throughout the facility.
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Hazcom training program in place.
Any Photo labs	N/A.
Any hazardous **noise** sources	N/A.
Light levels checked throughout building	Attached to report.
Breaker panels properly labeled with no exposed wiring	Yes.
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. One part time military personnel, 0 civilian. 2. MP Company.
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Not regularly. Rented out one time last year for a blood drive.
Obtain two **lead air samples**	On IHSW Request Only

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A. kitchen was condemned in 2010. No longer in use.
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A. kitchen was condemned in 2010. No longer in use.
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Done
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	Done
Name of Armory, **POC**, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Armory HC72 Malta Non-Responsive 1008 US 191 Malta, MT 406-324-5540 MP Company **(Add Checklist to Report)**

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04				0
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05				0
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09				0
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			

Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18				0
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18				0
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19				0
Number of ventilation systems which were evaluated by an IH	953-02-19				0
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			0
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			0

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Miles City Armory
2500 Main Street
Miles City, MT 59301

03 Oct 2012

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

23 April 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive (DSS), Montana Medical Det Troop Medical Clinic, Room 1009, 1956 MT Majo St, Fort Harrison, MT 59636-4789

FOR Commander Miles City Armory, 2500 Main Street, Miles City, MT 59301

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Miles City Armory, 2500 Main Street, Miles City, Montana conducted on 03 October 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Miles City Armory at 2500 Main St. Miles City, MT on 03 OCT 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. A building inspection of the armory, for asbestos, should be provided and a management plan in place for personnel working at and on the facility should be written from that inspection. (para. 3.4) **(RAC 3)**

BEST AVAILABLE COPY

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for the Miles City Armory, 2500 Main Street, Miles City, Montana conducted on 03 October 2012.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Miles City Armory, MT

CONTROL NUMBER CLOSED [X]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTMCA-100312 - 3.4	No asbestos O/M plan or asbestos building survey was available.	Facility	3	Create an asbestos Operations & Maintenance Plan and have an asbestos building survey performed by a qualified MT asbestos building inspector.					29 CFR 1926.1110 TB MED 513
MTMCA-100312 - 4.11	Monthly and yearly fire extinguisher inspections were out of date.	Armory	4	Perform monthly and yearly inspections of fire extinguishers as required.					29 CFR 1910.157

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Industrial Hygiene Site Assistance Visit
Miles City Armory
Miles City, Montana
3 October, 2012

NES
www.nesglobal.net

ARMY NATIONAL GUARD

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

MILES CITY ARMORY
2500 MAIN STREET
MILES CITY, MONTANA 59301

October 3, 2012

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1374.64**

Prepared by:

Non-Responsive

Industrial Hygiene Technician

Reviewed by:

Non-Responsive

Principal-In-Charge

BEST AVAILABLE COPY

Table of Contents

Appendices

EXECUTIVE SUMMARY

On October 3, 2012, Non-Responsive Industrial Hygiene Technician with NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Miles City Armory located at 2500 Main Street in Miles City, Montana. The primary point of contact for information gathered during this survey was Non-Responsive may be reached by phone at (406) 324-5470 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate configuration of battery storage and charging facilities;
- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor employee noise exposures through noise dosimetry and source measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards; and,
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive and Non-Responsive went above and beyond expectations to help *NES* complete the IHSAV.

1.0 INTRODUCTION

On October 3, 2012, Non-Responsive Industrial Hygiene Technician with NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Miles City Armory located at 2500 Main Street in Miles City, Montana. The primary point of contact for information gathered during this survey was Non-Responsive may be reached by phone at (406) 324-5470 or by email at Non-Responsive

1.1 IHSAV Objectives

The objective of the IHSAV is to evaluate the occupational environment of the administrative areas in the Armory to determine the presence of operational health and safety risks and make recommendations for corrective actions or follow-up work to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances; and,
- Conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Miles City Armory has a total of 4 personnel working at the facility: two recruiters; one readiness officer; and one honor guard. The Armory has offices used for administrative purposes and also contains the following: a drill floor; classroom; supply room; kitchen; and a training room. There are no civilian employees at this Armory. Civilian functions carried out in the Miles City Armory approximately five times per year. These functions include: Christmas & Halloween parties; 4th of July float preparation; and voting ballots collections.

A new Miles City Armory is scheduled to begin construction in January 2013. The current Armory, at 2500 Main Street in Miles City, will be sold. Non-Responsive was not aware of any additional information regarding the sale of the facility at the time of the IHSAV.

3.0 METHODS

3.1 Lead Wipe Sampling

Lead wipe samples were collected on horizontal work and floor surfaces in various locations throughout the Miles City Armory. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge tubes. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust.

3.2 Painted Surface Evaluation

The interior and exterior of the Armory was visually inspected for peeling paint on the walls and ceilings. No paint chip samples were collected because no peeling paint was encountered.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. No areas of water damage or fungal growth were identified.

3.4 Asbestos Documentation

An evaluation of asbestos documentation was performed. During the site visit, no asbestos building survey assessment or asbestos operations and maintenance plan documentation could be found.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning (HVAC) systems that serve the Miles City Armory was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, and relative humidity were measured throughout the Armory using a TSI Model 8551 IAQ-Calc™ Monitor. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Miles City Armory. The instrument used for the illumination survey was a Konica Minolta Illuminance Meter, model TL-1. Measurements taken were obtained at typical working locations such as desks, computers, workstations and general working areas.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, i.e., flammable storage cabinets/rooms were also inspected as part of this IHSAV.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Exhaust Ventilation Survey

There were no ventilation hoods operational in the facility at the time of the IHSAV. Air velocity and flow measurements could not be performed.

3.10 Sound-Level Measurements

There were no potentially hazardous noise sources identified during the IHSAV. Sound-level measurements were not taken.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Miles City Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, to inspect ground fault circuit interrupter (GFCI) electrical outlet measurements, if eyewash stations inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey:

Type	Model Number	Serial Number	Calibration Date
Konica Minolta Illuminance Meter	TL-1	279029	May 2012
TSI IAQ-Calc™ Meter	8551	51380	November 2012

Please see Appendix H for a complete inventory of calibration certificates that may have been used during this IHSAV.

3.13 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Miles City Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of eight Ghost Wipe™ lead samples were taken during the time of the IHSAV. The first five samples were collected from the center and the four corners of the drill floor surface areas. The analytical results for the samples collected from the drill floor ranged from < 2.5 $\mu g/ft^2$ to 5.5 $\mu g/ft^2$; and are below the 40 $\mu g/ft^2$ criterion.

Additional lead wipe samples were taken from approximately 25% of the rest of the building. The three additional areas samples were collected from the following areas: the kitchen floor, the supply room floor, and the orderly room floor near the entrance. The analytical results for all the samples were below the 200 $\mu g/ft^2$ criterion. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard ($\mu g/ft^2$)
100312-2500Miles-01	Drill Floor	Southeast corner, floor sample	5.1	≤ 40
100312-2500Miles-02	Drill Floor	Southwest corner, floor sample	3.0	≤ 40
100312-2500Miles-03	Drill Floor	Northwest corner, floor sample	5.5	≤ 40
100312-2500Miles-04	Drill Floor	Center, floor sample	5.2	≤ 40
100312-2500Miles-05	Drill Floor	Northeast corner, floor sample	3.7	≤ 40

100312-2500Miles-06	Kitchen	Floor area sample	3.4	≤ 40
100312-2500Miles-07	Supply room	Floor area sample	<2.5	≤ 200
100312-2500Miles-08	Orderly Room	Floor area sample	<2.5	≤ 200
100312-2500Miles-Blank	—	—	<2.5	NA

See Appendix I, table 1 for lead wipe sampling analytical results. Analytical laboratory reports are provided in Appendix J.

4.2 Painted Surface Evaluation

No paint chip samples were collected because no peeling paint was identified.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

No water intrusion issues or fungal growth was identified during the IHSAV.

4.4 Asbestos Documentation

During the site visit, no asbestos documentation could be located.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The Miles City Armory utilizes a central HVAC system. The HVAC systems were all functioning and up to date on maintenance and inspections during the time of the IHSAV. Maintenance is provided through the Field Operations Company based out of Fort Harrison in Helena. All heating and cooling air is direct-ducted to the offices and the drill floor. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bioeffluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (700 ppm) above outdoor levels. Outside CO_2 concentrations are typically around 350 ppm. Carbon dioxide concentrations throughout the facility were below 1050 ppm. The highest CO_2 concentration measured was 535 ppm in the orderly room.

ASHRAE recommends maintaining temperatures between 68 and 75°F. Relative humidity should be maintained between 30% and 60% to minimize the growth of allergenic or pathogenic organisms. Building air temperatures ranged from 71.3 to 73.7°F and relative

humidity was between 30.1% and 33.6% during the testing period. See Appendix E for IAQ data.

4.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. The numbers represent the illumination level in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Based on the above criterion, the lighting throughout the facility is adequate for tasks being performed.

4.7 Hazardous Material Storage and Use Procedures

4.7.1 Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)

Inventories of all hazardous materials used by the Miles City Armory along with their associated Material Safety Data Sheets (MSDSs) are maintained in a master binder within the facility. The master chemical inventory and MSDS binder is arranged by a Federal Stock Class and National Stock Number (NSN). The inventories and MSDSs are arranged by product name, quantity, unit of issue and shelf life. Copies of the Armory's chemical inventories are provided in Appendix D.

4.7.2 Flammable Storage Cabinets

Flammable storage cabinets were inspected and no storage incompatibilities or leaking materials were found. The lockers were in good condition and all doors were noted to close properly. Fire extinguishers were located throughout the facility offices and in the drill floor area. According to 29 CFR 1910.157(c)(1) the employer shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury.

4.7.3 Flammable and POL Storage

Not applicable to this facility.

4.8 Safety Training and Record Keeping

The following training documentation was found at the site:

Montana Army National Guard Safety SOP:

- Hazcom

4.9 Exhaust Ventilation Survey

Since there were no ventilation hoods operational in the facility at the time of the IHSAV, no air velocity measurements were collected from the kitchen canopy hood.

4.10 Sound-Level Measurements

Since there were no potentially hazardous noise sources identified during the IHSAV, no sound-level measurements were taken from the kitchen appliances.

4.11 Safety Walk-Through

1. Housekeeping throughout the facility was very good.
2. Fire extinguishers are strategically located in the hallway and throughout the drill floor. Fire extinguishers were past due for monthly and annual inspections.
3. A fire evacuation plan was prominently posted throughout the building. Egress routes are marked on the fire evacuation plan.
4. GFCI electrical outlets functioned properly when tested.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES* professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IHSAV report was reviewed and approved by:

Non-Responsive

June 6, 2013
Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contac Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 1: Front of Miles City Armory.

Photo 2: Front sign at Miles City Armory.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 3: View of Drill floor.

Photo 4: Drill floor looking towards offices.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 5: Lead wipe floor sample 100312-2500Miles-01 collected from southeast corner of Drill floor.

Photo 6: Lead wipe floor sample 100312-2500Miles-02 collected from southwest corner of Drill floor.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 7: Lead wipe floor sample 100312-2500Miles-03 collected from northwest corner of Drill floor.

Photo 8: Lead wipe floor sample 100312-2500Miles-04 collected from center of Drill floor.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 9: Lead wipe floor sample 100312-2500Miles-05 collected from northeast corner of Drill floor.

Photo 10: Lead wipe floor sample 100312-2500Miles-06 collected from kitchen.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

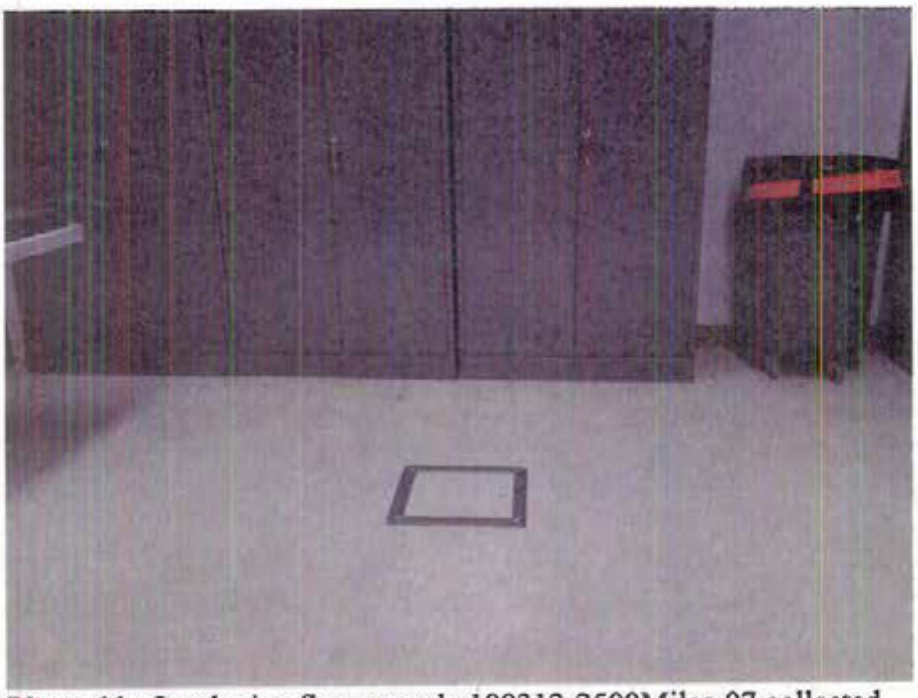


Photo 11: Lead wipe floor sample 100312-2500Miles-07 collected from supply room.

Photo 12: Lead wipe floor sample 100312-2500Miles-08 collected from orderly room.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 13: View of the vault.

Photo 14: View of the second floor classroom.

PHOTO LOG
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Photo 15: View of the kitchen.

Photo 16: View of front supply room.

Print Inventory

Print Inventory | Cancel

Unit: 260th (-) HORIZ ENG CO

Storage: FL01 Drill Floor Month: 12/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
1A1	Spray Paint (Smoke Gray 1608)	LOCAL PURCHASE	Krylon Products Group	24504-0160	3	CAN	0	V3
1A2	HEAT RESISTANT PAINT	LOCAL PURCHASE	ACE	17066	10	CAN	0	V3
1A3	Flat Black 37038	8010-01-331-6108	Skillcraft / LHB	CQWGV	11	CAN	7	V3
1A4	Flat Olive Drab 34088	8010-01-331-6113	Skillcraft / LHB	CVTNT	12	CAN	7	V3
1A5	TT-E-527D ENAMEL BROWN 30372	8010-00-348-7715	Skillcraft / LHB	CQZTP	9	CAN	7	V3
1A6	GLOSS BLUE 15050	8010-01-359-9246	LHB	CQZYF	3	CAN	7	V3
1A7	ENAMEL, SUN YELLOW	LOCAL PURCHASE	Walmart Stores	78742-0322	2	CN	0	V3
1B1	CLP	1025-01-196-2174	Break-Free / San Bar Corp	BYXXT	14	3.5OZ BT	6	V4
1B2	CLP	9150-01-054-6453	Break-Free / San Bar Corp	BGJHY	4	BT	6	V4
1C1	PAINT, RUBBER BASE	8010-00-597-8198	GRIGGS PAINT	BPRHS	2	5GL	6	F2
1C4	Propane Fuel	6830-00-584-3041	Turner Tools / Cooper Tools	BNRQC	0	Cyl	0	V3

Print Inventory

Print Inventory | Cancel

Unit: 260th (-) HORIZ ENG CO

Storage: FL03 POL Shed

Month: 12/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
3A1	GREASE, AUTO	9150-01-197-7693	SUMMIT	BQYLM	16	TB	6	V6
3A2	ATF DEXTRON III	9150-00-698-2382	B&M	CJMVG	9	QT	7	V6
3A3	ENGINE OIL 10W	9150-00-189-6727	CSD INC.	DZFWY	5	QT	7	V6
3A3	ENGINE OIL 10W	9150-00-189-6727	SDB Consulting		6	QT	6	V6
3A3	ENGINE OIL 10W	9150-00-189-6727	Salathe Oil CO.		1	QT	6	V6
3A4	Power Steering Sealer and Conditioner	LOCAL PURCHASE	Mag1/ Warren Performance Products	172	2	BT		V1
3B1	HYDRAULIC FLUID	9150-00-935-9807	ROYAL LUBE	CKSKX	1	QT	6	V6
3B1	HYDRAULIC FLUID	9150-00-935-9807	ROYCO	CFFFR	5	QT	6	V6
3C1	BRAKE FLUID	9150-01-102-9455	SAN JUAN	BWPTH	1	GL	6	V6
3C4	LUBE OIL, ENGINE 15W40	9150-01-152-4117	B&M ENTERPRIZES	CJJGD	15	QT	7	V6
3C4	SAE 15W40	9150-01-421-1427	SAFETY-KLEEN SYSTEMS INC	CVCCM	18	QT	7	V6
3D1	GEAR OIL 80W-90	9150-01-035-5393	IMPERIAL	BGGLH	3	5GL	6	V6

3D2	AIRCRAFT GREASE	9150-00-935-5851	EQUILON ENTERPRIZES	CKRZH	1	5GL	6	V6

Print Inventory

Print Inventory | Cancel

Unit: 260th (-) HORIZ ENG CO

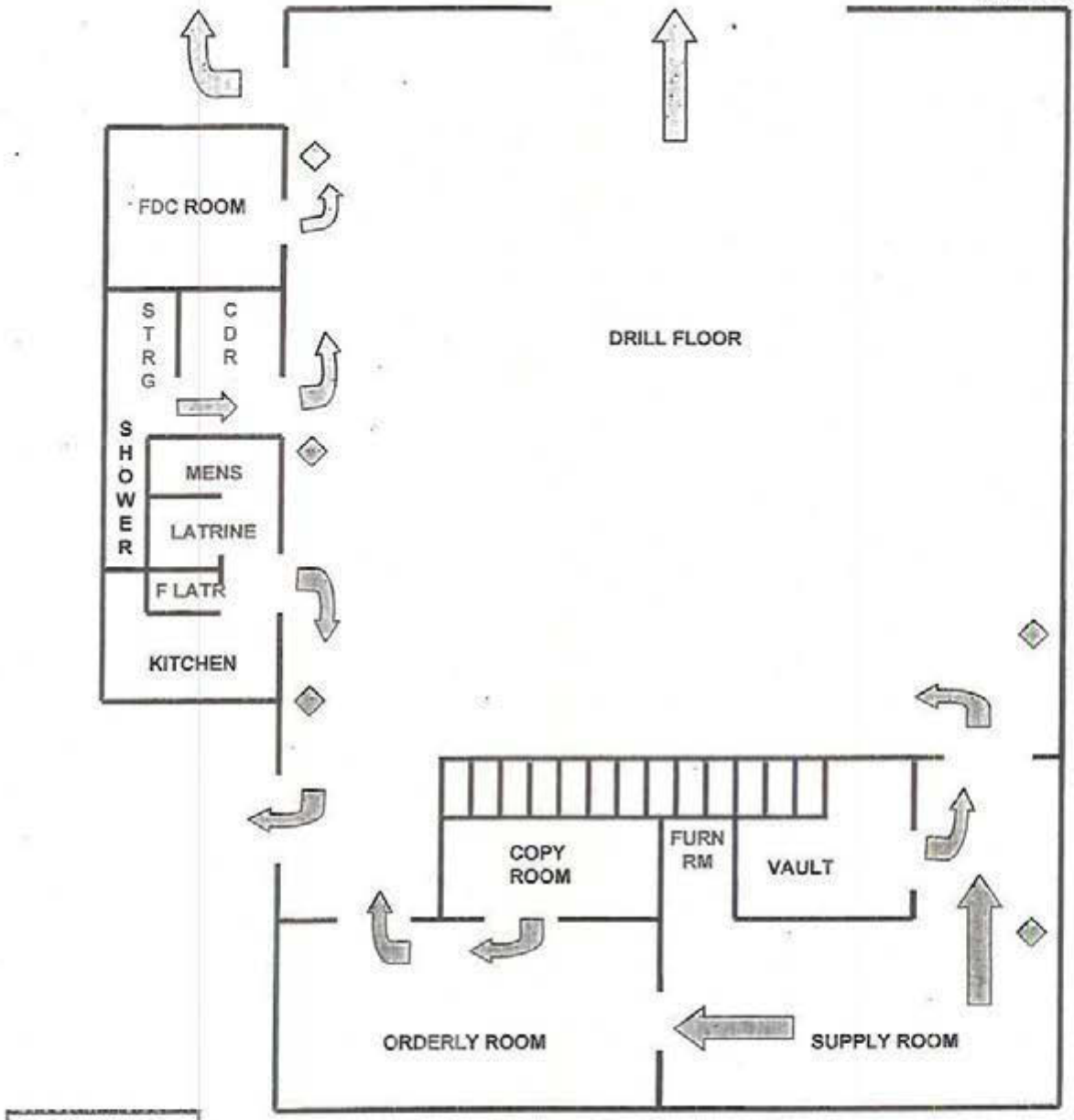
Storage: POL Bulk Storage

Month: 12/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
PBS-SA1	Simple Green	LOCAL PURCHASE	Sunshine Makers, Inc	10013c	2	5gal	0	N1
PBS-SA2	Power Green	7930-01-373-8845	LHB Industries	1064090	2	5gal	6	N1

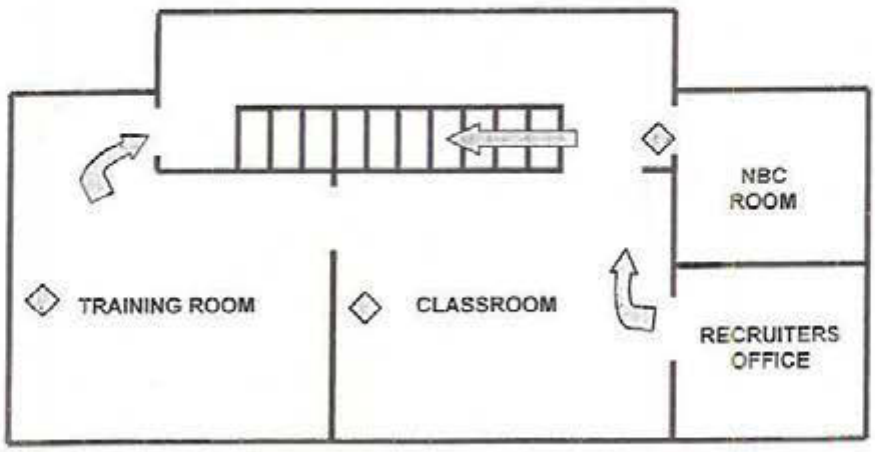
MILES CITY ARMORY

MILES CITY, MT



MAIN FLOOR

NOT TO SCALE



2ND FLOOR

IAQ MEASUREMENTS
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Location	CO_2 max permissible level 1,035 ppm	Temperature permissible range 68 - 75°F	RH% permissible range 30-60%	CO max permissible range 200 ppm. STEL
First floor, FDC room	472	71.3	30.5	0.9
First floor, CDR room	409	71.7	30.5	0.8
First Floor, Men's latrine	407	71.5	30.9	0.9
First floor, Kitchen	411	71.3	30.8	0.9
First floor, Orderly room	535	72.7	33.6	0.9
First floor, Copy room	501	73.7	31.4	0.9
First floor, Vault room	520	73.7	32.1	1.0
First floor, Supply room	483	73.7	32.0	0.9
First floor, Drill floor Northwest corner	420	72.6	30.1	1.1
First floor, Drill floor Southeast corner	411	71.9	30.2	0.9
Second floor, Training room	429	72.5	30.4	0.8
Second floor, Classroom	425	72.8	30.7	0.7
Second floor, NBC room	477	72.5	30.9	0.7
Second floor, Recruiters office	417	72.5	30.7	0.7

CO_2 - Carbon Dioxide
°F = Fahrenheit
RH = Relative Humidity
CO = Carbon Monoxide
STEL – Short Term Exposure Limit

ILLUMINANCE SURVEY

MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Building	Location	Light – FC	Minimum lighting requirements – FC
Armory, first floor	FDC room	30.1	30
Armory, first floor	CDR room	96.2	30
Armory, first floor	Men's latrine	30.6	10
Armory, first floor	Kitchen	34.0	50
Armory, first floor	Orderly room	74.0	50
Armory, first floor	Copy room	94.6	50
Armory, first floor	Vault room	36.8	30
Armory, first floor	Supply room	41.4	30
Armory, first floor	Northwest corner of drill floor	48.3	30
Armory, first floor	Southeast corner of drill floor	32.2	30
Armory, second floor	Training room	95.3	50
Armory, second floor	Classroom	135.3	50
Armory, second floor	NBC room	116.5	50
Armory, second floor	Recruiters office	115.5	50

*FC= foot candle measurement

10/03/12

Wipe Sampling Summary Form

NES Job # 013-1H1374.64

Collected By [redacted]

Sample # 01
Analyte
Sample Collected From Drill floor

Wipe Area ____ units ____ Date 10/3/12 Time 8:49 AM

Sample # 02
Analyte
Sample Collected From Drill floor

Wipe Area ____ units ____ Date 10/3/12 Time 8:53 AM

Sample # 03
Analyte
Sample Collected From Drill floor

Wipe Area ____ units ____ Date 10/3/12 Time 8:55 AM

Sample # 04
Analyte
Sample Collected From Drill floor

Wipe Area ____ units ____ Date 10/3/12 Time 8:57 AM

Sample # 05
Analyte
Sample Collected From drill floor

Wipe Area ____ units ____ Date 10/3/12 Time 8:59 AM

Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, California 95630

10/03/12

Wipe Sampling Summary Form

NES Job # 013.1H1374.04

Collected By Non-Responsive

Sample # 06

Analyte

Sample Collected From Dorm floor kitchen floor

Wipe Area _____ units _____ Date 10/3/12 Time 9:01 AM

Sample # 07

Analyte

Sample Collected From supply room

Wipe Area _____ units _____ Date 10/3/12 Time 9:05 AM

Sample # 08

Analyte

Sample Collected From Orderly room entrance

Wipe Area _____ units _____ Date _____ Time _____

Sample #

Analyte

Sample Collected From

Wipe Area _____ units _____ Date _____ Time _____

Sample #

Analyte

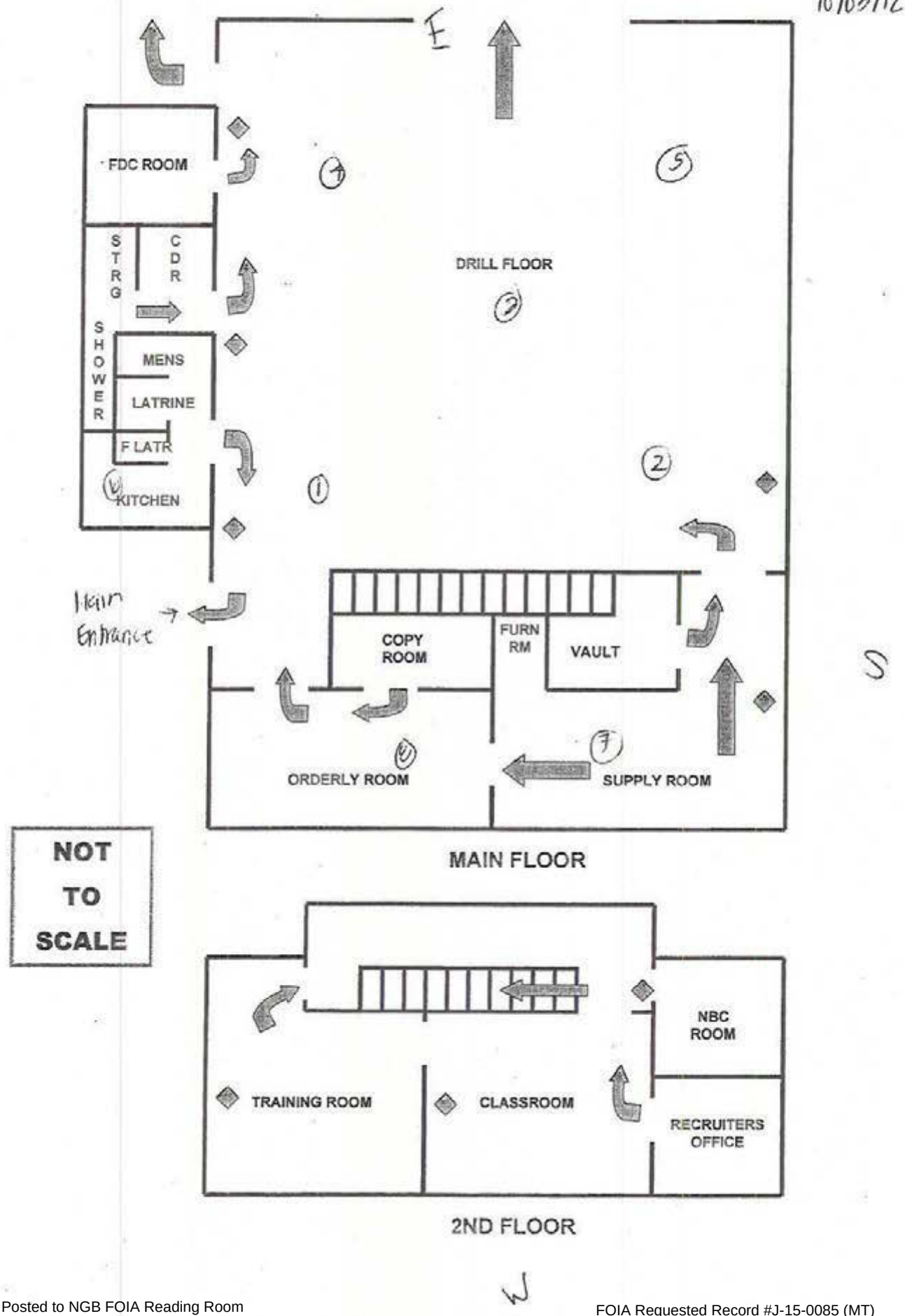
Sample Collected From

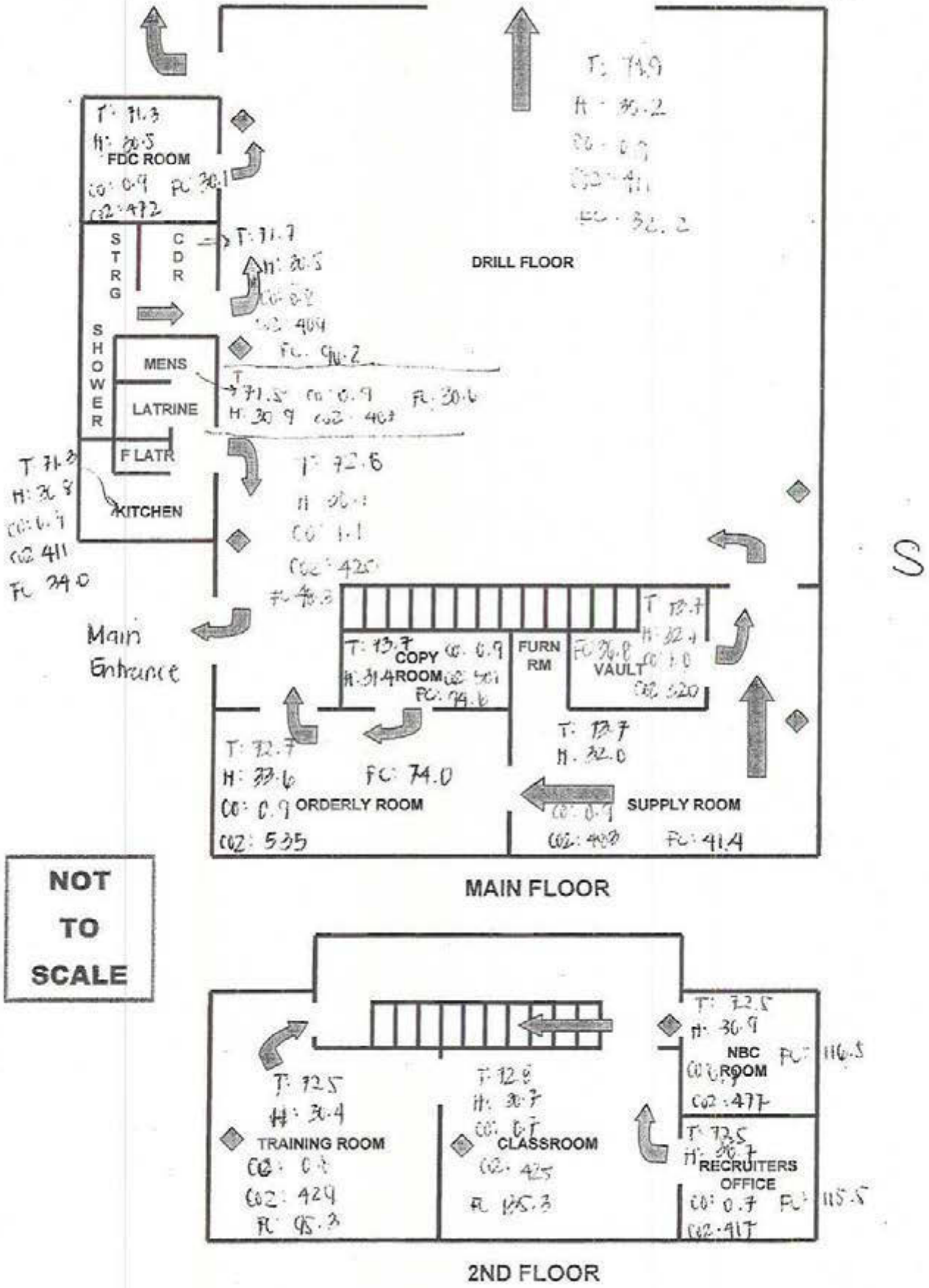
Wipe Area _____ units _____ Date _____ Time _____

Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, California 95630

Lead Samples

013.1H1374.64
10/03/12





Miles City Armory (Fact finding) 03.1H1374.64 10/3/12

- employee list ✓
- MSDS chem. inventory list ✓
- violation inventory log
- facility map
- IAQ ✓
- Light ✓
- Lead samples ✓
- Photo log

POC:

[redacted]

Fact Finding:

- New Armory is going to [start] being built in January 2013.
- Offices @ Miles City is used for recruiting.
- going to sell facility, don't know much about the when its going to happen
-

Miles City Armory 013.1111374.04 10/3/12

Photo Log

01 - 08 → lead samples

09: sign

10: building (front)

11: building

12 building

13: drill floor

14: kitchen

15 office (1st floor left)

16: office (1st floor 2nd room on left)

17. drill floor (towards offices, view of 2nd flr.)

18: 2nd floor + classroom

19. training room

20. drill floor (view from 2nd floor)

21. supply room (front area)

22. vault

23. supply room (back)

ARNG Site Assistance Visit Checklist

General Information

Facility: Miles City Armory

Physical Address: 2500 Main Street, Miles City, MT. 59301

Number of Employees: 4 Dates: 10/3/12

Standard Items

IAQ: ✓ Illumination: ✓ Lasers: X

Jack Stands: N/A CO Monitors: ~~N/A~~

Bloodborne Pathogens: N/A Confined Space: N/A

LOTO: Equipment available: N/A Equipment used: N/A

Cranes/Hoists: N/A Fall Protection: N/A

Respirators: N/A

Hearing Protection: N/A

Flammables Cabinets:

Radon Detectors: N/A

Fire Extinguishers serviced: 0 Inspected: 0

0 last serviced / inspected Sept. 2011

Ventilation N/A

Paint Booth: Work Bays: Welding:

Soldering: Carpenter: Other?:

Noise N/A

Noise Dosimetry:

SPL Measurements: Pneumatics:

Welding:

Machinery:

Vehicles:

Tektronix
Service Solutions

Certificate of Calibration

6209119

Instrument Identification

PO Number: Non-Responsive

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

Instrument ID: H225438
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive
Cal Date 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.

Approved By Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230626	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700276206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

8120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012 **Cert No.** 2008120221675

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3921
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.6 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC8185	MULTIFUNCTION PROCESS CALIBRATOR	726	1355148	FLUKE	Nov 5, 2013	2008120211043
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90058781A	MET ONE	Apr 30, 2013	2008120175502

Procedures Used in this Event

Procedure Name	Description
PARTICLE COUNTER	PARTICLE COUNTERS
971 TEMP/HUMIDITY METER	TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

TABLE 1
LEAD WIPE SAMPLE RESULTS
MILES CITY ARMORY
MILES CITY, MT
OCTOBER 03, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard ($\mu g/ft^2$)
100312-2500Miles-01	Drill Floor	Southeast corner, floor sample	5.1	≤ 40
100312-2500Miles-02	Drill Floor	Southwest corner, floor sample	3.0	≤ 40
100312-2500Miles-03	Drill Floor	Northwest corner, floor sample	5.5	≤ 40
100312-2500Miles-04	Drill Floor	Center, floor sample	5.2	≤ 40
100312-2500Miles-05	Drill Floor	Northeast corner, floor sample	3.7	≤ 40
100312-2500Miles-06	Kitchen	Floor area sample	3.4	≤ 40
100312-2500Miles-07	Supply room	Floor area sample	<2.5	≤ 200
100312-2500Miles-08	Orderly Room	Floor area sample	<2.5	≤ 200
100312-2500Miles-Blank	NA	NA	NA	NA

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
NA = not applicable
ND = none detected at or above the analytical detection limit

ANALYTICAL REPORT

Report Date: October 10, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1228244
Client Project ID: Miles City Armor
Purchase Order: 013.IH1374.64
Project Manager: Non-Responsive

Analytical Results

Sample ID: 100312-2500 Mile-01 Media: Ghost Wipe
Lab ID: 1228244001 Sampling Location: Miles City Armory
Collected: 10/03/2012
Received: 10/08/2012
Method: NIOSH 7300 Mod. Sampling Parameter: Area 1 ft²
Prepared: 10/09/2012
Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5.1	5.1	2.5

Sample ID: 100312-2500 Mile-02 Media: Ghost Wipe
Lab ID: 1228244002 Sampling Location: Miles City Armory
Collected: 10/03/2012
Received: 10/08/2012
Method: NIOSH 7300 Mod. Sampling Parameter: Area 1 ft²
Prepared: 10/09/2012
Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	3.0	3.0	2.5

Sample ID: 100312-2500 Mile-03 Media: Ghost Wipe
Lab ID: 1228244003 Sampling Location: Miles City Armory
Collected: 10/03/2012
Received: 10/08/2012
Method: NIOSH 7300 Mod. Sampling Parameter: Area 1 ft²
Prepared: 10/09/2012
Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5.5	5.5	2.5

Sample ID: 100312-2500 Mile-04 Media: Ghost Wipe
Lab ID: 1228244004 Sampling Location: Miles City Armory
Collected: 10/03/2012
Received: 10/08/2012
Method: NIOSH 7300 Mod. Sampling Parameter: Area 1 ft²
Prepared: 10/09/2012
Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5.2	5.2	2.5

ANALYTICAL REPORT

Workorder: 34-1228244
Client Project ID: Miles City Armor
Purchase Order: 013.IH1374.64
Project Manager: Non-Responsive

Analytical Results

Sample ID: 100312-2500 Mile-05	Media: Ghost Wipe		Collected: 10/03/2012
Lab ID: 1228244005	Sampling Location: Miles City Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	3.7	3.7	2.5

Sample ID: 100312-2500 Mile-06	Media: Ghost Wipe		Collected: 10/03/2012
Lab ID: 1228244006	Sampling Location: Miles City Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	3.4	3.4	2.5

Sample ID: 100312-2500 Mile-07	Media: Ghost Wipe		Collected: 10/03/2012
Lab ID: 1228244007	Sampling Location: Miles City Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 100312-2500 Mile-08	Media: Ghost Wipe		Collected: 10/03/2012
Lab ID: 1228244008	Sampling Location: Miles City Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 100312-2500 Mile-09	Media: Ghost Wipe		Collected: 10/03/2012
Lab ID: 1228244009	Sampling Location: Miles City Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area Not Applicable		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	NA	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

ANALYTICAL REPORT

Workorder: 34-1228244
Client Project ID: Miles City Armor
Purchase Order: 013.IH1374.64
Project Manager: Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

W 1228244

ANALYTICAL REQUEST FORM

1228244

1. ☐ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 10/05/12 Purchase Order No. OD. 1Hi374.04

3. Company Name NES

Address 1141 Sibley St.
Folsom, CA. 95630

Person [redacted]

Telepho [redacted]

Fax Tele [redacted]

E-mail A [redacted]

Billing A [redacted]

Non-Responsive

4. Quote No. _____

ALS Project Manager Non-Responsive [redacted]

5. Sample Collection

Sampling Site Miles City Armory

Industrial Process _____

Date of Collection 10/3/12

Time Collected _____

Date of Shipment _____

Chain of Custody No. _____

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	100312-2500 Miles-01	Other Wipes	1 sq. ft.	Lead MOSH 7300	ug/sq.ft
	100312-2500 Miles-02	↓	↓	↓	↓
	100312-2500 Miles-03				
	100312-2500 Miles-04				
	100312-2500 Miles-05				
	100312-2500 Miles-06				
	100312-2500 Miles-07				
	100312-2500 Miles-08				
	100312-2500 Miles-Blank				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of C [redacted]

Non-Responsive

Relinquished	[redacted]	Date/Time
Received by		Date/Time 10-8-12 9:44
Relinquished		Date/Time
Received by		Date/Time

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Laboratory Group

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Miles City Armory, MT

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTMCA-100312 - 3.4	No asbestos O/M plan or asbestos building survey was available.	Facility	3	Create an asbestos Operations & Maintenance Plan and have an asbestos building survey performed by a qualified MT asbestos building inspector.					29 CFR 1926.1110; TB MED 513
MTMCA-100312 - 4.11	Monthly and yearly fire extinguisher inspections were out of date.	Armory	4	Perform monthly and yearly inspections of fire extinguishers as required.					29 CFR 1910.157(e)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 **Introduction** -- This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Miles City Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Findings and Recommendations; Item 2 – Painted Surface Evaluation).

N4.11 Safety Walk-Through

Perform monthly and yearly inspections of fire extinguishers as required.

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down. moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Yes. Samples 100312-2500Miles-01, 02, 03, 04, 05
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	No
Additional lead **wipe** samples taken from 25% of the rest of the building - -**(on floor areas only)**	Yes. Samples 100312-2500Miles-06, 07, 08
Is there **a converted indoor firing range?** If so collect additional wipe samples IAW the SOW.	No
Is there any peeling **paint?** Take bulk sample if able.	No
Are there any signs of water damage or **mold?**	No
Any suspected **ACM?** Where and what condition is it in. Bulk sample if able.	No
Quality of housekeeping	Very good
HVAC maintenance plan in place?	Yes. Maintenance is provided through the Field Operations Company based out of Fort Harrison in Helena.
Overall condition of HVAC system	Good working condition
Obtained **CO2, Temp, RH** monitoring	Yes
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Yes. Last updated 12/1/2011
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	Storage good. Lockers labeled and in good condition & organized.

Fire alarm in working condition - -not usually in place in older armories	Yes
Fire extinguishers in place and properly identified and mounted	Yes.
Evidence of **monthly fire extinguisher inspections**	No. Outdated
Annual fire extinguisher inspections tags current	No. Last inspection Sept 2011
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	N/A
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	Yes
Training programs in place; Hazcom, Respiratory Protection, Confined Spaces, Hearing conservation, PPE (if applicable)	Yes. Montana Army National Guard Safety SOP Hazcom
Any Photo labs	No
Any hazardous **noise** sources	No
Light levels checked throughout building	Yes
Breaker panels properly labeled with no exposed wiring	Yes
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	1. 4 personnel 2. 2 recruiters, 1 readiness officer, & 1 honor guard
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Yes. Rented throughout year to host parties.
Obtain two **lead air samples**	On IHSW Request Only

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	No working Stove
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	None found
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	No Hazards
Name of Armory, **POC**, **phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Miles City Armory 2500 Main Street Miles City, Montana Non-Responsive **(Add Checklist to Report)**

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	0			
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	0			
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	0			
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	0			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	0			
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	0			
Number of ventilation systems which were evaluated by an IH	953-02-19	0			
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Sidney Armory
Indoor Firing Range (IFR)
2190 W. Holly Street
Sidney, MT 59270

30 Oct 2013

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-P

19 January 2014

MEMORANDUM THRU Non-Responsive DSS, 1956 Mt. Majo St., Room 1009, Helena, MT 59636

FOR Commander Sidney Armory Indoor Firing Range (IFR) at 2190 W. Holly St., Sidney, MT 59270

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Sidney Armory Indoor Firing Range (IFR) at 2190 W. Holly St., Sidney, MT on 30 OCT 2013.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Sidney Armory Indoor Firing Range (IFR) at 2190 W. Holly St., Sidney, MT on 30 OCT 2013.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. Increase temperatures throughout the facility to meet the ASHRAE recommended range 68-75 degrees Fahrenheit (para. 5.5) **(RAC 4)**

b. Post warning signage at the entryway(s) of the facility and on Converted IFR door(s) to warn

pregnant or nursing females and children under 7 years of age that there is a potential for elevated lead dust in this facility/area. Make sure staff and maintenance personnel are aware of the associated lead hazards. (Exec. Summary) **(RAC 3)**

c. Continue Good Housekeeping Practices within the armory and utilize SOP included to help prevent migration of noted lead dust in this Converted IFR and with weapons cleaning episodes. (Exec. Summary) **(RAC 3)**

d. **Prohibit use of the converted IFR** (workout room) until the area is cleaned of lead below ARNG thresholds. Utilize NGP 420-15 Conversion of Indoor Firing Ranges (IFR) to have IFR properly cleaned this time around. Clean the workout area in accordance with the Armory SOP for lead cleanup accompanying this report. Have follow-up testing conducted to meet acceptable concentrations. (para. 5.3) **(RAC 2)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

ARNG-CSG-P

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (SAV) for the Sidney Armory Indoor Firing Range (IFR) at 2190 W. Holly St., Sidney, MT on 30 OCT 2013

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the NGB-IHSW office at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Sidney IFR - Sidney, MT

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTSIFR-10302013-5.3	Lead concentrations exceed established criteria	Converted IFR	2	Prohibit use of the converted IFR until the area is cleaned of lead below ARNG thresholds. Clean the locker in accordance with the Armory SOP for lead cleanup. Have follow-up testing conducted to meet acceptable concentrations.					29 CFR 1910.1025 (h)(1) & NGP 420-15
MTSIFR-10302013-5.5	Temperatures are below the ASHRAE recommended range	Facility	4	Increase temperatures throughout the facility to meet the ASHRAE recommended range.					ASHRAE Standard 62.1-2010

Reference DA FORM 4754

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

EQUIPMENT LIST
Sidney Armory

.12

ITEM	VSN/USA	S/N
10T DUMP TRUCK (M1157)	NP2MPH	10TDJAU58BS724368
	NP2MPZ	10TDJAU58BS728100
	NP2MPY	10TDJAU59BS727148
	NP2MPM	10TDJAU59BS727165
	NP2MPJ	10TDJAU5XBS724341
	NP2MPK	10TDJAU5XBS724372
	NP2MPU	10TDJAU5XBS727157
10T DUMP TRAILERS (M1059)	PB0G5J	10TDC1527CS734082
	PB0G5Q	10TDC1520CS734084
	PB0H9G	10TDC1528CS746502
	PB0G5S	10TDC1529CS733905
	PB0G5T	10TDC152XCS733928
	PB0G5N	10TDC152XCS734092
	PB0H92	10TDC152XCS746503
TRK TRACTOR (M1088)	NL1GT5	T019975BFCN
	NL1GT4	T019974BFCN
SEMITRAILER LOW BED (M172A1)	7G2613	9072
	7F5779	7552
HMEE	UC09TS	GEOHMEE1T01063324
	UC09TG	GEOHMEE1C01063314
SKIDSTEER (M400W)	UA07FK	NCM459274
SKIDSTEER (M400T)	NZ3G8T	NCM459770
HMMWV (M1165)	NZ2QFE	328153
OE-254 ANTENNA		11082E
CLEANING KIT GUN BORE		693
TENT		
CHEMICAL MASK: M40		4240013703822
		4240013703822
		4240013703822
		4240013703822
		4240013703822
GEN MECHANIC TOOL KIT		5180014830249
SURVEYING SET		6675006413639
SKETCH SE SURVEY MIL F		6675006413632
CHEM AGENT MONITER		Z47-C-46337
		Z47-C-46359

EQUIPMENT LIST
Sidney Armory

COMPASS MGNT		1290009304260
		1290009304260
		1290009304260
		1290009304260
SCRAPER BII		KEH00194
CARPENTERS SQUAD BOX		5180014472200
RADIO MOUNTS		193170
		187916
		193133
		192779
		192745
		193077
		028055AA
RADIO		031346A

Industrial Hygiene Site Assistance Visit
Sidney IFR (Converted)
Sidney, Montana
October 30, 2013

NES
www.nesglobal.net

ARMY NATIONAL GUARD

TABLE OF CONTENTS

Appendices:

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

SIDNEY INDOOR FIRING RANGE
(CONVERTED)
2190 WEST HOLLY STREET
SIDNEY, MONTANA 59270

October 30, 2013

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1449.12**

Non-Responsive

Non-Responsive

EXECUTIVE SUMMARY

On October 30, 2013, Non-Responsive Certified Industrial Hygienist (CIH), of Network Environmental Systems, Inc. (*NES*), conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Sidney Indoor Firing Range (IFR) facility, located at 2190 West Holly Street in Sidney, Montana. The primary point of contact (POC) for information gathered during this survey was Non-Responsive who may be reached by phone at (406) 324-5485 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate work processes conducted within the facility;
- Collect metal surface wipe samples;
- Perform an assessment & inspection of the converted IFR;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards; and
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive was very helpful with providing critical information during this IHSAV.

1.0 INTRODUCTION

On October 30, 2013, Non-Responsive CIH, of *NES*, conducted an IHSAV at the Sidney IFR facility, located at 2190 West Holly Street in Sidney, Montana. The primary POC for information gathered during this survey was Non-Responsive who may be reached by phone at (406) 324-5485 or by email at Non-Responsive

1.1 Objectives

The primary objective of the IHSAV was to conduct hazard evaluations of work processes and asses the IFR. Processes and activities at the facilities were evaluated and recommendations to control the existence and extent of potentially hazardous operations or conditions at the Army National Guard (ARNG) facility were documented accordingly (Reference Appendix M – Hazard Assessments). This IHSAV will serve to establish a baseline Hazard Assessments (HA) / Job Safety Analysis (JSA) of workplace and process conditions or update/validate a previous HA/JSA so a worker's history of exposures, or potential exposures is provided for each civilian and military employee.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Evaluate work processes conducted within the facility;
- Collect metal surface wipe samples;
- Perform an assessment & inspection of the converted IFR;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate existing safety hazards; and
- Review safety policies/programs, training, and record keeping.

2.0 PROCESS DESCRIPTION

The Sidney Armory/ IFR combination facility currently has twenty-six (26) full time guard members performing administrative and maintenance activities. The primary unit assigned to this facility is Detachment 1 of the 260th Engineer Support Company. The facility has offices used for administrative and recruiting purposes, a converted indoor firing range (IFR) located in the facility's basement, a drill floor, storage rooms, a training room, a supply room, bathrooms and a kitchen. The facility operates weekdays, Monday thru Friday, from 0800 to 1700. The facility is not currently rented out for civilian activities. The primary work activities performed at this facility are administrative duties and facilitating drills for M-day soldiers. A copy of the employee list is provided in Appendix K.

The IFR had been closed in 1997 due to insufficient ventilation. It was then converted into a gym area for facility personnel after the previously sand floors were sealed with concrete. The ceiling consists of exposed iron trusses and the walls have been repainted. Documentation of repurposing was not available during the IHSAV, and personnel had indicated the IFR was not cleaned prior to conversion. Lead wipe sampling was performed during this IHSAV in order to determine if adequate cleaning of the IFR had been completed.

NES was not provided and did not find records or documentation of any previous IHSAVs that had been conducted at the facility.

3.0 METHODS

3.1 Air Monitoring – Carbon Monoxide

Air monitoring for carbon monoxide (CO) was performed throughout the facility using a TSI QTrak Meter, model 8551. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.2 Breathing Zone Air Sampling

Personal breathing zone air sampling was not conducted during the ISHAV.

3.3 Lead Wipe Sampling

Lead wipe samples were collected from horizontal work and floor surfaces in various locations throughout the facility. Ghost Wipe™ brand wipes were used by wiping a one (1) square foot (ft^2) area. The collected wipe samples were placed in clean and labeled plastic centrifuge tubes and promptly sealed upon collection. Sampling personnel donned a clean pair of Nitrile gloves for each sample collected. Samples were submitted to ALS Environmental Laboratory, located in Salt Lake City, Utah, to be analyzed for lead in accordance with NIOSH Method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix I for a summary of sample results and Appendix J for laboratory reports.

3.4 Painted Surface Evaluation

The interior of the converted IFR was visually inspected for peeling paint on the walls and ceilings. All samples, if collected, were submitted to ALS Environmental Laboratory, located in Salt Lake City, Utah to be analyzed for lead in accordance with NIOSH Method 7300 modified method.

3.5 Indoor Air Quality

Carbon dioxide (CO_2), temperature, and relative humidity were measured using a TSI QTrak Meter, model 8551. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bio effluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (ppm) above

outdoor levels. Outside CO_2 concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO_2 concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bio effluents (body odors). A copy of the current annual calibration certificate for this instrument is located in Appendix H.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the facility using a Konica Minolta Light Meter, Model TL-1. Measurements in office areas were taken at typical work locations, such as the tops of desks and near workstations. To provide information on the overall lighting conditions in the remainder of the facility, measurements were taken from the surfaces of typical work locations and at waist level from selected locations. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.7 Exhaust Ventilation Survey

Air velocity and flow measurements were not collected during this IHSAV as no active ventilation systems were present.

3.8 Personal Noise Dosimetry & Sound-Level Measurements

Personal noise dosimetry and sound-level measurements were not collected during this IHSAV as no hazardous noise sources were identified.

3.9 Equipment Used

The following equipment was used for this survey:

Type	Model Number	Serial Number	Calibration Date
TSI QTrak Meter	8551	54110546	October 2013
Konica Minolta Light Meter	TL-1	279019	May 2013

Please see Appendix H for a complete inventory of calibration certificates of equipment used during this IHSAV.

3.10 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs and;
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 OBSERVATIONS AND RECOMMENDATIONS

4.1 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the converted IFR was visually inspected for water damage and subsequent fungal growth resulting from moisture. The converted IFR has had water intrusion occur in the winter months, according to the POC. Water stains were observed on the side walls. There were no visual signs of fungal growth in the converted IFR.

4.2 Facility/Building HVAC System

An evaluation of the heating, ventilation, and air-conditioning HVAC systems that serve the facility was conducted. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system. The facility HVAC systems were in good visible condition. No exposed hazards or defects were observed during the IHSAV. The HVAC system helps to provide the facility with proper indoor air quality (IAQ); temperature, humidity and CO_2 levels. A central HVAC system is used in the office areas.

4.3 Safety Training and Record Keeping

A cursory inspection of the facility's written health and safety programs and training documentation was performed to determine if the site specific programs and annual documentation was current. The following training documentation was found at the site:

- Emergency Preparedness Program (last completed training in 2011)

Written programs were missing for Hazard Communication, Hearing Protection, Personal Protective Equipment (PPE), and Respiratory Protection.

Note: *NES* evaluated the documents to verify their presence and implementation. *NES* did not evaluate the contents or quality of any of the documents identified during this visit.

4.4 Safety Walk-Through

NES conducted a walk-through of the facility to identify existing conditions and whether safety hazards or deficiencies were present.

1. The facility housekeeping was very good.
2. Fire extinguishers were current for monthly and annual inspections.

5.0 SAMPLING RESULTS

5.1 Air Monitoring – Carbon Monoxide

Carbon monoxide (CO) concentrations were measured at a total of six (6) locations throughout the facility using a TSI QTrak Meter, model 8551. The concentrations of CO ranged from 1 to 2 ppm. These concentrations are below the exposure limit ceiling of 200 ppm set forth by NIOSH. A summary of CO measurements collected is provided in Appendix E.

5.2 Breathing Zone Air Sampling

Personal breathing zone air sampling was not conducted during the ISHAV.

5.3 Lead Wipe Sampling

Wipe samples for lead dust were collected from horizontal surfaces in selected representative areas of the facility to determine if housekeeping efforts have been successful. The US Department of Housing and Urban Development (HUD) recommends 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not expected to be used by the public are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays and tool rooms, which are not routinely accessible to the general public.

A total of fifteen (15) Ghost Wipe™ lead wipe samples were collected during the IHSAV to be analyzed in accordance with NIOSH Method 7300, modified for Ghost Wipes™. Five (5) of the samples were collected from the center and four corners of the drill floor. Nine (9) samples were collected from the converted indoor firing range. The remaining sample was collected from the kitchen countertop. The analytical results are summarized in the table below. Laboratory results are attached in Appendix J.

Table 1: Summary of Lead Wipe Sample Results

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG/HUD Standard
103013-2190-01	**Converted IFR**	**Firing line, middle lane, floor**	**390**	$\leq 40\ \mu g/ft^2$
103013-2190-02	**Converted IFR**	**Midrange, floor**	**240**	$\leq 40\ \mu g/ft^2$
103013-2190-03	**Converted IFR**	**Bullet trap area, floor**	**92**	$\leq 40\ \mu g/ft^2$
103013-2190-04	**Converted IFR**	**Stucco wall at southwest end**	**180**	$\leq 40\ \mu g/ft^2$
103013-2190-05	**Converted IFR**	**HVAC duct near bullet trap area**	**5,400**	$\leq 40\ \mu g/ft^2$
103013-2190-06	**Converted IFR**	**Painted ceiling truss at south end (horizontal surface)**	**130,000**	$\leq 40\ \mu g/ft^2$
103013-2190-07	**Converted IFR**	**Painted ceiling truss at north end (horizontal surface)**	**81,000**	$\leq 40\ \mu g/ft^2$
103013-2190-08	Converted IFR	Concrete wall at northeast end	19	$\leq 40\ \mu g/ft^2$
103013-2190-09	Converted IFR	Handrail leading to converted IFR	9.5	$\leq 40\ \mu g/ft^2$
103013-2190-10	Drill Floor	Northeast corner, floor	6.9	$\leq 40\ \mu g/ft^2$
103013-2190-11	Drill Floor	Northwest corner, floor	8.4	$\leq 40\ \mu g/ft^2$
103013-2190-12	Drill Floor	Center, floor	2.3	$\leq 40\ \mu g/ft^2$
103013-2190-13	Drill Floor	Southeast corner, floor	< 1.3	$\leq 40\ \mu g/ft^2$
103013-2190-14	Drill Floor	Southwest corner, floor	14	$\leq 40\ \mu g/ft^2$
103013-2190-15	Kitchen	Countertop	3.5	$\leq 40\ \mu g/ft^2$

Bold = Denotes sample results were greater than the allowable level set by ARNG

Analytical results for samples which exceed the acceptable concentration are shown in bold. The analytical results indicate acceptable concentrations in the areas sampled, except for the converted IFR ceiling and floor samples. These locations should be cleaned to remove excess lead contamination. The Armory SOP for lead cleanup is provided in Appendix R (Safety Related Information).

5.4 Painted Surface Evaluation

Peeling paint was not identified during the IHSAV.

5.5 Indoor Air Quality

The facility has methods and engineering controls in place to provide adequate IAQ. General dilution ventilation is provided throughout most areas within the facility. The facility HVAC system is able to provide the general dilution by removing indoor contaminants and displacing them outdoors. Also the HVAC system is able to provide temperature controls, relative humidity controls and air cleaning. The average outdoor carbon dioxide concentration was measured to be 365 parts per million (ppm); therefore, the maximum indoor CO_2 concentration recommended by ASHRAE would be 1,065 ppm. The CO_2 concentrations from the locations measured inside the facility ranged between 709 and 861 ppm, within the ASHRAE recommended concentration. ASHRAE recommends maintaining temperatures between 68 and 75°F and relative humidity between 30% and 60% relative humidity to minimize the growth of allergenic or pathogenic organisms. Temperatures inside the building ranged between 62 and 67°F. Relative humidity ranged from 33 to 36%. The rooms measured were within the ASHRAE recommended ranges for relative humidity. Temperatures throughout the facility were measured to be below the recommended range, but no personnel had reported discomfort. A table of the sample locations and corresponding IAQ measurements is available in Appendix E.

5.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. Measurements were collected in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level. The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Lighting in the drill hall ranged from 59 to 100 FC. Illumination was measured from a total of six (6) locations. The locations measured during this IHSAV met the corresponding illumination criteria. See Appendix E for a table of illumination measurements and locations.

5.7 Exhaust Ventilation Survey

Air velocity and flow measurements were not collected during this IHSAV as no active ventilation systems were present.

5.8 Personal Noise Dosimetry & Sound-Level Measurements

Personal noise dosimetry and sound-level measurements were not collected during this IHSAV as no hazardous noise sources were identified.

6.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES*' professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

7.0 PROJECT APPROVAL

This IHSAV was reviewed and approved by:

Non-Responsive

January 3, 2014
Date

Senior Industrial Hygienist

Non-Responsive

January 10, 2014
Date

Industrial Hygiene Program Manager

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

Appendix A

References

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

Appendix B

Assessment Criteria

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

.12

Print Inventory

Print Inventory | Cancel

Unit: DET 1 260th HORIZ ENG CO

Storage: FLAM CAB

Month: 10/1/2013

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	Antifreeze	6850-01-464-9125	Old World Industries Inc.		3	Gallons		
	Grease	9150-01-197-7693	Summit Lubricants Inc.		10	14 Ounces		
	Hydraulic Fluid	9150-00-698-2382	Radco Industries Inc.		3	Quarts		
	OE/HDO-10	9150-01-496-1946	Safety-Kleen Systems Inc.		5	Gallons		
	OE/HDO-15 \40	9150-01-421-1427	Safety-Kleen Sytems Inc.		20	Quarts		

.12

Print Inventory

Print Inventory | Cancel

Unit: DET 1 260th HORIZ ENG CO

Storage: JANITORIAL

Month: 1/1/2013

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
	CLEANING COMPOUND,WINDSHIELD	6850-00-926-2275	LIGHTHOUSE FOR THE BLIND THE	CPYJQ	3	EA		F2
Description: SHELF LIFE:24 MONTHS								
	GLASS CLEANER	7930-00-901-2088	LIGHTHOUSE FOR THE BLIND OF HOUSTON		2	EA		
Description: SKILCRAFT,36 MONTH SHELF LIFE								
	ABSORBENT MATERIAL,OIL AND WATER	7930-00-269-1272	FEDERAL SPECIFICATIONS	BDRLP	0	CO		
	AJAX QUICK SOL	7930-01-F01-6389	COLGATE PALMOLIVE	BKGKS	4	QT		
	BETCO FLOOR SEALER		BETCO		4	GL		
	BETCO HI TECH FINISH		BETCO		5	GL		
	BETCO PUSH		BETCO		4	QT		
	BETCO SURE CURE SEALER		BETCO		3	GL		
	BETCO TOILET BOWL CLEANER		NATIONAL LABORTORIES	BDLHV	3	QT		C1
	CLEANING COMPOUND,SOLVENT,SIMPLE GREEN	7930-01-342-5316	SUNSHINE MAKERS INC.	GPYLC	1	SGL		
	DETERGENT,GENERAL PURPOSE	7930-01-436-8000	ROCHESTER MIDLAND	CFDNK	0	GL		

.12

Description: BUFFERALL CLEANER/NEUTRALIZER,SHELF LIFE:36 MONTHS

DETERGENT,GENERAL PURPOSE	7930-00-926-5280	LHB	CGNHK	0	EA	

Description: 36MONTH SHELF LIFE

FLOOR GLOSS RESTORER, SPRAY BUFF	7930-01-380-8419	SPARTAN CHEMICAL COMPANY, INC.	CYFRH	1	CN 5GL	V5

Description: SHELF LIFE:24 MONTHS

GLASS CLEANER,ANTIFOGGING	7930-01-326-8110	LIGHTHOUSE FOR THE BLIND OF HOUSTON	BZNMD	2	16 OZ	

Description: SHELF LIFE:36 MONTHS

HORIZON 100	7930-00-N01-8106	JOHNSON WAX	BLXRZ	3	GL	N1
HORIZON 400	7930-00-F03-8657	JOHNSON WAX	BWVMD	0	GL	N1
LIME-SOL		ROCHESTER MIDLAND		0	QT	
MASTERPIECE WAX STRIPPER	7930-00-F02-5521	RECKITT&COLMAN	BPSPK	0	GL	
MONTANA DELUXE	LP	MONTANA BRUSH AND BRROM		1	GL	
REOWN SPECIAL GLASS CLEANER		AMSAN		2	GL	
SOAP LIQUID HAND	8520-00-228-0598	DBA LHB INDUSTRIES		1	GL	

Description: SHELF LIFE 24 MONTHS

WAX POLISH		CLASSIC SHINE		1	17OZ	
A-125 DRY	6840-01-313-1901	DBA ECOLAB SERVICES GROUP	CDJTG	1	CN	B3
MATALIST 20 FLOOR FINISH	7930-01-131-5648	RECKITT AND COLMAN INC	CHCBT	2	GL	

.12

Description: 24 MONTH SHELF LIFE

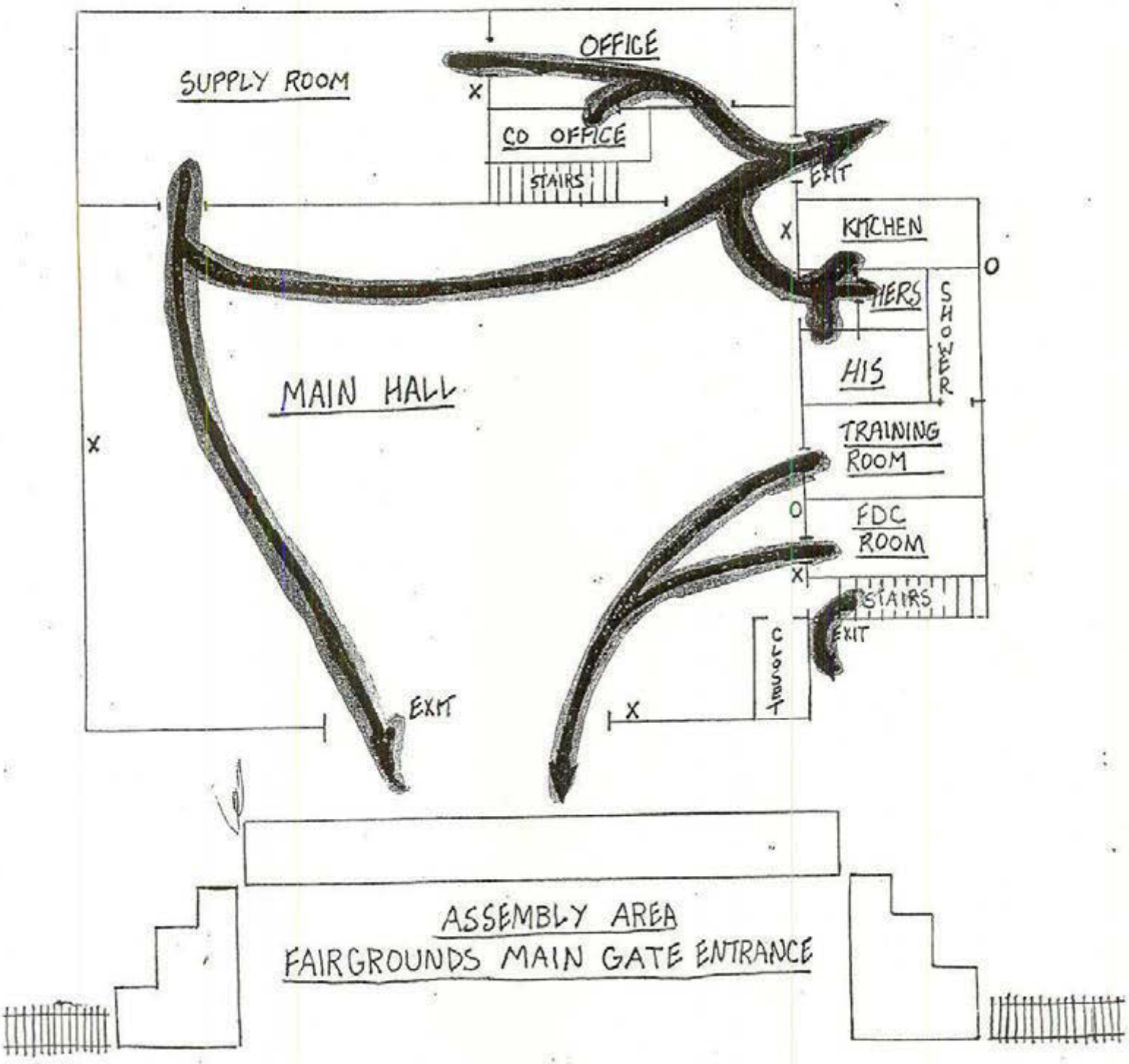
METALIST PENETRATING WAX STRIPPER 1	7930-00-F02-5521	RECKITT BENCKISER	BWTHZ	0	GL	
METALIST SBR 200 BUFF RESTORE 5	7930-00-N02-5479	RECKITT BENCKISER	BMPPL	0	GL	N1
POWER TIME	7930-01-436-8045	ROCHESTER MIDLAND	CFDNN	6	GL	
SPRAY NINE CLEANER	7930-01-393-6747	SPRAY NINE CORPORATION		4	24 OZ BBOTTLE	

#12

ANNEX A (Drawing of facility) for DET 1 BTRY B 1-190TH FA BN

1. Arrows denote evacuation routes.
2. "X" indicates fire extinguishers.
3. "O" indicates water outlet.

SIDNEY ARMORY



IAQ MEASUREMENTS
SIDNEY IFR (CONVERTED)
SIDNEY, MT
30 OCTOBER 2013

Location	CO_2 max permissible level 1,065 ppm	Temperature permissible range 68 - 75°F	RH% permissible range 30-60%	CO Max permissible 200 ppm STEL
Outside Control	365	34.1	28.5	2
Drill Floor	803	**64.3**	34.7	1
Drill Floor	783	**64.1**	34.6	1
Kitchen	709	**61.7**	33.2	1
Office	861	**66.9**	34.2	1
Converted IFR	798	**66.4**	35.2	1
Men's Restroom	816	**65.3**	35.6	1

BOLD = Outside of permissible range
CO_2 = Carbon Dioxide
CO = Carbon Monoxide
°F = Fahrenheit
RH = Relative Humidity

ILLUMINATION SURVEY
SIDNEY IFR (CONVERTED)
SIDNEY, MT
30 OCTOBER 2013

Room	Location	Light Measurement (FC)	Minimum Lighting Requirement (FC)
Drill Floor	North End	58.9	≥ 30
Drill Floor	South End	100	≥ 30
Kitchen	Center of room	52	≥ 30
Office	Desktop	86	≥ 50
Converted IFR	Firing Line	78	≥ 10
Men's Restroom	Center of room	55	≥ 10

*FC = foot candle measurement
Bold = Insufficient Lighting

Oct 30 2013

Sidney - Closed "IFR" .12

- History & Present Use

~~[redacted] Airport Road~~, 2490 West Holly St, Sidney MT

Armory Built early 1960s

History: IFR Constructed & Operated
- used for 22 & 45 cal pistol range
- 1997 - concern about lack of adequate vent., so IFR closed. Floor was sand.

Curtis Stahl

IFR Presently - Closed
- Area has been deconstructed to remove the ceiling, firing lanes & lead back stop.
- What presently exists are bare concrete walls & floors

Non-Responsive

Hist. Ph. Interviews:

History - Cont'd.

Floor was poured w/ concrete, shut down sometime w/ 95-97, no lead removed from sand floor, so left in place & mixed w/ concrete & poured a concrete cap over floor. No decon (lead) was performed upon closure. Walls were painted & lockers moved in. Ceiling was open steel trusses (as it presently remains). Gym equip installed in 1996/98.

Non-Responsive

According to [redacted], retired from ph interviews the IFR had not been cleaned once closed.

Sidney Closed IFR

- IFR Present Condition -
  - water stains observed on the side walls,
  - IFR(CL) floods in the winters.
  - Presently the Closed IFR is not used.

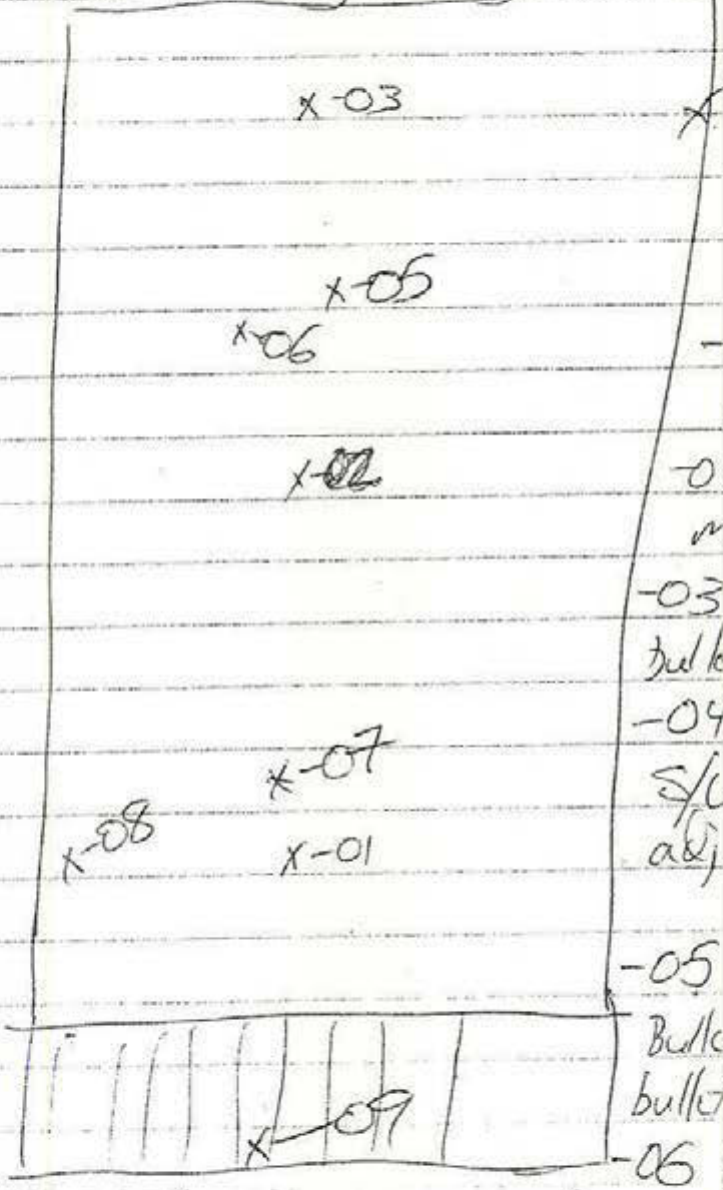
- No activities generating noise or chem expo were being performed at time of IHSAV. Only 2 Adwin personnel on site at time of survey.

Non-Responsive

Sidney - Closed IFR (CIFR) .12
Basement of Armory

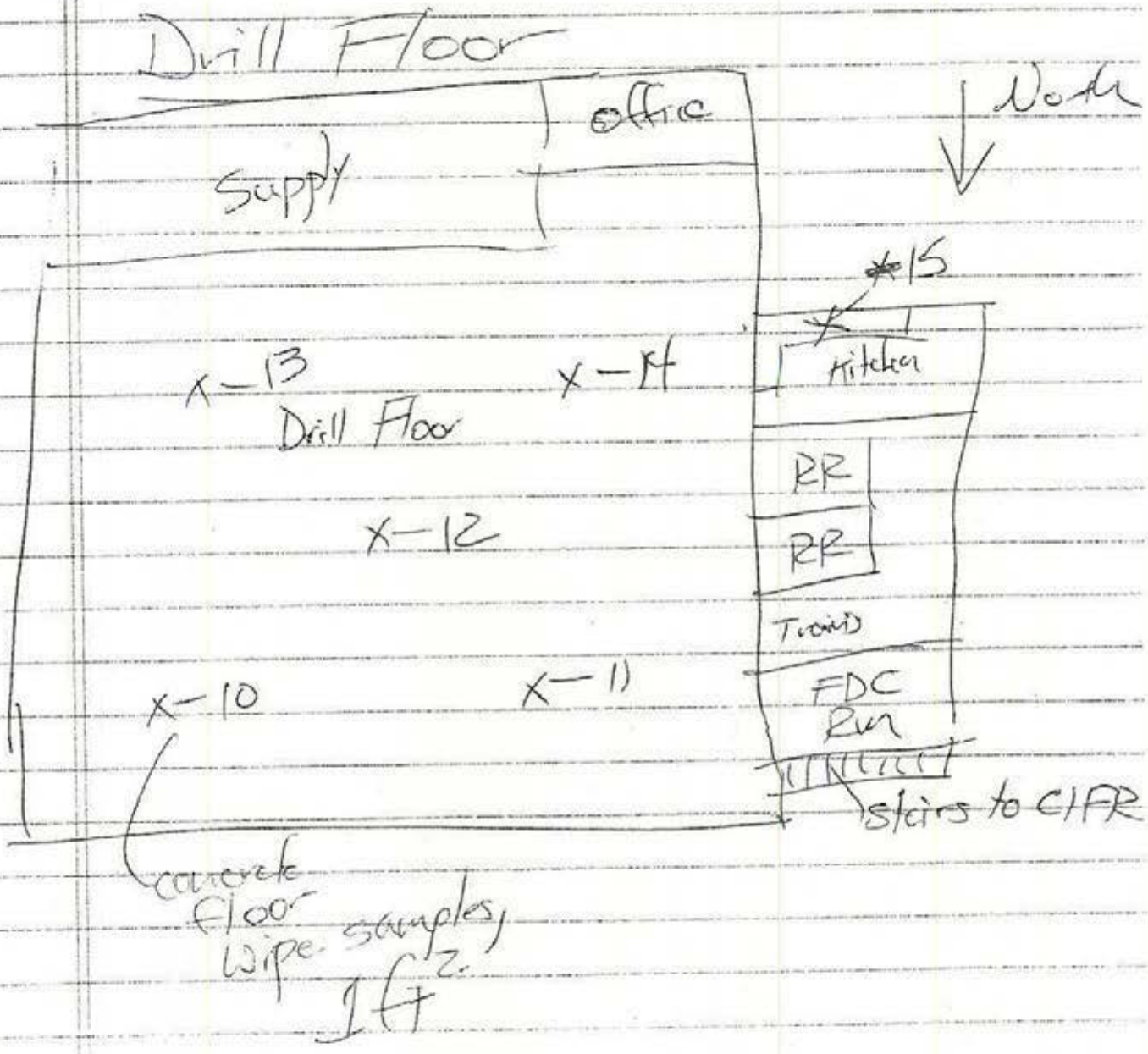
Area = 1 ft²

Former Indoor Firing Range



-01 Firing Line - Middle lane area
-02 Concrete floor mid Range
-03 Concrete floor at bullet trap end of range
-04 Stucco Wall at S/W end of range adj. to bullet trap former
-05 HVAC duct w/ Bullet holes, at former bullet trap end of Range
-06 Horiz surface of Block painted ceiling truss at SO. end of Range = 1/4 ft
-07 Horiz Block painted metal ceiling truss = 1/4 ft at No. end of Range
-08 Concrete wall
-09 Handrail down to the basement IFR

Sidney Armory



All elements of the old firing range have been removed, all lanes, bullet stop.

Existing ventilation sys. provides heat only to IFR
- bullet holes observed in the down range duct work

Outside use (Rent by facility) = None

Converted IFR
was used for
- gym,
- storage,
- laser training
- no weapons are cleared in the IFR
- presently area is not used
- weapons are cleared on the Army Drill floor

No proof of IFR Conversion was available

Fire extinguisher present in CIFR, & inspected monthly.

Housekeeping in armory & CIFR was very good.

Wipe Sampling Summary For...

Facility: Sidney, MT IFR

Collected By: Non-Responsive

Date & Time: 10-30-13 .12

Revised: September 18, 2013

	Sample Information		Sample Area	Area Units	Analyte(s)
1	Sample Number:	103013-2190-01	1	1ft²	Lead
	Sample Location:	Entry Line - Center			
2	Sample Number:	103013-2190-02			
	Sample Location:	Floor Mid Range			
3	Sample Number:	103013-2190-03			
	Sample Location:	Floor at Bullet Trap			
4	Sample Number:	103013-2190-04			
	Sample Location:	Wall S/W end			
5	Sample Number:	103013-2190-05			
	Sample Location:	HVAC duct So. end range			
6	Sample Number:	103013-2190-06	1/4 ft²	1/4	
	Sample Location:	Truss So End of Range			
7	Sample Number:	103013-2190-07	1/4 ft²		
	Sample Location:	Truss No End of Range			
8	Sample Number:	103013-2190-08	1ft²		
	Sample Location:	Locker Doors, No. end			
9	Sample Number:	103013-2190-09			
	Sample Location:	Hand rail to basement IFR			
10	Sample Number:	[illegible]			
	Sample Location:				
11	Sample Number:	103013-2190-10			Lead
	Sample Location:	Drill floor - See map			
12	Sample Number:	103013-2190-11			
	Sample Location:	Drill Floor - See map			
13	Sample Number:	103013-2190-12			
	Sample Location:	Drill Floor - See map			

OVER

103013-2190-13 (See Map) Drill Floor

103013-2190-14 (") Drill Floor

103013-2190-15 (") Kitchen counter-top

~~103013-2190-16~~

IAZ

Lead

NES

I..Q & Illumination Measureme...s

Facility: Sidney, MT Armory + CFR. 12

Date: 10/30-12

Revised: September 18, 2013

Location	CO_2 max permissible level 1,000 ppm	Temperature permissible range 68 - 75° F	RH% permissible range 30-60%	CO max permissible range 200 ppm. STEL	Illumination (FC)
Drill Floor	803	64.3	34.7	1	58.9
Drill Floor	783	64.1	34.6	1	100
Kitchen	709	61.7	33.2	1	52
Office	861	66.9	34.2	1	86 at a desk
Outside	565	34.1	28.5	2	—
CIFR	798	66.4	35.2	1	78 at firing line
Rest Room mens	816	65.3	35.6	1	55

CO_2 = Carbon Dioxide
°F = Fahrenheit
RH = Relative Humidity
CO = Carbon Monoxide
STEL = Short Term Exposure Limit

Facility Information Form

Revised: September 19, 2013

#12

Gener: Non-Responsive

IH(s):

Date(s) of Previous IHSAVs: None

Date(s) of IHSAV: Oct. 30, 13

Facility Name: Armory w/ Basement (Closed IFR)

Address: 2190 West Holly Street, Sidney, MT 59270

Facility Commande: Non-Responsive

Safety Officer:

No Person(s): 24 Admin: Maint: 0 Work Sched: 8am-5pm Facility: ? ft²

Unit(s): Det. 1 260th Engineer Supt Co-Tenant(s): None

Include UIC if available — List All

Primary work activities at Facility: Admin, Training, support for M-Day Side

Written Health & Safety Programs / SOPs

Program	Program Needed	Have Program	Date of Last Training	# Enrolled	Comments
Bloodborne Pathogen	✓				
Confined Space					Not ~~Est~~ Confined Spaces
Emergency Preparedness		✓	2011	30	
Hazard Communication	✓				Not Available
Hearing Protection	✓				Plugs avail., no written program
Lock Out / Tag Out					None Required
PPE	✓				
Respiratory Protection	✓				
Vision	✓				Vision tested through mil med program

Y = Yes N = No NA = Not Applicable to this site

Documents / Records to Obtain

- [✓] Facility floor plan / evacuation map
- [✓] List of equipment serviced / maintained
- [ ] Previous IH reports — None Avail.
- [✓] Hazardous Materials inventory
- [✓] Personnel list
- [ ] Others (List):

NA = Not Applicable to this site

MICRO PRECISION CALIBRATION INC.

MICRO PRECISION CALIBRATION
22835 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
530-268-1860

Certificate of Calibration

Date: **Oct 10, 2013**

Cert No. **220081202166631**

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

Work Order #: SAC-70062158

MPC Control #:	CD3921	Serial Number:	51380
Asset ID:	1245	Department:	N/A
Gage Type:	IAQ METER W/PROBE	Performed By:	Non-Responsive
Manufacturer:	TSI	Received Condition:	IN TOLERANCE
Model Number:	8551	Returned Condition:	IN TOLERANCE
Size:	N/A	Cal. Date:	October 10, 2013
Temp/RH:	68.8°F / 34.5 %	Cal. Interval:	12 MONTHS
		Cal. Due Date:	October 10, 2014

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
AV2339	GAS TEST KIT	58L-400	BAL-400-2	GASCO AFFILIATES LLC	Nov 1, 2013	914776
AV5000	ENVIRONMENTAL CHAMBER	BTX-475	0612421	ESPEC	Nov 26, 2013	2008120224653

Procedures Used in this Event

Procedure Name	Description
MANUFACTURER	MANUAL REV CONTROL

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

Tektronix

Certificate of Calibration

7323005

Instrument Identification

Company ID: 607229
[redacted]SW
Non-Responsive
10510 SUPERFORTRESS AVE
SUITE C
MATHER, CA 95655

PO Number: Non-Responsive

Instrument ID: 00279019
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279019

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: LEFT AS FOUND
Procedure: 33K4-4-564-1 ILLUMINANCE LIGHT METER

Remarks:

Technician: Non-Responsive
Cal Date 02May2013
Cal Due Date: 02May2014
Interval: 12 MONTHS
Temperature: 23.0 C
Humidity: 47.0 %

Tektronix certifies the performance of the above instrument has been verified using test equipment of known accuracy, which is traceable to National Metrology Institutes (NIST, NPL, PTB) that are linked to the International System of Units (SI). The policies and procedures used comply with ANSI/NCSL Z540.1-1994 (R2002).

Approved By: Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700294966	17-1001076	6 STEEL RULE	STARETT	C416R-72	22Mar2013	22Mar201
1700282698	17-1001081	LUMINANCE STD	OPTRONIC LABS	OL 455-4	31Jul2012	31Jul2013
1700293531	17-2007750	1000W LIGHT BULB	GOOCH HOUSEGO	OL FEL-P-K	30Jan2013	30Jan201
1700285565	4083RC	MULTIMETER	FLUKE	8842A	08Aug2012	08Aug201

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

TABLE 1
LEAD WIPE SAMPLE RESULTS
SIDNEY IFR (CONVERTED)
SIDNEY, MT
30 OCTOBER 2013

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard ($\mu g/ft^2$)
103013-2190-01	**Converted IFR**	**Firing line, middle lane, floor**	**390**	**≤ 40**
103013-2190-02	**Converted IFR**	**Midrange, floor**	**240**	**≤ 40**
103013-2190-03	**Converted IFR**	**Bullet trap area, floor**	**92**	**≤ 40**
103013-2190-04	**Converted IFR**	**Stucco wall at southwest end**	**180**	**≤ 40**
103013-2190-05	**Converted IFR**	**HVAC duct near bullet trap area**	**5,400**	**≤ 40**
103013-2190-06	**Converted IFR**	**Painted ceiling truss at south end (horizontal surface)**	**130,000**	**≤ 40**
103013-2190-07	**Converted IFR**	**Painted ceiling truss at north end (horizontal surface)**	**81,000**	**≤ 40**
103013-2190-08	Converted IFR	Concrete wall at northeast end	19	≤ 40
103013-2190-09	Converted IFR	Handrail leading to converted IFR	9.5	≤ 40
103013-2190-10	Drill Floor	Northeast corner, floor	6.9	≤ 40
103013-2190-11	Drill Floor	Northwest corner, floor	8.4	≤ 40
103013-2190-12	Drill Floor	Center, floor	2.3	≤ 40
103013-2190-13	Drill Floor	Southeast corner, floor	< 1.3	≤ 40
103013-2190-14	Drill Floor	Southwest corner, floor	14	≤ 40
103013-2190-15	Kitchen	Countertop	3.5	≤ 40

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
Bold = Above ARNG Standard limit

ANALYTICAL REPORT

Report Date: December 02, 2013

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1332433
Client Project ID: 013.IH1449.12/Sidney, MT
Purchase Order: 013.IH1449.12
Project Manager: Non-Responsive

Analytical Results

Sample ID: **103013-2190-01** Received: 11/20/2013
Lab ID: 1332433001 Sampling Location: Sidney, MT
Method: **NIOSH 7300 Mod.** Media: Ghost Wipe Prepared: 11/26/2013
Sampling Parameter: **Area 1 ft²** Analyzed: 11/27/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	**390**	**390**	1.3

Sample ID: **103013-2190-02** Received: 11/20/2013
Lab ID: 1332433002 Sampling Location: Sidney, MT
Method: **NIOSH 7300 Mod.** Media: Ghost Wipe Prepared: 11/26/2013
Sampling Parameter: **Area 1 ft²** Analyzed: 11/27/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	**240**	**240**	1.3

Sample ID: **103013-2190-03** Received: 11/20/2013
Lab ID: 1332433003 Sampling Location: Sidney, MT
Method: **NIOSH 7300 Mod.** Media: Ghost Wipe Prepared: 11/26/2013
Sampling Parameter: **Area 1 ft²** Analyzed: 11/27/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	**92**	**92**	1.3

Sample ID: **103013-2190-04** Received: 11/20/2013
Lab ID: 1332433004 Sampling Location: Sidney, MT
Method: **NIOSH 7300 Mod.** Media: Ghost Wipe Prepared: 11/26/2013
Sampling Parameter: **Area 1 ft²** Analyzed: 11/27/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	**180**	**180**	1.3

ANALYTICAL REPORT

Workorder: 34-1332433
Client Project ID: 013.IH1449.12/Sidney, MT
Purchase Order: 013.IH1449.12
Project Manager: Non-Responsive

Analytical Results

Sample ID: 103013-2190-05 — Received: 11/20/2013
Lab ID: 1332433005 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5400	5400	6.3

Sample ID: 103013-2190-06 — Received: 11/20/2013
Lab ID: 1332433006 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	130000	130000	130

Sample ID: 103013-2190-07 — Received: 11/20/2013
Lab ID: 1332433007 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	81000	81000	130

Sample ID: 103013-2190-08 — Received: 11/20/2013
Lab ID: 1332433008 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	19	19	1.3

Sample ID: 103013-2190-09 — Received: 11/20/2013
Lab ID: 1332433009 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	9.5	9.5	1.3

Sample ID: 103013-2190-10 — Received: 11/20/2013
Lab ID: 1332433010 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe; Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013; Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	6.9	6.9	1.3

ANALYTICAL REPORT

Workorder: 34-1332433
Client Project ID: 013.IH1449.12/Sidney, MT
Purchase Order: 013.IH1449.12
Project Manager: Non-Responsive

Analytical Results

Sample ID: 103013-2190-11 — Received: 11/20/2013
Lab ID: 1332433011 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe — Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013 — Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	8.4	8.4	1.3

Sample ID: 103013-2190-12 — Received: 11/20/2013
Lab ID: 1332433012 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe — Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013 — Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	2.3	2.3	1.3

Sample ID: 103013-2190-13 — Received: 11/20/2013
Lab ID: 1332433013 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe — Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013 — Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<1.3	<1.3	1.3

Sample ID: 103013-2190-14 — Received: 11/20/2013
Lab ID: 1332433014 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe — Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013 — Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	14	14	1.3

Sample ID: 103013-2190-15 — Received: 11/20/2013
Lab ID: 1332433015 — Sampling Location: Sidney, MT
Method: NIOSH 7300 Mod. — Media: Ghost Wipe — Sampling Parameter: Area 1 ft² — Prepared: 11/26/2013 — Analyzed: 11/30/2013

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	3.5	3.5	1.3

Comments

Sample: 1332433005

The lead result for this sample is reported from 5X dilution data in order to obtain an instrument response within the linear range for lead. The reporting limit has been raised in proportion to the dilution level.

ANALYTICAL REPORT

Workorder: 34-1332433
Client Project ID: 013.IH1449.12/Sidney, MT
Purchase Order: 013.IH1449.12
Project Manager: Non-Responsive

Comments

Sample: 1332433006

The lead result for this sample is reported from 100X dilution data in order to obtain an instrument response within the linear range for lead. The reporting limit has been raised in proportion to the dilution level.

Sample: 1332433007

The lead result for this sample is reported from 100X dilution data in order to obtain an instrument response within the linear range for lead. The reporting limit has been raised in proportion to the dilution level.

Report Authorization

Method	Analyst	
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing: CPSC Soil, Dust, Paint ,Air	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1332433
Client Project ID: 013.IH1449.12/Sidney, MT
Purchase Order: 013.IH1449.12
Project Manager: Non-Responsive

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
NA = Not Applicable.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

1332433

CHEM LABORATORIES, INC.

ANALYTICAL REQUEST FORM

☒ **REGULAR** Status (5 working days from receipt) 1332433

☐ **RUSH** Status Required - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES

10-30-13 CB, IH1449.12

Date _____ Purchase Order No. _____

Company Name VES

Address 1141 Sibley St

Folsom Ca 95630

City

Person [redacted]

Teleph

Fax Te

Billing

Quote No [redacted]

Sample Collection

Sampling Site Sidney, MT

Industrial Process

Date of Collection

Time Collected

Date of S

QC Req

Collecto

Signatur

GW Bulk

REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
	10303-2190-01		1.52	Lead
		-02		
		-03		
		-04		
		-05		
		-06		
		-07		
		-08		
		-09		
		-10		
		-11		
		-12		
		-13		

[redacted]

DISTRIBUTION: WHITE – LABORATORY COPY CANARY – CUSTOMER COPY

.12

ENLISTED ETS REPORT PCN: GPFM-1581 30 Oct 2013

Unit Name: DET 1 260TH EN SPT CO UPC: Non-Responsive

Name	SSN	Rank	PMOS	[redacted]	UPC ATCH

Non-Responsive

Non-Responsive

FOR OFFICIAL USE ONLY - PRIVACY ACT DATA

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Sidney IFR (Converted) - Sidney, MT

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	CORRECTIVE ACTIONS (Abatement Plan)	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTSIFR-10302013-5.3	Lead concentrations exceed established criteria	Converted IFR	2	Prohibit use of the converted IFR until the area is cleaned of lead below ARNG thresholds. Clean the locker in accordance with the Armory SOP for lead cleanup. Have follow-up testing conducted to meet acceptable concentrations.					29 CFR 1910.1025 (h)(1)
MTSIFR-10302013-5.5	Temperatures are below the ASHRAE recommended range	Facility	4	Increase temperatures throughout the facility to meet the ASHRAE recommended range.					ASHRAE Standard 62.1-2010

Reference DA FORM 4754

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 **Introduction** – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Sidney converted IFR. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.5.2 describes the following: the N is Conclusions & Recommendations and the 5.2 corresponds back to Section 5 – Sampling Results; Item 2 – Lead Wipe Sampling).

N5.2 **Lead Sampling** – Review the SOP for lead cleanup and follow-up housekeeping recommendations. Have follow-up testing conducted to ensure lead levels have been reduced to acceptable concentrations in the converted IFR.

N5.4 **Indoor Air Quality** – Increase temperatures throughout the facility to meet the ASHRAE recommended range.

FY 13 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	0			
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	0			
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	0			
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT	IHT	IHT	IHT
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT	IHT	IHT	IHT
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT	IHT	IHT	IHT
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT	IHT	IHT	IHT
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT	IHT	IHT	IHT
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT	IHT	IHT	IHT

FY 13 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT	IHT	IHT	IHT
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT	IHT	IHT	IHT
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT	IHT	IHT	IHT
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT	IHT	IHT	IHT
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT	IHT	IHT	IHT
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT	IHT	IHT	IHT
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT	IHT	IHT	IHT
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT	IHT	IHT	IHT
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	0			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	0			
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	0			
Number of ventilation systems which were evaluated by an IH	953-02-19	0			
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT	IHT	IHT	IHT
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT	IHT	IHT	IHT

Facility Information Form

Revised: October 3, 2013

General Facility Information

Date(s) of Previous IHSAVs: None

IH(s): Non-Responsive

Date(s) of IHSAV: October 30, 2013

Facility Name: Armory with Basement (Closed IFR)

Address: 2190 West Holly Street, Sidney MT 59270

Facility Commander: Non-Responsive

Safety Officer:

No Person(s): 24 Admin: 2 Maint: 0 Work Sched: M-F, 8-5 Size of Facility: Unkown

Unit(s): Det. 1 260th Engineer Support Co-Tenant(s): None

Include UIC if available List All

Primary work activities at Facility: Admin., Training, Support for M-day side.

Written Health & Safety Programs / SOPs

Program	Program Needed	Have Program	Date of Last Training	# Enrolled	Comments
Bloodborne Pathogen	X				
Confined Space					No confined spaces
Emergency Preparedness		X	2011	30	
Hazard Communication	X				Not available
Hearing Protection	X				Plugs available, no written program
Lock Out/ Tag Out					None required
PPE	X				
Respiratory Protection	X				
Vision	X				Vision tested throughout military medical program
Others (Bloodborne Pathogens, Lock Out / Tag Out, Lifting Devices, Radiation, SOPs, etc.) – List on back					

Y = Yes N = No NA = Not Applicable to this site

Documents / Records to Obtain

- [X] Facility floor plan / evacuation map
- [X] List of equipment serviced / maintained
- [ ] Previous IH reports – **none available**

NA = Not Applicable to this site

- [X] Hazardous Materials inventory
- [X] Personnel list
- [ ] Others (List):

DEPARTMENT OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE, SOUTHWEST
10510 Superfortress Ave, Suite C
Mather, CA 95655

ARNG-CSG-IHSW

8 January 2013

MEMORANDUM FOR

Montana Army National Guard, ATTN: Deputy State Surgeon, Montana Medical Detachment, 1956 Mt Majo Street, Fort Harrison, MT 59636-4789

SUBJECT: Industrial Hygiene Site Assistance Visits for FY13

1. The National Guard Bureau, Industrial Hygiene – Southwest (IHSW) will be conducting annual Industrial Hygiene Site Assistance Visits, to include a cursory review of safety related items, for

-Hamilton Armory & Indoor Firing Range (IFR)(CL), 910 West Main Street, Hamilton, MT 59840
-Glasgow Armory & Indoor Firing Range (IFR)(CL), 81 Airport Road, Glasgow, MT 59230
-Indoor Firing Range (IFR)
(CL) 1008 U.S. 191, Malta, MT 59538
(CL) Dawson County Fairgrounds, P.O. Box 1323, Glendive, MT 59330
(CL) 2190 West Holly Street, Sidney, MT 59270
(A) 24 Fleshman Creek Road, Livingston, MT 59407
(A) 350 Airport Road, Belgrade, MT 59714
(CL) 600 Gilman Avenue, Butte, MT 59701
(A) 1900 William Street, Fort Harrison, Helena, MT 59636
(CL) RR2, 773 Airport Road, Lewistown, MT 59457
(A) 1840 U.S. 93, Kalispell, MT 59901

2. The primary purpose of this memorandum is to notify you of the anticipated site visits. We ask that you contact the facilities and coordinate the tentative dates for the site visits. Attached are a Request for Information (RFI)-(IH Site Assistance Visit Questionnaire) and a Memorandum of Instruction (MOI) outlining a tentative schedule and the objectives of our visit and should be forwarded to each facility POC.

3. Secondly, we ask that you contact the contractor within 20 working days to coordinate a tentative schedule. The contractor information is as follows: Non-Responsive f Network Environmental Systems (NES), Non-Responsive

4. Finally, we ask that you provide IHSW personnel with a copy of the finalized schedule and facility POCs.

5. Questions or comments may be directed to [redacted] (916) 854-1490/ (916) 812-5838 or [redacted] (916) 854-149[redacted]

[redacted]
NGB, IHSW, CIV
Industrial Hygiene

CF:
FMO
OHN
SSO

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Sidney Armory
2190 W. Holly Street
Sidney, MT 59270

~~23 April~~ 2013

02 Oct 12

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

23 April 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive SS), Montana Medical Det Troop Medical Clinic, Room 1009, 1956 MT Majo St, Fort Harrison, MT 59636-4789

FOR Commander Sidney Armory, 2190 W. Holly Street, Sidney, MT 59270

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV), 2190 W. Holly Street, Sidney, Montana conducted on 02 October 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Sidney Armory at 2190 W. Holly St. Sidney, MT on 02 OCT 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. A building inspection of the armory, for asbestos, should be provided and a management plan in

place for personnel working at and on the facility should be written from that inspection. (para. 3.4) **(RAC 3)**

b. Improve lighting within the noted areas by replacing burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color. (para. 4.6) **(RAC 3)**

c. Perform monthly and yearly inspections of fire extinguishers, as required. (para. 4.11.3) **(RAC 4)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV), 2190 W. Holly Street, Sidney, Montana conducted on 02 October 2012.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132 and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the **Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations.** This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Sidney Armory - Montana

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTSA-100212-3.4	No asbestos O/M plan or asbestos building survey was available.	Armory	3	Create an asbestos Operations & Maintenance Plan and have an asbestos building survey performed by a qualified MT asbestos building inspector					29 CFR 1926.1110; TB MED 513
MTSA-100212-4.6	Lighting did not provide the required illumination.	Upstairs office (north side), classroom	4	Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107
MTSA-100212-4.11.2	There was no fire alarm installed at the facility	Armory	5	Have a means of alerting employees of a fire installed.					29 CFR 1910.165
MTSA-100212-4.11.3	Monthly and yearly fire extinguisher inspections were out of date.	Armory	4	Perform monthly and yearly inspections of fire extinguishers as required.					29 CFR 1910.157(e)

Reference DA FORM 4754

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Industrial Hygiene Site Assistance Visit
Sidney Armory
Sidney, Montana
2 October, 2012

www.nesglobal.net

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

SIDNEY ARMORY
2190 WEST HOLLY STREET
SIDNEY, MONTANA 59270

October 2, 2012

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1374.67**

Prepared by:

Non-Responsive

Industrial Hygiene Technician

Non-Responsive

Table of Contents

Appendices

EXECUTIVE SUMMARY

On October 2, 2012, Non-Responsive dustrial Hygiene Technician for NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Sidney Armory located at 2190 West Holly Street in Sidney, Montana. The primary point of contact for information gathered during this survey wa Non-Responsive may be reached by phone at (406) 324-5500 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate configuration of battery storage and charging facilities;
- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor employee noise exposures through noise dosimetry and source measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards; and,
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive went above and beyond expectations to assist *NES* staff with completing the IHSAV.

1.0 INTRODUCTION

On October 2, 2012, Non-Responsive Industrial Hygiene Technician for NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Sidney Armory located at 2190 West Holly Street in Sidney, Montana. The primary point of contact for information gathered during this survey was Non-Responsive ay be reached by phone at (406) 324-5500 or by email at Non-Responsive

1.1 IHSAV Objectives

The objective of the IHSAV is to evaluate the occupational environment of the administrative areas in the Armory, to determine the presence of operational health and safety risks, and to make recommendations for any corrective actions or follow-up work and to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances; and,
- Conduct a safety walk-through evaluation and note any existing safety hazards.

BEST AVAILABLE COPY

2.0 PROCESS DESCRIPTION

The Sidney Armory has one guard member who checks on the facility occasionally. The ARNG personnel assigned to this facility were deployed at the time of the IHSAV. The Armory has offices for administrative purposes and also contains a drill floor, a gym, a supply room, and a kitchen. There are no civilian employees employed at the Sidney Armory. Civilian functions are carried out rarely at this facility and are typically limited to banquets.

3.0 METHODS

3.1 Lead Wipe Sampling

Lead wipe samples were collected on horizontal work and floor surfaces in various locations throughout the facility. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge tubes. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust.

3.2 Painted Surface Evaluation

The interior and exterior of the Armory was visually inspected for peeling paint on the walls and ceilings. No paint chip samples were collected because no peeling paint was encountered.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. No areas of water damage or fungal growth were identified.

3.4 Asbestos Documentation

An evaluation of asbestos documentation was performed. During the site visit, no asbestos building survey assessment or asbestos operations and maintenance plan documentation could be found.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning (HVAC) systems that serve the Sidney Armory was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, and relative humidity were measured throughout the Armory using a Gray Wolf IAQ Meter. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Sidney Armory. The instrument used for the illumination survey was a Konica Minolta Illuminance Meter, Model TL-1. Measurements taken were obtained at typical working locations such as desks, computers, workstations and general working areas.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, i.e., flammable storage cabinets/rooms were also inspected as part of this IHSAV.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Exhaust Ventilation Survey

There were no exhaust ventilation hoods used at the facility. Therefore, air velocity and flow measurements could not be measured.

3.10 Sound-Level Measurements

There were no appliances producing elevated sound-levels at this facility, therefore, sound-level measurements were not collected.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Sidney Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, to inspect ground fault circuit interrupter (GFCI) electrical outlets, if eyewash station inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
Konica Minolta Illuminance Meter	TL-1	679404	May 2012
Gray Wolf IAQ Meter	IQ-410	4G2BDW3381NWP	May 2012

Please see Appendix H for a complete inventory of calibration certificates for equipment that may have been used during this IHSAV.

3.13 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;
- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Sidney Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of eight Ghost Wipe™ lead samples were taken during the time of the IHSAV. The first five samples were collected from the center and four corners of the drill hall floor. The analytical results for the samples listed above, ranged from < 2.5 $\mu g/ft^2$ to 11 $\mu g/ft^2$; which was below the 40 $\mu g/ft^2$ criterion.

Additional lead wipe sampling was taken from approximately 25% of the rest of the building. The three additional samples were collected from the following areas: the kitchen counter; the table top in the 1st floor office; and the supply room. The analytical results for these wipe samples collected were below the established criteria. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard ($\mu g/ft^2$)
100212-Sidney-01	Drill Floor	Northwest corner, floor sample	5.0	≤ 40
100212-Sidney-02	Drill Floor	Southwest corner, floor sample	< 2.5	≤ 40
100212-Sidney-03	Drill Floor	Center of drill floor, floor sample	< 2.5	≤ 40
100212-Sidney-04	Drill Floor	Southeast corner, floor sample	< 2.5	≤ 40
100212-Sidney-05	Drill Floor	East Side at bay door, floor sample	11	≤ 40

100212-Sidney-06	Kitchen	Counter top	2.5	≤ 40
100212-Sidney-07	1st Floor Office	Table Top	< 2.5	≤ 40
100212-Sidney-08	Supply Room	Center, floor sample	4.2	≤ 200
100212-Sidney-Blank	—	—	< 2.5	NA

See Appendix I, Table 1 for a table of analytical results. Analytical laboratory reports are provided in Appendix J.

4.2 Painted Surface Evaluation

No paint chip samples were collected because no peeling paint was identified.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

During the inspection of the facility, no water intrusion or fungal growth issues were observed.

4.4 Asbestos Documentation

No suspect asbestos containing materials were observed in the Sidney Armory. Asbestos documentation including an asbestos building survey or an asbestos operations and maintenance plan were not available for review on site.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The HVAC systems were all functioning and up to date on maintenance and inspections during the time of the IHSAV. The central HVAC system provides AC and heating. All heating and cooling air is direct-ducted to the offices and the drill floor.

Carbon dioxide measurements are often used as a screening technique to evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bioeffluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (700 ppm) above outdoor levels. Outside CO_2 concentrations are typically about 350 ppm. Carbon dioxide concentrations throughout the facility were below 1050 ppm. The highest CO_2 concentration measured was 543 ppm in the office adjacent to the supply room.

ASHRAE recommends maintaining temperatures between 68 and 75°F. Relative humidity should be maintained between 30% and 60% to minimize the growth of allergenic or pathogenic organisms. Building air temperatures ranged from 72.4 to 74.8°F and relative humidity was between 31.3 and 32.7% during the testing period.

4.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. The numbers represent the illumination level in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Based on the above criteria the lighting in the upstairs office (south side) and the class room is inadequate for tasks being performed. Please see Appendix E for a table of lighting results.

4.7 Hazardous Material Storage and Use Procedures

4.7.1 Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)

Inventories of all hazardous materials used by the Armory along with their associated Material Safety Data Sheets (MSDSs) are maintained in a master binder within the facility. A copy of the Armory's chemical inventory is provided in Appendix D.

4.7.2 Flammable Storage Cabinets

Flammable storage cabinets were inspected and no storage incompatibilities or leaking materials were found. The lockers were in good condition and all of the doors were noted to close properly.

4.7.3 Flammable and POL Storage

Not applicable to this facility.

4.8 Safety Training and Record Keeping

The following training documentation was found at the site:

- None available

Personnel assigned to this facility were deployed at the time of the IHSAV.

4.9 Exhaust Ventilation Survey

No air velocity measurements were taken from kitchen canopy hoods because they were not being used.

4.10 Sound-Level Measurements

Since there were no appliances producing elevated sound-levels at this facility, no sound-level measurements were taken on kitchen appliances during the IHSAV.

4.11 Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. There is no fire alarm present in the facility.
3. Fire extinguishers are strategically located in the hallway, offices and throughout the drill floor. Monthly and annual fire extinguisher inspections were out of date. Personnel assigned to this facility were deployed at the time of the IHSAV.
4. Fire evacuation plan is prominently posted throughout the building. Egress routes are marked of the fire evacuation plan.
5. GFCI outlets functioned properly when tested.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, *NES* professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. *NES* assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of *NES*, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since *NES* is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IHSAV report was reviewed and approved by:

Non-Responsive

June 7, 2013

Date

Principle-In-Charge

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact Non-Responsive at 916-353-2360, or Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).
OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 1: Front of building, Sidney armory located in Sidney, Montana.

Photo 2: Signage in front of the Sidney armory.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 3: Southeast view of drill floor.

Photo 4: West view of drill floor.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 5: Main office located on first floor.

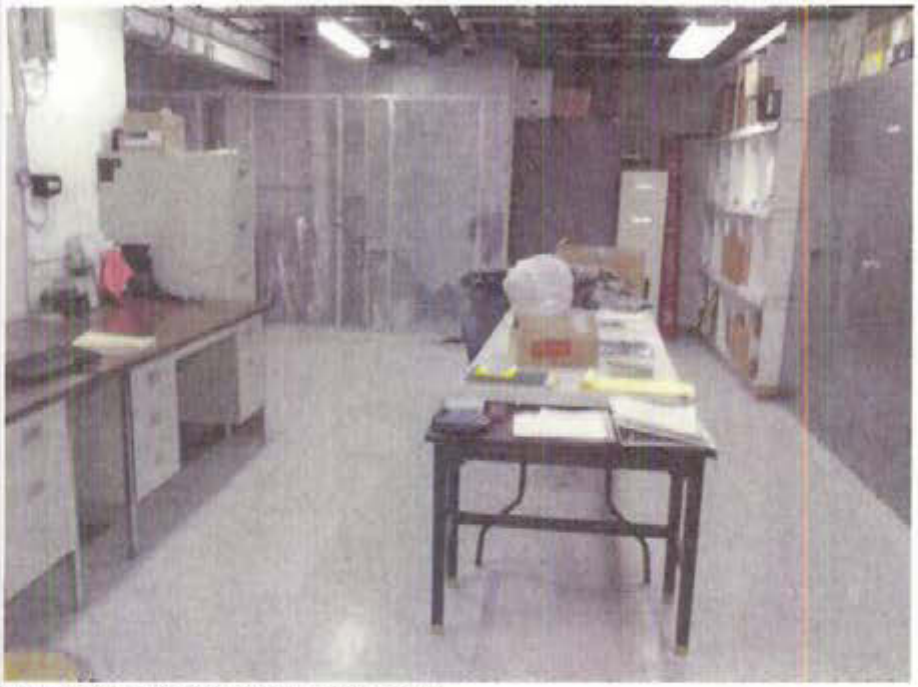


Photo 6: First floor supply room.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 7: Sidney Armory kitchen.

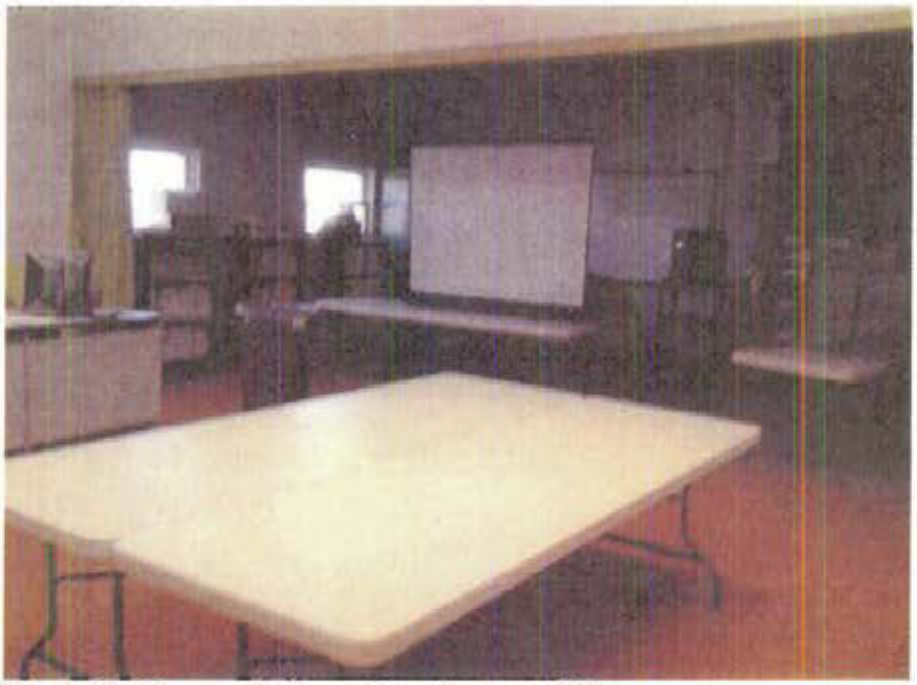


Photo 8: Classroom located on the second floor.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 9: Basement of Sidney Armory.

Photo 10: Lead wipe sample 100213-Sidney-01 collected from northwest corner of drill floor.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 11: Lead wipe floor sample 100213-Sidney-02 collected from southwest corner of drill floor.

Photo 12: Lead wipe floor sample 100213-Sidney-03 collected from center of drill floor.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 13: Lead wipe floor sample 100213-Sidney-04 collected from southeast corner of drill floor.

Photo 14: Lead wipe floor sample 100213-Sidney-05 collected from northeast corner of drill floor, at bay door.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

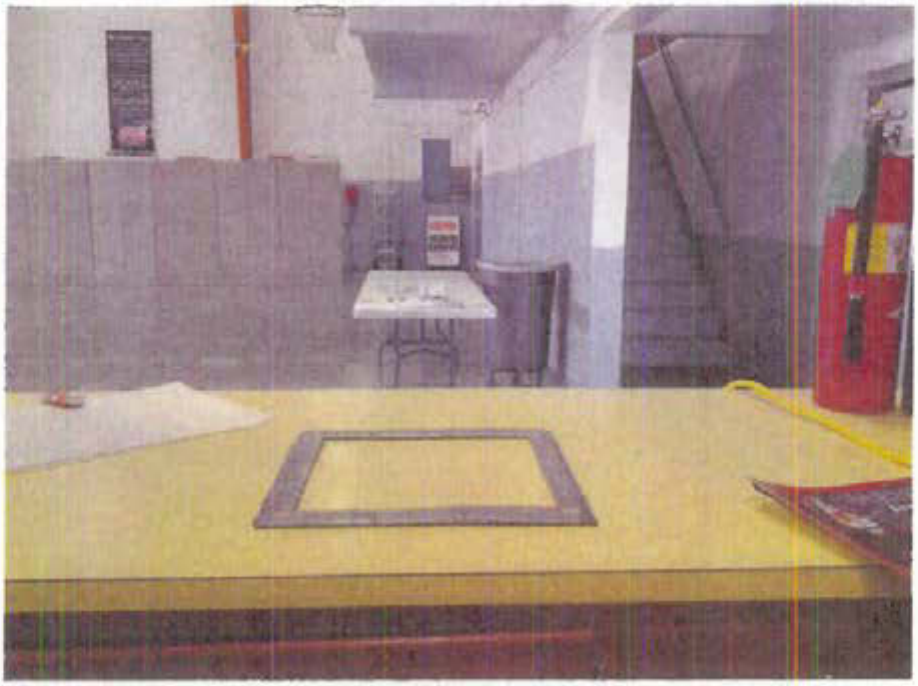


Photo 15: Lead wipe sample 100213-Sidney-06 collected from kitchen table top.

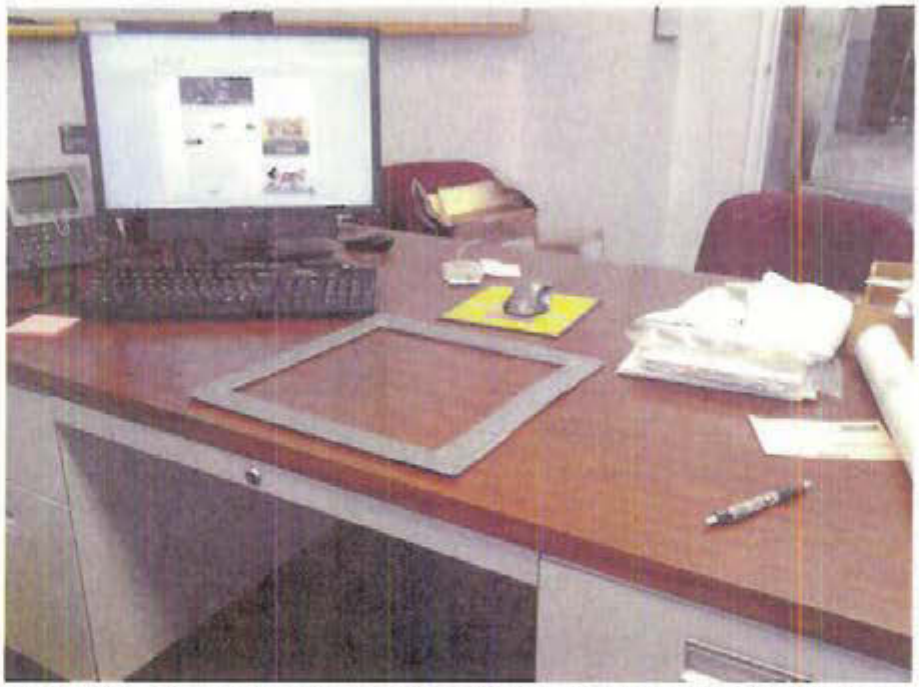


Photo 16: Lead wipe sample100213-Sidney-07 collected from main office desk table top, first floor.

PHOTO LOG
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Photo 17: Lead wipe floor sample 100213-Sidney-08 collected from supply room floor.

Print Inventory

Print Inventory | Cancel

Unit: DET 1 260th HORIZ ENG CO | Storage: FLAM CAB | Month: 12/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
01	ENAMEL, CAMO GREY	8010-00-664-1914	LHB	BPMTB	4	CN	1007	V3
02	ENAMEL, GREY	8010-00-721-9754	LHB	BHPYD	2	CN	1007	V3
03	ENAMEL, RED	8010-00-141-2952	LHB	BHBSB	3	CN	1007	V3
04	ENAMEL, BLACK	8010-00-290-6984	LHB	BHDJP	2	CN	1007	V3
05	ENAMEL, BROWN	8010-00-348-7715	SO SURE		1	CN	1007	V3
06	CLP	9150-01-054-6453	BREAKFREE	CCCDS	1	PT	1008	V4
07	GAA	9150011977693	SUMMIT		3	14 OZ CONTAINER		
08	CLP	9150-01-102-1473	BREAKFREE	BXWDW	6	.5OZ BT	1008	V4
09	LATEX, WHITE	797034 O/M (1-4)	VALSPAR		0	GL		
10	ENAMEL, OSHA YELLOW	04-400-62	COLUMBIA		2	GL		
11	DIESEL FUEL	0	NA		5	GALLONS		
12	CLP	0	BREAKFREE		21	3.72 FL OZ.		

BRAKE FLUID,

13	SILICONE	9150-01-102-9455	GSD INC.		1	GL		
14	ENGINE LUB	9150-01-152-4117	MIDATLANTIC		13	1 QT	II	
15	STARTING FLUID	6850-00-823-7861	SPRAY PRODUCTS	CKSZT	0	CN	1007	V3
16	ANTIFREEZE	6850-01-464-9125	FLEET CHARGE		1	GL		
17	DIESEL CONDITIONER TREATMENT	0	HOWES LUB		4	PT		
18	Lubricating Engine Oil	9150-01-496-1946	MIL-PRF		10	GL		

Print Inventory

Print Inventory | Cancel

Unit: DET 1 260th HORIZ ENG CO

Storage: JANITORIAL

Month: 2/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
01	HORIZON 100	7930-00-N01-8106	JOHNSON WAX	BLXRZ	3	GL		N1
02	HORIZON 400	7930-00-F03-8657	JOHNSON WAX	BWVMD	0	GL		N1
03	AJAX QUIK SOLV	7930-00-F01-6389	COLGATE PALMOLIVE	BKGKS	4	QT		
04	POWER TIME	7930-01-436-8045	ROCHESTER MIDLAND	CFDNN	6	GL		
05	BETCO TOILET CLEANER		NATIONAL LABORATORIES	BDLHV	8	QT		C1
06	LIME-SOL	0	ROCHESTER MIDLAND		0	GL		
07	RING MASTER ALL PURPOSE CLEANER	1846 (1291B)	ZEP MANUFACTURING		0	QT		
08	BETCO FLOOR SEALER	0	BETCO		4	GAL		
09	ALL PURPOSE CLEANER	7930-00-926-5280	LHB	CGNHK	0	PT		
10	MONTANA DELUXE	0	MONTANA BRUSH AND BROOM		1	GAL		
11	BETCO PUSH		BETCO		4	QT		
12	A-125 DRY	6840-01-313-1901	AIRWICK PROFESSIONAL	CDJTG	1	CN-1/2 PACKETS		B3

Print Inventory

Print Inventory | Cancel

Unit: DET 1 260th HORIZ ENG CO

Storage: JANITORIAL

Month: 2/1/2011

SLN	Item	NSN	Manufacturer	MSDSID	Quantity	Unit of Issue	Shelf Life	HCC
01	HORIZON 100	7930-00-N01-8106	JOHNSON WAX	BLXRZ	3	GL		N1
02	HORIZON 400	7930-00-F03-8657	JOHNSON WAX	BWVMD	0	GL		N1
03	AJAX QUIK SOLV	7930-00-F01-6389	COLGATE PALMOLIVE	BKGKS	4	QT		
04	POWER TIME	7930-01-436-8045	ROCHESTER MIDLAND	CFDNN	6	GL		
05	BETCO TOILET CLEANER		NATIONAL LABORATORIES	BDLHV	8	QT		C1
06	LIME-SOL	0	ROCHESTER MIDLAND		0	GL		
07	RING MASTER ALL PURPOSE CLEANER	1846 (1291B)	ZEP MANUFACTURING		0	QT		
08	BETCO FLOOR SEALER	0	BETCO		4	GAL		
09	ALL PURPOSE CLEANER	7930-00-926-5280	LHB	CGNHK	0	PT		
10	MONTANA DELUXE	0	MONTANA BRUSH AND BROOM		1	GAL		
11	BETCO PUSH		BETCO		4	QT		
12	A-125 DRY	6840-01-313-1901	AIRWICK PROFESSIONAL	CDJTG	1	CN-1/2 PACKETS		B3

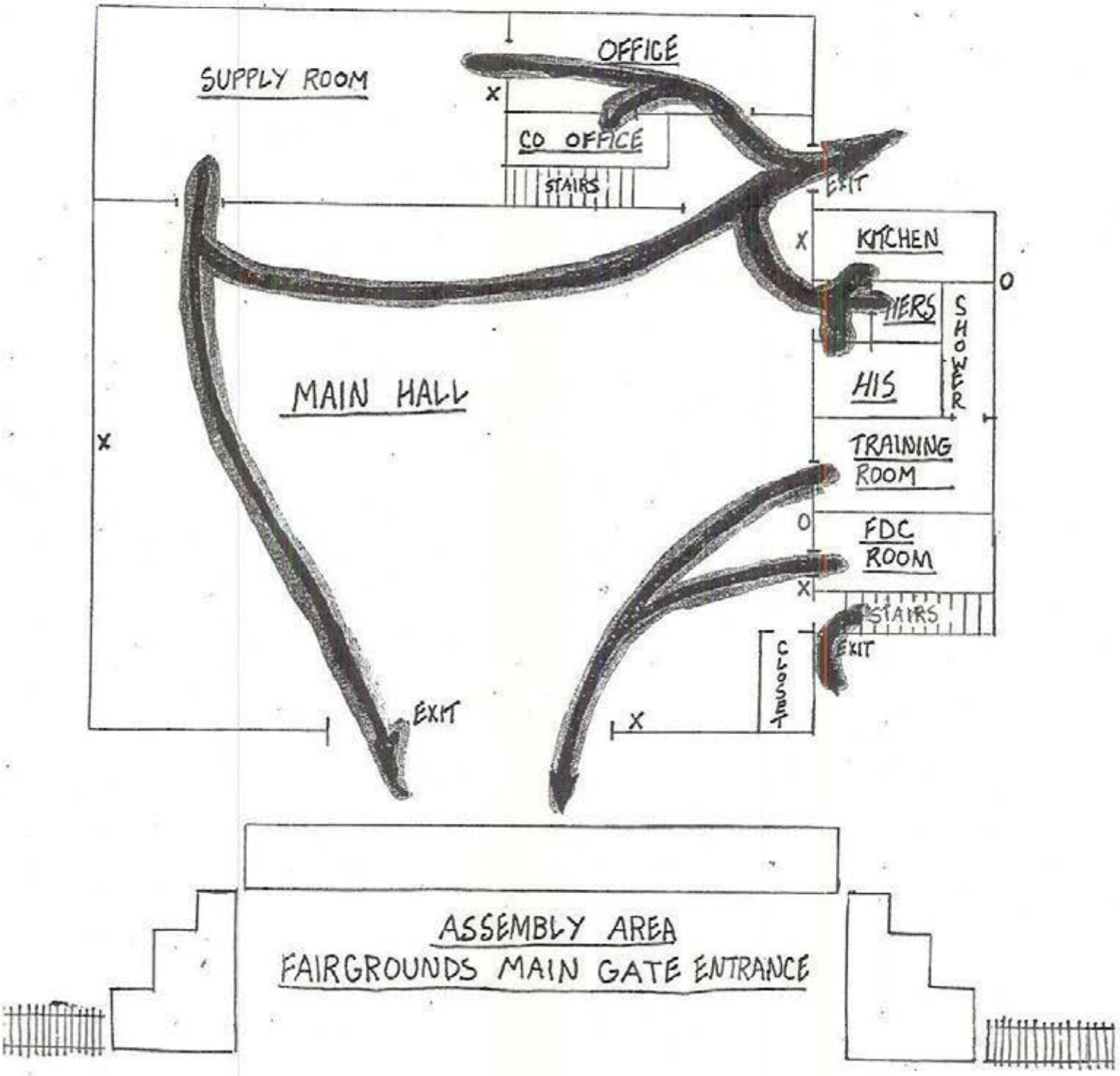
13	BETCO HI TECH FINISH	0	BETCO		8	GL	
14	BETCO SURE CURE SEALER	0	BETCO		3	5GL	
15	RENOWN SPECIAL GLASS CLEANER		AMSAN		1	GAL	
16	SPRAY NINE	0	SPRAY NINE CORP		5	24 OZ BOTTLE	
17	LIQUID HAND SOAP	8520002280598	SKILCRAFT		1	1 GALLON JUG	
18	GOOD SENSE ODOR COUNTERACTANT	401622 (GCN 4985F-00)	SC JOHNSON & SON		8	CN	V3
20	AJAX CHLORINE CLEANER		AJAX		1	EA	
21	MATALIST 20 FLOOR FINISH	7930-01-131-5648	RECKITT & COLMAN	CHCBT	2	GL	
22	ANTIFOGGING GLASS CLEANER	7930-00-901-2088	SKILCRAFT		2	1GL	
23	METALIST SBR 2000 BUFF RESTORE 5	7930-00-N02-5479	RECKITT BENCKISER	BMPPL	0	GL	N1
24	METALIST PENETRATING WAX STRIPPER 1	7930-00-F02-5521	RECKITT BENCKISER	BWTHZ	0	GL	
25	MASTERPIECE WAX STRIPPER	7930-00-F02-5521	RECKITT & COLMAN	BPSPK	0	GL	
26	BUFFERALL CLEANER/NEUTRALIZER	7930-01-436-8000	ROCHESTER MIDLAND	CFDNK	0	GL	
27	SIMPLE GREEN	7930-01-342-5316	SUNSHINE MAKERS	CPYLC	1	5GL	

28	SPRAY BUFF	7930-01-380-8419	SPARTAN	1	5GL
29	ANTIFOGGING GLASS CLEANER	7930-01-326-8110	SKILCRAFT	3	16OZ
30	GOJO	6850-00-926-2275	GOJO	4	16OZ
31	WAX POLISH	0	CLASSIC SHINE	1	17OZ
32	ABSORBENT	7930-00-269-1272	Capital Soap Products	2	45 lbs.

ANNEX A (Drawing of facility) for DET 1, BTRY B 1-190TH FA BN

1. Arrows denote evacuation routes.
2. "X" indicates fire extinguishers.
3. "O" indicates water outlet.

SIDNEY ARMORY



IAQ MEASUREMENTS
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Location	CO_2 max permissible level 1,035 ppm	Temperature permissible range 68 - 75°F	RH% permissible range 30-60%	CO max permissible range 200 ppm. STEL
First floor, supply room	492	72.4	32.1	0.8
First floor, office	543	73.5	32.7	0.9
First floor, kitchen	427	73.5	31.7	1.1
First floor, male rest room	426	73.8	32.4	1.3
First floor, female rest room	437	73.5	31.9	1.2
First floor, FDC room	441	73.6	31.9	1.1
First floor, center of drill floor	454	74.1	31.6	1.1
First floor, southeast corner of drill floor	427	73.7	31.5	1.2
Second floor, south office	462	73.8	31.3	1.0
Second floor, north office	443	72.8	31.3	1.2
Second floor, classroom	491	73.5	31.3	1.0

CO_2 - Carbon Dioxide
°F = Fahrenheit
RH = Relative Humidity
CO = Carbon Monoxide
STEL – Short Term Exposure Limit

ILLUMINANCE SURVEY
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Location	Light – FC	Minimum lighting requirements – FC
First floor, supply room	41.1	30
First floor, office	68.2	50
First floor, kitchen	35.1	30
First floor, male rest room	30.2	30
First floor, female rest room	62.8	30
First floor, FDC room	30.0	30
First floor, center of drill floor	74.8	30
First floor, southeast corner of drill floor	31.1	30
Second floor, south office	41.6	50
Second floor, north office	56.5	50
Second floor, classroom	47.6	50

*FC= foot candle measurement

Armory Sidney 03-1H1374 67 19/02/12

- faculty map ✓ ist floor only
- MSDS chem inventory list ✓
- employee list ✓
- ~~hazardous inventory~~

-lead wipes -
- IAQ ✓
- light ✓
- photolog
- ~~ventilation~~ no kitchen ✓
- ~~noise~~
- fire extinguishers → last inspection Feb 2012
- fire alarm → no fire alarm
- peeling paint?
- Hazmat storage → organized but last MSDS update was 12/1/2011
- all electrical panels good ✓

Armory Sidney 013.1H1374.07 10/2/12

Photo Log

01-08 → Lead samples

09: Armory sign

10: Building

11: drill floor, to the SW

12: kitchen, view to the SE

13: gym area (drill floor), NW

14: drill floor, view to N

15: drill floor, view from 2nd floor (SW)

16: 2nd floor classroom

17: 2nd floor, office space

18: supply room, > view

19: connecting office (small), E view

20: office (main), view to the N.

21: basement

- AED good until 9/20/14

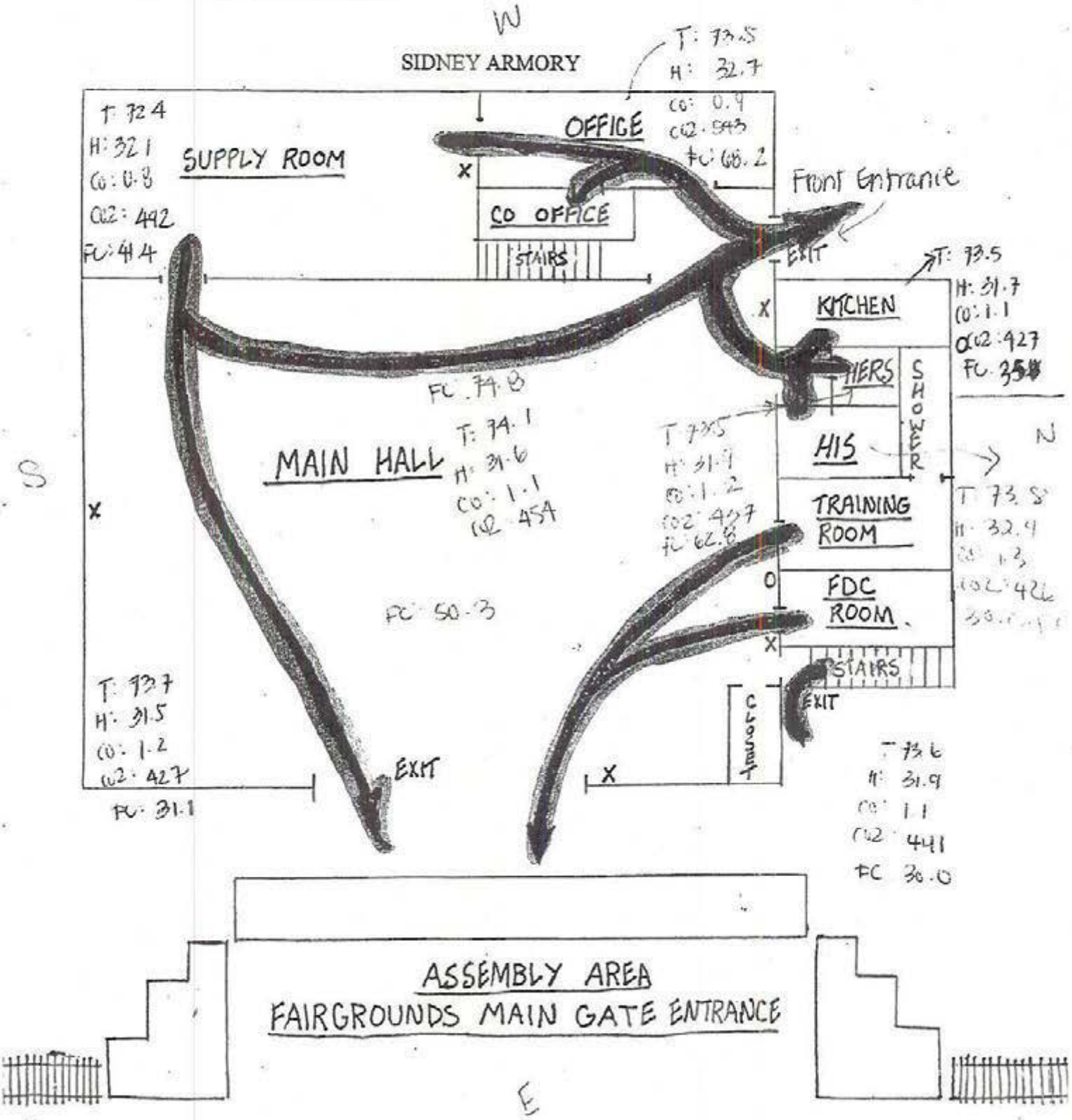
IAG + Illumination

013. 1H13J4.07

10/2/12

ANNEX A (Drawing of facility) for DET 1, BTRY B 1-190TH FA BN

1. Arrows denote evacuation routes.
2. "X" indicates fire extinguishers.
3. "O" indicates water outlet.

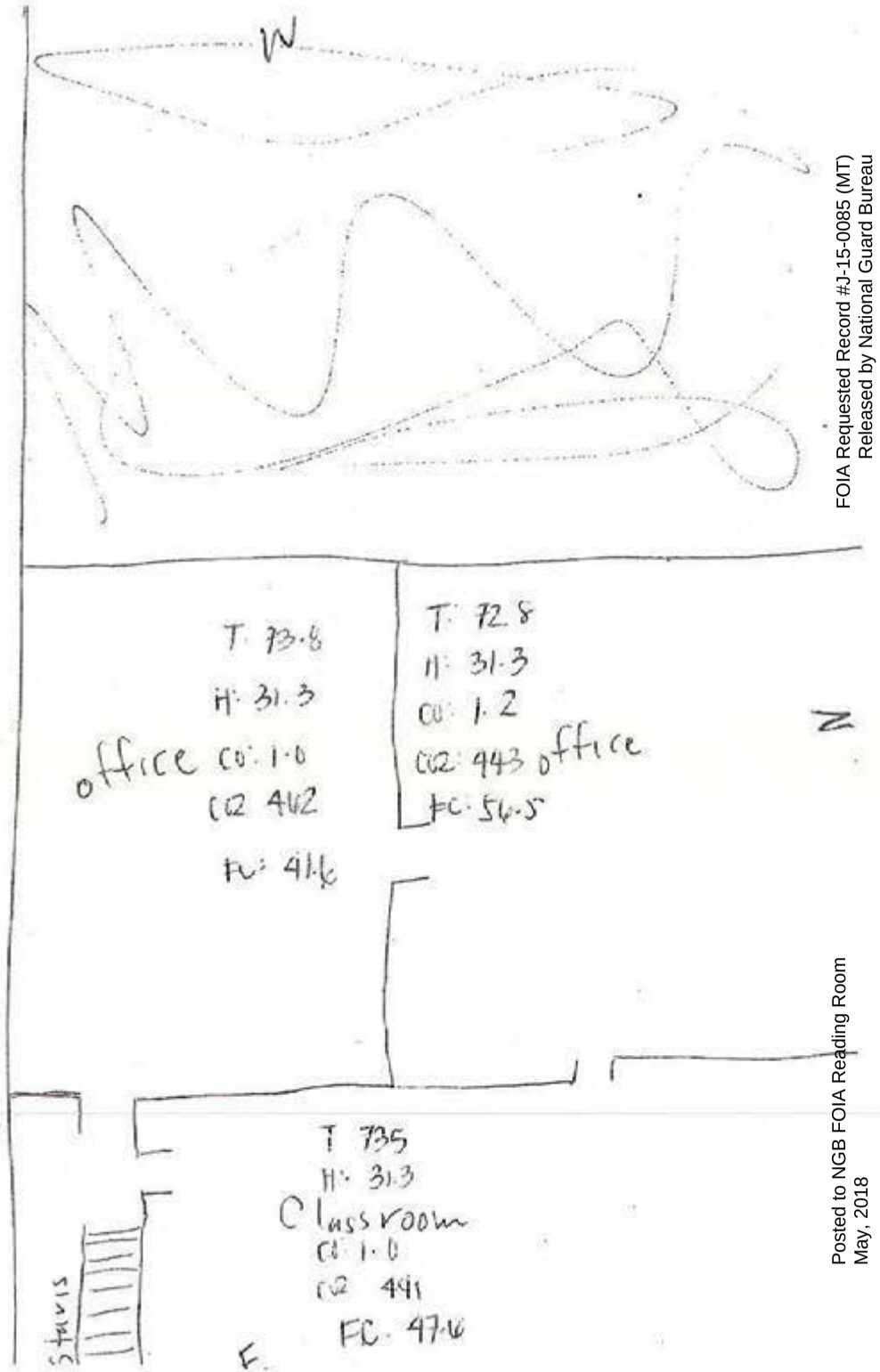


IAQ + Illumination

013-1H1574.67

2nd Floor

Upstairs

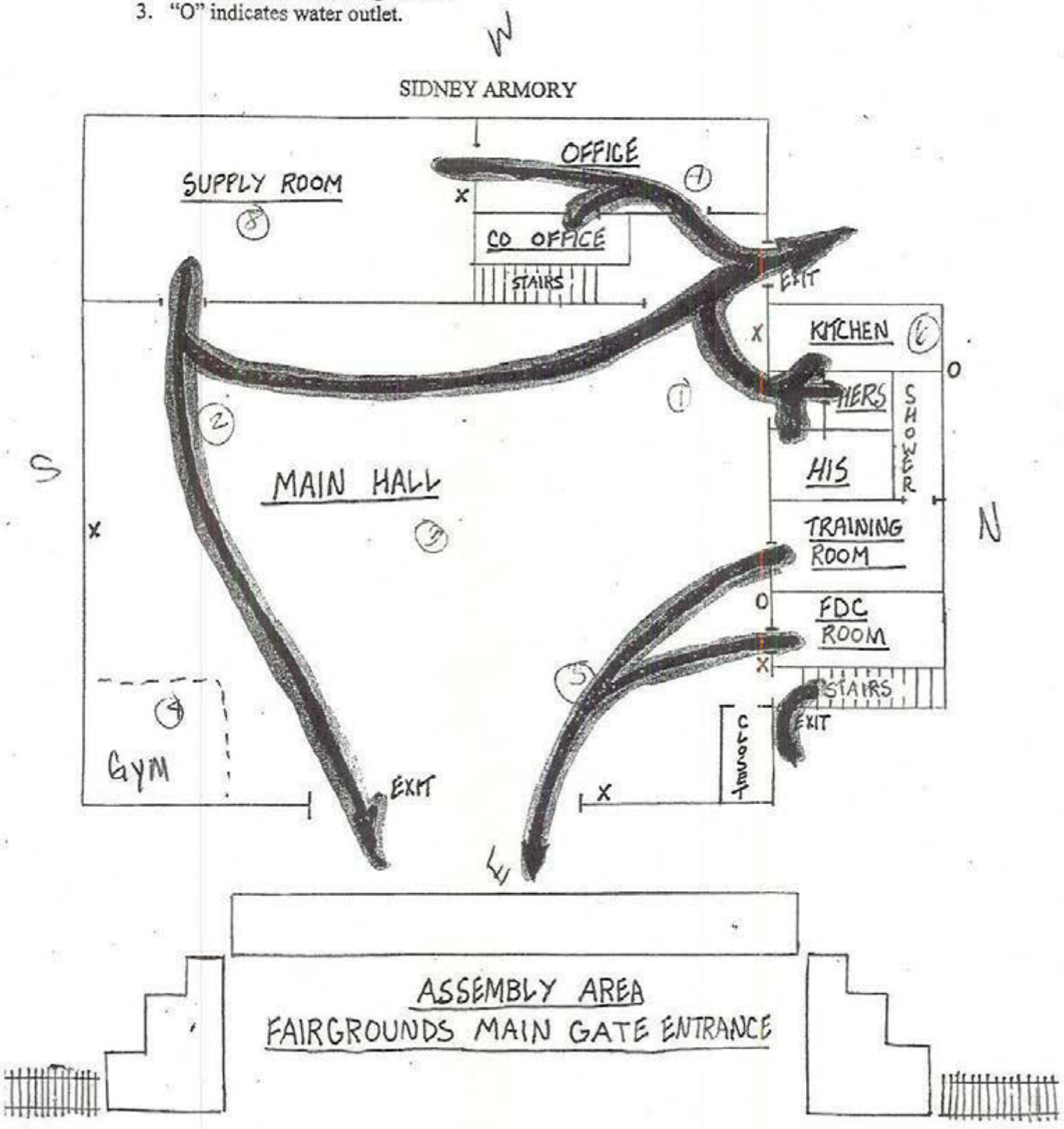


Lead Samples

013-IH1574-07
10/2/12

ANNEX A (Drawing of facility) for DET 1, BTRY B 1-190TH FA BN

1. Arrows denote evacuation routes.
2. "X" indicates fire extinguishers.
3. "O" indicates water outlet.



Tektronix
Service Solutions

Certificate of Calibration

6209107

Certificate Page 1 of 1

Instrument Identification

PO Number: [redacted] LL

Company ID: 607229
INDUSTRIAL HYGIENE SW
[redacted]
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

Instrument ID: H225437
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00679404

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: [redacted]
Cal Date 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.
This certificate shall not be reproduced, except in full, without the written consent of Tektronix Service Solutions.

Approved By [redacted]
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230826	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700276206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

GrayWolf Sensing Solutions Calibration Certificate

Model Number of UUT#:	IQ-410	**Probe Software Version:**	1.3,0,38	**Serial Number:**	01-624
Display Model Number:	N/A	**Display Software Version:**	N/A	**Display Serial Number:**	N/A

Company Name:	Industrial Hygiene
Calibration Date:	5/2/2012
Calibration Due Date:	5/2/2013

Ambient Conditions:

Temperature:	23.9°C
Relative Humidity:	33.7%RH
Barometric Pressure:	1010.4mbar

Temperature Check:

Actual:	18.7°C	43.2°C
Measured:	18.7°C	43.2°C

Relative Humidity Check:

Actual:	0.0%RH	75.3%RH
Measured:	0.0%RH	75.3%RH

Carbon Dioxide: s/n 012149

Actual:	379ppm	1250ppm
Measured:	379ppm	1250ppm

Carbon Monoxide: s/n 11031536110

Actual:	0ppm	97.3ppm
Measured:	0ppm	97.3ppm

GrayWolf Sensing Solutions
GrayWolf Calibration Information: www.wolfsense.com/calibration.html
Phone: (203) 402-0477
GrayWolf on the web: www.graywolfsensing.com

TABLE 1
LEAD WIPE SAMPLE RESULTS
SIDNEY ARMORY
SIDNEY, MT
OCTOBER 02, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG Standard
100212-Sidney-01	Drill Floor	Northwest corner, floor sample	5.0	≤ 40
100212-Sidney-02	Drill Floor	Southwest corner, floor sample	< 2.5	≤ 40
100212-Sidney-03	Drill Floor	Center of drill floor, floor sample	< 2.5	≤ 40
100212-Sidney-04	Drill Floor	Southeast corner, floor sample	< 2.5	≤ 40
100212-Sidney-05	Drill Floor	East Side at bay door, floor sample	11	≤ 40
100212-Sidney-06	Kitchen	Counter top	2.5	≤ 40
100212-Sidney-07	1st Floor Office	Table Top	< 2.5	≤ 40
100212-Sidney-08	Supply Room	Center, floor sample	4.2	≤ 200
100212-Sidney-Blank	—	—	< 2.5	NA

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
ND = none detected at or above the analytical detection limit
NA = not applicable

ANALYTICAL REPORT

Report Date: October 10, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1228246
Client Project ID: Sidney Armory
Purchase Order: 013.IH1374.67
Project Manager: Non-Responsive

Analytical Results

Sample ID: **100212-Sidney-01**	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246001	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: **NIOSH 7300 Mod.**	Sampling Parameter: **Area 1 ft²**		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	**5.0**	**5.0**	2.5

Sample ID: **100212-Sidney-02**	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246002	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: **NIOSH 7300 Mod.**	Sampling Parameter: **Area 1 ft²**		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: **100212-Sidney-03**	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246003	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: **NIOSH 7300 Mod.**	Sampling Parameter: **Area 1 ft²**		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: **100212-Sidney-04**	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246004	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: **NIOSH 7300 Mod.**	Sampling Parameter: **Area 1 ft²**		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

ANALYTICAL REPORT

Workorder: 34-1228246
Client Project ID: Sidney Armory
Purchase Order: 013.IH1374.67
Project Manager: Non-Responsive

Analytical Results

Sample ID: 100212-Sidney-05	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246005	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	11	11	2.5

Sample ID: 100212-Sidney-06	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246006	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	2.5	2.5	2.5

Sample ID: 100212-Sidney-07	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246007	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	<2.5	2.5

Sample ID: 100212-Sidney-08	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246008	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	4.2	4.2	2.5

Sample ID: 100212-Sidney-Blank	Media: Ghost Wipe		Collected: 10/02/2012
Lab ID: 1228246009	Sampling Location: Sidney Armory		Received: 10/08/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area Not Applicable		Prepared: 10/09/2012 Analyzed: 10/09/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	<2.5	NA	2.5

ANALYTICAL REPORT

Workorder: 34-1228246
Client Project ID: Sidney Armory
Purchase Order: 013.IH1374.67
Project Manager: Non-Responsive

Comments

Sample: 1228246003

NC/CAR-524 was initiated for this sample because approximately 50% to 75% out of the initial volume of sample and a portion of the un-dissolved wipe was lost during digestion due to extremely violent reaction of the sample after initial aliquot of concentrated nitric acid was added. The remaining digestion was continued with the remaining sample volume per project manager, Stella Hanis. Therefore, the reported lead result for this sample will be biased lower than the actual lead result.

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	Non-Responsive	Non-Responsive

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA (ISO 17025, AIHA ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

ANALYTICAL REPORT

Workorder: 34-1228246
Client Project ID: Sidney Armory
Purchase Order: 013.IH1374.67
Project Manager: Non-Responsive

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

BEST AVAILABLE COPY

1228246

ANALYTICAL REQUEST FORM

1. [X] REGULAR Status — P0820246

[ ] RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY ______ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 10/5/12 Purchase Order No. 013 1H1374.07
3. Company Name NES
Address 1141 Sibley Street
Folsom, CA 95630
Person to Contact Non-Responsive [redacted]
Telephone (916 [redacted]
Fax Telephone ([redacted]
E-mail Address [redacted]
Billing Address ([redacted]

4. Quote No. Non-Responsive [redacted]
ALS Project Manager [redacted]
5. Sample Collection
Sampling Site Sidney Armory
Industrial Process
Date of Collection 10/2/12
Time Collected
Date of Shipment
Chain of Custody No.
6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	100212-Sidney-01	Ghost Wipe	1 sq ft.	Lead NIOSH 7300	µg/sq ft.
	100212-Sidney-02	↓	↓	↓	↓
	100212-Sidney-03				
	100212-Sidney-04				
	100212-Sidney-05				
	100212-Sidney-06				
	100212-Sidney-07				
	100212-Sidney-08				
	100212-Sidney-Blank				

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m^3 3. ppm 4. % 5. µg/m^3 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by Non-Responsive [redacted] Date/Time
Received by Date/Time 10-8-12 9:44
Relinquished by Date/Time
Received by Date/Time Non-Responsive [redacted]

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Laboratory Group

Industrial Hygiene Southwest

Violation Inventory Log

LOG OF SCHEDULE OF CORRECTIVE ACTION - COMPLIANCE WITH SAFETY AND HEALTH STANDARDS

Sidney Armory - Montana

CONTROL NUMBER CLOSED ☐	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTSA-100212-3.4	No asbestos O/M plan or asbestos building survey was available.	Armory	3	Create an asbestos Operations & Maintenance Plan and have an asbestos building survey performed by a qualified MT asbestos building inspector					29 CFR 1926.1110; TB MED 513
MTSA-100212-4.6	Lighting did not provide the required illumination.	Upstairs office (north side), classroom	4	Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107
MTSA-100212-4.11.2	There was no fire alarm installed at the facility	Armory	5	Have a means of alerting employees of a fire installed.					29 CFR 1910.165
MTSA-100212-4.11.3	Monthly and yearly fire extinguisher inspections were out of date.	Armory	4	Perform monthly and yearly inspections of fire extinguishers as required.					29 CFR 1910.157(e)

APPENDIX–N: CONCLUSIONS AND RECOMMENDATIONS

N.1 Introduction – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Sidney Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N is Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Findings and Recommendations; Item 2 – Painted Surface Evaluation).

N3.4 Asbestos Documentation

1. Consult with Montana state certified inspector to evaluate the facility for asbestos containing material.
2. Develop and implement a written asbestos Operations and Management plan.

N4.6 Illumination Level Monitoring

Replace burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.

N4.8 Safety Training and Record Keeping

Ensure training of personnel, once personnel have returned to the Sidney Armory.

N4.11 Safety Walk-Through

Perform monthly and yearly inspections of fire extinguishers as required.

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down. moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Army National Guard Armory Survey
(To Be Included In Report)

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Yes. Samples 100213-Sidney-01, 02, 03, 04, 05
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	No.
Additional lead **wipe** samples taken from 25% of the rest of the building - -(**on floor areas only**)	Yes. Samples 100213-Sidney-06, 07, 08.
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	No
Is there any peeling **paint**? Take bulk sample if able.	No
Are there any signs of water damage or **mold**?	No
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	No.
Quality of housekeeping	Good
HVAC maintenance plan in place?	Field Operation Maintenance controlled at St. Helena Facility.
Overall condition of HVAC system	Good working condition.
Obtained **CO2, Temp, RH** monitoring	Yes.
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Yes.
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	All good condition.

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	N/A, no stove.
Coilect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	N/A
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	None found
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	No Hazards
Name of Armory, **POC, phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	SidneyArmory Augustina Garcia 2190 West Holly Street Sidney, Montana 59270 406-324-5500 Non-Responsive **(Add Checklist to Report)**

BEST AVAILABLE COPY

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04	0			
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05	0			
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07	0			
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08	0			
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09	0			
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09	0			
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18	0			
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18	0			
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19	0			
Number of ventilation systems which were evaluated by an IH	953-02-19	0			
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			

ARMY NATIONAL GUARD
INDUSTRIAL HYGIENE – SOUTHWEST
Guam • Hawaii • California • Oregon • Washington • Nevada • Arizona • Idaho • Utah • Wyoming • Montana • New Mexico • Nebraska

Industrial Hygiene Site Assistance Visit

Womak Armory
1956 Mt Majo Street
Helena, MT 59604

31 Oct 2012

10510 Superfortress Avenue, Suite C, Mather, CA 95655 (916) 854-1494

DEPARTMENT OF THE ARMY AND AIRFORCE
NATIONAL GUARD BUREAU
INDUSTRIAL HYGIENE SOUTHWEST
10510 Superfortress Ave, Ste. C
Mather, CA 95655

ARNG-CSG-IHSW

25 March 2013

MEMORANDUM THRU Montana Army National Guard, ATTN: Non-Responsive DSS), Montana Medical DET, Troop Medical Clinic, RM 1009, 1956 MT Majo Street, Fort Harrison, MT 59636-4789

FOR Commander, Womak Armory, 1956 Mt Majo Street, Helena, MT 59604

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Womak Armory 1956 Mt. Majo Street, Helena, Montana conducted on 31 October 2012.

1. References. See survey report.

2. General.

a. At the request of the NGB Industrial Hygiene, Southwest (IHSW) Region, an Industrial Hygiene Site Assistance Visit and cursory review of safety related items and programs was conducted at the Womak Armory at 1956 Mt. Majo, Womak, MT on 31 OCT 2012.

b. The findings and recommendations in this Executive Summary are controlling and supersede all recommendations in the contractor report (reference Attachment II). However, IHSW concurs with the observations and findings within the attached contractor report.

c. Risk Assessment Codes (RAC) provided in this report have been derived from two sources: Deriving Risk Assessment Codes (RAC's) for Health Hazards (Ref: DOD Instruction 6055.1) and AR 385-10, The Army Safety Program.

d. Use of trademark names in the attached report, or this Executive Summary, does not imply Army National Guard endorsement of any product.

3. Findings. See survey report.

4. Commendable.

a. The facility was generally clean and orderly and personnel were helpful during this SAV.

5. Observations / Recommendations.

NOTE: This section provides conclusions and recommendations for the findings and observations made within the attached contractors report. The paragraphs are numbered to correspond to the sections where they were first noted. (i.e., paragraph 2.1a represents the 2.1a located within the contractors report.

a. A building inspection of the armory for asbestos, should be provided and a management plan in place for personnel working at and on the facility should be written from that inspection (para.4.4)(RAC 4)

b. Record fire extinguishers inspections which should be done monthly and annually with documentation on extinguisher. (para. 4.10) **(RAC 3)**

c. Add more task lighting or brighter light bulbs to the existing light fixtures to increase the illumination level on all areas of the drill floor to at least 30 foot candles (FC). (para. 4.6) **(RAC 4)**

6. Violation Correction Log.

a. IHSW has provided a Violation Correction Log derived from the observations from this visit. IHSW recommends the following:

1. Commander(s) assign an Action OIC/NCOIC, Suspense Date for completion, and Estimated Cost(s) to ensure item completion and corrective status is briefed during quarterly (or monthly) Safety Meetings/Councils until resolved.

2. Corrective measures should be implemented and accomplished at the lowest levels possible. Hazards and Corrective Measures that cannot be corrected at the facility level, and require assistance from higher headquarters or from the state level, should be elevated to the Quarterly State/BN Safety Council Meeting for resolution.

3. Recommend a representative from the facility attend all quarterly/monthly meetings to ensure the appropriate emphasis and corrective actions are followed for hazard resolution and abatement of the observations made during this visit.

4. Retain entries of the items corrected, or closed, for future reference. This may be accomplished by posting completed items within the Corrected Hazard Sheet portion of the Excel Violation Correction Log Workbook we've provided.

5. The preferred method to document and track identified hazards for resolution is for their entry into the Reserve Component Automation System – Safety and Occupational Health **(RCAS-SOH)** Program.

b. IHSW recommends further program refinement through written documentation for standardized guidance to the personnel performing the processes. Conducting Hazard Assessments consistent with 29 Code of Federal Regulations (CFR) 1910.132, General Requirements for Personal Protective Equipment and AR 40-5, Preventive Medicine, would provide this continued program refinement.

7. Hazard Assessment/Job Safety Analysis (JSA).

a. Documenting the Hazard Assessments provides a method to obtain initial and periodic review from the Industrial Hygiene, Occupational Health and Safety Professions located at the JFHQ/HQ/state level.

b. The Hazard Assessments should be used as written training materials for the new, transfer and unit personnel working under the auspice of the facility.

c. IHSW recommends facility supervisory staff and facility personnel conduct initial Hazard Assessments outlined in AR 40-5, Army Preventive Medicine (Section V) and 29 CFR 1910.132

ARNG-CSG-IHSW

SUBJECT: Executive Summary for Industrial Hygiene Site Assistance Visit (IHSAV) for Womak Armory 1956 Mt. Majo Street, Helena, Montana conducted on 31 October 2012.

and submit for review and obtain approval from the state Industrial Hygiene, Occupational Health and Safety Professions.

d. We have provided an appendix with Hazard Assessments (HA) examples of some of this facilities operations. Additional operations can utilize this format to design HA not observed during this SAV.

e. An integral and important factor of the Hazard Assessment/JSA process is for the review and guidance from qualified Safety, Occupational Health and Industrial Hygiene professions located at the higher headquarters level or state level. For this reason, the Hazard Assessments (to include all pertinent and supporting documents) should be completed by the facility personnel and forward to the Montana Army National Guard Industrial Hygiene, Occupational Health and Safety Office for final review and approval (signature).

f. Job Safety Analysis (JSA's)/Hazard Assessments.

NOTE: The Hazard Assessments can be used for monthly meetings to brief/train, and document large group training events and activities.

8. IHSW recommends the Senior Unit Commander of this Facility and any Co-Tenant Organizations or Units, review and provide assistance with implementation of these recommendations. This will educate the chain of command and allow the unit or co-tenant organizations to take any necessary precautions or actions required by them and their personnel.

9. To assist you with execution of your responsibilities in correcting the observations noted, we encourage you to consult with the State Safety Manager, Occupational Health Manager and Industrial Hygiene professions located and/or authorized within the State Safety and Occupational Health Office.

10. For additional information please contact the undersigned at (916) 854-1491 or via email at Non-Responsive

Non-Responsive

NGB, IHSW, CIV
Industrial Hygiene

Industrial Hygiene, Southwest
Violation Inventory Log
Womak Armory - Helena MT

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTWA-103112-4.4	No asbestos documentation located at the facility.	Armory	4	Maintain copies of the Asbestos Operations & Maintenance Plan at the Armory.					29 CFR 1910.1001(j)
MTWA-103112-4.4	Floor tiles are suspect asbestos containing materials.	Armory	4	Consult with a Montana state-certified asbestos inspector to determine if the floor tiles contain asbestos.					29 CFR 1910.1001(j)(8)
MTWA-103112-4.5	Temperatures below ASHRAE recommendations.	Armory	4	Maintain temperatures within ASHRAE recommended values.					ASHRAE Standard 55-1992
MTWA-103112-4.6	Lighting did not provide the required illumination.	Armory	4	Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107
MTWA-103112-4.13	Overdue monthly inspections of fire extinguishers	Armory	3	Inspect all fire extinguishers monthly and document inspection date, and inspectors signature on the inspection tag.					29 CFR 1910.157 (e)(2)

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Industrial Hygiene Site Assistance Visit
Womak Armory
Clackamas, Oregon
31 October, 2012

NES
www.nesglobal.net

ARMY NATIONAL GUARD

INDUSTRIAL HYGIENE SITE ASSISTANCE VISIT (IHSAV)

WOMAK ARMORY
1956 MT. MAJO STREET
FORT HARRISON, HELENA, MONTANA 59604

October 31, 2012

Prepared for:
Industrial Hygiene Southwest
10510 Superfortress Avenue, Suite C
Mather, California 95655

Prepared by:
NES, Inc.
1141 Sibley Street
Folsom, California 95630

***NES* Job Number: 013.IH1374.74**

Prepared by:

Non-Responsive

Senior Industrial Hygienist

Reviewed by:

Non-Responsive

BEST AVAILABLE COPY

Table of Contents

Appendices

EXECUTIVE SUMMARY

On October 31, 2012, Non-Responsive Certified Industrial Hygienist (CIH), of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Womak Armory located at 1956 Mt. Majo Street, Fort Harrison in Helena, Montana. The primary point of contact for information gathered during this survey was Non-Responsive may be reached by phone at (406) 324-3656 or by email at Non-Responsive

The objectives of this IHSAV were to perform the following activities:

- Evaluate configuration of battery storage and charging facilities;
- Review hazardous material storage and use procedures;
- Review the Respiratory Protection Program and respirator use/storage;
- Collect area and breathing zone air samples;
- Collect metal surface wipe samples;
- Measure the volumetric flow of local exhaust ventilation systems;
- Monitor employee noise exposures through noise dosimetry and source measurements;
- Measure illumination levels;
- Collect indoor air quality data;
- Evaluate any existing safety hazards; and,
- Review safety policies/programs, training, and record keeping.

Significant findings for this IHSAV can be found in the Industrial Hygiene Southwest – Violation Inventory Log located in Appendix L of this report.

The report that follows this Executive Summary should be read in its entirety because it includes important information not included in this summary, such as task descriptions, work space locations, regulatory requirements, and additional recommendations.

Appendices may be left blank where information has been requested from the facility and not yet received.

Commendables: Non-Responsive went above and beyond expectations to help *NES* complete the IHSAV. His responsiveness and assistance were greatly appreciated.

BEST AVAILABLE COPY

1.0 INTRODUCTION

On October 31, 2012, Non-Responsive Certified Industrial Hygienist (CIH), of NES, Inc. (*NES*) conducted an Industrial Hygiene Site Assistance Visit (IHSAV) at the Womak Armory located at 1956 Mt. Majo Street, Fort Harrison in Helena, Montana. The primary point of contact for information gathered during this survey was Non-Responsive may be reached by phone at (406) 324-3656 or by email at Non-Responsive

1.1 IHSAV Objectives

The objective of the IHSAV is to evaluate the occupational environment of the administrative areas in the Armory, to determine the presence of operational health and safety risks and make recommendations for corrective actions or follow-up work to assist the Army National Guard in managing those risks.

1.2 Scope of Work

To achieve the above objectives at this facility, the survey included the following work:

- Collect lead wipe samples;
- Evaluate the condition of painted surfaces and collect paint chip samples for lead analysis where painted surfaces are peeling;
- Inspect the interior rooms of the armory for water damage and the presence of fungal growth;
- Review asbestos survey and assessment files and determine if documentation of asbestos awareness training is current;
- Evaluate the condition of the Heating, Ventilation, and Air-Conditioning system and collect indoor air quality data;
- Review hazardous material storage and use procedures;
- Review safety training, and record keeping;
- Perform a ventilation survey on the kitchen stove hood (if present);
- Perform a noise survey on the kitchen appliances; and,
- Conduct a safety walk-through evaluation and note any existing safety hazards.

2.0 PROCESS DESCRIPTION

The Womak Armory has three full time military personnel. The three full time personnel are Readiness NCO Non-Responsive upply NCO Non-Responsive and the Training NCO Non-Responsive The military units that utilize the facility are the 163rd Combined Arms Battalion and the E 145th Forward Support Company. Various civilian clubs occasionally rent out the facility as well. The Armory has offices used for administrative purposes and also contains a drill floor, storage rooms, and a kitchen converted into a break room. The drill floor and the publications library area are occasionally used by Army National Guard members as a staging area to clean weapons.

3.0 METHODS

3.1 Lead Wipe Sampling

Lead wipe samples were collected on horizontal work and floor surfaces in various locations throughout the facility. Ghost Wipe™ brand wipes were used by wiping a one square foot template. The collected wipe samples were placed in clean and labeled centrifuge vials. Samples were submitted to ALS Environmental Laboratories located in Salt Lake City, Utah for analysis, using NIOSH method 7300. The wipes used conform to American Standards for Testing Materials (ASTM) E1792, Standard Specification for Wipe Sampling Materials for Lead in Surface Dust. See Appendix I, Table 1 for a table of analytical results. See Appendix J for laboratory reports.

3.2 Painted Surface Evaluation

The interior and exterior of the Armory was visually inspected for peeling paint. Paint chip samples, if collected, are submitted to ALS Laboratory Group (ALS) in Salt Lake City, Utah. ALS analyzes the samples for lead using NIOSH 7300 modified method.

3.3 Water Damage and Limited Visual Fungal Growth Evaluation

The interior of the Armory was visually inspected for water damage and subsequent fungal growth resulting from moisture. Any water impacted areas noted were documented on the facility map for a follow-up evaluation.

3.4 Asbestos Documentation

An evaluation of asbestos documentation was performed. This evaluation consisted of determining if an asbestos survey and assessment have been performed and if there is an asbestos operations and maintenance plan in place.

3.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

An evaluation of the heating, ventilation, and air-conditioning systems that serve the Armory was accomplished. This evaluation consisted of determining if a maintenance plan is in place and a visual inspection of the system was performed to note any obvious operational problems.

Carbon dioxide (CO_2), temperature, and relative humidity were measured using a TSI IAQ-Calc™, model 8551. The unit was calibrated before use with certified zero gas and 1,000-ppm CO_2 span gas. Carbon dioxide measurements are often used as a screening technique to

evaluate whether adequate quantities of outdoor air are being introduced and evenly distributed to interior occupied spaces. Human occupants produce CO_2, water vapor, and other bioeffluents. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), in their Standard 62.1-2010, *Ventilation for Acceptable Air Quality*, recommend maintaining CO_2 below a concentration that is 700 parts per million (700 ppm) above outdoor levels. Outside CO_2 concentrations are typically about 350 ppm. Providing sufficient ventilation to maintain steady-state CO_2 concentrations at this level will assure that a substantial majority of people entering a space will be satisfied with respect to human bioeffluents (body odors). ASHRAE also recommends an outside air supply rate of 20 cubic feet per minute (20 cfm) per building occupant in office spaces, and, at that ventilation rate, CO_2 concentrations should not increase over time. Outside air supply rates were not measured during this IHSAV since CO_2 concentrations were within an acceptable range. A copy of the annual calibration certificate for this instrument is located in Appendix H.

3.6 Illumination Level Monitoring

Illumination measurements were taken throughout the Womak Armory. The instrument used for the illumination survey was a Konica Minolta Illuminance Meter, model TL-1. Measurements taken were obtained at typical working locations such as desks, computers, workstations and general working areas.

3.7 Hazardous Material Storage and Use Procedures

A review of the Armory's chemical inventory and material safety data sheet (MSDS) file was accomplished. Chemical storage areas, including flammable storage cabinets/rooms were also inspected as part of this IHSAV.

3.8 Safety Training and Record Keeping

An inspection of the Armory's training programs and training documentation was performed to determine if the site specific training programs and annual documentation is current.

3.9 Ventilation Survey

Air velocity and flow measurements are measured on the kitchen ventilation hoods, when present and operational, using a TSI VelociCalc, model 8386A. Results are evaluated for compliance with TM 5-810-1, prepared by Headquarters, Department of the Army, June 1991 which sets a criteria of 50 feet per minute (fpm) for open hood sections and 75 (fpm) for grease filter sections, measured at the horizontal hood opening.

3.10 Sound-Level Measurements

Sound-level measurements are made on kitchen appliances, when operational; using a Quest Sound-Level Meter, model 2900 in the A-weighted decibel (dBA) range, using a slow meter response. Copies of annual calibration certificates for these instruments are located in Appendix H. DD Forms 2214 are provided in Appendix O.

3.11 Safety Walk-Through

A safety walk-though evaluation of the Armory was performed to document the presence of a fire alarm, to determine if fire extinguishers are properly mounted and are current on their monthly and annual inspections, ground fault circuit interrupter (GFCI) testing, if eyewash stations inspections are current, and to document any fire or safety hazards in the Armory.

3.12 Equipment Used

The following equipment was used for this survey.

Type	Model Number	Serial Number	Calibration Date
Quest Sound Level Meter	2900	CDF020012	March 2012
TSI IAQ-Calc™ Meter	8551	51380	November 2012
Konica Minolta Light Meter	TL-1	279029	May 2012
TSI VelociCalc™ Plus Meter	8386A	84110581	March 20212

Please see Appendix H for a complete inventory of calibration certificates that may have been used during this IHSAV.

3.13 Quality Assurance

NES employs, at a minimum, the following methods to help assure quality of field investigations and reports:

- Use of appropriately educated and experienced personnel;
- Documentation of pertinent field and sampling information;
- Continuing education of technical personnel through attendance at training sessions and conferences, and literature review;
- Peer and supervisory review of sampling strategy, field methods, calculations, and reports;
- Strict adherence to method requirements, in particular to NIOSH and OSHA, standard methods, including strict chain-of-custody protocol;

- Use of accredited laboratories, or, in cases where specific accreditation is not available, choice of laboratories of good reputation, having strong QA/QC programs; and,
- Calibration of instruments, including field calibration via manufacturers' recommended procedures and routine (typically annual) off-site calibration of equipment via certified third parties.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Lead Wipe Sampling

Wipe samples for lead dust, were collected from horizontal surfaces in selected representative areas of the Womak (Helena) Armory to determine if housekeeping efforts are successful. The US Department of Housing and Urban Development (HUD), recommends a 40 micrograms per square foot ($\mu g/ft^2$) as a clearance level for floors (includes carpeted and uncarpeted floors). This guideline was established to prevent lead exposure to children in domestic and public facilities. This criterion is applied to any areas of a facility that may be used by the public for nonmilitary functions. These areas include: converted indoor firing ranges; drill halls; locker rooms; class rooms; and fitness areas. Areas of a facility which are not specifically listed are expected to be, "maintained as free as practicable of accumulations of lead," as specified by the Occupational Safety & Health Administration (OSHA) in 29 CFR 1910.1025 (h)(1). The Army National Guard has determined lead concentrations less than 200 $\mu g/ft^2$ is practicable for maintenance type facilities. This criterion is applied to areas such as maintenance bays, and tool rooms, which are not routinely accessible to the general public.

A total of nine Ghost Wipe™ lead samples were collected during the time of the IHSAV. The first five samples were collected from the center and the four corners of the drill floor surface areas.

Additional lead wipe sampling was taken from approximately 25% of the rest of the building. The four additional samples were collected from the following areas: table top in the publication library; table top in the break room; supply room floor; and, the back hallway floor. The analytical results are provided in the table below.

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG/HUD Standard ($\mu g/ft^2$)
103112-Womak-01	Drill Floor	Floor - Northwest corner	11	≤ 40
103112-Womak-02	Drill Floor	Floor - Northeast corner	6.6	≤ 40
103112-Womak-03	Drill Floor	Floor - Center	7.7	≤ 40
103112-Womak-04	Drill Floor	Floor - Southwest corner	27	≤ 40
103112-Womak-05	Drill Floor	Floor - Southeast corner	23	≤ 40
103112-Womak-06	Publication Library	Table top	15	≤ 40
103112-Womak-07	Break Room	Table top	23	≤ 40
103112-Womak-08	Supply Room	Floor	17	≤ 40
103112-Womak-09	Back Hallway	Floor	5.9	≤ 40

4.2 Painted Surface Evaluation

Peeling paint was not observed in the interior or on the exterior of the facility. Therefore no paint chip samples were collected for analysis. The painted surfaces of the facility were in good repair.

4.3 Water Damage and Limited Visual Fungal Growth Evaluation

During the inspection of the facility no water damage was observed on the first floor of the Womak Armory. The second floor was not accessible at the time of the IHSAV and was not inspected.

4.4 Asbestos Documentation

Chris Denning, with the State of Montana's Facilities Management Office (FMO), indicated that he has an asbestos building survey and a written asbestos operations and maintenance plan on site.

The floor tiles in the building are suspected asbestos containing material. The tiles were in good repair and a sample was not able to be collected during the IHSAV.

4.5 Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality

The armory's HVAC systems were all functioning with no visual defects of damage observed. No maintenance plan or inspection documentation could be produced at the time of the IHSAV. We were advised that the FMO maintains all documentation of building HVAC systems at Ft. Harrison.

The average outdoor carbon dioxide concentration at the time of the survey was approximately 401 ppm; therefore, the maximum indoor CO_2 level recommended by the ASHRAE Standard would be 1,101 ppm. Carbon dioxide concentrations throughout the facility were lower than 1,101 ppm. The highest CO_2 concentration measured was 377 ppm in the drill floor.

ASHRAE recommends maintaining temperatures between 68 and 75°F. Relative humidity should be maintained between 30% and 60% to minimize the growth of allergenic or pathogenic organisms. Building air temperatures, ranged from 63.3 to 68°F, and are below ASHRAE's recommended temperature range. Relative humidity measured between 28.6 and 33.2% during the IHSAV. Some of the relative humidity values are below ASHRAE's recommended range, and are a concern for personal comfort rather than allergenic or pathogenic organisms.

Please see Appendix E for IAQ data.

4.6 Illumination Level Monitoring

Illumination levels were measured throughout the facility. The numbers represent the illumination level in foot-candles (FC). In general, the measurements were taken at task surface level, such as on desks or work benches. Measurements not taken on a desk or workbench were taken at waist level.

The illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 and 41 CFR 101-20-107, Energy Conservation Rule, Federal Property Management Regulations. In general, 50 FC is the minimum lighting requirements for the performance of tasks where reading is required, 30 FC is required for work areas where reading is not required, 10 FC is required for non-work areas, such as aisles and corridors, and 5 FC is required for walking surfaces, such as mechanical spaces.

Based on the above criterion, the lighting on the drill floor is inadequate for tasks performed. The illumination levels in the drill hall ranged from 14 to 17 FC. See Appendix E for a table of IAQ results.

4.7 Hazardous Materials Inventory & Material Safety Data Sheets (MSDS)

Inventories of all hazardous materials used by the Armory along with their associated Material Safety Data Sheets (MSDSs) are maintained in a master binder. Inventories and MSDSs are also maintained in separate binders at each satellite storage location. The master chemical inventory and MSDS binder is arranged by shelf location number (SLN), national stock number (NSN) and by manufacturer. Copies of chemical inventories are provided in Appendix D.

4.8 Flammable Storage Cabinets

There are three flammable storage cabinets used for hazardous material storage in the Publication Library of the Womak Armory. These flammable cabinets were inspected and no storage incompatibilities or leaking materials were found. The cabinets were in good condition and all doors were noted to close properly.

4.9 POL Storage

Not applicable to the facility as stated b[redacted]

4.10 Safety Training and Record Keeping

The following training documentation was found at the site:

- Employee Hearing Medicals – Completed June of 2012
- Fire Prevention Plan, Emergency Egress Maps Posted
- Hazardous Material Waste Training
- Spill Prevention and Response & Practice Exercise

4.11 Ventilation Survey

The kitchen has been converted into a break room for use by personnel. Food is not prepared for troops in this area. There were no operating exhaust ventilation systems to evaluate during the IHSAV.

4.12 Sound-Level Measurements

The kitchen appliances are not being used. No sound-level measurements were collected from within the armory during the IHSAV. No activities other than administrative were in progress at the time of the IHSAV.

4.13 Safety Walk-Through

1. Housekeeping throughout the facility was good.
2. Fire extinguishers are strategically located throughout the Womak Armory. All extinguishers were up to date for annual inspections. Action Fire Extinguisher Service is contracted to perform annual fire extinguisher inspections; however, there was no evidence of monthly fire extinguisher inspections.
3. There weren't any emergency eyewash stations on site.
4. Second story building access was not available at the time of the IHSAV.
5. The fire evacuation plan is documented, visual throughout the building and seems to be communicated to all personnel. Egress routes are marked on the fire evacuation plan. There is no fire alarm system currently installed in the Womak Armory.

5.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, Company professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. Company assumes no responsibility for omissions or errors resulting from inaccurate information or data provided by sources outside of Company, or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since Company is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

6.0 PROJECT APPROVAL

This IHSAV was reviewed and approved by:

Non-Responsive

March 27, 2013
Date

Technical Assistance: For technical assistance regarding information found in this report or the performed survey, please contact Non-Responsive of the Southwest Regional Industrial Hygiene Office, 916-804-1707. Contact the State Safety Officer and Occupational Health Office and/or the Regional Industrial Hygienist should any of the operations change, or should the personnel become incapable of following the previous recommendations and subsequent recommendations are needed.

APPENDIX A

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation, A Manual of Recommended Practice

American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices

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

American National Standards Institute, Z358. 1-1998. Emergency Eyewash and Shower Equipment

AR 40-5, Preventative Medicine

AR 40-10, Appendix B – Health Hazard Assessment Program in Support of Army Material Acquisition Decision Process

AR 385-10, The Army Safety Program

Corps of Engineers Guide Specification, CEGS-1585 1, Overhead vehicle tailpipe (and welding fume) Exhaust Systems

DA PAM 40-ERG, Ergonomics

DA PAM 40-501, Hearing Conservation.

National Safety Council, Fundamentals of Industrial Hygiene

NOR 385-10, Army National Guard Safety and Occupational Health Program

TB MED 503, The Army Industrial Hygiene Program

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

TG 141, US Army for Health Promotion and Preventive Medicine (USACHPPM) Industrial Hygiene Air Sampling Guide, Nov. 1997

Title 29, Code of Federal Regulations (CFR), 2011, revision Part 1910, Occupational Safety and Health Standards

APPENDIX B

ASSESSMENT CRITERIA

A. Ventilation Standards

Ventilation rates were compared to recommendations made in 29 CFR 1910, ACGIH Industrial Ventilation Manual, and Corps of Engineers specifications. See Appendix A for reference information.

B. Illumination Standards

Illumination measurements were compared with recommendations made by the Industrial Engineering Society (IES)/American National Standards Institute (ANSI) RP7-1991 Standard and MIL-STD¬1472E.

C. Noise

Noise measurements were taken and compared with OSHA Standard 29 CFR 1910.95 and Department of the Army Pamphlet 40-501.

D. Air Sampling

Personal air sampling was conducted in compliance with applicable NIOSH Analytical Methods. Sampling results were compared to relevant Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (REL).

Occupational Safety and Health Administration (OSHA)

OSHA has established Permissible Exposure Limits (PELs) for workplace toxic and hazardous substances listed in 29 CFR 1910.1000 Table Z-1. Most OSHA PELs are based on 8-hour time weighted averages (TWAs); when sampling periods differ from 8 hours, the result must first be converted to an 8-hour TWA before comparing it to the OSHA PEL. Some OSHA PELs are based on Short Term Exposures Limits (STEL) of 15 minutes of worst case exposure or Ceiling Limits of worst case peak exposures (sampled as a 15 minute exposure if direct-reading methods are not available).

OSHA regulations are legally enforceable. Employers are required to maintain employee exposures below PELs. The best practice is to eliminate hazards and use safer substitutes. Alternatively, engineering and/or administrative (work practice) controls may reduce exposures to acceptable levels. Personal protective equipment should be the solution of last resort, implemented after all other efforts to eliminate the hazard have been exhausted or deemed infeasible. OSHA 29 CFR 1910.134 covers the use of respiratory protection in the work place.

American Conference of Governmental Industrial Hygienists (ACGIH)

Unlike the OSHA PELs, the ACGIH TLVs are not consensus standards; however, TLVs represent a scientific opinion based on a review of existing peer-reviewed scientific literature by committees of experts in public health and related sciences.

Occupational Exposure Limit

In accordance with the Department of the Army (DA) Pamphlet 40-503, Industrial Hygiene Program (DA PAM 40-503), "The DA mandates the use of ACGIH TLVs when they are more stringent than OSHA regulations or when there is no PEL." The DA defines the resulting exposure limit as the Occupational Exposure Limit (OEL).

PHOTO LOG

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Photo 1: Womack Readiness Center (Armory) front sign.

Photo 2: Montana National Guard sign located in front of the facility.

PHOTO LOG

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Photo 3: View of drill floor area.

.74

Hazardous Material Storage Inventory Form

HAZARDOUS MATERIAL STORAGE INVENTORY

Facility Name: ______________ Storage Location: Cabinet #1

SLN[1]	PRODUCT NAME[2]	NSN/Part Number[3]	Manufacturer[4]	MSDSID[5]	QTY[6]	Unit of Issue[7]	Shelflife Code[8]
R05560	White spray Paint (Gloss)	8010-01-380-1773	Skillcraft		51	Ea	
S0118	Desert Tan spray Paint	8010-01-502-5538	Skillcraft		16	Ea	
R05970	White spray paint	7510-00-419-9564	So-Sure		11	Ea	
	Black spray paint	7510-00-469-7910	So-Sure		Ø	Ea	
X00110	Flat White spray paint	8010-01-331-6106	Skillcraft		1	Ea	
R05307	Red spray paint Gloss	8010-01-331-6109	Skillcraft		8	Ea	
B0774	Gray	8010-01-363-3373	Griggs paint of Duncan		1	Ea	
D10744	Flat Olive Drab	8010-01-331-6113	Skillcraft		1	Ea	
W0617	Gloss Olive Drab	8010-01-331-6111	Skillcraft		1	Ea	
B1389	Tape Prime spray Adhesive	8040-01-040-0947	Ralrube Inc.		2	Ea	
N0260-1	Rust Stop	PN 1010008	Ace		1	Ea	
L1-815-K80 [illegible]	Gloss Black	PN 80-881	Kimball Midwest		1	Ea	
R0257	Sunbonnet Lemon Wax	PN 82-1450-02	Butchers		5	Ea	
496010	Oven Cleaner	7930-00-459-2247	DiHoMa Chemical		6	Ea	
R0590	Power Duster	7930-01-398-2473	Skillcraft		3	Ea	
D0303	Starting Fluid	PN 065-516	Spray Products		3	Ea	
W4953	GO-8090 MIL-PRF-2105E	9150-01-035-5392	CSD Inc.		9	Ea	

Date: ___/___/___ Inventory Performed by: ______________ Page 1 of 3

(1) Shelf Location Number.	(5) HMIRS MSDS Serial Number
(2) Product Name	(6) Quantity present at time of Inventory
(3) National Stock Number	(7) Unit of Issue-BT=Bottle, DM=Drum, CN=Can, BX=Box
(4) Manufacturer Name	(8) Shelf Life Extension code or Number of Months to Extend

Hazardous Material Storage Inventory Form

HAZARDOUS MATERIAL STORAGE INVENTORY

Facility Name: ______________________ Storage Location: Cabinet #1

SLN[1]	PRODUCT NAME[2]	NSN/Part Number[3]	Manufacturer[4]	MSDSID[5]	QTY[6]	Unit of Issue[7]	Shelflife Code[8]
4H953	Lubricating Oil MIL-L-46000C	9150-00-687-4241	SDB Consultants Ltd		2	Ea	
SD01	Lubricating Oil MIL-M107C-AM.2	9150-00-292-9689	Castrol Inc.		1	Ea	
4H953	Cleaning comp MIL-PRF-372D	6850-00-224-6658	CSD Inc.		1	Ea	
6255	CLP MIL-PRF-63460D AMD.6	9150-01-053-6688	CSD Inc.		1gal	Ea	
	Glass Cleaner (windshield)	6850-00-926-2275	RITE-KEM Inc.		12	Ea	
8030500000RM16	Mineral Spirits	PN QMS-44	Kleanstrip		1	Ea	
4H205	Brake Free MIL-L-63460D AMD	9150-01-102-1473	Brake-Free Inc		1	Box	
7176	CLP MIL-PRF-63460D AMD.6	9150-01-054-6453	CSD Inc.		1pt	Ea	
	MAPP Gas	00-935-1125	NAPA		2	Ea	
	Glass Cleaner (indoor)	7930-01-326-8110	Skillcraft		2	Ea	
SC03	Lub. oil MIL-L-46000B	9150-00-889-3522	Castrol Inc		3	Ea	
	Optical Lens Cleaner	6850-00-392-9751	Telechem International		3	Box	
7E5	Brake Free MIL-L-63460C	PN 105-130	Brake-Free		1	Ea	
70608	CLP 4oz bottle	9150-01-079-6129	CSD Inc		1	Ea	
ST1746	Gloss White spray paint	PN:20000	Colorplace		1	Ea	
ST1730	Flat White spray paint	PN:20009	Colorplace		1	Ea	
10179	Gloss White spray paint	PN: B-4	Carquest		1	Ea	

Date: ___/___/___ Inventory Performed by: ______________________ Page 2 of 3

(1) Shelf Location Number.	(5) HMIRS MSDS Serial Number
(2) Product Name	(6) Quantity present at time of inventory
(3) National Stock Number	(7) Unit of Issue-BT=Bottle, DM=Drum, CN=Can, BX=Box
(4) Manufacturer Name	(8) Shelf Life Extension code or Number of Months to Extend

Hazardous Material Storage Inventory Form

HAZARDOUS MATERIAL STORAGE INVENTORY

Facility Name: ______________ Storage Location: Cabinet 1

SLN[1]	PRODUCT NAME[2]	NSN/Part Number[3]	Manufacturer[4]	MSDSID[5]	QTY[6]	Unit of Issue[7]	Shelflife Code[8]
[illegible]	Gloss Black	PN: B-1	Carquest		1	Ea	
[illegible]	Flat Black	PN: 20004	Colorplace		1	Ea	
[illegible]	Semi-Flat Black	PN: 1678830	Rust-oleum		1	Ea	

Date: ___/___/___ Inventory Performed by: ______________ Page 3 of 3

(1) Shelf Location Number.	(5) HMIRS MSDS Serial Number
(2) Product Name	(6) Quantity present at time of Inventory
(3) National Stock Number	(7) Unit of Issue-BT=Bottle, DM=Drum, CN=Can, BX=Box
(4) Manufacturer Name	(8) Shelf Life Extension code or Number of Months to Extend

Hazardous Material Storage Inventory Form

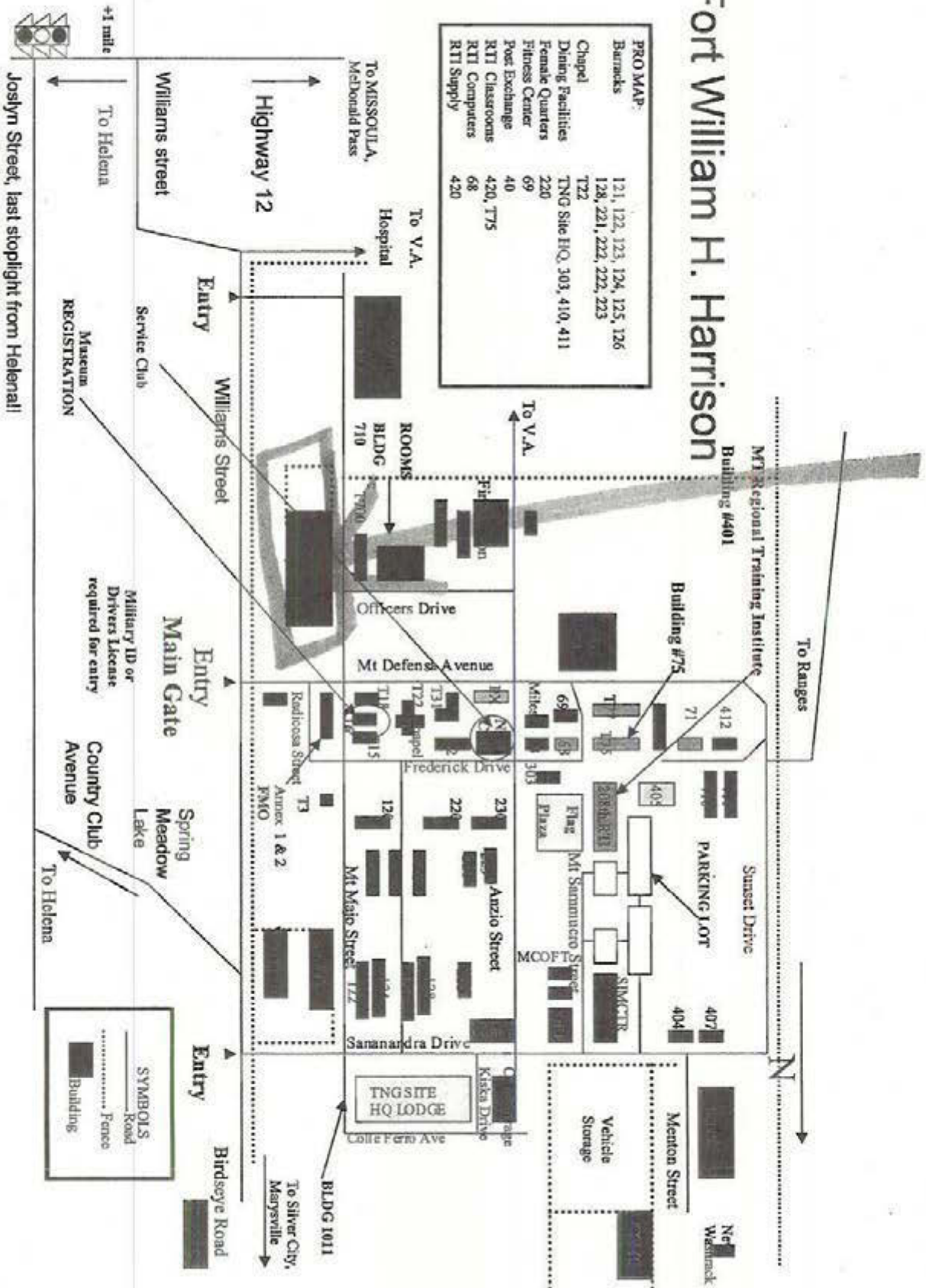
HAZARDOUS MATERIAL STORAGE INVENTORY

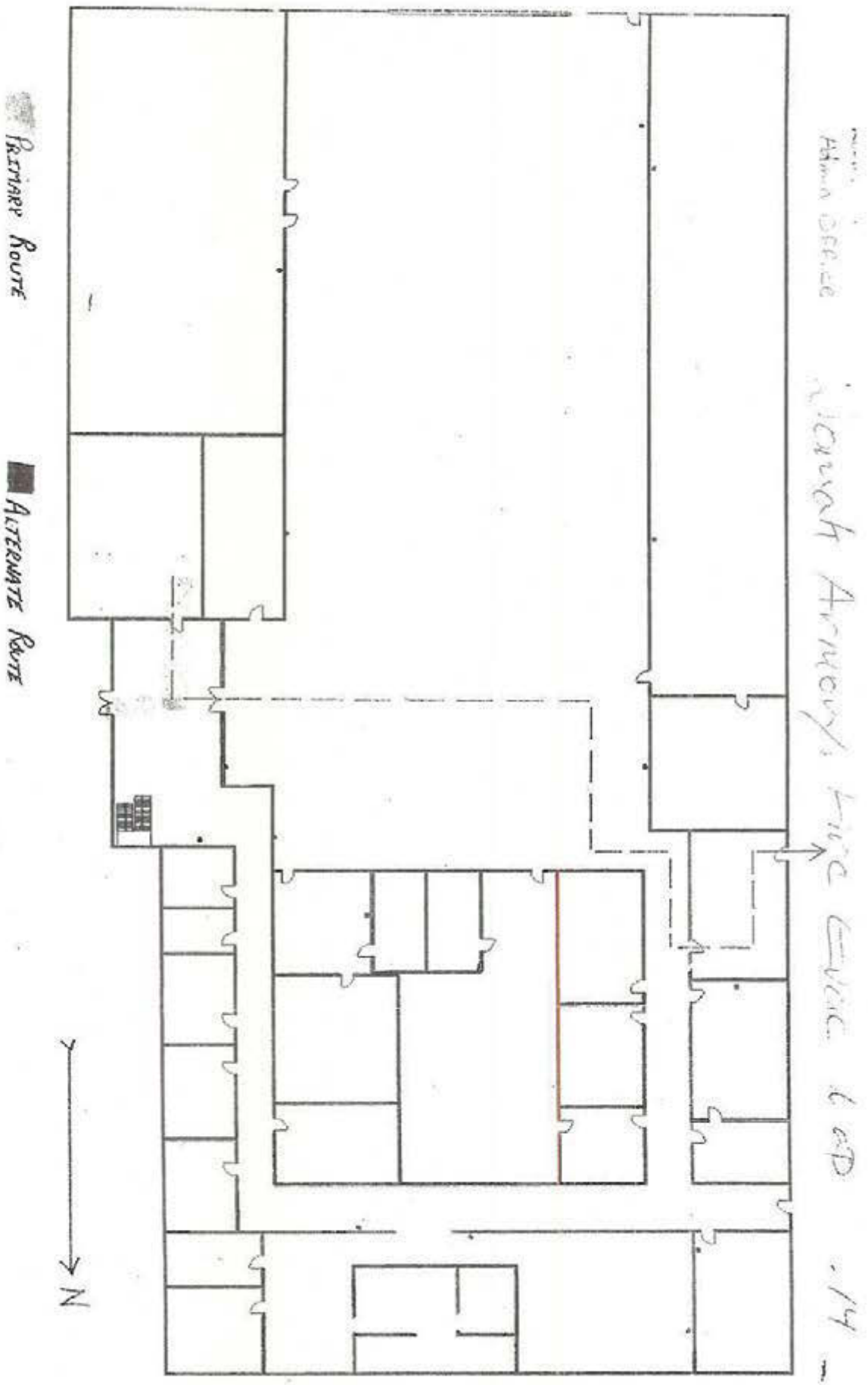
Facility Name: ______________________ Storage Location: Cabinet #3

SLN(1)	PRODUCT NAME(2)	NSN/Part Number(3)	Manufacturer(4)	MSDSID(5)	QTY(6)	Unit of Issue(7)	Shelflife Code(8)
[illegible]	Swing Spout	PN 75-662	Plews/Edelman		2	Ea	
[illegible]	Lub. Oil Hydraulic	9150-01-428-9692	American Lub + Oil Corp		4	Ea	
7L9381/7L3912	Transmission Fluid	9150-01-353-4799	Pitt Penn Oil		2	Bx	
	XNSM Fluid	9150-00-698-2382	Pitt Penn Oil		1	Ea	
9U-005/EH020	Engine Oil SEA OE/HDO-40 (10W)	9150-01-518-9471	F&L Petroleum Prod.		Ø	Ea	
HL16709511/GM58P010/GM003A002	Engine Oil OE/HDO 15-40S	9150-01-421-1427	Safety-Kleen Systems Inc		3	Ea	
HL0598	Eng. Oil SEA 30	9150-01-433-7974	Pitt Penn Oil		1	Ea	
LL02A12809/LL[illegible]	XNSM Fluid	PN 1052619	Conocophillips		11	Ea	
HL-17389232	Eng. Oil OE/HDO-10	9150-01-496-1957	Safety-Kleen Systems		10	Ea	

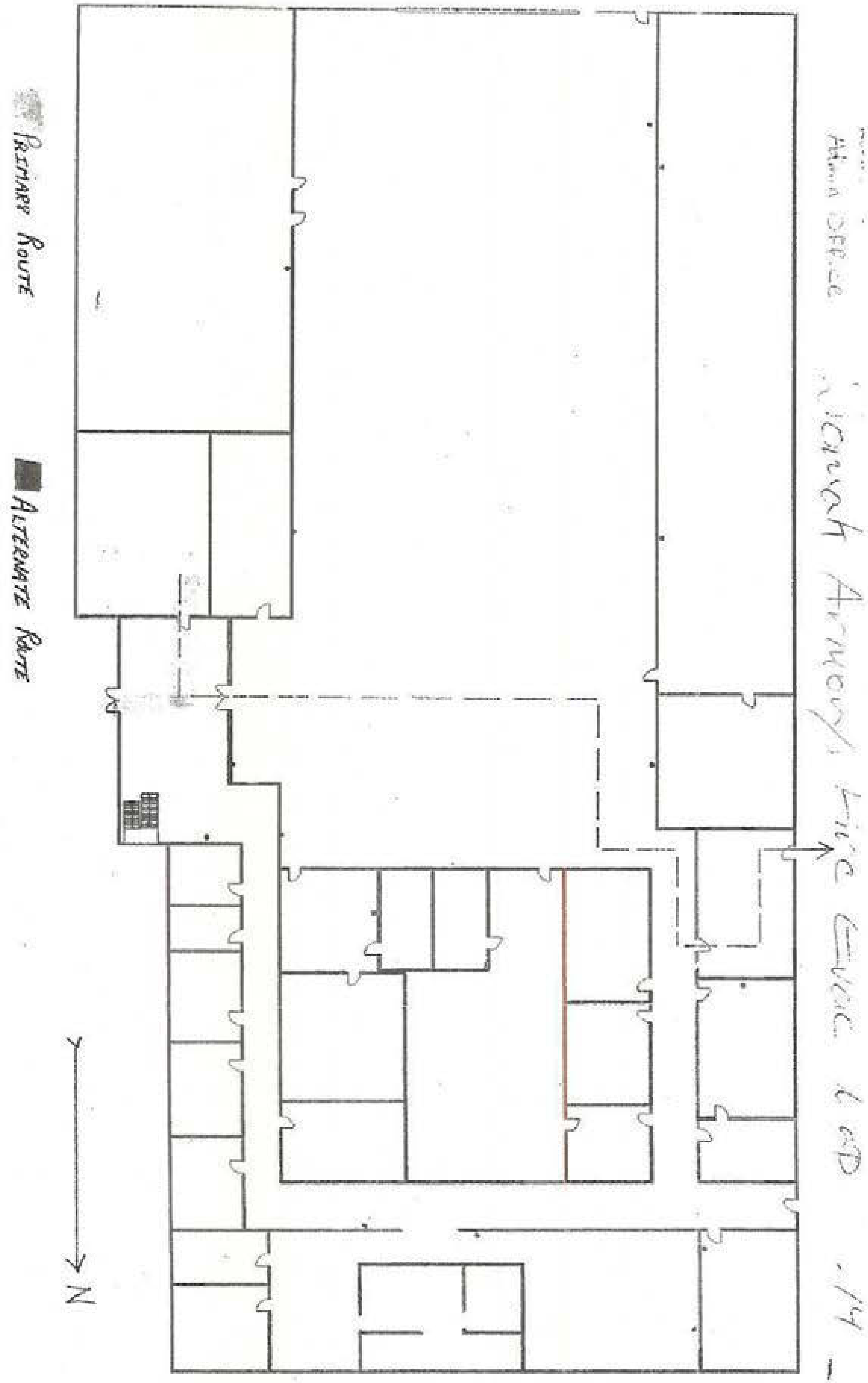
Date: ___/___/___ Inventory Performed by: ______________________ Page 1 of 1

(1) Shelf Location Number.	(5) HMIRS MSDS Serial Number
(2) Product Name	(6) Quantity present at time of Inventory
(3) National Stock Number	(7) Unit of Issue-BT=Bottle, DM=Drum, CN=Can, BX=Box
(4) Manufacturer Name	(8) Shelf Life Extension code or Number of Months to Extend



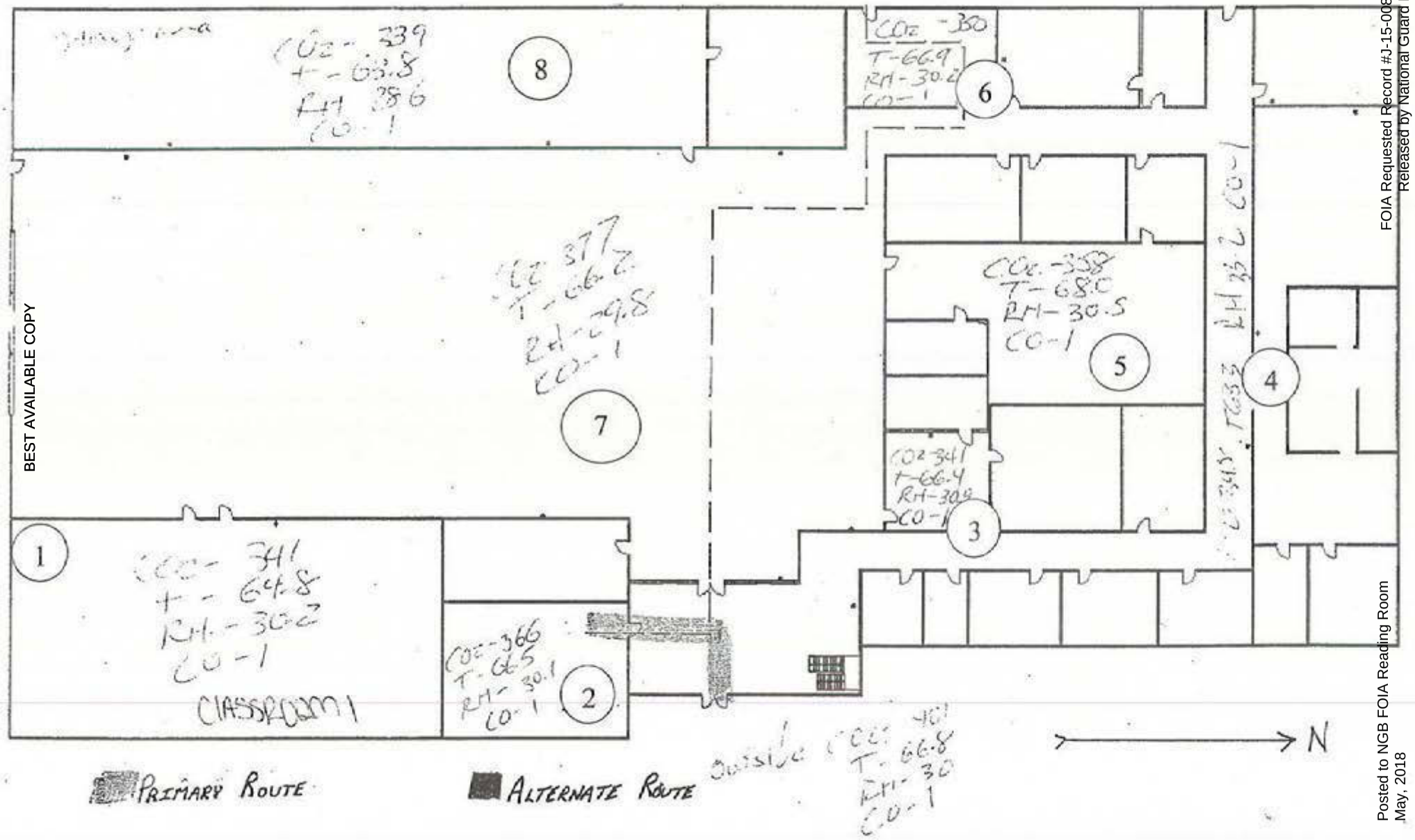


BEST AVAILABLE COPY



IAQ Survey Site Map Key

Womak Armory
Helena, Montana
October 31, 2013



IAQ MEASUREMENTS

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Location*	CO_2 max permissible level 1,101 ppm	Temperature permissible range 68 - 75°F	RH% permissible range 30-60%	CO max permissible range 200 ppm. STEL
Location 1	341	**64.8**	30.2	1.0
Location 2	366	**66.5**	30.1	1.0
Location 3	341	**66.4**	30.9	1.0
Location 4	348	**63.3**	33.2	1.0
Location 5	358	68.0	30.5	1.0
Location 6	350	**66.9**	30.2	1.0
Location 7	377	**66.2**	*29.8*	1.0
Location 8	339	**63.8**	*28.6*	1.0
Outside	401	**66.8**	30.0	1.0

* **Please use Light Survey Site Map Key for identifying corresponding locations.**

CO_2 = Carbon Dioxide
PPM = Parts per million
°F = Degrees Fahrenheit
RH = Relative Humidity
% = Percent
CO = Carbon Monoxide
STEL = Short Term Exposure Limit
Bold = Temperature below recommended range
Italic = RH below recommended range

ILLUMINANCE SURVEY

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Location*	Location	Light – FC	Minimum lighting requirements – FC
Location 1	Center of Classroom	**48**	50
Location 2	Center of Room	65	50
Location 3	Center of Room	60	50
Location 4	Center of Room	35	30
Location 5	South End of East Hallway	44	10
Location 6	Center of Room	48	30
Location 7	Center of Room	59	50
Location 8	Center of North Hallway	70	10
Location 9	Center of Boiler Room	37	30
Location 10	Center of Room	74	50
Location 11	Center of West Hallway	88	10
Location 12	Center of Room	49	30
Location 13	Center of Room	48	30
Location 14	Drill Floor	**14-17**	30

*Please use Lighting Survey Key for site map locations.

*FC= foot candle measurement
Bold = Below minimum lighting requirement

Oct. 31, 2012 013. 41374.74

→ Womack Armory, 163 Rd Helena MT

POC: Readiness NCO, [redacted]

[redacted]

[redacted]

DOC's

✓ Haz Matl. Inventory

✓ EE List - 3 Full time employees

1) Readiness NCO - [redacted]

2) Supply NCO - [redacted]

3) Training NCO - [redacted]

✓ Fire Evac. Floor Plan -

✓ - Posted throughout facility

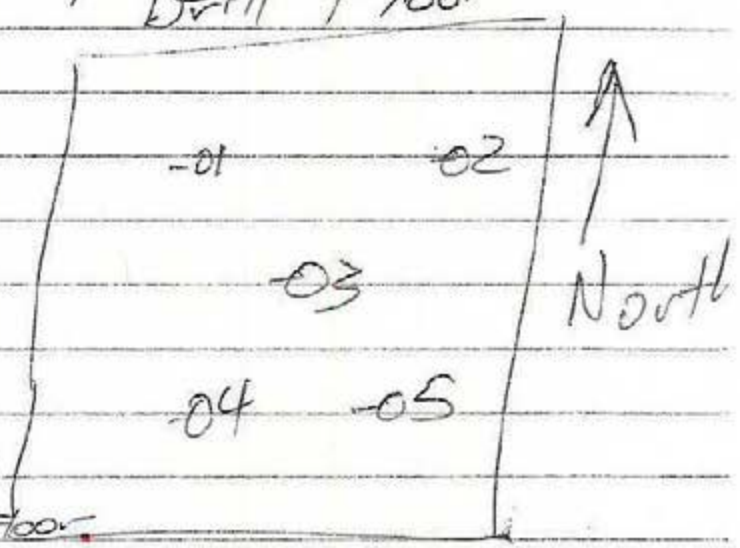
✓ - Rec'd. Evac. Map

IAQ - was o/i normal limits, no reported employee complaints.

10-31-12 Womak Armory, 163RD .74

Lead Wipe Sampling:

Womak
103112-A-01 – Drill Floor
-02 - Drill Floor
-03 - Drill Floor
-04 - Drill Floor
-05 - Drill Floor
-06 – Publications Library Table tops
-07 – Breakroom Table tops
-08 – Former Kitchen 145th Supply Area Floor
-09 – Back hall floor, adj. to Mens Latrine



Kitchen was converted & used as a break room, no food is prepared for the troops in this area

Weapons may be cleared on the drill floor or on a limited basis in the publications library area.

Water Damage – No signs on ground floor area, Second floor area not accessible.

10-31-12 Wausau Armory, 163 KD .74

Painted Surfaces - exterior & interior, no observed peeling paint

Asbestos Survey - ~~Not available~~
~~O+M Plan - Not available~~, Asbestos survey for building is in the O+M Plan
Chris Denny c/ FMO has Asbestos
HVAC System works fine Per [redacted] Non-Responsive

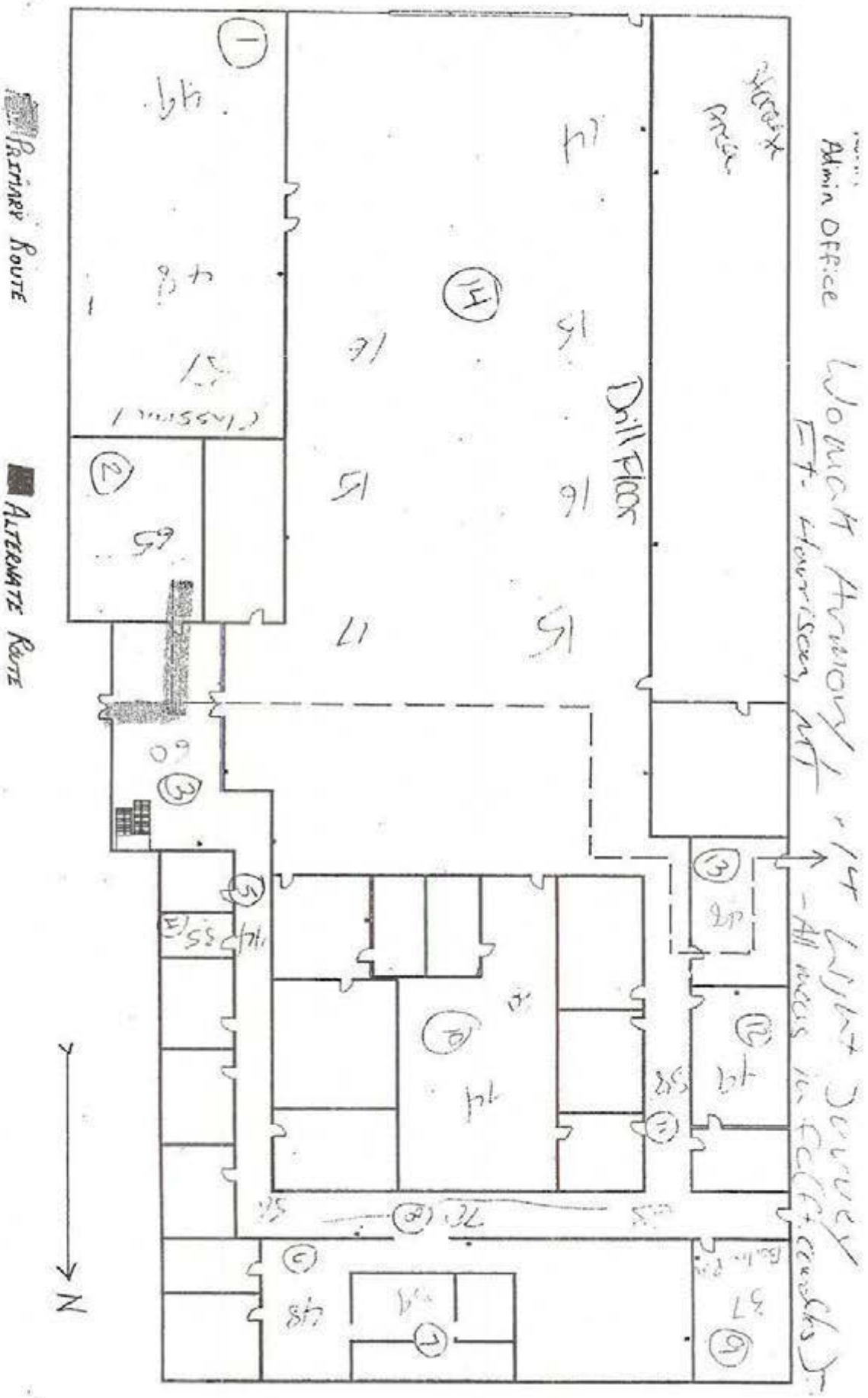
Haz Matl Storage - in Flam lockers located in the Publication Library area - lockers are inventoried & posted on doors, MSDS binders loc. in Publ. Library.

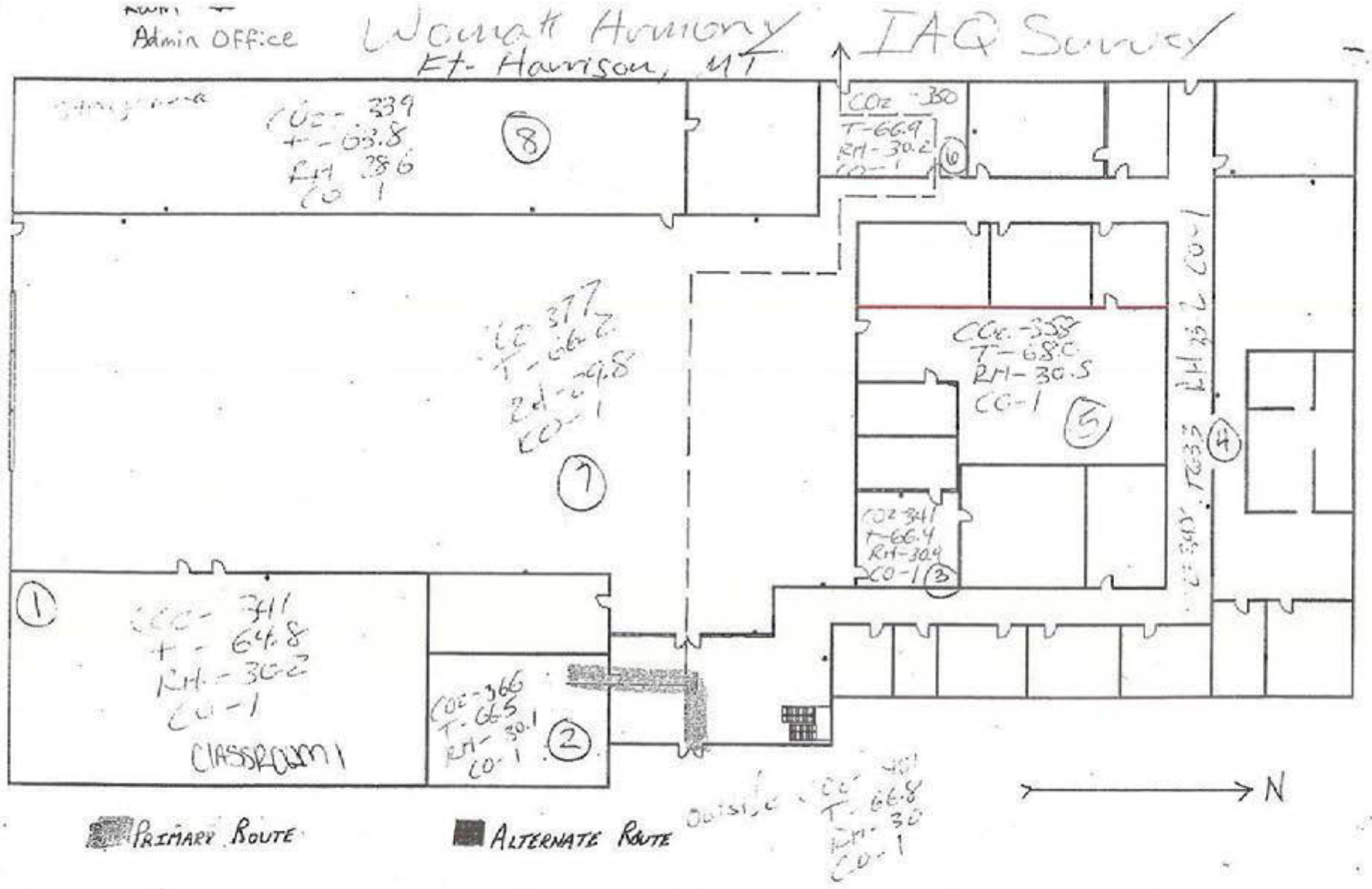
Light Survey - Done

Ventilation Survey - Done

No Haz Log Avail on-site

BEST AVAILABLE COPY





Oct. 31, 2012 013. 41374.74

→ Womack Armory, 163 Rd Helena MT

POC: Readiness NCO

Non-Responsive

Non-Responsive

Doc's

✓ Haz Matl. Inventory

✓ EE List - 3 Full time employees

1) Readiness NCO - Non-Responsive

2) Supply NCO -

3) Training NCO -

✓ Fire Evac. Floor Plan -

✓ - Posted throughout facility

✓ - Rec'd. Evac. Map

IAQ - was o/i normal limits, no reported employee complaints.

Tektronix
Service Solutions

Certificate of Calibration

6209119

Instrument Identification

PO Number: Non-Responsive

Company ID: 607229
INDUSTRIAL HYGIENE SW
Non-Responsive
10510 SUPERFORTRESS AVE SUITE
MATHER, CA 95655

Instrument ID: H225438
Manufacturer: KONICA MINOLTA
Description: ILLUMINANCE METER

Model Number: TL-1
Serial Number: 00279029

Certificate Information

Reason For Service: CALIBRATION
Type of Cal: NORMAL
As Found Condition: IN TOLERANCE
As Left Condition: IN TOLERANCE
Procedure: MINOLTA T-1M ILLUMINANCE METER

Remarks:

Technician: Non-Responsive
Cal Date: 22May2012
Cal Due Date: 22May2013
Interval: 12 MONTHS
Temperature: 24.0 C
Humidity: 43.0 %

Tektronix Service Solutions certifies the performance of this instrument has been verified using equipment of known accuracy which are traceable to National Metrology Institutes (NIST, NPL, PTB) which are traceable to the International System of Units (SI), derived from ratio type measurements, compared to reference materials or recognized consensus standards. The policies and procedures used comply with ANSI/NCSL Z540.1-1994. The quality system is registered to ISO9001.

Approved By: Non-Responsive
Service Representative

Calibration Standards

NIST Traceable#	Inst. ID#	Description	Manufacturer	Model	Cal Date	Date Due
1700230826	17-1001076	6 STEEL RULE	STARETT	C416R-72	10Jun2010	10Jun2012
1700279206	17-2007214	1000W LIGHT BULB	OPTRONIC LABS	OL FEL-P-K	17Feb2012	17Feb2017
1700201473	4083RC	MULTIMETER	FLUKE	8842A	25Jul2011	25Jul2012
1700201472	461952	CURRENT SHUNT	LEEDS & NORTHRUI	4360	09Aug2011	09Aug2012

6120 Hanging Moss Road • Orlando, FL 32807 • Phone: 800-438-8165 • Fax: 407-678-4854

Tektronix
Service Solutions

DATASHEET

Manufacturer: **Minolta**
Model: **TL-1**
Description: **Illuminance Meter**

Workorder #: **602492**
Procedure: **Manufacture**
Date: **22-May-12**

ILLUMINANCE

Range	Nominal Value	As Found	Result	As Left	Result	Min	Max
30fC (resolution: .1 fC)	10.00	10.1	P	10.1	P	9.7	10.3
300 fC (resolution: 1 fC)	100.0	100.1	P	100	P	97	103
3000 fC (resolution: 10 fC)	1000.0	1000.0	P	999	P	970	1030

Note: Measurement Uncertainty = +/- 2.4% of Indication.

TSI - Customer Service report

Thank you for the opportunity to service your instrument.

RMA Number: 800235189

Ship-to party 5180406	Sold-to party 5180406
IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA	IHSW NGB ARMY NATL GUARD 10510 SUPERFORTRESS AVE S MATHER CA USA

Service Information:
Purchase Order CC-Non-Responsive
Purchase Order Date 03/26/2012

Description Calibration of VelociCalc Plus 8386A

Equipment 57602 VELOCICALC Plus Air Velocity Meter
Serial Number 54110581
Material 8386A

Service Description:

Return Reason:
CALIBRATION OVERDUE

Findings:
Unit sent in for clean and calibration. The unit passed as found.

Action:
The unit was cleaned, calibrated, and a complete operational checkout

was performed.

TSI P/N 2300157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	68.4 (20.2)	°F (°C)
RELATIVE HUMIDITY	36	%RH
BAROMETRIC PRESSURE	28.61 (968.8)	inHg (hPa)

MODEL	8386A
SERIAL NUMBER	54110581

☐ AS LEFT ☒ IN TOLERANCE
☒ AS FOUND ☐ OUT OF TOLERANCE

– CALIBRATION VERIFICATION RESULTS –

VELOCITY VERIFICATION — SYSTEM V-106 — *Unit: ft/min (m/s)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	0 (0.00)	0 (0.00)	−3~3 (−0.02~0.02)	7	643 (3.26)	640 (3.25)	623~662 (3.17~3.36)
2	34 (0.17)	35 (0.18)	31~37 (0.16~0.19)	8	995 (5.06)	991 (5.03)	965~1025 (4.90~5.21)
3	64 (0.32)	64 (0.32)	61~67 (0.31~0.34)	9	1468 (7.45)	1476 (7.50)	1423~1512 (7.23~7.68)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2481 (12.60)	2463 (12.51)	2406~2555 (12.22~12.98)
5	160 (0.81)	159 (0.81)	155~164 (0.79~0.84)	11	4501 (22.87)	4440 (22.55)	4366~4636 (22.18~23.55)
6	328 (1.67)	325 (1.65)	318~338 (1.62~1.72)	12	8000 (40.64)	7943 (40.35)	7760~8240 (39.42~41.86)

TEMPERATURE VERIFICATION — SYSTEM T-119 — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (−0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

PRESSURE VERIFICATION — SYSTEM V-106 — *Unit: inH_2O (Pa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	−4.073 (−1014.2)	−4.084 (−1016.9)	−4.119~−4.027 (−1025.6~−1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

HUMIDITY AS FOUND — SYSTEM H-102 — *Unit: %RH*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001358	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Temperature	E001800	01-19-12	07-19-12
Humidity	E003539	02-28-12	08-28-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001644	01-20-12	07-20-12
Pressure	E001360	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
Temperature	E001799	01-19-12	07-19-12

Non-Responsive

March 27, 2012

DATE

s IF: CERT_DEFAULT

TSI P/N 2300157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Condition		
Temperature	69.1 (20.6)	°F (°C)
Relative Humidity	37	%RH
Barometric Pressure	28.61 (968.8)	inHg (hPa)

Model	8386A
Serial Number	54110581

☒ As Left ☐ As Found
☒ In Tolerance ☐ Out of Tolerance

– Calibration Verification Results –

Temperature Verification — System T-119 — *Unit: °F (°C)*

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	32.0 (0.0)	32.1 (0.1)	31.5~32.5 (−0.3~0.3)	2	140.0 (60.0)	139.8 (59.9)	139.5~140.5 (59.7~60.3)

Pressure Verification — System V-106 — *Unit: inH_2O (Pa)*

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	−4.073 (−1014.2)	−4.084 (−1016.9)	−4.119~−4.027 (−1025.6~−1002.8)	3	8.027 (1998.7)	8.074 (2010.4)	7.942~8.112 (1977.5~2020.0)
2	2.032 (506.0)	2.041 (508.2)	2.007~2.057 (499.7~512.3)	4	14.052 (3498.9)	14.114 (3514.4)	13.906~14.198 (3462.7~3535.2)

Humidity Verification — System H-102 — *Unit: %RH*

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	10.0	11.8	7.0~13.0	4	70.0	69.1	67.0~73.0
2	30.0	30.6	27.0~33.0	5	90.0	89.4	87.0~93.0
3	50.0	49.9	47.0~53.0				

Velocity Verification — System V-110 — *Unit: ft/min (m/s)*

#	Standard	Measured	Allowable Range	#	Standard	Measured	Allowable Range
1	0 (0.00)	0 (0.00)	−3~3 (−0.02~0.02)	7	648 (3.29)	646 (3.28)	629~667 (3.19~3.39)
2	35 (0.18)	34 (0.17)	32~38 (0.16~0.19)	8	996 (5.06)	997 (5.06)	966~1025 (4.91~5.21)
3	64 (0.33)	64 (0.32)	61~67 (0.31~0.34)	9	1476 (7.50)	1476 (7.50)	1432~1521 (7.27~7.72)
4	99 (0.50)	99 (0.50)	96~102 (0.49~0.52)	10	2476 (12.58)	2472 (12.56)	2401~2550 (12.20~12.95)
5	160 (0.81)	159 (0.81)	155~165 (0.79~0.84)	11	4498 (22.85)	4548 (23.10)	4363~4633 (22.17~23.54)
6	346 (1.76)	346 (1.76)	335~356 (1.70~1.81)	12	7988 (40.58)	8013 (40.71)	7748~8227 (39.36~41.80)

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2008 and meets the requirements of ISO 10012:2003.

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001800	01-19-12	07-19-12
DC Voltage	E004477	12-15-11	12-15-12
Pressure	E001558	12-12-11	06-12-12
Velocity	E003327	09-19-07	09-19-12
Humidity	E003539	02-28-12	08-28-12
Temperature	E004402	12-08-11	06-08-12
Pressure	E001721	12-13-11	06-13-12
Velocity	E003327	09-19-07	09-19-12

Measurement Variable	System ID	Last Cal.	Cal. Due
Temperature	E001799	01-19-12	07-19-12
Temperature	E001644	01-20-12	07-20-12
Pressure	E001560	12-12-11	06-12-12
Barometric Pressure	E001992	04-08-11	04-08-12
DC Voltage	E001658	06-28-11	12-28-12
Pressure	E001719	12-13-11	06-13-12
Barometric Pressure	E001992	04-08-11	04-08-12

Non-Responsive

March 27, 2012
Date

ID: CERT_DEFAULT

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

QUEST TECHNOLOGIES now part of 3M

Certificate of Calibration

Certificate No: 1095258CDF020012

Submitted By: IHSW-NGB
10510 SUPERFORTRESS AVE.
MATHER, CA 95655

Serial Number:	CDF020012	Date Received:	3/28/2012
Customer ID:		Date Issued:	3/29/2012
Model:	2900 SLM	Valid Until:	3/29/2013
Test Conditions:		Model Conditions:	
Temperature:	18°C to 29°C	As Found:	IN TOLERANCE
Humidity:	20% to 80%	As Left:	IN TOLERANCE

Barometric Pressure: 890 mbar to 1050 mbar

SubAssemblies:

Description:	Serial Number:
MICROPHONE QE 7052 1/2 IN. ELECTRET	25923
TYPE 2 PREAMP	N/A

.ibration Procedure:56V996

Reference Standard(s):

I.D. Number	Device	Last Calibration Date	Calibration Due
ET0000453	FLUKE 45 MULTIMETER	3/2/2011	3/2/2013
ET0000556	B&K ENSEMBLE	4/27/2011	4/27/2012

Measurement Uncertainty:

+/- 2.2% ACOUSTIC (0.19DB)+/- 1.4% VAC +/- 0.1% VDC
Estimated at 95% Confidence Level (k=2)

Calibrated By: [redacted] 3/29/2012

Reviewed/Approved By: [redacted] 3/29/2012

This report certifies that all calibration equipment used in the test is traceable to NIST or other NMI, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of Quest Technologies.

098-393 Rev. B

An ISO 9001 Registered Company
ISO 17025 Accredited Calibration Laboratory

ACCREDITED Calibration Laboratory

3M Occupational Health and
Environmental Safety Division

Quest Technologies
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.questtechnologies.com
262 567 9157 800 245 0779
262 567 4047 Fax

QUEST TECHNOLOGIES
now part of 3M

Certificate of Calibration

Certificate No: 1095258CDF020012

(A) indicates out of tolerance condition

Test Type	Nominal	Tolerance-	Tolerance+	As Found	As Left	Unit
Calibration	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/125Hz	93.9	92.4	95.4	94.4	94.3	dB
A Weighting/250Hz	101.4	99.9	102.9	101.8	101.7	dB
A Weighting/500Hz	106.8	105.3	108.3	107.0	106.9	dB
A Weighting/1kHz	110.0	109.5	110.5	110.1	110.0	dB
A Weighting/2kHz	111.2	109.2	113.2	111.5	111.4	dB
C Weighting/125Hz	109.8	108.3	111.3	110.6	110.5	dB
C Weighting/250Hz	110.0	108.5	111.5	110.7	110.5	dB
C Weighting/500Hz	110.0	108.5	111.5	110.5	110.3	dB
C Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
C Weighting/2kHz	109.8	107.8	111.8	110.2	110.1	dB
Lin Weighting/125Hz	110.0	108.5	111.5	110.8	110.7	dB
Lin Weighting/250Hz	110.0	108.5	111.5	110.7	110.6	dB
Lin Weighting/500Hz	110.0	108.5	111.5	110.5	110.4	dB
Lin Weighting/1kHz	110.0	109.5	110.5	110.2	110.1	dB
Lin Weighting/2kHz	110.0	108.0	112.0	110.4	110.3	dB
Lin/60 - 120/120	120.0	118.8	121.2	120.6	120.5	dB
Lin/60 - 120/110	110.0	109.5	110.5	110.1	110.0	dB
Lin/60 - 120/100	100.0	98.8	101.2	99.9	99.8	dB
Lin/60 - 120/90	90.0	88.8	91.2	90.0	89.9	dB
Lin/40 - 100/90	90.0	88.8	91.2	89.8	89.8	dB
Lin/40 - 100/80	80.0	78.8	81.2	79.9	79.8	dB
Peak/60 - 120/120	123.0	121.5	124.5	122.2	122.0	dB
Peak/60 - 120/110	113.0	111.5	114.5	113.1	112.9	dB
Peak/60 - 120/100	103.0	101.5	104.5	103.0	102.8	dB
Peak/60 - 120/90	93.0	91.5	94.5	93.1	93.0	dB
DC Out/120dB	1.000	0.950	1.050	1.008	1.005	VDC
AC Out/120dB	3.160	2.920	3.430	3.252	3.196	VAC

*** indicates non accredited**

098-393 Rev. B

An ISO 9001 Registered Company
ISO 17025 Accredited Calibration Laboratory

ACCREDITED
Calibration Laboratory
CERT# 3240.01

MICRO PRECISION CALIBRATION
22635 INDUSTRIAL PLACE
GRASS VALLEY CA 95949
(530) 268-1860

Certificate of Calibration

Date: Nov 20, 2012 **Cert No.** 20081202216?5

Customer:
NETWORK ENVIRONMENTAL
1141 SIBLEY STREET
FOLSOM CA 95630

MPC Control #:	CD3921
Asset ID:	1245
Gage Type:	IAQ METER
Manufacturer:	TSI
Model Number:	8551
Size:	N/A
Temp/RH:	68.9°F / 35.8 %

Work Order #:	SAC-7004499
Purchase Order #:	013.IH1374.00
Serial Number:	51380
Department:	N/A
Performed By:	Non-Responsive
Received Condition:	IN TOLERANCE
Returned Condition:	IN TOLERANCE
Cal. Date:	November 19, 2012
Cal. Interval:	12 MONTHS
Cal. Due Date:	November 19, 2013

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CC9185	MULTIFUNCTION PROCESS CALIBRATOR	725	1355148	FLUKE	Nov 5, 2013	20081202111943
J2270	LASER PARTICLE COUNTER	200L-1-115-1	90058781A	MET ONE	Apr 30, 2013	20081201755?2

Procedures Used In this Event

Procedure Name	Description
PARTICLE COUNTER	PARTICLE COUNTERS
971 TEMP/HUMIDITY METER	TEMP/HUMIDITY METER (FLUKE) 971

Calibrating Technician: Non-Responsive

QC Approval: Non-Responsive

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO 17025:2005, ISO 9001:2008, ANSI/NCSL Z540-1, MPC Quality Manual, MPC QSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's acceptable systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.

TABLE 1

LEAD WIPE SAMPLE RESULTS
WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Sample Number	Sample Area	Sample Location	Results ($\mu g/ft^2$)	ARNG/HUD Standard ($\mu g/ft^2$)
103112-Womak-01	Drill Floor	Floor - Northwest corner	11	≤ 40
103112-Womak-02	Drill Floor	Floor - Northeast corner	6.6	≤ 40
103112-Womak-03	Drill Floor	Floor - Center	7.7	≤ 40
103112-Womak-04	Drill Floor	Floor - Southwest corner	27	≤ 40
103112-Womak-05	Drill Floor	Floor - Southeast corner	23	≤ 40
103112-Womak-06	Publication Library	Table top	15	≤ 40
103112-Womak-07	Break Room	Table top	23	≤ 40
103112-Womak-08	Supply Room	Floor	17	≤ 40
103112-Womak-09	Back Hallway	Floor	5.9	≤ 40

$\mu g/ft^2$ = micrograms per square foot
ARNG = Army National Guard
HUD = US Department of Housing and Urban Development

ANALYTICAL REPORT

Report Date: November 13, 2012

Non-Responsive
Network Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1231253
Client Project ID: 013.IH1374.74/Womak Armory, MT
Purchase Order: 13.IH1374.74
Project Manager: Non-Responsive

Analytical Results

Sample ID: 103112-Womak-01	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253001	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	11	11	2.5

Sample ID: 103112-Womak-02	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253002	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	6.6	6.6	2.5

Sample ID: 103112-Womak-03	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253003	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	7.7	7.7	2.5

Sample ID: 103112-Womak-04	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253004	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	27	27	2.5

ANALYTICAL REPORT

Report Date: November 13, 2012

Non-Responsive
Non-Responsive Environmental Systems, Inc.
1141 Sibley Street
Folsom, CA 95630

Phone: (916) 353-2370 x 20
Fax: (916) 353-2375
Non-Responsive

Workorder: 34-1231253
Client Project ID: 013.IH1374.74/Womak Armory, MT
Purchase Order: 13.IH1374.74
Project Manager: Non-Responsive

Analytical Results

Sample ID: 103112-Womak-01	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253001	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	11	11	2.5

Sample ID: 103112-Womak-02	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253002	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	6.6	6.6	2.5

Sample ID: 103112-Womak-03	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253003	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	7.7	7.7	2.5

Sample ID: 103112-Womak-04	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253004	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	27	27	2.5

ANALYTICAL REPORT

Workorder: 34-1231253
Client Project ID: 013.IH1374.74/Womak Armory, MT
Purchase Order: 13.IH1374.74
Project Manager: [redacted]

Analytical Results

Sample ID: 103112-Womak-05	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253005	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	23	23	2.5

Sample ID: 103112-Womak-06	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253006	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	15	15	2.5

Sample ID: 103112-Womak-07	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253007	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	23	23	2.5

Sample ID: 103112-Womak-08	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253008	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	17	17	2.5

Sample ID: 103112-Womak-09	Media: Ghost Wipe	Collected: 10/31/2012
Lab ID: 1231253009	Sampling Location: Womak Armory, MT	Received: 11/07/2012
Method: NIOSH 7300 Mod.	Sampling Parameter: Area 1 ft²	Prepared: 11/09/2012 Analyzed: 11/12/2012

Analyte	ug/sample	ug/ft²	RL (ug/sample)
Lead	5.9	5.9	2.5

Report Authorization

Method	Analyst	Peer Review
NIOSH 7300 Mod.	[redacted]	[redacted]

EMPLOYEE LIST

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

Job Title	Rank	Last Name, First Name	Social Security # (Last 4 Digits)
Readiness NCO	Non-Responsive	Non-Responsive	Non-Responsive
Supply NCO			
Training NCO			

Industrial Hygiene, Southwest
Violation Inventory Log
Womak Armory - Helena MT

CONTROL NUMBER CLOSED [x]	HAZARD DESCRIPTION	SITE	RAC	HAZARD COUNTERMEASURE	SUSPENSE DATE	ACTION OIC/NCOIC	Estimated Cost(s)	DATE CORRECTED	REFERENCES
MTWA-103112-4.4	No asbestos documentation located at the facility.	Armory	4	Maintain copies of the Asbestos Operations & Maintenance Plan at the Armory.					29 CFR 1910.1001
MTWA-103112-4.4	Floor tiles are suspect asbestos containing materials.	Armory	4	Consult with a Montana state-certified asbestos inspector to determine if the floor tiles contain asbestos.					29 CFR 1910.1001(j)(8)
MTWA-103112-4.5	Temperatures below ASHRAE recommendations.	Armory	4	Maintain temperatures within ASHRAE recommended values.					ASHRAE Standard 55-1992
MTWA-103112-4.6	Lighting did not provide the required illumination.	Armory	4	Replace the burnt out bulbs, increase the number of fixtures or number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.					41 CFR 101-20-107
MTWA-103112-4.13.2	Overdue monthly inspections of fire extinguishers	Armory	3	Inspect all fire extinguishers monthly and document inspection date, and inspectors signature on the inspection tag.					29 CFR 1910.157 (e)(2)
MTWA-103112-4.13.3	No emergency eyewash stations.	Armory	4	Install suitable facilities for for quick drenching or flushing of the eyes and body within the work area.					29 CFR 1910.151 (c)
MTWA-103112-4.13.5	No fire alarm system.	Armory	5	Install an employee alarm system that will provide a warning for necessary emergency action, or for reaction time for a safe escape of employees from the workplace or the immediate work area.					1910.165(b)(1)

APPENDIX – N: CONCLUSIONS AND RECOMMENDATIONS

WOMAK ARMORY
HELENA, MONTANA
OCTOBER 31, 2012

N.1 **Introduction** – This section provides conclusions and recommendations for the findings and observations described in the previous sections of the IHSAV report for Womak Armory. The paragraphs are numbered to correspond to the sections where first noted. (i.e., N.4.2 describes the following: the N represents Conclusions & Recommendations and the 4.2 corresponds back to Section 4 – Observations; Item 2 – Painted Surface Evaluation).

N4.4 **Asbestos Documentation** – Locate and maintain copies of the Asbestos Survey and Assessment and the Operations and Maintenance Program at the Armory. Consult with a Montana state-certified asbestos inspector to determine if the floor tiles contain asbestos.

N4.5 **Heating, Ventilation, and Air-Conditioning Systems and Indoor Air Quality** – Maintain temperatures throughout the facility between 68 and 75°F in accordance with ASHRAE recommendations.

N4.6 **Illumination Level Monitoring** – Replace the burnt out bulbs, increase the number of fixtures or the number of bulbs per fixture, change to a more effective lighting type, or paint the walls a more reflective color.

N4.13.2 **Safety Walk-Through** – Inspect all fire extinguishers monthly and document inspection date, and inspector's signature on the inspection tag.

N4.13.3 **Safety Walk-Through** – Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

N4.13.4 **Safety Walk-Through** – Conduct an Industrial Hygiene Site Assistance Visit (IHSAV) of the Womak Armory's second floor, once access becomes available.

N4.13.5 **Safety Walk-Through** – Install an employee alarm system that will provide a warning for necessary emergency action, or for reaction time for a safe escape of employees from the workplace or the immediate work area.

ARMORY

CLEANUP & FOLLOW-UP HOUSEKEEPING RECOMMENDATIONS

Materials Needed:

1. Cloth Mop head (s) & Mop head holder(s) with handle.
2. Mop bucket (s) with wringer.
3. Clean cotton rags and sponges.
4. Disposable gloves
5. Large barrel (55 gal.) to store wastewater in after changing out of dirty scrub water. Waste water containers.
6. Disposable overshoes or rubber boots. Personnel conducting cleaning operations should not take clothes, boots, etc., home for laundering.
7. HEPA vacuum
8. Six (6) mill plastic bags to dispose of waste.
9. Detergent with surfactant, e.g., Spic-N-Span, Mr. Clean, etc.

Disposal of Waste Water and Cleaning Materials:

1. *NOTE*: Consult with Local Army National Guard Environmental Office prior to taking any collection, disposal or wiping activities commence. Each state and territory may have additional regulatory guidance on collection, storage and disposal of wastewater.

2. Mop heads should be disposed of after initial cleanup, unless otherwise advised by Environmental office personnel. Note: thorough cleaning of mop heads may be sufficient enough to reuse on future Armory cleanups but check with local Environmental Office.

3. Disposable gloves should be treated as hazardous waste.

4. Soiled cotton rags should be treated as hazardous waste.

5. Wash water contaminated with Lead can be collected and allowed to slowly evaporate leaving Lead deposits/sludge that may be collected in plastic containers, placed in metal drums, and stored for future delivery to an authorized hazardous waste disposal site.

a. Drums shall be properly labeled to identify contents In-Accordance With (IAW) Federal, State and local regulatory guidance.
b. Disposal of containerized waste shall be coordinated IAW State hazardous waste program requirements.
c. The Environmental Office shall coordinate removal and disposal of all containerized hazardous waste through established waste streams.

Post-Cleanup Precautionary Measures:

1. Thoroughly wash hands with soap and water.
2. Rinse off rubber boots with soap and water, capturing wastewater for collection into established waste stream. If personnel choose to use over shoes for protection, dispose of overshoes into waste stream. NOTE: This recommendation is for initial clean up activities and PPE requirements may be reduced after it has been determined non-hazardous levels have been achieved.
3. Wash BDU's or personal clothing separately from children's clothes.

NOTE: No eating, drinking or cosmetics allowed during cleanup procedures (these may be allowed after washing of hands/face and done outside of cleanup area)

NOTE: Avoid blowing, shaking or like actions which could potentially disperses lead dust. Dry sweeping, dusting, wiping or blowing with compressed air shall not be permitted

Initial Armory Cleanup:

1. Use a vacuum cleaner equipped with a HEPA exhaust filter. HEPA vacuum all surfaces in the room (ceiling, walls trim, and floors). Start with the ceiling and work down, moving toward the entry door. **Completely clean each room before moving on**.

2. Prepare water and detergent for the wipe down phase, according to manufactures recommendations.

3. Wet wipe, with cotton rags or sponge, any horizontal, diagonal or vertical surfaces up six (6) feet from floor surfaces using hot water and "Spic-n-Span" or an equivalent product.

    a. Rinse out cleaning cloths thoroughly and frequently.
    b. Change out cleaning water as necessary.

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

4. Now prepare water and detergent (e.g. Spic N Span, Mr. Clean, Pine Sol) for the mopping phase, according to manufactures recommendations, which should be found on the products label for general clean up.

    a. Change out water frequently (when water appears dirty)
    b. Rinse out mop heads frequently to prevent contamination of dirty water.

5. Cover entire drill floor surface with above prescribed water and detergent.

6. Final rinse should be with clean water only - -after mop heads have been cleaned.

Recommended Follow-up Housekeeping Practices *after Clearance sampling of cleaned area is performed by certified personnel:*

1. Floor cleaning and dusting should be accomplished using the wet method described in Initial Armory Cleanup SOP.

Note: Only exception to these wet cleaning procedures would be the use of a chemically treated dust floor mop. This can be used for follow-up armory cleaning by sweeping of large particles of dirt and paper.

    a. Pre-treated (chemically treated) dust floor mop will limit dust particles from being disbursed into the surround atmosphere.

b. If treated dust mop is used - -Do Not Shake Mop head - - have mop head laundered after use. **Always keep used dust mop heads in sealed double plastic bags when stored at armory/facility**. Shaking of mop head could release unwanted contaminants into surrounding atmosphere.

2. Frequency of Cleanup- Armories will vary, according to usage and how often they should be cleaned. The following general cleaning schedule is provided:

   a. Only full-time technicians and traditional soldiers using facility during the month. (***Cleaned Monthly***)

   b. Occasional activities taking place during the month, e.g., 1-2 classes or volleyball games, etc. (***Cleaned 2x's Monthly***)

   c. Used regularly by soldiers or outside agencies/personnel. (***Cleaned Regularly - -at least Weekly***)

NOTE: Armories with adjoining Indoor Firing Ranges (IFR) should be cleaned more than weekly, again depending on use of Armory and IFR.

NOTE: Clearance sampling/testing is to be accomplished by certified personnel after these cleanup procedures are followed. If the area is an average Armory, occupied by adults only, for which you are cleaning and **is not a Converted IFR space**, you may continue to utilize the Armory space before the officials re-test this space. Please notify your Safety and/or Occupational Health personnel of the completion of this cleaning regime and they will notify the proper officials of the sampling/testing requirements needed.

If work is contracted out, a third party should do the clearance sampling.

Young children and females who are pregnant, there should be posted signs on all facilities, warning of the potential danger of exposure to lead dust.

Womack Armory
163RD

Army National Guard Armory Survey
(To Be Included In Report)

.74

Five **lead wipe** samples collected from drill floor (take samples from dusty horizontal floor surfaces)	Done
Are any **weapons cleaned** in the facility, if yes where are they cleaned?	Yes, drill floor & publication Library
Additional lead **wipe** samples taken from 25% of the rest of the building - -**(on floor areas only)**	Done
Is there **a converted indoor firing range**? If so collect additional wipe samples IAW the SOW.	No
Is there any peeling **paint**? Take bulk sample if able.	None
Are there any signs of water damage or **mold**?	None
Any suspected **ACM**? Where and what condition is it in. Bulk sample if able.	Yes, Floors, Bldg dedicated in 1971, No Survey avail onsite
Quality of housekeeping	Good
HVAC maintenance plan in place?	No Plan avail onsite w/FMO
Overall condition of HVAC system	Good
Obtained **CO2, Temp, RH** monitoring	Done
HAZMAT inventory on hand (make copies for the report), **MSDS** available for all materials.	Recd-Inventory
HAZMAT storage, Condition of lockers, if outside storage building is used is it ventilated and does it meet OSHA standards.	Lockers stored in publication Library

Fire alarm in working condition - -not usually in place in older armories	None
Fire extinguishers in place and properly identified and mounted	Yes
Evidence of **monthly fire extinguisher inspections**	None
Annual fire extinguisher inspections tags current	Yes, Action Fire extinguisher Service
Are **eye wash stations** available in areas where hazardous materials are used and are they inspected weekly (inspections must be documented)	No Eye wash onsite
Egress routes accessible and properly marked - -noted on Fire Evacuation Plan	posted throughout Armory + Noted on Fire Evac Plan
Training programs in place; Hazcom, ~~Respiratory Protection, Confined Spaces,~~ Hearing conservation, PPE (if applicable)	Hazcom – Not avail., written prog. Hearing Medicals – June of 2012
Any Photo labs	None
Any hazardous **noise** sources	None
Light levels checked throughout building	Done
Breaker panels properly labeled with no exposed wiring	Yes
Check **building occupancy** 1. How many military personnel, how many civilian personnel 2. What types of units occupy facility, i.e. Administrative, Maintenance, etc.?	3 Full Time Military Personnel 163RD Combined Arms Battalion & 145th Forward Support Co.
Any **civilian activities** in armory (cub scouts, classes, day care, parties etc)	Rental to Clubs, occasionally
Obtain two **lead air samples**	On IHSW Request Only None

Evaluate Kitchen Stove Hood Flow if Present IAW NFPA Standard 96.	Kitchen converted to a breakroom
Collect Source Noise Measurements of Kitchen Appliances and Document Using DD 2214	None
Conduct a safety walkthrough of entire facility document any safety deficiencies found.	Done
Take photos of outside of **building**, all **sample points** and any **pertinent hazards** or concerns.	Done
Name of Armory, **POC, phone #, address** and **organizations** in Armory **(Add Checklist to Report)**	Non-Responsive

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Breathing Zone samples collected above Occupational Exposure Limit (OEL), with no controls	953-01-04				0
Breathing Zone samples collected above Occupational Exposure Limit (OEL)	953-01-04				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA with no controls	953-01-05				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA	953-01-05				0
Number of Noise Sound Level samples collected >= 140 dBP with no controls	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP	953-01-06				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled, that are recommended for control	953-01-07				0
Number of Noise Sound Level samples collected >= 140 dBP not controlled	953-01-07				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled, that are recommended for control	953-01-08				0
Number of Breathing Zone samples collected above Occupational Exposure Limit (OEL) not controlled	953-01-08				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled, that are recommended for control	953-01-09				0
Number of Personal Noise Dosimetry samples collected >= 85 dBA not controlled	953-01-09				0
Total number of DOEHRS-IH shops coded as Priority 1 which have at least one task performed in the past 12 months	953-02-10	IHT			n/a
Total number of DOEHRS-IH shops coded as Priority 1	953-02-10	IHT			n/a
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-11	IHT			n/a
Number of buildings requiring a basic industrial hygiene characterization within the last 12 months	953-02-11	IHT			n/a
Number of buildings for which all processes requiring a basic industrial hygiene characterization have received one within the last 12 months	953-02-12	IHT			n/a
Number of buildings requiring an industrial hygiene exposure assessment within the last 12 months	953-02-12	IHT			n/a
Number of processes that were assessed for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			n/a
Number of processes that require an assessment for potential inhalation exposure to employees during this IH Visit	953-02-13	IHT			n/a

FY 11 Installation Status Report (ISR) Services Documentation	Intellicode	Q1	Q2	Q3	Q4 Annual
Number of processes that were assessed for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			n/a
Number of processes that require an assessment for potential inhalation exposure to employees within the last 12 months.	953-02-14	IHT			n/a
Number of personnel who were reassessed by industrial hygiene within the last 12 months.	953-02-15	IHT			n/a
Number of personnel who required reassessment by industrial hygiene within the last 12 months.	953-02-15	IHT			n/a
Number of processes which have been measured for potential hazardous noise levels with a sound level meter within the last 12 months.	953-02-16	IHT			n/a
Number of processes which require measurement for potential hazardous noise levels using a sound level meter within the last 12 months.	953-02-16	IHT			n/a
Number of personnel for which noise dosimetry was collected during their complete work shift to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			n/a
Number of personnel who require work shift dosimetry to quantify their daily noise exposures within the last 12 months.	953-02-17	IHT			n/a
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which were inspected and measured for airflow rates	953-02-18				0
Number of ventilation systems (e.g., spray paint booths, tailpipe exhausts, etc.) which require inspection and measurement of airflow rates	953-02-18				0
Number of ventilation systems which require corrective action based on deficiencies identified during an IH survey	953-02-19				0
Number of ventilation systems which were evaluated by an IH	953-02-19				0
Number of design review packages evaluated and addressed by an IH with recommendations applicable to occupational health concerns	953-02-20	IHT			n/a
Number of design review packages which required IH evaluation and recommendations applicable to occupational health concerns	953-02-20	IHT			n/a