AH Environmental Consultants

Hazardous Material Inspection Report

Building 1001

Marine Corps Base Quantico, VA

Prepared For:

NAVFAC Naval Facilities Engineering Command NAVFAC WASHINGTON

Wiley|Wilson®

September 2015

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HAZARDOUS MATERIAL INSPECTION REPORT

Repair Building 1001 and Interior Improvements for DAPS

Marine Corps Base Quantico, VA

Prepared For:

NAVFAC Washington

and

Wiley|Wilson

AH Project Number: 122-83

N40080-15-D-0452,

Project QU1402M

September 2015

AH Environmental Consultants, Inc.
11837 Rock Landing Drive, Suite 300
Newport News, VA 23606
757.873.4959
solutions@ahenv.com

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EXECUTIVE SUMMARY

AH Environmental Consultants (AH) has prepared this Hazardous Material Inspection Report for the use of the Naval Facility Engineering Command (NAVFAC) and Wiley|Wilson Engineers to provide information concerning asbestos building materials, lead containing paints, or other recognized hazardous materials (HAZMAT) identified at Marine Corps Base Quantico, VA, Building #1001, that may be impacted by work associated with the planned demolition of the building. Work was conducted under contract N40080-15-D-0452.

This site inspection and assessment was conducted by AH staff and involved sampling of suspect asbestos containing materials (ACM), testing of paint/coatings, investigation for mercury and polychlorinated biphenyls (PCBs), and other known potentially hazardous materials (HAZMAT) anticipated to be impacted by the proposed demolition.

The primary HAZMAT concern for planned work activities appears to asbestos containing material present on the exterior walls. Additionally, lead paint and lead dust contamination appear to be present. The precise means and methods to handle the identified hazardous materials are covered under project specifications, separate from this document.

Inspection at the facility was conducted 24-25 August 2015 which included identification, sampling and analysis, evaluation of paint/ coatings and suspect ACM, and inventory of other potentially hazardous materials that could impact planned work actions.

Asbestos inspection information is provided in Section 1. Lead inspection information is provided in Section 2. Additional HAZMAT issues are contained in Section 3.

Site drawings indicating sample locations and information concerning the location of HAZMAT are provided in Appendix A, a reference photo-log is included in Appendix B, and the laboratory and XRF reports of analysis for all samples collected are provided in Appendix C.

1. ASBESTOS

There is a well-known link between the inhalation of asbestos fibers and various diseases such as asbestosis, mesothelioma, lung and other cancers. As a result, the Asbestos Hazard Emergency Response Act (AHERA, 40 CFR Part 763) was enacted. An AHERA inspection requires an accredited inspector to visually inspect and assess the condition of all known or assumed friable asbestos-containing building materials (ACM); to visually inspect non-friable ACM and touch it to determine friability; and to identify homogeneous areas of friable materials. The National Emission Standards for Hazardous Air Pollutants (NESHAPs) require thorough inspections for asbestos in structures before renovation or demolition.

The intent of the inspection was to provide sufficient information to involved parties that may impact the renovations of project buildings and to prepare adequate abatement specifications for such. Bulk sampling of suspect ACM was performed. Samples were analyzed utilizing Polarized Light Microscopy (PLM) with dispersion staining (EPA method 600/M4/82/020). For confirmation, two floor tile samples were analyzed by Transmission Electron Microscopy (TEM), NIOSH method 7402. The accredited laboratory reports of analysis are provided in Appendix C.

The sample identification system of this report consists of a three-unit sample identification number. The first set of digits indicates the building designation, the next set indicates the homogenous material grouping for the building, and the last two numbers indicate the consecutive sample number as collected in the field. For example, 44-01-03 would indicate that the sample was collected from Building 44, homogenous area one, and was the third sample collected [of that homogenous material] during the inspection. These sample numbers match the chain-of-custody, lab reports of analysis, and sample identification numbers on the drawings (Appendix A). No historical sample data was provided or referenced for this project.

Sample result summaries are provided in table format. Note that NAD in the % asbestos column indicates that there was *No Asbestos Detected* in the sample. Some sample results in this column may be displayed in this report with a slash between two numbers, (#/#). The

first number represents the first material listed under the material location/description and the second number represents the second material listed. Sampled materials that contain asbestos are highlighted in **bold red** and underlined.

The samples are also grouped into homogeneous material/area groups. Homogeneous materials are suspect materials that are uniform by color, texture, construction/application date and general appearance. Photos of ACM are included in the reference photo-log (Appendix B) for assistance in later material identification.

Sample summary tables also distinguish whether materials are considered friable (able to be crushed or pulverized by hand pressure) or non-friable (not able to be crushed or pulverized by hand pressure) for the purpose of determining the ACM category. The collected samples were at least 1 cubic centimeter and were placed in a sealed container at the time of collection. Appropriate precautions were taken to prevent exposure to those present in or around the facility during the collection of samples, including wet collection methods.

As previously mentioned, the asbestos NESHAP (40 CFR 61, subpart M) requires a thorough inspection for asbestos in structures before the renovation or demolition of those structures. Materials determined to be ACM (containing greater than 1% asbestos) must also be categorized for removal and demolition purposes. The various categories for ACM are shown in the following chart.

ACM CATEGORY (NESHAP)

Categories	Typical Material Type	Guidance for RACM
Friable ACM	Pipe insulation fittings	Able to crush with hand pressure
Cat I, Non-friable	Floor coverings, Roofing products, Gaskets	Non-friable materials that have become friable, or Non-friable material that is or will be damaged due to sanding, grinding, cutting, or abrading
Cat II, Non-friable	Cement siding (Transite), Significantly damaged tile	Non-friable material that has a high probability of becoming or has become friable by forces expected to act on the material in the course of renovation or demolition

Any ACM that is Friable, or Category I and II Non-friable that meets the qualifications to be considered a Regulated Asbestos-Containing Material (RACM), must be removed prior to

demolition or disturbance that would break up, dislodge, or similarly destroy the material or preclude access to the material for subsequent removal. This includes gasket materials.

The findings of the asbestos inspection are detailed in the following section, including recommendations for action.

1.1 ASBESTOS INSPECTION

A visual survey was performed of accessible suspect ACM of Building 1001. The inspection was inclusive of the west end printing areas and offices, second floor warehousing operations, and included roofing system and exterior. The central health and safety offices, and east end operations of the first floor were not inspected as not impacted by proposed work activity. The building appeared to be constructed circa 1919 and was believed originally a train depot. Renovations and upgrades have occurred to the interior but most portions of the structure were considered substantially original.

The asbestos survey identified thirteen (13) unique homogenous suspect materials. The homogenous materials identified include:

- Textured wall coatings (exterior),
- Roofing sealant,
- Ceiling panel material,
- Asphalt roofing and sealant,
- 12" White tile and adhesive,
- Drywall and joint compound,
- Carpet adhesive,
- Floor leveling compound,
- Rope packing material, and
- Window glazing material

Bulk sampling was performed on the suspect ACM found in the survey area. Thirty-one (31) samples were collected for asbestos analysis which included Thirty-seven (37) individual layers for analysis of collected samples. A summary of sample results are provided in Table 1-1 (and indicate general defined areas).

Table 1-1
Asbestos Summary 1001

Sample #	Description	Friable ?	Asbestos %
1001-01-01	**Textured wall coating, exterior north**	**NO**	**5**
1001-01-02	**Textured wall coating, exterior northeast**	**NO**	**3**
1001-01-03	**Textured wall coating, exterior southeast**	**NO**	**3**
1001-01-04	**Textured wall coating, exterior south**	**NO**	**3**
1001-01-05	**Textured wall coating, exterior south**	**NO**	**3**
1001-01-06	**Textured wall coating, exterior southwest**	**NO**	**5**
1001-01-07	**Textured wall coating, exterior northwest**	**NO**	**2**
1001-01-08	Textured wall coating, interior south men room	N/A	NAD
1001-02-01	Roofing sealant, gray/black, block wall southwest	N/A	NAD
1001-03-01	Ceiling panel material, under foam, 2nd fl east	N/A	NAD
1001-03-02	Ceiling panel material, under foam, 2nd fl east	N/A	NAD
1001-03-03	Ceiling panel material, under foam, 2nd fl west	N/A	NAD
1001-03-04	Ceiling panel material, under foam, 2nd fl west	N/A	NAD
1001-03-05	Ceiling panel material, under foam, 2nd fl west	N/A	NAD
1001-03-06	Ceiling panel material, under foam, 2nd fl east	N/A	NAD
1001-03-07	Ceiling panel material, exposed, center stair	N/A	NAD
1001-04-01	**Roof sealant, silver/black, ridge vent**	**NO**	**3**
1001-04-02	**Roof sealant, silver/black, vent**	**NO**	**4**
1001-04-03	Roof sealant, gray/black, metal edge	N/A	NAD
1001-05-01	Roof sealant, black, drain patch	N/A	NAD
1001-06-01	Asphalt roofing and tar, valley	N/A	NAD
1001-07-01	12" White tile and adhesive, room 100	N/A	NAD
1001-08-01	Joint material, wall, room 100	N/A	NAD
1001-08-02	Drywall and joint material, wall, room 102	N/A	NAD
1001-08-03	Joint material, wall, room 103	N/A	NAD
1001-08-04	Drywall and joint material, ceiling, south men's	N/A	NAD
1001-09-01	Carpet adhesive, yellow, room 102		NAD
1001-10-01	Floor leveling compound, gray, room 103		NAD
1001-11-01	2x2 Ceiling tile, room 103c		NAD
1001-12-01	Rope packing debris, wall, room 108		NAD
1001-13-01	Window glazing material, interior, south men's		NAD

1.2 ACM NOTES

HM01 Textured Wall Coatings. This ACM is in poor condition throughout. Current category is considered Cat II non-friable since the paints act as a binder of the material. However, once disturbed, it is believed the material can be rendered friable and extensive control measures must be used to prevent uncontrolled release of asbestos fibers.

The removal of textured wall coatings is believed best done by wet pressure washing methods to keep material wet while disturbed. A collection method for waste water (drum and filter) and debris (screen and bag) would be required. The use of scaffolding would allow access and structure to build adequate containment. Monitoring of air quality would be required adjacent to the contained area and inside the building during occupancy.

HM04 Roof sealants, silver/black. This ACM is in good condition and located at roof old ridge vents (not operational). Roofing materials are considered Cat I non-friable and not likely to become friable since tar is the binder of the material. If disturbed, it is believed the material will remain non-friable and limited control measures will be required due to location.

1.3 RECOMMENDATIONS FOR ACM

Note that any building material that is not identified as homogenous with those addressed in this report must be considered as an ACM unless additional testing indicates otherwise. Locations of samples and known ACM are indicated on the inspection drawings (Appendix A).

The following work practice should be followed whenever activities involving any ACM occur at this facility:

- Ensure any ACM is managed in accordance with Federal and Maryland regulations.
- Remove any ACM that may be disturbed during renovations or ensure the material will not be disturbed.
- Always keep any ACM adequately wet before, during, and after removal operations and conduct activities in a manner which produces no visible emissions to the outside air.

- Handle and dispose of all ACM in accordance with Federal and Naval regulations. Waste water properly filtered through a five micron filter can be discharged into a sanitary sewer.

Additional inspection information is included in the appendices on the lab reports of analysis chain of custody documents and building drawings.

1.4 CERTIFICATION

The AIHA and NVLAP Accredited laboratory selected to analyze the bulk samples for asbestos content by PLM and NIOSH method 7402 methods, equivalent to the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (Appendix A to Subpart F in 40 CFR Part 763) was:

SANAIR TECHNOLOGIES LABORATORY, INC.
1551 OAKBRIDGE DR, SUITE B
POWHATAN, VA 23139
(804) 897-1177

The inspector who physically surveyed for ACM at the facility and who has received EPA-approved training as an asbestos inspector and management planner is:

DAVID W. DOBSON
AH ENVIRONMENTAL CONSULTANTS, INC.
11837 ROCK LANDING DRIVE, SUITE 300
NEWPORT NEWS, VA 23608
(757) 873-4959

SIGNATURE OF INSPECTOR: _____

The above-signed inspectors certify information contained within this asbestos inspection report is true and correct concerning site conditions at the time of survey only. Every reasonable attempt was made to identify all ACM. However, locations not accessible such as wall interiors may contain materials not yet identified.

2. LEAD

Since 1971, the construction industry has been required to protect workers from exposure to lead through engineering and work practice controls. The current OSHA regulations 29 CFR 1926.62 set the following limits for lead exposure including a permissible exposure limit (PEL) lead of 50 micrograms per cubic meter ($\mu g/m^3$), and an action level of 30 $\mu g/m^3$, as determined using an 8-hour time weighted average. Since lead-based paint has been determined to be a health threat, assessment of buildings for the presence of lead-based paint is required in order to prevent occupational exposure to personnel or the general public, and to enact appropriate control measures for lead hazards.

OSHA and EPA regulations must be followed when renovation or demolition work affects any lead based paint (LBP) or paints with detectable lead levels referred to as paint containing lead (PCL). X-Ray Fluorescence (XRF) testing of components was used as the primary testing method for Building 1001 prior to renovations. Limited bulk paint and lead wipe sampling was also conducted.

A preconstruction inspection is not to be confused with a Housing and Urban Development (HUD) Title X lead inspection. The preconstruction inspections primary purpose is to identify major building components containing lead in order to properly address the lead during renovation/ demolition that may be impacted by the proposed work for the purpose of OSHA compliance. The inspection was conducted using the EPA's work practice standards for conducting lead-based paint activities (40 CFR 745.227) as a guide and all State and local regulations.

Disturbance of paint containing lead requires special training and initial exposure monitoring at a minimum. Above **0.5% by weight** (bulk paint) or **>1.00 mg/cm^2** (XRF), paint is considered to be lead-based. However, in the interest of safety, lower thresholds are utilized in construction since OSHA standards 29 CFR 1926.62 (Lead in Construction) are invoked if <u>any lead</u> is present in the paint; there is **<u>no minimum concentration level</u>**.

These standards set forth the regulations that apply with regards to construction or renovation of painted materials or structures that contain detectable amounts of lead and not necessarily lead pigment containing items that have been manufactured.

An Innov-X, X-ray tube source, XRF instrument was used for this inspection (model #a-4000, serial number 9897). The unit was operated by a factory trained user in the standard lead paint test mode using the rules and procedures found in the Performance Characteristic Sheet (PCS) for the instrument. The XRF is not substrate dependent according the PCS, so no substrate corrections were required. The XRF was calibrated prior to use and at the end of the testing, and/or every four hours, whichever came first. Calibrations are noted on the X-ray fluorescence data sheets included in Appendix C. Quality control included calibrations to the NIST standard for XRF sampling and duplicate testing of the same component.

2.1 SAMPLING

XRF sampling does not require collection of material and is considered non-destructive. This state-of-the-art method for determining the composition of painted surfaces can quickly determine if a surface contains LBP/PCL or not, and provides sufficient data concerning the amount of lead contained in paint. Data is provided as recorded by the XRF unit at the time of survey using pre and post calibration, and by following the performance characteristic sheet of the equipment. Areas are immediately identified as coated with LBP/PCL using this method.

Most components tested are believed to contain several layers of paint film and are difficult to interpret. XRF and bulk paint analysis does not differentiate which layer of paint may contain lead. The results only indicate the amount of lead that is present in the sample/test location. Lead is likely to be present at a higher percentage in a particular layer than reported due to averaging the weight of other layers of paint into the calculation. For this reason, OSHA standards apply to any sample with detectable lead. Construction activities that impact these paints may result in exposure to lead, even though they are not technically considered lead-based paints.

Results of the lead testing conducted are presented in the following sections.

2.2 XRF RANGES

An inspection was performed on painted and limited non-painted components to be suspect for the presence of lead found at the project building. Readings were then taken of a

representative number of surfaces, dependent on the quantity of the particular material present. Although OSHA utilizes the term "any detectable lead", the amount of "detectable lead" is relevant in order to determine the potential for lead exposure. Information is presented in a lead range format to assist in determining protective measures and special procedures that may be required during renovation/ demolition activities. The readings were categorized as follows:

- ***Lead-Based*** Paint **[L]** or >**1.00 mg/cm^2** lead;
- Containing ***Elevated Lead*** **[E]** or between **0.99 and 0.66 mg/cm^2** lead;
- Containing ***Lead of Concern*** **[C]** or between **0.65 and 0.33 mg/cm^2** lead; and
- ***Detectable Levels*** of Lead **[D]** or between **0.32 and 0.05** mg/cm^2 lead.
- Readings below **0.05 mg/cm^2** lead were considered insignificant.

2.3 LEAD COMPONENTS

Lead inspection of Building 1001 was conducted on 25 August 2015. One hundred thirty-one (131) readings were taken, which includes fifteen (15) test standards for calibration. A summary of the components tested and determined to contain lead are presented in the following sections. A description of the component, including color and substrate is listed. The XRF reading numbers are also included for reference. The complete XRF sampling summary is presented in Appendix C.

2.3.1 Lead components

Components tested and determined to be lead-based **[L]** or >1.00 mg/cm^2 lead include:

- White, Dark Green, Beige, Gray, and Black cement/block walls and ceiling (014, 016, 028, 035, 047, 051, 054, 057, 069, 071, 075, 076, 078, 079, 081, 082, 083, 085, 086, 098, 099, 104, 105, 111, 114, 115, 116, 123, 124, 127)
- Yellow concrete floor striping (018, 102, 117)
- Gray, White, Yellow, Beige, Red, Black, and Silver miscellaneous metal (023, 027, 037, 038, 048, 052, 055, 062, 072, 080, 087, 100, 103, 108, 109, 126)
- Beige, Light Brown, Light Green wood wall (044, 045, 046, 053, 060, 068
- Gray concrete floor (050, 063, 066, 073, 074, 101, 118, 119, 121, 122

2.3.2 Elevated lead components

Components were tested at levels determined to contain elevated lead **[E]** or 0.99- 0.66 include.

- White, Silver concrete/block walls (096, 097, 110)

2.3.3 Lead of concern components

Components tested and determined to contain lead levels of concern **[C]** or 0.65 – 0.33 mg/cm^2 include:

- White miscellaneous metal (038, 077)
- White concrete wall (095)

2.3.4 Detectable lead components

Components tested and determined to contain detectable lead levels **[D]** or 0.32 – 0.05 mg/cm^2 lead include:

- Brown miscellaneous metal (025)
- Light Brown wood wall (043)
- Yellow concrete floor stripe (065)
- Gray metal floor (070)
- Black metal stairs and railing (104, 105)

2.4 OTHER LEAD SAMPLING

Multiple types of testing were conducted in addition to XRF to determine the full scope and breadth of the impact of lead on the project. Additional sampling information follows.

2.4.1 Bulk Paint

Bulk paint sampling was conducted on exterior wall covering paints since these paints were considered to be in "poor" condition. Since debris is present, a potential exposure issue exists. However, the asbestos content of the material supersedes the lead issue with respect to health and safety on the site.

Bulk paint samples are shown in the following table.

Table 2-1
1001 Bulk Paint

SAMPLE #	DESCRIPTION Color(s), Substrate, Component [location]	TOTAL LEAD (µg/g or PPM)	LEAD CONC. (%)
1001-L01	**White/Green/Beige on textured walls, interior** [South men's]	**2,985.8**	**0.299**
1001-L02	**White/Tan on textured walls, exterior** [Southwest]	**4,319.4**	**0.432**

Bold = Paint sample contained detectable lead
Underline = Classified as lead-based paint

Based on these findings, paints should be handled in accordance with OSHA regulations, including personal monitoring for exposure and collection for testing to determine waste classification.

2.4.2 Lead Dust Wipes

Due to unexpected testing results during the lead paint sampling via XRF (readings of lead on unpainted surfaces), lead dust wipe samples were collected since areas of contamination were suspected. Results of lead dust wipe sampling are presented in the following table.

Table 2-2
1001 Lead Wipes

Sample #	Location	Lead Concentration (µg/ft^2)
1001-W01	**2nd fl NE bay at HVAC** (floor)	**4,794.2**
1001-W02	**1st fl DLA print shop 104** (floor)	**435.8**
1001-W03	**1st fl DLA storage 109 NE** (floor)	**1,109.2**

Bold = Paint sample contained lead in excess of the clearance level of 40 micrograms per square foot (µg/ft^2) on floors.
Underline = Sample contained lead in excess levels (>10 times allowable standard).

No lead soil samples were collected since the exterior paint is still large flaky debris and majority of the perimeter is paved.

2.5 LEAD COMMENTS/ RECOMMENDATIONS

Occupational exposure to persons conducting disturbance or removal of paint can result in elevated blood lead levels. Lead paint becomes an increased hazard when it deteriorates and oxidizes and/or is present as lead dust. Ingestion and potentially inhalation of resulting dusts may cause lead related health problems.

Based upon the lead sampling results, worker exposure testing would be required during the demolition activities in Building 1001 since damage to lead painted items is present. OSHA dictates what type of exposure monitoring must occur.

Under no circumstances should torch cutting of metals coated with lead since it poses an immediate hazard as heavy metal vapors resulting from the intense heat and are acutely more toxic than airborne particulates. The use of non-torch methods are always preferred, although chop saw cutting also releases particulates into the air posing a risk to equipment operators and risk of area contamination.

A toxicity characteristic leachate procedure (TCLP) test was not conducted on bulk structural components of this project since the mass of debris for disposal has not yet been determined/ produced for an accurate sample. However, painted or lead containing materials comprise <5% of the total waste stream mass and it is most unlikely to create a disposal issue. Of note, when scrap metal is disposed of at a reclamation facility, the materials are exempt from regulation as a potentially hazardous waste [EPA 40 CFR 261.6 (a)(3)(ii)].

The following measures are recommended to conduct operations safely during renovation operations.

- Follow OSHA and EPA regulations when performing construction operations affecting paints containing lead.
- Inform facility personnel of the inspection findings.
- Conduct personal air monitoring when performing construction work on painted surfaces until a negative exposure assessments can be completed and approved by appropriate personnel.

- Segregate metal components from the waste stream and designate for recycling.
- Additionally, the following is recommended for inclusion to the planned actions; HEPA vacuum and wash all concrete floors and coat with a penetrating epoxy

2.6 CERTIFICATION

The AIHA and NVLAP Accredited laboratory selected to analyze the bulk material samples for lead and RCRA metals content, using EPA Method 6010C was:

SANAIR TECHNOLOGIES LABORATORY, INC.
1551 OAKBRIDGE DR, SUITE B
POWHATAN, VA 23139
(804) 897-1177

The EPA-approved and trained inspector who physically surveyed the project site is

DAVID W. DOBSON
AH ENVIRONMENTAL CONSULTANTS, INC.
11837 ROCK LANDING DRIVE, SUITE 300
NEWPORT NEWS, VA 23608
(757) 873-4959

SIGNATURE OF INSPECTOR: _____

The above-signed inspectors certify information contained within this inspection report is true and correct concerning site conditions at the time of survey only.

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3. OTHER HAZARDS

In addition to asbestos, lead, various additional issues relevant to the project were included in the building assessment. The additional concerns assessed and protocols followed during the assessment are described in this section.

Older building demolition creates additional items of concern; fluorescent lighting fixtures have elemental mercury in the fluorescent bulbs and may also contain polychlorinated biphenyls (PCB) ballasts. Buildings may also contain mercury switches inside of thermostats, lead or other chemical containing batteries, and other materials of special concern.

A brief narrative concerning the other hazards to be cognizant of are discussed below. However, major interior renovations are not anticipated and information is provided for reference only.

3.1 MERCURY

Mercury is a toxic elemental metal with unique properties, including being in a liquid state at room temperatures. Human intake of mercury is primarily through oral means. Inhalation of mercury vapor is another source of human exposure. Once absorbed, mercury in all forms is distributed via the blood steam to all tissues in the body. Chronic exposure to mercury primarily affects the central nervous system and kidneys.

Mercury is used in a wide variety of common products including:

- Fluorescent and neon lamps,
- Mercury vapor and high pressure sodium lamps,
- Switches and relays,
- Thermostats and regulators, and
- Thermometers and manometers,

3.1.1 Mercury Lamps

In recent years, the use of fluorescent and high-intensity discharge (HID) lamps has become the standard choice for lighting sources since they can use up to 50 percent less energy than incandescent lighting. However, fluorescent and HID lamps contain mercury and therefore must be properly managed. This includes new "low mercury" lamps. Low mercury fluorescent lamps are currently in use and can be identified by looking at the metal end plates. Low mercury lamps have "green" and sometimes "gold" end caps, while standard lamps have unfinished aluminum caps. Although low mercury lamps contain approximately one-tenth the amount of mercury as standard lamps, they still must be handled properly.

No lamp removal and disposal is anticipated.

3.1.2 Mercury Switch Inspection

Buildings were inspected for older style thermostats that are likely to contain mercury tilt switches. When an older thermostat was identified, the cover was removed to determine if a mercury-filled glass vial was present. The number and location of each mercury switch identified was noted on the field sketches.

No old style thermostats containing a mercury vial were identified during the building inspection. If any are identified during the course of renovation or demolition, they are likely to contain mercury switches. The mercury is in a liquid state, within a small glass vial.

3.2 PCBs

Another potential concern associated with building renovations is the presence of PCBs. Older fluorescent lighting fixtures have the potential to contain ballasts with PCB capacitors. Inspections included a visual survey of light fixtures to determine if pre-1980 fixtures were present. All ballasts manufactured after 1 July 1978 that do not contain

PCBs are required to be clearly marked ***"NO PCBs"***. Ballasts without a date of manufacture or clearly marked ***"NO PCBs"*** must be assumed to contain PCBs.

PCBs are synthetic organic chemicals that were produced in the United States from 1929 to 1977. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics and rubber products; in pigments, dyes and carbonless copy paper and many other applications. A major use of PCBs was in fluorescent light fixture ballasts (in the capacitor).

PCBs have been demonstrated to cause a variety of adverse health effects including cancer and a number of serious non-cancer health effects in animals. These effects include damage to the immune system, reproductive system, nervous system, and endocrine system. Studies in humans provide evidence for carcinogenic and non-carcinogenic effects of PCBs. Concern over PCBs in the environment led Congress in 1976 to enact §6(e) of the Toxic Substances Control Act (TSCA) that included among other things, prohibitions on the manufacture, processing, and distribution in commerce of PCBs.

Inspection of the light ballasts included in this project involved the disassembly of light fixtures to reveal the ballast. Information including manufacturer, model numbers, and condition were recorded. A cross reference was made to known listings of PCB ballast manufacturers to determine if the ballast should be assumed PCB containing. Ballasts were not disassembled.

Suspect PCB ballasts are believed to be present in the building in the rear print shop northeast area. A Centium/ Advance ballast (blue/ yellow) not marked as "NO PCB" was identified in this area. Most lighting fixtures appear to be post-2000 manufacture.

3.3 IAQ ISSUES

Indoor air quality (IAQ) concerns were noted during the inspection. Although presented for buildings that will remain occupied or renovated, the information is considered relevant to this and other buildings of the type.

3.3.1 Dusts

The second floor warehouse section has dust and dirt buildup, likely from prolonged use as a warehouse and an inability to thoroughly clean. Since older and deteriorating lead based paints are present, dusts may contain lead and complicate cleanup activities. Proper operation of HVAC with filtered ventilation is critical in maintaining lowered airborne dust levels.

3.3.2 Mold

Visible mold growth, high humidity/moisture levels, and other factors likely to produce conditions that would promote mold growth were also documented during the building assessment.

No significant mold findings were noted, other than exterior algae type growth on the east end. No airborne mold concerns are expected during the renovation or demolition of the building.

Note: if mold is identified, a correction of the related water issue will correct the mold growth in most cases.

3.4 OTHER ITEMS OF NOTE

Items of note for potential regulatory concern were noted during the inspection as follows:

- Exit signage may contain lead battery backup. Removal if required should be done with caution. All batteries (lead acid, NiMH, or NiCd) should be recycled

- Emergency lighting will contain battery backup. Removal if required should be done with caution. All batteries (lead acid, NiMH, or NiCd) should be recycled.
- Fire strobe lights may contain mercury high intensity discharge lamps. Do not damage fire strobes and dispose of with fluorescent lighting.
- Smoke detectors may contain a small amount of radioactive filament. Consult local and state requirements prior to disposal.

3.5 RECOMMENDATIONS

Broken or crushed, fluorescent and HID lamps must be managed as a hazardous waste. This can become costly when managing a large volume of lamps needing disposal. The Federal Government and most locales, have adopted disposal regulations for handling fluorescent and HID lamps as a universal waste based upon a "recycling presumption". Through recycling and proper handling of spent lamps as a universal waste, the burdens and liabilities placed upon disposers are reduced. The universal waste rule does not authorize disposal of mercury containing lamps in landfills, but has created a cost effective alternative for disposal through recycling.

Approved recycling facilities reduce lamps to their primary components: spent glass, aluminum, and phosphor and mercury powder. The spent glass and aluminum are sold to manufacture's for reuse. The phosphor and mercury powder is distilled and compounds are then reused in various manufacturing sectors which eliminates hazardous materials from entering the environment.

Although most light ballasts identified during the inspection do not contain PCBs, it is NAVFAC policy [specification 02 82 16.20] to dispose of all ballasts in an environmentally preferred manner. Therefore, all fluorescent light tubes (including those deemed low mercury), HID lights, and all ballasts should be packaged intact and sent to an approved recycling facility for disposal/recycling.

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HAZMAT Inspection Drawings

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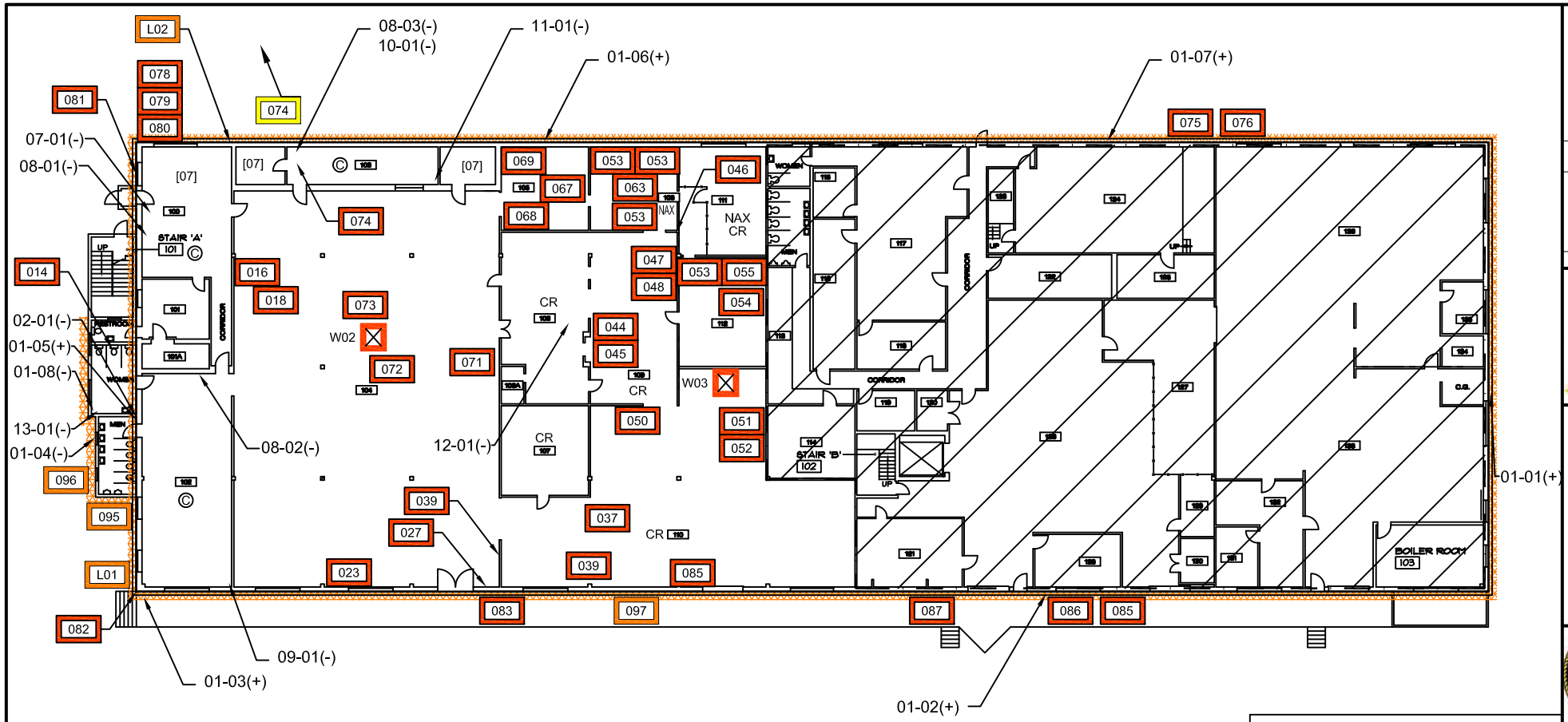


FLOOR PLAN LEGEND

© CARPET
CR CONCRETE
[HM] HOMOGENOUS MATERIAL NUMBER

SAMPLE LEGEND ID

01-01 (+,-)
- SAMPLE IDENTIFICATION
- POSITIVE (+), NEGATIVE (-), OR TRACE (TR) FOR THE PRESENCE OF ASBESTOS
- HOMOGENOUS MATERIAL

AREA NOT INSPECTED

BUILDING 1001
FIRST FLOOR

12' 0' 12' 24' 48'
Scale in Feet

ACM LEGEND

TEXTURED WALL MATERIAL [HM01]

LEAD PAINT LEGEND

LEAD BASED PAINT >1.0 mg/cm²

LEAD BASED PAINT 1.0 - .066 mg/cm²

ELEVATED LEAD BETWEEN <0.66 mg/cm²

W## LEAD WIPE, > 40 µg/ft² (CLEARANCE LEVEL)

L## BULK LEAD PAINT SAMPLE

BOD - 208

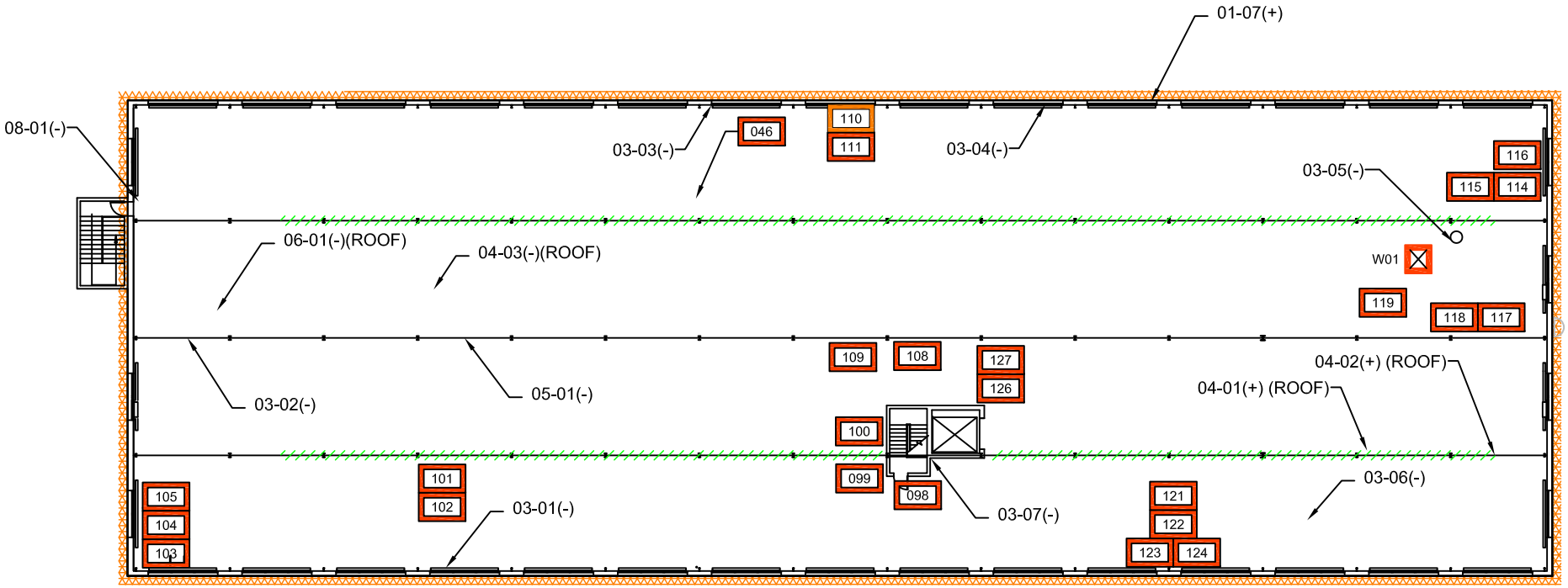
REVISIONS

Wiley|Wilson
AH Environmental Consultants

N40080-15-D-0452
MCB QUANTICO, VA

HAZARDOUS MATERIAL INSPECTION
BLDG. 1001-FIRST FLOOR
WAREHOUSE / OFFICE

CHECKED BY: ARD
DRAWN BY: ???
SCALE: GRAPHIC
DATE: JULY 2015
SHEET 2OF 2



ACM LEGEND

- TEXTURED WALL MATERIAL [HM01]
- ROOF SEALANT, SILVER/BLACK [HM03]

LEAD PAINT LEGEND

- # — LEAD BASED PAINT >1.0 mg/cm²
- # — LEAD BASED PAINT 1.0 - .066 mg/cm²
- # — ELEVATED LEAD BETWEEN <0.66 mg/cm²
- W## — LEAD WIPE, > 40 µg/ft² (CLEARANCE LEVEL)
- L## — BULK LEAD PAINT SAMPLE

SAMPLE LEGEND ID

01-01 (+,-)

- SAMPLE IDENTIFICATION
- POSITIVE (+), NEGATIVE (-), OR TRACE (TR) FOR THE PRESENCE OF ASBESTOS
- HOMOGENOUS MATERIAL

BUILDING 1001
SECOND FLOOR/ROOF

12' 0' 12' 24' 48'

Scale in Feet

BOD - 209

REVISIONS

SYM.	DESCRIPTION	DATE	APPROVED

Wiley|Wilson

AH Environmental Consultants

N40080-15-D-0452
MCB QUANTICO, VA

HAZARDOUS MATERIAL INSPECTION
BLDG. 1001-SECOND FLOOR
WAREHOUSE/OFFICE

CHECKED BY: ARD
DRAWN BY: ???
SCALE: GRAPHIC
DATE: JULY 2015
SHEET 2 OF 2

Inspection Photo-Log

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ACM: Exterior walls in poor condition contain asbestos (typical), 01-04 shown.

ACM: Exterior walls in poor condition contain asbestos (typical), 01-07 shown.

ACM: Roofing sealant at ridge vents contains asbestos, 04-02 shown.

Lead: Lead detected >1.0 μg/ft^2 in exterior wall paints, XRF075 (typical).

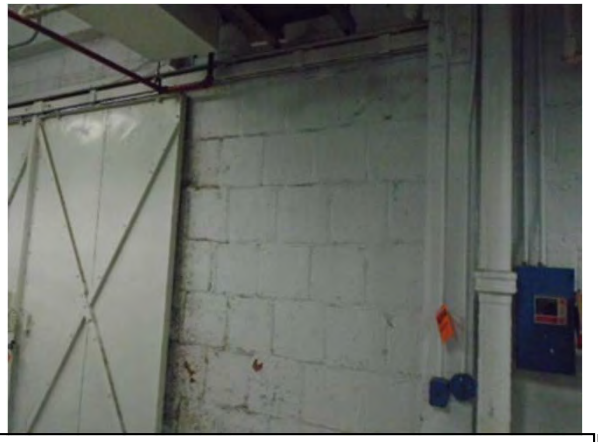
Lead: Lead detected >1.0 μg/ft^2 in exterior wall paints, XRF086 (typical).

Lead: Lead detected >1.0 μg/ft^2 in interior concrete wall paints, XRF014 (typical)

BURNS McDONNELL

AH Environmental
Newport News, VA

Hazardous Material Inspection
Building 1001
Marine Corps Base Quantico, Virginia
1 of 2



Lead: Lead detected >1.0 μg/ft^2 in white block walls, XRF035 (typical).

Lead: Lead paint identified on other colors of wall paint, XRF046 (typical).

Lead: High lead levels identified via XRF on concrete flooring, XRF050 shown.

Lead: Lead wipe sampling indicates lead dust contamination, W01 area shown.

PCB: Likely PCB containing light ballast, typical for old light style shown.

Lead: Emergency lighting with lead battery pack (typical).

BURNS McDONNELL

AH Environmental
Newport News, VA

Hazardous Material Inspection
Building 1001
Marine Corps Base Quantico, Virginia
2 of 2

Laboratory and XRF Reports of Analysis

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15026491

AH **Environmental Consultants Inc.**

Bulk Asbestos **Analysis**

Date: 24 August 2015 *Location:* MCB Quantico

Project: AH # 122-83 *Building:* 1001

Sample Number (Bldg- Type- Number)	Sample Description/ Location
1001-01-01	Textured wall coating, ext. (N)
1001-01-02	Textured wall coating, ext. (NE)
1001-01-03	Textured wall coating, ext. (SE)
1001-01-04	Textured wall coating, ext. (S-low)
1001-01-05	Textured wall coating, ext. (S-upper)
1001-02-01	Roofing sealant, Gray/black, blockwall (S-low)
1001-01-06	Textured wall coating, ext. (SW)
1001-01-07	Textured wall coating, ext. (debris) (NW)
1001-03-01	Ceiling panel, under foam (E, SE)
1001-03-02	Ceiling panel, under foam (E, So.)
1001-03-03	Ceiling panel, under foam (W, Cw.W)
1001-03-04	Ceiling panel, under foam (W, Cw.NW)
1001-03-05	Ceiling panel, underfoam (W, No.)
1001-03-06	Ceiling panel, under foam (E, NE)
1001-03-07	Ceiling panel, exposed (wtr stain)

Notes 5 Day TAT - PLM

Relinquished by (Signature)	Date	Received by (Signature)	Company	Date
DDOBSON	8/25/15			
Relinquished by (Signature)	**Date**	**Received by (Signature)**	**Company**	**Date**

Page 1 of ____

11837 Rock Landing Dr., Suite 300
Newport News, VA 23606

PH: (757) 873-4959
FX: (757) 873-4952
ddobson@ahenv.com

MC AUG 27 2015 10:30AM

15026491

AH Environmental Consultants Inc.

Bulk Asbestos Analysis

Date: 24 August 2015

Project: AH # 122-83

Location: MCB Quantico

Building: 1001

Sample Number (Bldg- Type- Number)	Sample Description/ Location
1001-04-01	Roof sealant, Silver/black, ridge vent
1001-04-02	Roof sealant, silver/black, vent end
1001-05-01	Roof sealant, black, drain patch
1001-06-01	Asphalt roofing & tar, valley
1001-04-03	Roof sealant, gray/black, metal end
1001-07-01	12" white tile & adhesive/mastic (100)
1001-08-01	Joint mat'l, wall (100)
1001-08-02	Drywall & joint mat'l, wall (102)
1001-09-01	Carpet adhesive, yellow (102)
1001-10-01	Floor leveling compound, gray (103)
1001-08-03	Joint mat'l, wall (103)
1001-11-01	2x2 Ceiling tile (103c)
1001-12-01	Rope packing, debris, wall (108)
1001-01-08	Textured wall coating, int. (South M)
1001-13-01	Window glazing mat'l, int. (South M)

Notes 5 Day TAT - PLM

Relinquished by (Signature)	Date	Received by (Signature)	Company	Date
DDOBSON	8/25/15			
Relinquished by (Signature)	**Date**	**Received by (Signature)**	**Company**	**Date**

Page 2 of ____

11837 Rock Landing Dr., Suite 300
Newport News, VA 23606

PH: (757) 873-4959
FX: (757) 873-4952
ddobson@ahenv.com

MC AUG 27 2015

15026491

AH Environmental Consultants Inc.

Bulk Asbestos Analysis

Date: 25 August 2015

Project: AH # 122-83

Location: MCB Quantico

Building: 1001

Sample Number (Bldg- Type- Number)	Sample Description/ Location
1001-08-04	Drywall + joint mat'l, ceiling (South M)
1	

Notes 5 Day TAT - PLM

Relinquished by (Signature)	Date	Received by (Signature)	Company	Date
DDobson	8/25/15			
Relinquished by (Signature)	**Date**	**Received by (Signature)**	**Company**	**Date**

Page 3 of ____

11837 Rock Landing Dr., Suite 300
Newport News, VA 23606

PH: (757) 873-4959
FX: (757) 873-4952
ddobson@ahenv.com

AUG 27 2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

15026491

FINAL REPORT

Name: AH Environmental Consultants, Inc.
Address: 11837 Rock Landing Drive
Suite 300
Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quantico 1001

Collected Date: 8/24/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 9/3/2015 5:00:55 PM
Analyst: Sobrino, Sandra

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-01-01 / 15026491-001	Tan Non-Fibrous Homogeneous	2% Cellulose	93% Other	5% Chrysotile
1001-01-02 / 15026491-002	Beige Non-Fibrous Heterogeneous	2% Cellulose	95% Other	3% Chrysotile
1001-01-03 / 15026491-003	Beige Non-Fibrous Heterogeneous		97% Other	3% Chrysotile
1001-01-04 / 15026491-004	Beige Non-Fibrous Heterogeneous		97% Other	3% Chrysotile
1001-01-05 / 15026491-005	Beige Non-Fibrous Homogeneous		97% Other	3% Chrysotile
1001-02-01 / 15026491-006	Black Non-Fibrous Homogeneous	1% Cellulose	99% Other	None Detected
1001-01-06 / 15026491-007	Beige Non-Fibrous Homogeneous	2% Wollastonite	93% Other	5% Chrysotile

Certification

Signature: Sandra Sobrino
Date: 9/3/2015

Reviewed:
Date: 9/3/2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
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Analyst: Sobrino, Sandra

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-01-07 / 15026491-008	Beige Non-Fibrous Homogeneous		98% Other	2% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-01 / 15026491-009 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected
1001-03-01 / 15026491-009 Foam	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-02 / 15026491-010 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected
1001-03-02 / 15026491-010 Foam	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-03 / 15026491-011 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected
1001-03-03 / 15026491-011 Foam	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-04 / 15026491-012 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected

Certification

Signature: Sandra Sobrino
Date: 9/3/2015

Reviewed:
Date: 9/3/2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

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FINAL REPORT

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Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quantico 1001

Collected Date: 8/24/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 9/3/2015 5:00:55 PM
Analyst: Sobrino, Sandra

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-05 / 15026491-013 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-06 / 15026491-014 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-03-07 / 15026491-015 Ceiling Panel	Tan Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-04-01 / 15026491-016	Silver Non-Fibrous Homogeneous	2% Cellulose	95% Other	3% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-04-02 / 15026491-017	Silver Non-Fibrous Homogeneous	2% Cellulose	96% Other	2% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-05-01 / 15026491-018	Black Non-Fibrous Homogeneous	3% Cellulose	97% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-06-01 / 15026491-019	Black Non-Fibrous Heterogeneous	2% Cellulose	98% Other	None Detected

Certification

Signature: Sandra Sobrino
Date: 9/3/2015

Reviewed:
Date: 9/3/2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

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FINAL REPORT

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Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quantico 1001

Collected Date: 8/24/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 9/3/2015 5:00:55 PM
Analyst: Sobrino, Sandra

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-04-03 / 15026491-020	Silver Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-07-01 / 15026491-021 Floor Tile	White Non-Fibrous Homogeneous		100% Other	None Detected
1001-07-01 / 15026491-021 Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-08-01 / 15026491-022	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-08-02 / 15026491-023 Drywall	Grey Non-Fibrous Homogeneous		100% Other	None Detected
1001-08-02 / 15026491-023 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-09-01 / 15026491-024	Yellow Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-10-01 / 15026491-025	Grey Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: Sandra Sobrino
Date: 9/3/2015

Reviewed:
Date: 9/3/2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

15026491

FINAL REPORT

Name: AH Environmental Consultants, Inc.
Address: 11837 Rock Landing Drive
Suite 300
Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quantico 1001

Collected Date: 8/24/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 9/3/2015 5:00:55 PM
Analyst: Sobrino, Sandra

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-08-03 / 15026491-026	White Non-Fibrous Heterogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-11-01 / 15026491-027	White Fibrous Homogeneous	30% Cellulose 30% Glass 20% Min. Wool	20% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-12-01 / 15026491-028	Brown Fibrous Homogeneous	100% Cellulose	< 1% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-01-08 / 15026491-029	Tan Non-Fibrous Heterogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-13-01 / 15026491-030	Grey Non-Fibrous Heterogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components % Fibrous	Components % Non-Fibrous	Asbestos Fibers
1001-08-04 / 15026491-031 Drywall	Grey Non-Fibrous Homogeneous		100% Other	None Detected
1001-08-04 / 15026491-031 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: Sandra Sobrino
Date: 9/3/2015

Reviewed:
Date: 9/3/2015

15026493

AH Environmental Consultants Inc. **Bulk** Lead **Analysis**

Date: 25 August 2015 *Location:* MCB Quantico
Project: AH # 122-83 *Building:* 1001

Sample Number (Bldg- Type- Number)	Sample Description/ Location
1001-L01	White/Green/Beige on textured wall (So. Mould)
1001-L02	White/Tan on textured wall, ext. (SW)
	WIPE SAMPLES, LEAD
1001-W01	2nd Fl., FL, 12"x12", NE. BAY @ HVAC
1001-W02	1st Fl., FL, 12"x12", DLA Print shop (104)
1001-W03	1st Fl., FL, 12"x12", DLA Storage (109 NE)

Notes 5 Day TAT - Bulk Lead (Pb) Paint (L) and lead Wipe (W)

Relinquished by (Signature)	Date	Received by (Signature)	Company	Date
Dobson	8/25/14			
Relinquished by (Signature)	**Date**	**Received by (Signature)**	**Company**	**Date**

Page 1 of ____

11837 Rock Landing Dr., Suite 300
Newport News, VA 23606

PH: (757) 873-4959
FX: (757) 873-4952
ddobson@ahenv.com

MC AUG 27 2015 10:39AM

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

15026493

FINAL REPORT

Name: AH Environmental Consultants, Inc.
Address: 11837 Rock Landing Drive
Suite 300
Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quanitco 1001

Collected Date: 8/25/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 8/28/2015 3:11:39 PM
Analyst: Lane, Jennifer

Lead Paint Analysis

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15026493-001	1001-L01 / White/ Green/ Beige On Textured Wall (So. Mouhd)	365	0.1221	81.9	2985.8 µg/g (ppm)	0.2986 % By Weight

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15026493-002	1001-L02 / White/ Tan On Textured Wall, Ext. (SW)	457	0.1058	94.5	4319.4 µg/g (ppm)	0.4319 % By Weight

Method Reporting Limit <10 ug/0.1 g paint
SanAir Technologies Laboratory, Inc participates in the AIHA ELPAT for environmental Lead.
AIHA Lab Id: 162952

Certification

Signature: Jennifer Lane
Date: 8/28/2015

Reviewed:
Date: 8/28/2015

BOD - 225

Reading	Pb	Pb +/-	LL	COMPONENT	COLOR	SUBSTRATE	CONDITION	LOCATION	NOTE	Date
1	0	0	X	STANDARD				Quantico 1001	Calibrate	25-Aug-15
2	1.09	0.05	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
3	1.02	0.03	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
4	1.05	0.04	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
5	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	100		25-Aug-15
6	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	100		25-Aug-15
7	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	100		25-Aug-15
8	0.00	0.00		WINDOW	LT. BLUE	WOOD	GOOD	100		25-Aug-15
9	0.00	0.00		DOOR	WHITE	WOOD	GOOD	102		25-Aug-15
10	0.00	0.00		DOOR FRAME	LT. BLUE	METAL	GOOD	102		25-Aug-15
11	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	102		25-Aug-15
12	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	102		25-Aug-15
13	0.03	0.05		BASE COVE	GRAY	VINYL	GOOD	102		25-Aug-15
14	**5.00**	3.15	L	WALL	WHITE	CEMENT	POOR	102 So mens		25-Aug-15
15	0.00	0.00		WALL	WHITE	DRYWALL	GOOD	104		25-Aug-15
16	**3.14**	0.40	L	WALL	WHITE	BLOCK	GOOD	104		25-Aug-15
17	0.00	0.00		MISCELLANEOUS	ORANGE	METAL	GOOD	104		25-Aug-15
18	**5.00**	0.51	L	MISCELLANEOUS	YELLOW	CONCRETE	GOOD	104	stripe	25-Aug-15
19	0.00	0.00		MISCELLANEOUS	WHITE	METAL	GOOD	104	duct	25-Aug-15
20	0.00	0.00		MISCELLANEOUS	BEIGE	METAL	GOOD	104	HVAC	25-Aug-15
21	0.00	0.00		MISCELLANEOUS	BROWN	METAL	GOOD	104	HVAC	25-Aug-15
22	0.00	0.00		MISCELLANEOUS	YELLOW	WOOD	GOOD	104		25-Aug-15
23	**5.00**	0.37	L	MISCELLANEOUS	GRAY	METAL	GOOD	104	rail	25-Aug-15
24	0.00	0.00		MISCELLANEOUS	BEIGE	METAL	GOOD	104	HVAC	25-Aug-15
25	**0.09**	0.12	D	MISCELLANEOUS	BROWN	METAL	GOOD	104	HVAC	25-Aug-15
26	0.00	0.00		MISCELLANEOUS	GREEN	METAL	GOOD	104	HVAC	25-Aug-15
27	**5.00**	1.17	L	MISCELLANEOUS	WHITE	METAL	GOOD	104	Radiator	25-Aug-15
28	**5.00**	1.28	L	WALL	WHITE	BLOCK	GOOD	104		25-Aug-15
29	0.00	0.00		DOOR	WHITE	WOOD	GOOD	104		25-Aug-15
30	0.00	0.00		DOOR FRAME	WHITE	WOOD	GOOD	104		25-Aug-15
31	0.00	0.00		DOOR	RED	WOOD	GOOD	110		25-Aug-15
32	0.00	0.00		MISCELLANEOUS	YELLOW	METAL	GOOD	110	cabinet	25-Aug-15
33	0.00	0.00		WALL	WHITE	WOOD	GOOD	110		25-Aug-15

BOD - 226

Reading	Pb	Pb +/-	LL	COMPONENT	COLOR	SUBSTRATE	CONDITION	LOCATION	NOTE	Date
34	0.00	0.00		WALL	WHITE	WOOD	GOOD	110		25-Aug-15
35	**4.46**	0.58	L	WALL	WHITE	BLOCK	FAIR	110		25-Aug-15
36	0.02	0.02		DOOR	WHITE	METAL	GOOD	110		25-Aug-15
37	**5.00**	0.97	L	MISCELLANEOUS	WHITE	METAL	GOOD	110	duct	25-Aug-15
38	**0.39**	0.10	C	MISCELLANEOUS	WHITE	METAL	GOOD	110	beam	25-Aug-15
39	**2.76**	0.20	L	MISCELLANEOUS	YELLOW	METAL	GOOD	110	rack	25-Aug-15
40	0.01	0.00		MISCELLANEOUS	BEIGE	METAL	GOOD	109	duct	25-Aug-15
41	0.00	0.00		MISCELLANEOUS	BEIGE	METAL	GOOD	109	duct	25-Aug-15
42	0.00	0.00		WALL	BEIGE	WOOD	GOOD	109		25-Aug-15
43	**0.14**	0.05	D	WALL	LT. BROWN	WOOD	GOOD	109		25-Aug-15
44	**5.00**	0.83	L	WALL	BEIGE	WOOD	GOOD	109		25-Aug-15
45	**5.00**	0.81	L	WALL	LT. BROWN	WOOD	GOOD	109		25-Aug-15
46	**5.00**	0.61	L	WALL	LT.GREEN	WOOD	GOOD	109		25-Aug-15
47	**5.00**	1.33	L	WALL	BEIGE	BLOCK	GOOD	109		25-Aug-15
48	**5.00**	0.86	L	MISCELLANEOUS	BEIGE	METAL	FAIR	109	beam	25-Aug-15
49	0.01	0.00		MISCELLANEOUS	BEIGE	METAL	GOOD	109	duct	25-Aug-15
50	**1.00**	0.04	L	FLOOR	GRAY	CONCRETE	GOOD	109		25-Aug-15
51	**5.00**	0.88	L	CEILING	WHITE	CONCRETE	GOOD	109		25-Aug-15
52	**5.00**	0.73	L	MISCELLANEOUS	WHITE	METAL	GOOD	109	beam	25-Aug-15
53	**5.00**	0.66	L	WALL	BEIGE	WOOD	GOOD	112		25-Aug-15
54	**4.12**	0.38	L	WALL	DK. GREEN	BLOCK	GOOD	112		25-Aug-15
55	**5.00**	0.48	L	MISCELLANEOUS	WHITE	METAL	GOOD	112	sink	25-Aug-15
56	0.00	0.00		WALL	WHITE	BLOCK	GOOD	108	CMU	25-Aug-15
57	**5.00**	0.97	L	WALL	WHITE	BLOCK	GOOD	108		25-Aug-15
58	0.05	0.03		WALL	WHITE	WOOD	GOOD	108		25-Aug-15
59	0.04	0.03		WALL	WHITE	WOOD	GOOD	108		25-Aug-15
60	**5.00**	0.87	L	WALL	WHITE	WOOD	GOOD	108		25-Aug-15
61	0.01	0.00		MISCELLANEOUS	WHITE	METAL	GOOD	108	Duct	25-Aug-15
62	**5.00**	0.90	L	MISCELLANEOUS	WHITE	METAL	GOOD	108	radiator	25-Aug-15
63	**1.00**	0.04	L	FLOOR	GRAY	CONCRETE	GOOD	108		25-Aug-15
64	0.01	0.00		MISCELLANEOUS	BROWN	METAL	GOOD	108	rack	25-Aug-15
65	**0.08**	0.01	D	FLOOR	YELLOW	CONCRETE	GOOD	105	stripe	25-Aug-15
66	**1.00**	0.04	L	FLOOR	GRAY	CONCRETE	GOOD	105		25-Aug-15

BOD - 227

Reading	Pb	Pb +/-	LL	COMPONENT	COLOR	SUBSTRATE	CONDITION	LOCATION	NOTE	Date
67	0.01	0.02		WALL	WHITE	WOOD	GOOD	105		25-Aug-15
68	**5.00**	1.25	L	WALL	WHITE	WOOD	GOOD	105		25-Aug-15
69	**5.00**	0.86	L	WALL	WHITE	BLOCK	GOOD	105		25-Aug-15
70	**0.12**	0.04	D	FLOOR	GRAY	METAL	GOOD	105		25-Aug-15
71	**4.81**	0.64	L	WALL	WHITE	BLOCK	GOOD	104		25-Aug-15
72	**5.00**	0.65	L	MISCELLANEOUS	RED	METAL	GOOD	104	beam	25-Aug-15
73	**1.00**	0.01	L	FLOOR		CONCRETE	GOOD	104		25-Aug-15
74	**1.00**	0.02	L	FLOOR		CONCRETE	GOOD	104		25-Aug-15
75	**1.70**	0.35	L	WALL	WHITE	CONCRETE	POOR	NW Ext		25-Aug-15
76	**1.04**	0.25	L	WINDOW SILL	WHITE	CONCRETE	POOR	NW Ext		25-Aug-15
77	**0.42**	0.07	C	MISCELLANEOUS	WHITE	METAL	POOR	SW Ext	rail	25-Aug-15
78	**1.00**	0.21	L	WALL	WHITE	CONCRETE	POOR	SW Ext		25-Aug-15
79	**1.03**	0.20	L	WINDOW SILL	WHITE	CONCRETE	POOR	SW Ext		25-Aug-15
80	**1.00**	0.04	L	MISCELLANEOUS	WHITE	METAL	FAIR	SW Ext	downspout	25-Aug-15
81	**1.00**	0.19	L	WALL	WHITE	CONCRETE	POOR	SW Ext		25-Aug-15
82	**1.50**	0.24	L	WALL	WHITE	CONCRETE	POOR	South		25-Aug-15
83	**1.00**	0.22	L	WALL	WHITE	CONCRETE	FAIR	SE Ext		25-Aug-15
84	0.00	0.00		DOOR	BLACK	WOOD	FAIR	SE Ext		25-Aug-15
85	**1.00**	0.26	L	WALL	WHITE	CONCRETE	FAIR	NE Ext		25-Aug-15
86	**1.00**	0.21	L	WINDOW SILL	WHITE	CONCRETE	FAIR	NE Ext		25-Aug-15
87	**5.00**	0.59	L	MISCELLANEOUS	BLACK	METAL	FAIR	NE Ext	beam	25-Aug-15
88	1.05	0.04	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
89	1.08	0.04	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
90	1.19	0.09	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
91	0.00	0.00	X	STANDARD					Calibrate	25-Aug-15
92	1.20	0.08	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
93	1.02	0.03	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
94	1.08	0.04	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
95	**0.38**	0.07	C	WALL	WHITE	CONCRETE	POOR	South ext	ind paint mode	25-Aug-15
96	**0.82**	0.12	E	WALL	WHITE	CONCRETE	POOR	South ext	ind paint mode	25-Aug-15
97	**0.69**	0.17	E	WALL	WHITE	CONCRETE	POOR	East ext	ind paint mode	25-Aug-15
98	**1.84**	0.20	L	WALL	BEIGE	BLOCK	FAIR	2nd fl		25-Aug-15
99	**2.73**	0.23	L	WALL	GRAY	BLOCK	FAIR	2nd fl		25-Aug-15

BOD - 228

Reading	Pb	Pb +/-	LL	COMPONENT	COLOR	SUBSTRATE	CONDITION	LOCATION	NOTE	Date
100	**1.82**	0.20	L	MISCELLANEOUS	SILVER	METAL	FAIR	2nd fl	beam	25-Aug-15
101	**1.00**	0.03	L	FLOOR		CONCRETE	GOOD	2nd fl		25-Aug-15
102	**5.00**	0.54	L	FLOOR	YELLOW	CONCRETE	GOOD	2nd fl	stripe	25-Aug-15
103	**2.10**	0.24	L	MISCELLANEOUS	SILVER	METAL	GOOD	2nd fl	radiator	25-Aug-15
104	**1.00**	0.03	L	WALL	SILVER	BLOCK	GOOD	2nd fl		25-Aug-15
105	**2.31**	0.20	L	WALL	BLACK	BLOCK	GOOD	2nd fl		25-Aug-15
106	0.00	0.01		CEILING	WHITE		GOOD	2nd fl		25-Aug-15
107	0.00	0.01		CEILING	WHITE		GOOD	2nd fl		25-Aug-15
108	**5.00**	0.61	L	MISCELLANEOUS	YELLOW	METAL	GOOD	2nd fl	beam	25-Aug-15
109	**3.08**	0.23	L	MISCELLANEOUS	YELLOW	METAL	GOOD	2nd fl	hatch	25-Aug-15
110	**0.83**	0.08	E	WALL	SILVER	BLOCK	GOOD	2nd fl		25-Aug-15
111	**3.13**	0.29	L	WALL	BLACK	BLOCK	GOOD	2nd fl		25-Aug-15
112	0.00	0.00		CEILING	WHITE		GOOD	2nd fl		25-Aug-15
113	0.00	0.00		CEILING	WHITE		GOOD	2nd fl		25-Aug-15
114	**2.28**	0.28	L	WALL	SILVER	BLOCK	GOOD	2nd fl		25-Aug-15
115	**3.60**	0.33	L	WALL	BLACK	BLOCK	GOOD	2nd fl		25-Aug-15
116	**1.32**	0.14	L	WINDOW SILL	BLACK	CONCRETE	GOOD	2nd fl		25-Aug-15
117	**1.95**	0.19	L	FLOOR	YELLOW	CONCRETE	GOOD	2nd fl	stripe	25-Aug-15
118	**2.65**	0.35	L	FLOOR	GRAY	CONCRETE	GOOD	2nd fl		25-Aug-15
119	**1.00**	0.03	L	FLOOR		CONCRETE	GOOD	2nd fl		25-Aug-15
120	0.03	0.01		FLOOR		CONCRETE	GOOD	2nd fl		25-Aug-15
121	**1.00**	0.06	L	FLOOR		CONCRETE	GOOD	2nd fl		25-Aug-15
122	**1.00**	0.07	L	FLOOR	GRAY	CONCRETE	GOOD	2nd fl		25-Aug-15
123	**1.00**	0.03	L	WALL	SILVER	BLOCK	GOOD	2nd fl		25-Aug-15
124	**2.91**	0.26	L	WALL	BLACK	BLOCK	GOOD	2nd fl		25-Aug-15
125	0.00	0.00		CEILING	WHITE		GOOD	2nd fl		25-Aug-15
126	**5.00**	0.62	L	MISCELLANEOUS	YELLOW	METAL	GOOD	2nd fl	rail	25-Aug-15
127	**2.70**	0.41	L	MISCELLANEOUS	WHITE	BRICK	GOOD	2nd fl		25-Aug-15
128	1.10	0.05	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
129	1.07	0.04	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
130	1.01	0.03	X	STANDARD	RED		GOOD	Quantico 1001		25-Aug-15
131	0.00	0.00	X	STANDARD	WHITE		GOOD	Quantico 1001		25-Aug-15

BOD - 229

15026495

AH Environmental Consultants Inc. **Bulk** Lead **Analysis**

Date: 25 August 2015 *Location:* MCB Quantico
Project: AH # 122-83 *Building:* 1001

Sample Number (Bldg- Type- Number)	Sample Description/ Location
1001-L01	White/Green/Beige on textured wall (So. Mouhd)
1001-L02	White/Tan on textured wall, ext. (SW)
	WIPE SAMPLES, LEAD
1001-W01	2nd fl., FL, 12"x12", NE. BAY @ HVAC
1001-W02	1st fl., FL, 12"x12", DLA Print shop (104)
1001-W03	1st fl., FL, 12"x12", DLA Storage (109 NE)

Notes 5 Day TAT - Bulk Lead (Pb) Paint (L) and lead Wipe (W)

Relinquished by (Signature)	Date	Received by (Signature)	Company	Date
Dobson	8/25/14			
Relinquished by (Signature)	**Date**	**Received by (Signature)**	**Company**	**Date**

Page 1 of ____

11837 Rock Landing Dr., Suite 300
Newport News, VA 23606

PH: (757) 873-4959
FX: (757) 873-4952
ddobson@ahenv.com

10:35AM
AUG 27 2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

15026495

FINAL REPORT

Name: AH Environmental Consultants, Inc.
Address: 11837 Rock Landing Drive
Suite 300
Newport News, VA 23606

Project Number: 122-83
P.O. Number:
Project Name: MCB Quantico 1001

Collected Date: 8/25/2015
Received Date: 8/27/2015 10:30:00 AM
Report Date: 8/28/2015 3:03:47 PM
Analyst: Lane, Jennifer

Lead Wipe Analysis

Test Method: SW846/3050B/7000B

Sample	Description	µg Pb in Sample	Sample Size		Calculated RL	Sample Result	Units
15026495-001	1001-W-01 / 2nd Fl., Fl, 12"x12", No. Bay @ HVAC	4794	1	Sq. Ft.	10 µg/ft2	4794.2	µg/ft2

Test Method: SW846/3050B/7000B

Sample	Description	µg Pb in Sample	Sample Size		Calculated RL	Sample Result	Units
15026495-002	1001-W-02 / 1st Fl., Fl, 12"x12", DLA Print Shop (104)	436	1	Sq. Ft.	10 µg/ft2	435.8	µg/ft2

Test Method: SW846/3050B/7000B

Sample	Description	µg Pb in Sample	Sample Size		Calculated RL	Sample Result	Units
15026495-003	1001-W-03 / 1st Fl., Fl, 12"x12", DLA Storage (109 NE)	1109	1	Sq. Ft.	10 µg/ft2	1109.2	µg/ft2

Method Reporting Limit < 10 µg/wipe
SanAir Technologies Laboratory, Inc participates in the AIHA ELPAT for environmental Lead.
AIHA Lab Id: 162952

Certification

Signature: Jennifer Lane
Date: 8/28/2015

Reviewed:
Date: 8/28/2015

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