



INVITATION TO BID AND INSTRUCTIONS TO BIDDERS

COR 13-11

**ABATEMENT AND DEMOLITION FOR RESIDENTIAL
STRUCTURE LOCATED AT 212 N. ILLINOIS AVENUE**

BID OPENING

**March 19, 2013
2:00 p.m., Local Time**

**at the
Materials Management Conference Room
City of Oak Ridge
100 Woodbury Lane
P. O. Box 1
Oak Ridge, Tennessee 37831-0001**

**Telephone: (865) 425-1819
Fax: (865) 482-8475
Attn: Lyn Majeski
Email: LMajeski@oakridgetn.gov**

CITY OF OAK RIDGE, TENNESSEE
Invitation to Bid and Instructions to Bidders

COR 13-11

March 7, 2013

Project: Abatement and Demolition for Residential Structure – 212 N. Illinois Avenue

Invitation

Bids will be received by the City of Oak Ridge until 2:00 p.m., local time, March 19, 2013, then publicly opened in the Materials Management Conference Room at 100 Woodbury Lane, Oak Ridge, Tennessee 37830, for furnishing all labor, materials, supplies, tools, and equipment necessary to perform all work and services described in the Contract attached hereto, in strict accordance with the terms and provisions of said Contract and any attachments thereto. (See attached Specifications/Scope of Work)

All bids must be completed and submitted on the Bid Form provided. All options must be bid unless the Bid Form provides otherwise. The bids shall be submitted on or before the time set for the opening of bids. Bids received after the time so set are late bids and will not be considered. Late bids, unmarked envelopes, and incorrectly marked envelopes will not be opened. Electronic bids are not accepted.

Discrepancies

Should the Bidder find any discrepancies in, or omission from, the bid documents, or should the Bidder be in doubt as to their meaning, the Bidder shall at once notify Lyn Majeski at (865) 425-1819 and obtain an interpretation or clarification prior to submitting a bid. Any interpretation or clarification given in accordance with this provision shall be in writing and will be distributed to all known Bidders. Only questions answered in writing will be binding. Oral and other interpretations or clarifications will be without legal effect.

Prices

The Bidder shall submit LUMP SUM bid prices as specified on Bid Form. It is agreed that this bid document in its entirety is included in and made a part of the contract between the City and the successful Bidder.

Withdrawal of Bids

Bids may be withdrawn on written or telegraphic request received from Bidders prior to the time fixed for opening the bids.

Rejection of Bids

The City reserves the right to reject any and all bids when such rejection is in the interest of the City of Oak Ridge; to reject the bid of a Bidder who has previously failed to perform properly or complete on time jobs of a similar nature; to reject the bid of a Bidder who is not, in the opinion of the City, in a position to perform the Contract, and to reject the bid of a Bidder not submitted in accordance with this Invitation to Bid.

References

With the bid, each Bidder shall furnish at least three (3) references for whom work similar to that covered by the specifications herein was performed, the year in which such work was performed and the manner of its execution, and giving such other information as will tend to show the Bidder's ability to perform the required work.

Equipment

The Bidder shall have available under Bidder's control, tools and equipment of the type, character and amount required to complete the proposed work within the specified time. Each Bidder shall furnish a list of the tools and equipment proposed for use on the work if requested.

Personnel

Each Bidder shall have available or shall agree to have available under Bidder's control sufficient equipment and personnel to complete the proposed work within the specified time.

Method of Work

Upon request, each Bidder shall describe the method or methods to be used in the performance of the required work.

Bidders Interested in More than One Bid

A party who has quoted prices to a Bidder is not thereby disqualified from quoting prices to other Bidders or from submitting a bid directly for the work; however, more than one bid for the same work from an individual or entity under the same or different name will not be considered.

Insurance

The successful Bidder will be required to maintain Worker's Compensation, Comprehensive General Liability, and Comprehensive Automobile Liability and Property Damage Insurance in accordance with the provisions of the Contract Documents. The City of Oak Ridge, Tennessee shall be named as an additional insured.

Bid Surety

The requirement for a bid bond has been waived by the City.

Completion and Performance Bond

The requirement for a completion and performance bond has been waived by the City.

Award of Contract

The City will make the award as soon as practicable to the lowest responsible Bidder, price and other factors considered, provided it is reasonable and in the best interest of the City. The City reserves the right to award the contract to more than one bidder if in the best interest of the City. The successful Bidder(s) shall be required to execute the Contract attached hereto.

Timeframe for Completion

Work shall commence within twelve (12) business days after the Contractor's receipt of a written Notice to Proceed from the City and shall be completed within ten (10) business days of commencement, unless an alternate schedule is approved by the parties in writing.

City Officers and Employees Not To Have Financial Interest

No contract shall be made with any officer or employee of the City or any firm or corporation in which any officer or employee of the City has financial interest.

Compliance with All Laws, Ordinances, Statutes, and Regulations

The Contractor shall comply with all federal, state, county and local laws, ordinances, statutes, and regulations. Pursuant to City Code § 5-413, the City may not accept bids from Bidders in default of any payment of any nature due to the City, including but not limited to taxes, licenses and fees.

SPECIFICATIONS/SCOPE OF WORK

Background on Property

This regulated residential structure is located at 212 N. Illinois Avenue, in Oak Ridge, Tennessee (GPS Coordinates: N36° 00.891' W084° 16.408') (Property). The Property and project is owned by the City of Oak Ridge, Tennessee and is either totally or partially funded by way of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) voluntary acquisition process. This property has been deemed unsafe/unfit for human occupation and use and ordered demolished for possible future redevelopment.

The City has contracted with Quantum Environmental & Engineering Services, LLC, to conduct environmental assessments of the Property. See 45-page attachment from Quantum Environmental & Engineering Services, LLC, which contains the Hazardous Material Survey Report.

Scope of Work

The Demolition Contractor (hereinafter "Contractor or Demolition Contractor") shall, at its sole cost and expense, provide, perform and complete in the manner described and specified in this Invitation to Bid all necessary work, labor, services, transportation, equipment, materials, apparatus, information, data and other items necessary to accomplish the Project as defined below, in accordance with the Scope of Work (hereinafter "Work"). The Services will also include procuring and furnishing all approvals and authorizations, permits, and certificates and policies of insurance as specified herein necessary to complete the Project.

Description of Project

The City of Oak Ridge is seeking a qualified contractor to provide the remediation services (abatement of asbestos and hazardous material) and complete demolition (removal of structure(s), foundations, basement, utility service & waste lines and tanks, concrete slabs, walkways, driveways, decks/porches, fence (if applicable), nuisance vegetation, all trash/debris and accessory structures of the one (1) dilapidated public nuisance residential dwelling listed above (Property). Backfill and finish lot grading with seed and stabilization is included in this bid. The Property is so deteriorated or has become so out of repair as to be dangerous, unsafe, unsanitary or otherwise unfit for human occupation or use, and as such, it is unreasonable to repair the structure(s). Per HUD CDBG guidelines, the City shall cause the structure(s) to be environmentally abated and demolished in accordance with the City Code.

The dilapidated structure identified in this Invitation to Bid has been tested for the presence of asbestos containing materials (ACM) and household hazardous waste. An Environmental Assessment Report has been prepared for each structure. These reports are attached to the Invitation to Bid.

The Demolition Contractor shall complete or subcontract to an Environmental Remediation Contractor for the abatement of asbestos and household hazardous waste as listed in the Assessment Report. Actual demolition activity shall not begin until after a "post-visual inspection" is conducted and approved by the City contracted Environmental Assessment company and the City's Project Manager.

Should previously undetected quantities of ACM or other regulated wastes be discovered during remediation, the demolition work shall stop and the Contractor shall immediately notify the City Project Manager. The Project Manager shall inspect the structure and determine if further remediation is warranted. If deemed warranted, demolition of the structure may be delayed because of such discovery and the resultant remediation work. Demolition may not resume until abatement has been completed.

Utility disconnection services are not a part of this bid. The utilities for the structures listed will be disconnected by the City upon receipt of a completed demolition permit. The Contractor must allow at least one (1) calendar week for disconnection prior to the start of demolition activity. The actual demolition permit will be issued after all utilities have been confirmed disconnected.

The Environmental Remediation Contractor performing the remediation work must hold all required State of Tennessee licenses and permits for Asbestos abatement activities and all staff performing work within the regulated work area (hot zone) must have all required training and certifications. The remediation work must be performed by the contractor possessing the Asbestos Abatement Contractors License. An asbestos licensed Contractor/Supervisor must be onsite at all times during remediation.

The Contractor shall demolish the entire structure above the foundation the same day; no partial demolition of the above-foundation structure will be allowed. Once demolition starts, every effort must be made to raze the structure and remove all debris within the work day. Backfill can be delayed as long as the property is secured with fencing up to a maximum of five (5) business days.

After the environmental abatement is complete, the Contractor must provide a continuous spray of clean water on the demolition site as needed during actual demolition operation to reduce if not eliminate visible emissions of dust.

Types of Debris, Debris Ownership and Hauling Responsibilities

Once the Contractor begins activity on a site, all debris generated is the responsibility of the Contractor and the Contractor is solely responsible for all aspects related to the debris, including, but not limited to, the hauling and disposal of the debris. This includes all materials resulting from demolition unless otherwise specified in this scope of work. The City is the generator of the debris. The Contractor has salvage rights to all materials. The Contractor shall ensure that all loads are properly secured and transported without threat or harm to the general public, private property and public infrastructure.

Disposal of Asbestos Containing Material (ACM) – Non-Friable and Friable

Non-Friable: The Environmental Remediation Contractor must dispose of non-friable asbestos containing materials at an approved landfill as specified in the Contractor's bid.

Friable: The Environmental Remediation Contractor must dispose of friable asbestos containing materials at an approved landfill as specified in the Contractor's bid.

Disposal of Household Hazardous Waste Material (HHWM)

Remove HHWM identified in the Environmental Assessment Reports. Household hazardous waste materials include drain cleaners, paint thinners, bleach, fertilizers, camp fuel, etc.; mercury thermostats; batteries; fluorescent tubes. HHWM must be disposed at an approved landfill as specified in the CONTRACTOR's bid.

Sort HHWM before delivery to AGENCY as directed by AGENCY personnel. This will include identifying and separating "unknown" chemicals as noted in the Assessment Reports.

Disposal of White Goods (aka Appliances) and Tires

Remove White Goods and automotive tires per the Assessment Report inventory. White Goods may include refrigerators, freezers, dryers, clothes washers, water heaters, stoves, dishwashers, dehumidifiers, microwaves, trash compactors, humidifiers, air conditioners. White Goods that have been significantly damaged (mangled, crushed, not upright, lines cut) must be accompanied by a written statement declaring how damage occurred, if known, before arriving at AGENCY. The Environmental Remediation Contractor will clean out appliances, especially refrigerators and freezers, before delivering to the AGENCY or additional charges will be incurred by the Contractor. If available, White Goods and tires must be recycled per the AGENCY's requirements.

It is not mandated that the concrete be hauled to the Landfill. Bidders may salvage the concrete. If the salvage option is taken, the bidder must (1) state in writing on the Bid Submittal Form where the concrete is going and (2) how it will be used.

Lead Based Paint Abatement

Lead based paint materials will not be abated prior to demolition. Any materials containing lead based paint should be disposed of in the landfill. If the Contractor chooses to recycle painted concrete, then all applicable laws, standards and regulations shall apply to the Contractor for that activity. The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) have established standards to protect workers from overexposure to lead. OSHA'S Lead-in-Construction rule, contained in 29CFR1926.62, regulates work practices and procedures which must be followed when working around suspected lead. Contractor shall submit a written notification to the PROJECT MANAGER within two (2) business days if the required initial assessment meets or exceeds "Action Level" criteria for any specific job site.

Compliance with Laws

The Contractor and all Subcontractors shall be responsible for compliance with all federal, state, county and municipal laws, ordinances, rules, standards and regulations related to structure demolition and removal, including, but not limited to, requirements of the Occupational Safety and Health Administration (OSHA), EPA and the Tennessee DEC. These requirements include (but are not limited to) good demolition practices.

The Contractor shall obtain all applicable City permits and utility locates as required to perform the work specified by this agreement prior to any demolition commencing. The City's Code Enforcement Division will provide the City demolition permit application with pertinent information to include the disconnect completion of utilities.

Work Hours and Restrictions

Hours of work at individual lots must adhere to the City noise ordinance. In residential areas work may be performed during the hours of 7:00 am to 6:30 pm, Monday through Saturday, except otherwise indicated.

Standards

Each entity engaged in any part of the Project is required to be familiar with industry standards applicable to that entities' construction activity. The Contractor shall maintain work sites to appropriate use standards, safety standards, and regulatory requirements. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source. Although copies of standards needed for enforcement of requirements may be part of required submittals, the Project Manager reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements. Copies of applicable standards shall be readily available at the project job site.

Pre Demolition Conference

Before Work is started, a conference attended by the City's Project Manager, the Demolition Contractor and others as appropriate will be held to:

1. Inspect and discuss condition of construction to be demolished.
2. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review and finalize protection requirements.
4. Review procedures for noise control and dust control.

Preparatory Operations

Before the start of the demolition job, the Contractor shall take a number of steps to safeguard the health and safety of workers in accordance with all Federal, State and Local regulations at the job site. A competent person, experienced in all phases of demolition work including safety issues shall perform the planning work. A suitable location shall be designated at the job site with written plans/procedures, emergency information and equipment. Employees shall be trained in evacuation procedures in the event of workplace emergencies.

Services and First Aid

The Contractor shall make provisions for prompt medical attention in case of serious injury. The location and the most direct accessible route to the nearest hospital and the telephone numbers of the hospital and the ambulance must be posted at the job site. (Exception: If it is practically infeasible to post required information in accordance to this section, it must be identifiable and readily available for all onsite workers). A proper First Aid kit and proper equipment for prompt transportation of an injured employee, as well as a communication system to contact an ambulance must be available at the job site.

Fire Prevention and Protection

Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

Smoking shall be prohibited in construction areas.

All welding or cutting operations, combustion-type temporary heating units, and similar sources of fire ignition shall be supervised according to requirements of authorities having jurisdiction and Hot Work Plan.

The Contractor is responsible for developing and supervising a fire protection program and for providing the necessary firefighting equipment at the job site. This program shall outline the assignments of essential personnel in case of a fire and provide an evacuation plan for workers on the site. The program shall contain provisions for securing hot work permits and instructions for shutting down all burning and hot work operations one hour before the end of the work shift. Review needs with local fire department and establish procedures to be followed. The Oak Ridge Fire Department must be called for all fires. Instruct personnel in methods and procedures. Post warnings and information.

Property Damage

The Contractor shall be legally and financially responsible for all damages caused by this environmental abatement demolition activity performed under this bid to public and private property. The Contractor shall have one lead individual per every work crew who is dedicated to resolving reports of property damage. Contractor shall maintain a log of property damage reports and their resolution, including dates for each damage report, pictures, contact information, and resolution. If public or private property, including trees and vegetation, is damaged by the Contractor and not repaired or resolved on a timely basis to the satisfaction of the City, the City has the option of having the damage repaired at the Contractor's expense to be reimbursed to the City or withheld from the Contractor's future payments.

Site Security

The Contractor shall demolish the entire structure above the foundation the same day; no partial demolition of the above-foundation structure will be allowed.

It shall be the Contractor's responsibility to secure the site by whatever means necessary to prevent unauthorized entry. The Contractor shall remove all debris and leave the site from which the eligible debris was removed in a clean and neat condition with the understanding that there will be certain debris that is not picked up by equipment, machinery and general laborers used by the Contractor. Determination of when a site is in a clean and neat condition will be at the reasonable judgment of the Project Manager.

Prior to, or during demolition

If it is determined by the Project Manager that a significant job site security and or safety risk exists, the following activities shall be required to be put in place by the Contractor. Otherwise, the Contractor must at all times take reasonable or other contracted steps necessary to ensure that each job site is maintained in a safe, secure and clean condition until final completion and acceptance by the Project Manager.

Pedestrian Protection

The work of demolishing any building shall not be commenced until pedestrian protection is in place as required by the International Building Code 2006 and City Code. Pedestrians shall be protected during construction, remodeling and demolition activities as required and signs shall be provided by the Contractor to direct pedestrian traffic.

Fencing

Temporary barricade type fence shall be erected prior to the commencement of demolition activities to prevent access by the public. Such fence shall be: (1) At least four feet high. (2) Consistently restrictive from top to grade. (3) Without horizontal openings or indentation wider than two inches. The fence shall be erected before demolition begins and shall not be removed until the backfill is completed.

Temporary Signs

Provide warning signs for site fencing as described above. Unauthorized signs are not permitted. The Contractor will provide and install project identification sign.

Temporary Use of Streets, Alleys and Public Property

Storage and Handling of Materials

The temporary use of streets or public property for the storage or handling of materials or of equipment required for construction or demolition, and the protection provided to the public shall comply with the provisions of the authority having jurisdiction and by the adopted International Building Code 2006 City of Oak Ridge Municipal Code.

Pre-loading is permissible, but trucks, cargo boxes, roll-offs, trailers, and etc. must be kept in a secured area and, if necessary, tarped for the public health and safety. The secured area may be located within perimeter of the demolition site or a designated location if the demolition area is not acceptable for overnight storage. The City's Project Manager will have final approval regarding pre-loading and secure storage.

Obstructions

Construction materials and equipment shall not be placed or stored so as to obstruct access to fire hydrants, standpipes, fire or police alarm boxes, catch basins or manholes, nor shall such material or equipment be located within 20 feet (6096 mm) of a street intersection, or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

Temporary Utility Installation

General

Install temporary service or connect to existing service. Arrange with utility company, Project Manager, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

Water Service

The Contractor has the option to use utilize the municipal water system using fire hydrant connections and a City of Oak Ridge issued water meter OR the Contractor may use self-provided tankers as long as they provide adequate potable water and are not an obstruction.

If the Contractor elects to use the City water supply via fire hydrant, the Contractor must contact the Public Works Department front office at (865) 425-1875 and provide all of the Contractor's contact information and show proof of a City issued demolition permit requesting the water meter to be delivered to the project site on a specified date and time. The water meter will be provided to the Contractor in good working order free of charge or deposit. Water used exclusively for the purposes of this demolition contract shall be free of charge. The Contractor is required to return the same water meter to the City in good working order as soon possible after it is no longer needed. If the Contractor damages or loses the City issued water meter, a fee of \$1,500.00 shall be immediately assessed against the Contractor. The City reserves the right and shall withhold any and all contract payment(s) until the water meter is returned in good working order or until the damage or loss assessment fee is paid in full.

The Contractor must submit water meter fee and/or proof of meter return with project completion invoice in order to receive payment for work performed under this contract.”

Sanitary Facilities

Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

Electric Power Service

Temporary electrical power will be by the Contractor provided generator only.

Traffic Controls

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.
3. Provide and operate temporary traffic control signals at designated intersections, and traffic control signage as needed for temporary closure of public roads and streets.
4. If traffic modifications are required, the Contractor shall coordinate all activities with the City's Police Department prior to any traffic control setup. The City or the Project Manager will determine locations that will require traffic control.

Contractor's Employees

The Contractor agrees to staff each project with personnel experienced in the nature of the work and having appropriate training, skills, and required credentials to accomplish the work's objectives. The Contractor will maintain continuity of its staff assigned to the work to the fullest extent possible throughout the term of this Agreement.

The Contractor shall be equipped with the normal tools of their trade and shall furnish all labor, tools, and other items necessary for and incidental to executing and completing all required work.

The Contractor shall be responsible for providing protective gear and equipment to its agents and employees, and for ensuring its proper utilization under all current applicable OSHA regulations. Anyone in the secure demolition area must be wearing appropriate protective equipment at all times. This would include, but not be limited to, hard hats and safety vests.

The Contractor will fully and sufficiently inform its staff of the nature of the work and the hazards inherent in performing the work, and shall inform its subcontractors of the same.

The work shall be performed in accordance with the requirements, standards, specifications and schedules set forth, and all applicable regulations or policies of the U. S. Environmental Protection Agency, Tennessee Department of Environment and Conservation, or any other regulatory agency that has jurisdiction over the work. All regulatory or contractual interpretations shall be made by the applicable regulatory authority or the City and shall be final.

The work shall be diligently and continuously performed in order that said work is completed within the time frame as specified by the City.

The Contractor shall only furnish employees who are properly licensed, competent and skilled for work under this Contract.

The Contractor's employees and sub-contractor employees shall each wear distinctive company clothing or hard hats with permanent markings identifying their respective employer at all times while within the project buildings and at all times while on site.

If, in the opinion of the City or the Project Manager, an employee of the Contractor or Contractor's subcontractor(s) is incompetent or disorderly, refuses to perform in accordance with the terms and conditions of the Contract, threatens or uses abusive language while performing work, or is otherwise unsatisfactory, that employee shall be removed from all work under this Contract.

The Contractor shall provide a main phone number and a backup phone number that will be answered 24/7.

Archaeology

The sites may be archeologically sensitive. The demolition footprint shall have minimal ground disturbance. In the event that archeological deposits (soils, artifacts and features such as cisterns, privies, alluvial wells and the like), or other remnants of human activity are uncovered, or if archeological deposits are found during excavation, the project will be halted immediately in the vicinity of the discovery, and the CONTRACTOR will inform the City's PROJECT MANAGER and take reasonable measures to avoid or minimize harm to finds. Work in the sensitive area cannot resume until CONTRACTOR is notified by the PROJECT MANAGER.

Septic Tanks – If discovery of a septic tank takes place during demolition, the CONTRACTOR is required to have it pumped by a certified licensed pumping service, collapsed and then backfilled as stated below.

Backfilling and Finishing

The Contractor shall obtain inspection and approval from the City's Code Enforcement Division or designee prior to backfilling all excavations, holes or depressions on the demolition site. Excavations, cellar holes, basement holes, abandoned cisterns or other depressions within the demolition site shall be filled and compacted with sand or earthen fill.

A 6 inch layer (in place thickness) of tillable topsoil shall be spread over areas impacted by the demolition removals and/or areas excavated and filled to provide positive surface drainage and to establish a finished site grade consistent with adjacent grades. Final grading must be raked level and surface rocks larger than one (1) inch removed prior to seeding.

Adjacent grades, when referred to in these specifications, means approximate existing elevation of the ground surrounding a basement, or other excavated or depressed area, at the distance of 5 feet outside the area, particularly when the existing ground has previously been graded up so as to slope away from the area. Stable, uniform grade for at least sixty days after the date when the job is reported "finished" is required. If the backfill materials were frozen when used or any other settling of the backfilled area occurs, causing unacceptable settling during the first sixty days after the ground is free of frost, the Contractor shall remedy such settling by additional tamping, refilling, compacting and re-grading in conformance with the standards set forth in this section, shall repair or replace any structures, vegetation or topography which was destroyed, damaged, moved or changed in conjunction with, or by reason of, the wrecking operation. Such repairs, replacement or restitution shall be based upon and consistent with the grade, appearance and state of repair which existed prior to the start of the demolition work. The backfill shall be compacted to 95 percent of the maximum dry density as set forth in ASTM Test Method D698. Random QA/QC may be completed by the City's Project Manager. The Contractor will provide for the service of an independent testing laboratory to perform tests if required. Copies of documentation verifying these tests have been completed shall be submitted with the project invoices.

Seeding

The topsoil shall be covered with appropriate and adequate seeding so as to ensure a healthy and uniform grass growth.

Cleanup

All pieces, parts, scraps, debris, rubbish, wood and organic materials from a structure or part of a structure in the process of being demolished shall be cleaned up and removed from the premises daily. Final cleanup after the structure is demolished shall include complete and thorough removal from the premises of all parts or pieces of the building, its contents and its furnishing, including all debris, organic materials, rubbish, wood, concrete, and masonry rubble in their entirety; examples: Concrete or brick floors of basements, or of areaways, stairways, stairwells or depressed structures shall be completely removed. Concrete slabs on ground of basement-less buildings and foundations shall be broken up and removed from the site. All hazardous open pits and recesses shall be filled with thoroughly tamped earth or mortar; whichever is required to completely eliminate the hazard.

Sidewalks, Driveways

City sidewalks running parallel to the street and the driveway portion for the street to the sidewalk are to be left intact, however, if they are damaged during demolition, they are to be removed and replaced at the Contractor's own expense. Private or approach walks and drives shall be removed. Damaged walks and aprons shall be noted by the Contractor and the Project Manager. The Contractor will not be responsible for repairing documented pre-existing damage.

Outbuildings / Fences / Misc. Debris

Outbuildings such as sheds, garages are identified on the Bid Submittal Form. Fences shall not be removed until authorization is provided by the Project Manager. Miscellaneous debris shall be removed and the lot shall be left clean and free of all debris.

Transporting and Disposal

The Contractor acknowledges, represents and warrants to the CITY that it is familiar with all laws relating to disposal of the materials as stated herein and is familiar with and will comply with all guidelines, requirements, laws, regulations, and any other federal, state or local agencies or authorities.

The Contractor acknowledges and understands that any disposal, removal, transportation or pick-up of any materials not covered in this scope of work shall be at the sole risk of the Contractor. The Contractor understands that it will be solely responsible for any liability, fees, fines, claims, etc., which may arise from its handling of materials not covered by this scope of work.

The Contractor is responsible for determining and complying with applicable requirements for securing loads while in transit and that all trucks shall have a solid tailgate made out of metal.

The Contractor shall ensure that all loads are properly secured and transported without threat of harm to the general public, private property and public infrastructure.

The Contractor shall ensure that all vehicles transporting debris are equipped with and use tarps or netting to prevent further spread of debris. All loads are required to be tarped.

Appliances

All appliances are considered to be asbestos contaminated and will be housed with the other materials from the demolition. Freon will not be removed from any appliances. Appliances will not be demanufactured. All appliances shall be landfilled.

Heating Oil Tanks

Some buildings may have heating oil tanks. The heating oil tanks shall be pumped of all fluids into an appropriate container. The Contractor shall ensure tanks are decontaminated and taken to a metal recycler as part of this contract.

REAL ESTATE ASSESSMENT DATA

Attached is a three (3) page Real Estate Assessment Data report from the State of Tennessee Comptroller of the Treasury.


 State of Tennessee Comptroller of the Treasury
Real Estate Assessment Data

County Number: **001**County Name: **ANDERSON**Tax Year: **2012**

Property Owner and Mailing Address

Jan 1 Owner:
~~CRABTREE ROCKFORD~~~~TONYA HENDERSON~~
 212 ILLINOIS AVE
 OAK RIDGE, TN 37830
 USA

 Don Roberts
 103 Middlebury Rd
 Oak Ridge, TN 37830
 cell: 865.617.9426

 City of Oak Ridge
 CDBG Purchase
 1/4/2013

Property Location

Address: ILLINOIS AVE 212

Map: 099J **Grp:** A **Ctrl Map:** 099K **Parcel:** 063.00 **PI:** **S/I:** 000

Value Information

Reappraisal Year: 2010

Land Mkt Value: \$28,300

Improvement Value: \$50,600

Total Market Appraisal: \$78,900

Assessment %: 25

Assessment: \$19,725

General Information

Class:	00 - RESIDENTIAL		
City #:	549	City:	OAK RIDGE
SSD1:	000	SSD2:	000
District:	02	Mkt Area:	F01
# Bldgs:	1	# Mobile Homes:	0
Utilities - Water:	1 - PUBLIC	Utilities - Sewer:	1 - PUBLIC
Utilities - Elec:	1 - PUBLIC	Utilities - Gas:	2 - PRIVATE
Utilities - Gas Type:		Zoning:	

Subdivision Data

Subdivision: BLOCK 0E11 LOT 0016

Plat Bk:	Plat Pg:	Block:	Lot:
-----------------	-----------------	---------------	-------------

Additional Description

02 016BZ 016BZ01600 000

Building Information

Building # 1

Improvement Type:	01 - SINGLE FAMILY	Stories:	1
Base Area Sq. Ft.:	1,400	Aux Base Sq. Ft.:	1,456
Foundation:	02 - CONTINUOUS FOOTING	Floor System:	04 - WOOD W/ SUB FLOOR
Exterior Wall:	04 - SIDING AVERAGE	Structural Frame:	00 - NONE
Roof Framing:	02 - GABLE/HIP	Roof Cover/Deck:	03 - COMPOSITION SHINGLE
Cabinet/Millwork:	03 - AVERAGE	Floor Finish:	11 - CARPET COMBINATION
Interior Finish:	07 - DRYWALL	Paint/Decor:	03 - AVERAGE
Heat and A/C:	00 - NONE	Plumbing Fixtures:	6
Bath Tile:	00 - NONE	Electrical:	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	Quality:	01 - AVERAGE
Act Yr Built:	1943	Condition:	0 - SOUND

Building Areas:

Area: BAS	Sq Ft: 1,400
Area: OPU	Sq Ft: 700
Area: OPF	Sq Ft: 24
Area: BMU	Sq Ft: 700
Area: OPU	Sq Ft: 32

Extra Features

Bldg/Card#	Type	Description	Units
1	SHED		1

Sale Information

Sale Date	Price	Deed Book	Page	Vac/Imp	Type Instrument	Qualification
10/23/2006	\$47,000	1437	1627	IMPROVED	WD	N
02/12/2004	\$47,000	1358	3759			

02/12/2004	\$47,000	1358	3757			
12/10/1997	\$32,500	1038	991	IMPROVED	WD	J

Land Information

Deed Acres: 0.28 **Calc Acres:** 0.00 **Total Land Units:** 0.28

Land Type: 04 - IMP SITE **Soil Class:** **Units:** .28

[View GIS Map for this Parcel](#)

<u>New Search</u>	<u>Glossary of Terms</u>	<u>How to Search</u>	<u>Fact Sheet</u>
<u>Real Estate Assessment Data Home Page</u>	<u>Division of Property Assessments Home Page</u>	<u>Comptroller of the Treasury Home Page</u>	<u>State of Tennessee Home Page</u>

PHOTOGRAPHS

Attached are photographs of the Property. One (1) page attachment.



HAZARDOUS MATERIALS SURVEY REPORT

Attached is a forty-five (45) page Hazardous Materials Survey Report from Quantum Environmental and Engineering Services, LLC.



March 5, 2013

Mr. Matthew Widner
Community Development
City of Oak Ridge
200 South Tulane Avenue
Oak Ridge, TN 37831

Re: Hazardous Materials Survey Report
Residential Structure, 212 Illinois Avenue, Oak Ridge, Tennessee

Dear Mr. Widner:

Quantum Environmental and Engineering Services, LLC (QE²) is pleased to present the enclosed Hazardous Materials Survey Report for the residential structure located at 212 Illinois Avenue, Oak Ridge, Tennessee. The hazardous materials survey was performed to support plans for demolition of the structure. If you have comments, questions, or need additional copies, please feel free to contact Helen Hennon or me at 865-689-1395.

Sincerely,

A handwritten signature in blue ink that reads "Terence Davis".

Terence Davis, P.G.
Senior Environmental Specialist

c: QE² Project File – 501036.000.002



**HAZARDOUS MATERIALS SURVEY REPORT
FOR
RESIDENTIAL STRUCTURE
212 ILLINOIS AVENUE
OAK RIDGE, TENNESSEE**



HAZARDOUS MATERIALS SURVEY REPORT

For:

**Residential Structure
212 Illinois Avenue
Oak Ridge, Tennessee**

Prepared For:

**City of Oak Ridge
200 S. Tulane Avenue
Oak Ridge, Tennessee 37831
Attn: Mr. Matthew Widner**

Prepared By:

**Quantum Environmental & Engineering Services, LLC
126 Dante Road
Knoxville, Tennessee 37918
QE² Task No. 501036.000.002**

March 5, 2013



TABLE OF CONTENTS

ACRONYMS..... ii
EXECUTIVE SUMMARY iii

1.0 INTRODUCTION..... 1
 1.1 Objectives and Scope 1
 1.2 Building Description..... 1
 1.3 General Survey Methodology..... 2

2.0 ASBESTOS CONTAINING MATERIALS SURVEY 2
 2.1 Regulatory Framework – Asbestos..... 2
 2.2 Asbestos Survey Methodology and Sampling Protocol..... 4
 2.3 Asbestos Sample Results..... 5

3.0 OTHER HAZARDOUS MATERIALS 7
 3.1 Polychlorinated Biphenyl Compounds 7
 3.2 Mercury 9
 3.3 Ozone Depleting Substances 10
 3.4 Miscellaneous Hazardous Substances and Conditions 11

4.0 CONCLUSIONS AND RECOMMENDATIONS..... 12
 4.1 Asbestos 12
 4.2 Other Hazardous Materials..... 13

5.0 DISCLAIMER 14

TABLES

Table 1 Potential ACM Homogeneous Areas..... 4
Table 2 Laboratory Results of Asbestos Sampling 5

APPENDICES

Appendix A Photographs and Site Sketch
Appendix B Laboratory Data and Chain of Custody Forms for Asbestos Samples

ACRONYMS

ACM	Asbestos-Containing Material
ASHERA	Asbestos Hazard Emergency Response Act
APC	Air Pollution Control (Division of TDEC)
CAA	Clean Air Act
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSHWM	State of Tennessee Division of Solid and Hazardous Waste Management
EPA	United States Environmental Protection Agency
HA	Homogeneous Area
Hg	mercury
LBP	Lead-based Paint
ND	None Detected
NESHAP	National Emissions Standards for Hazardous Air Pollutants
ODS	Ozone Depleting Substance
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl Compound
PLM	Polarized Light Microscopy
ppm	parts per million
PS-NA	Positive Stop – Not Analyzed
QE ²	Quantum Environmental & Engineering Services, LLC
RACM	Regulated Asbestos-Containing Material
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TOSHA	Tennessee Occupational Safety and Health Administration
TSCA	Toxic Substances Control Act

EXECUTIVE SUMMARY

On behalf of the City of Oak Ridge, Quantum Environmental and Engineering Services, LLC (QE²), conducted a hazardous materials survey to assess the potential presence of asbestos-containing materials (ACM) and other hazardous materials at a residential structure at 212 Illinois Avenue, Oak Ridge, Tennessee. The work was performed in accordance with Notice to Proceed No. COR 13-03, dated January 30, 2013.

The principal objective of the hazardous materials investigation was to gain information on the nature and location of hazardous materials present in the building to facilitate plans for demolition. City administrators, project managers, contractors, and workers may use the information in this report to ensure the environmentally compliant handling and disposal of hazardous or special wastes, in accordance with all State and Federal regulations.

Findings

- ACM – The types, asbestos percentages, and National Emission Standards for Hazardous Air Pollutants (NESHAP) categories include:
 - a) joint compound associated with approximately 800 square feet of drywall on interior basement ceilings and walls - 2% chrysotile asbestos, friable ACM;
 - b) ceiling texture material in Rooms 1, 2, 3, 4, 10, and portions of the hallway, approximately 900 square feet – 3% chrysotile, friable ACM;
 - c) cement-asbestos composite exterior shingles on the upper section of the two ends of the structure, approximately 130 square feet – 20% chrysotile asbestos, non-friable Category II ACM but should be abated as it would likely become friable during demolition;
 - d) one 6-in square heat shield/reflective backing in a ceiling-mounted incandescent light fixture in the basement – 70% chrysotile asbestos, friable ACM; and
 - e) thermal system insulation on approximately three linear feet of piping associated with the hot water heater in the basement – 70% chrysotile asbestos, friable ACM.
- Polychlorinated biphenyls (PCBs) or mercury (Hg) – PCB-containing equipment was not observed during the reconnaissance. One small fluorescent light fixture with no bulb was noted under a cabinet over the Room 10 kitchen sink. The fixture appeared to be a recent model and would not likely include a PCB-containing ballast. Appliances with potentially Hg-containing thermostats include several portable heaters and a hot water heater in the basement. Kitchen appliances have been removed and the home does not have central heat and air conditioning or thermostats.
- Ozone-depleting substances (ODS) - no appliances or equipment remains with the potential to contain ozone-depleting substances.

- Miscellaneous hazardous substances - household quantities of various cleaning chemicals, paints, automotive products, herbicides, insecticides, and petroleum-based products (less than 5-gallon capacity) were noted in the kitchens, bathrooms, storage closets, basement, and exterior shed. A gas can and a weed eater with minimal amounts of fuel were noted in the basement.
- Remaining electronic equipment includes a television and phonograph in the attic; space heaters, computer equipment, and smoke detectors in the basement; and space heaters, a microwave, and smoke detectors in the home.
- A bottle of urine and a pellet gun were present in Room 10 (south kitchen). The City of Oak Ridge has been notified about the presence of the pellet gun.

The drywall joint compound, light fixture heat shield, and thermal piping insulation in the basement; and the ceiling texture in five rooms of the main level were confirmed as ACM and have the National Emissions Standards for Hazardous Air Pollutants (NESHAP) classification of friable ACM. The cement-asbestos exterior wall shingles are classified as Category II non-friable ACM, but they would likely become friable during standard demolition methods. The friable and Category II non-friable materials are considered to be regulated asbestos containing materials and will require abatement prior to demolition. An accredited Tennessee-licensed asbestos abatement contractor must formally notify the Tennessee Department of Environment and Conservation (TDEC), Division of Air Pollution Control prior to performing the abatement.

Miscellaneous hazardous cleaning chemicals, petroleum-containing products, paints, insecticides, and herbicides were present in household quantities. Potential human pathogens, electronics, and appliances are also present. These items must be properly removed and disposed prior to demolition. Fungal growth was also noted in the structure, but is not a concern with general demolition and disposal. Mold spores could cause allergic symptoms for workers who are sensitive to mold and are exposed for extended time periods. The presence of lead-based paint was not investigated for this survey, but based on the age of the structure it is likely present. TDEC does not require specific testing or special disposal for lead-based paint coated debris during routine demolition projects, as long as workers are not sanding, scraping, or water blasting loose paint. The conclusions and recommendations presented in Section 4 should be reviewed to support demolition planning and compliance with environmental, safety, and health regulations, policies, and standards associated with facility demolition.

1.0 INTRODUCTION

Quantum Environmental and Engineering Services, LLC (QE²), conducted a pre-demolition hazardous materials survey on February 6 and 7, 2013, to assess the potential presence of asbestos-containing materials (ACM) and other hazardous materials at a residential structure at 212 Illinois Avenue, Oak Ridge, Tennessee. The work was performed in accordance with City of Oak Ridge Notice to Proceed No. COR 13-03, dated January 30, 2013.

1.1 Objectives and Scope

The principal objective of the hazardous materials investigation was to gain information on the nature and location of hazardous materials present in the residential structure to support plans for demolition. City administrators, project managers, contractors, and workers may use the information in this report to ensure the environmentally compliant handling and disposal of hazardous or special wastes in compliance with applicable State and Federal environmental, safety, and health regulations and policies.

The hazardous and regulated materials assessed included ACM, polychlorinated biphenyl compounds (PCBs), ozone-depleting substances (ODS), mercury-containing equipment, and other miscellaneous hazardous materials. The scope of work included sampling and laboratory analysis of potential ACM, a visual survey of other potentially hazardous materials and conditions, and the preparation of this Hazardous Materials Survey Report which documents the assessment findings. Conclusions and general recommendations are provided in Section 4.

1.2 Building Description

Construction details of the building are relevant in terms of planning for demolition and for the identification and removal of potential environmental hazards and regulated materials. The description is based on visual observations made during the site survey. No construction drawings or details were available that might provide additional information on the nature and location of hazardous or regulated materials, or indicate building materials or components that may have been overlooked or hidden during the site survey. Appendix A includes photographs and a site plan of the structure and specific building components that were addressed.

According to the State of Tennessee, Real Estate Assessment Data website, the residence was originally constructed in 1943. The approximately 1,450-square foot residence is a one-story wood-framed structure built over a concrete block and slab foundation basement. The basement includes several partially-finished storage rooms with some drywall on walls and ceilings, and is only accessible from the rear exterior of the house. The exterior siding is a combination of the original wood siding and lesser amounts of cement-asbestos composite shingles. Exterior window and door trims are wood. The interior walls are painted, papered, or paneled fiberboard and drywall with painted wood trim and baseboards. Ceilings are painted and/or textured fiberboard and drywall. Interior floor finishes include sheet vinyl, vinyl floor tiles, and

hardwood. The roof is pitched with wood truss construction, rolled felt paper, and several layers of asphalt shingles. The home does not have a central heating and air conditioning system. Several space heaters were noted but interior window-mounted air conditioning units have been removed. The structure is not currently occupied and access is not secured. A small metal-sided, wood-framed storage shed in the back yard contains wood and metal construction debris.

1.3 General Survey Methodology

The hazardous materials survey was conducted on February 6 and 7, 2013, and included a structure-wide appraisal of hazardous and regulated materials and key building conditions relevant to demolition. The sampling team used manual sampling equipment and supplies to assess suspect ACM. Other hazardous materials were assessed by visual inventory. Data were logged in field forms and chain of custody forms, and digital photographs were made of key building components and conditions. Subsequent sections provide additional details of the specific survey methodologies, equipment, and findings. A site sketch and photographs are contained in Appendix A.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

The following subsections present background information on Federal and State regulations for asbestos, particularly with regard to demolition; a review of the methodology for asbestos sampling and laboratory analysis; and results of the asbestos assessment and sampling. The results are supplemented with tables of laboratory results. Laboratory data sheets and chain of custody forms for asbestos samples are provided in Appendix B.

2.1 Regulatory Framework - Asbestos

The United States Environmental Protection Agency (EPA) was delegated the responsibility to promulgate and enforce emissions standards for hazardous air pollutants under the Clean Air Act (CAA) of 1990. The National Emissions Standards for Hazardous Air Pollutants (NESHAP), including regulations for asbestos (40 Code of Federal Regulations (CFR) 61.140), were established in 1973. These regulations were primarily directed at asbestos industries, but they also banned spray-applied ACM in new buildings, and established procedures for handling ACM during demolition activities. The regulations were revised in 1975 and 1978 to cover building renovations, the use of asbestos-containing insulation in new buildings, and asbestos emissions from ACM waste disposal.

The State of Tennessee, Department of Environment and Conservation (TDEC), Division of Air Pollution Control (APC), obtained authorization from the EPA to regulate activities involving asbestos or ACM within most of Tennessee. The APC developed the Tennessee Asbestos Rules (TDEC Rules: Chapter 1200-3-11-.02), which are similar to the federal NESHAP regulations. The Rules apply to any commercial, industrial, educational, or public building.

In enforcing the NESHAP regulations, the APC requires that each area of a building be inspected before renovation, removal, or demolition activities occur to reveal the presence of any regulated asbestos-containing material (RACM). RACM is defined as:

- friable ACM;
- Category I non-friable ACM that has become or is likely to become friable;
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by Subpart M (National Emission Standard for Asbestos).

Friable asbestos material is any material containing more than one percent (1%) asbestos as determined using polarized light microscopy (PLM) that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable asbestos includes pipe and tank insulation (thermal system insulation), and surfacing materials such as spray-applied or troweled on ceiling and wall coatings. The EPA defines Category I non-friable ACM as any asbestos-containing packing, gasket, resilient floor covering, or asphalt roofing product which contains more than 1% asbestos as determined using PLM according to the method specified in Appendix A, Subpart F, 40 CFR Part 763 (Sec. 61.141). The EPA defines Category II non-friable ACM as any material, excluding Category I non-friable ACM, containing more than 1% asbestos as determined using PLM according to the methods specified in Appendix A, Subpart F, 40 CFR Part 763 that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure (Sec. 61.141). In addition to the identification of all ACM in a facility, the NESHAP standard requires that the facility owner or operator of a demolition or renovation activity remove all RACM before demolition or renovation commences.

The APC must be notified for all commercial, industrial, educational, or public building demolition projects even if there is no ACM. A permit must also be obtained if renovation activities disturb RACM exceeding 260 linear feet, 160 square feet, or 35 cubic feet. A completed Notification of Demolition and/or Asbestos Renovation (Form CN-1055) must be postmarked or hand delivered to the APC at least ten (10) working days before the asbestos removal work or demolition.

A Tennessee-licensed and accredited contractor is required to perform activities involving RACM. The notification requirements and procedures for emission control are applicable based on the circumstances of the activity and the amount of asbestos present. Individuals and firms engaged in activities involving asbestos or ACM must also comply with applicable regulations

under the United States Department of Transportation (DOT) and Tennessee Department of Transportation (TDOT) for transportation of asbestos waste, the Occupational Safety and Health Administration (OSHA) and the Tennessee Occupational Safety and Health Administration (TOSHA) for occupational exposure, and the TDEC Division of Solid and Hazardous Waste Management (DSHWM) for disposal of ACM. An Asbestos Waste Shipping Record (TDEC Form CN-1054) must accompany ACM shipped for landfill disposal.

2.2 Asbestos Survey Methodology and Sampling Protocol

The asbestos survey was conducted in general conformance with the protocols established by EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). Components of the building were inspected and nineteen homogeneous areas (HAs) were identified and documented. An HA consists of a suspect building material which appears similar throughout in terms of color, texture, and date of application. Table 1 provides the identified HAs for the residence. Photographs and a site plan with materials locations are provided in Appendix A. HAs that were determined through analysis to contain >1% asbestos are highlighted.

Table 1
Potential ACM Homogeneous Areas
212 Illinois Avenue, Oak Ridge, Tennessee

HA#	Material Description	Sample #s	Location(s)
HA-1	Drywall & Joint Compound – Main Level	HA-1-1, HA-1-2, HA-1-3	Rooms 1-10
HA-1A	Drywall & Joint Compound – Basement Walls & Ceilings	HA-1-4, HA-1-5	Basement & Exterior Stairwell
HA-2	Textured Ceiling Material – White Swirled	HA-2-1, HA-2-2, HA-2-3	Rooms 1-4, 10, and Portions of Hallway
HA-3	Linoleum & Mastic – Brown Parquet Pattern	HA-3-1, HA-3-2, HA-3-3	Room 1
HA-4	Fiberboard Walls & Ceilings	HA-4-1, HA-4-2, HA-4-3	Rooms 1-10
HA-5	12-in x 12-in Vinyl Floor Tile & Mastic – Brown Parquet Pattern	HA-5-1, HA-5-2, HA-5-3	Room 2
HA-6	Linoleum & Mastic – White with 7-in Square Pattern	HA-6-1, HA-6-2, HA-6-3	Room 5
HA-7	Linoleum (Backing only) & Mastic (linoleum already removed)	HA-7-1	Room 6
HA-8	Linoleum & Mastic – White Square & Diamond Pattern	HA-8-1, HA-8-2	Room 9
HA-9	Linoleum & Mastic – Blue 7-in Square Pattern	HA-9-1, HA-9-2, HA-9-3	Room 10
HA-10	Blown Insulation in Walls & Attic - Beige	HA-10-1, HA-10-2, HA-10-3	Throughout Main Level & Attic
HA-11	Exterior Roofing Shingles – Green & Black Base Layer	HA-11/12-1, HA-11/12-2, HA-11/12-3	Exterior Roof
HA-12	Exterior Roofing Felt – Black Base Layer		

HA#	Material Description	Sample #s	Location(s)
HA-13	Exterior Siding Felt Liner	HA-13-1, HA-13-2, HA-13-3	Exterior Siding
HA-14	Exterior Cement-Composite Siding Shingles	HA-14-1	Exterior Siding – Ends at Attic Level
HA-15	Exterior Roofing Materials (several layers)	HA-15-1, HA-15-2, HA-15-3	Exterior Roof
HA-16	Exterior Window & Door Caulk – Beige/Gray	HA-16-1, HA-16-2, HA-16-3	Exterior
HA-17	Heat Shield/Reflective Backing – Silver Liner in Incandescent Fixture	HA-17-1	Basement – One Ceiling-mounted Fixture
HA-18	Wiring Insulation – Braided Black, Gray	HA-18-1, HA-18-2	Throughout
HA-19	Thermal System Insulation – Aircell on Hot Water Heater Effluent	HA-19-1	Basement Water Heater

HA = Homogeneous Area

2.3 Asbestos Sample Results

Bulk samples were submitted to SanAir Technologies Laboratory in Powhatan, Virginia, for analysis by PLM. The sample results are provided in Table 2. No ACM were identified in the exterior shed. The positive samples indicating ACM in the house are highlighted. Photographs and a site sketch with sample locations are provided in Appendix A. Laboratory data sheets and chain of custody forms for asbestos samples are provided in Appendix B.

Table 2
Laboratory Results of Asbestos Sampling
212 Illinois Avenue, Oak Ridge, Tennessee

Sample #s	Sample Description – Sample Location	Asbestos Content
HA-1-1	Drywall (DW) & Joint Compound (JC) – Room 7 Wall	DW=ND, JC=ND
HA-1-2	DW/Plaster & JC/Skimcoat – Room 7 Wall	DW=ND, JC=ND
HA-1-3	DW & JC – Room 3 Wall	DW=ND, JC=ND
HA-1-4	DW & JC – Basement Ceiling	DW=ND JC = 2% Chrysotile
HA-1-5	DW & JC – Basement Wall	DW=ND, JC=PS-NA
HA-2-1	Ceiling Texture – Room 4	3% Chrysotile
HA-2-2	Ceiling Texture – Room 3	PS-NA
HA-2-3	Ceiling Texture – Room 1	PS-NA
HA-3-1	Linoleum & Mastic, Brown Parquet Pattern – Room 1	Linoleum=ND, Mastic=ND
HA-3-2	Linoleum & Mastic, Brown Parquet Pattern – Room 1	Linoleum=ND, Mastic=ND
HA-3-3	Linoleum & Mastic, Brown Parquet Pattern – Room 1	Linoleum=ND, Mastic=ND
HA-4-1	Fiberboard – Room 5 Wall	ND
HA-4-2	Fiberboard – Room 8 Wall	ND
HA-4-3	Fiberboard – Room 4 Ceiling	ND

HA-5-1	12-in x 12-in Vinyl Floor Tile (VFT) & Mastic, Brown Parquet Pattern – Room 2	VFT=ND, Mastic=ND
HA-5-2	12-in x 12-in VFT & Mastic, Brown Parquet Pattern – Room 2	VFT=ND, Mastic=ND
HA-5-3	12-in x 12-in VFT & Mastic, Brown Parquet Pattern – Room 2	VFT=ND, Mastic=ND
HA-6-1	Linoleum & Mastic, White with 7-in Square Pattern – Room 5	Linoleum=ND, Mastic=ND
HA-6-2	Linoleum & Mastic, White with 7-in Square Pattern – Room 5	Linoleum=ND, Mastic=ND
HA-6-3	Linoleum & Mastic, White with 7-in Square Pattern – Room 5	Linoleum=ND, Mastic=ND
HA-7-1	Linoleum (Backing only) & Mastic – Room 6	Backing=ND, Mastic=ND
HA-8-1	Linoleum & Mastic, White Square & Diamond Pattern – Room 9	Linoleum=ND, Mastic=ND
HA-8-2	Linoleum & Mastic, White Square & Diamond Pattern – Room 9	Linoleum=ND, Mastic=ND
HA-9-1	Linoleum & Mastic, Blue 7-in Square Pattern – Room 10	Linoleum=ND, Mastic = <1% Chrysotile
HA-9-2	Linoleum & Mastic, Blue 7-in Square Pattern – Room 10	Linoleum=ND, Mastic=ND
HA-9-3	Linoleum & Mastic, Blue 7-in Square Pattern – Room 10	Linoleum=ND, Mastic=ND
HA-10-1	Blown Insulation – Attic above Room 10	ND
HA-10-2	Blown Insulation – Room 7 Wall	ND
HA-10-3	Blown Insulation – Attic above Room 5	ND
HA-11/12-1	Exterior Roofing Shingles & Felt, Base Layer – South Roof	Shingle=ND, Felt=ND
HA-11/12-2	Exterior Roofing Shingles & Felt, Base Layer – Center Roof	Shingle=ND, Felt=ND
HA-11/12-3	Exterior Roofing Shingles & Felt, Base Layer – North Roof	Shingle=ND, Felt=ND
HA-13-1	Exterior Siding Felt Liner – East Wall Center	ND
HA-13-2	Exterior Siding Felt Liner – East Wall South	ND
HA-13-3	Exterior Siding Felt Liner – South Wall	ND
HA-14-1	Exterior Cement-Composite Siding Shingles – North Wall	20% Chrysotile
HA-15-1	Exterior Roofing Materials (several layers) – South Roof	Shingles=ND, Felts=ND
HA-15-2	Exterior Roofing Materials (several layers) – Center Roof	Shingles=ND, Felts=ND
HA-15-3	Exterior Roofing Materials (several layers) – North Roof	Shingles=ND, Felts=ND
HA-16-1	Exterior Window Caulk, Beige/Gray – Northeast Window	ND
HA-16-2	Exterior Window Caulk, Beige/Gray – East Central Window	ND
HA-16-3	Exterior Window Caulk, Beige/Gray – North End Window	ND
HA-17-1	Heat Shield/Reflective Backing, Silver Liner in Incandescent Fixture – Basement Ceiling	70% Chrysotile
HA-18-1	Wiring Insulation, Braided Black, Gray – Basement	ND
HA-18-2	Wiring Insulation, Braided Black, Gray – Basement	ND
HA-19-1	Thermal System Insulation, Hot Water Heater Effluent – Basement	70% Chrysotile

DW = Drywall

JC = Joint Compound

ND = None Detected

PS-NA = Positive Stop, Not Analyzed

VFT = Vinyl Floor Tile

Laboratory analysis of sample HA-1-4, collected from the basement ceiling, indicated that the joint compound contained 2% chrysotile asbestos. Based on this result, the second sample (HA-1-5) from a basement wall was not analyzed and was assumed to contain asbestos. None of the three samples (HA-1-1, HA-1-2, and HA-1-3) collected from the drywall and joint compound on the main living level of the house contained asbestos. Based on a visual inspection, the drywall and

joint compound materials in the main level appear to be related to recent renovations performed after asbestos was no longer used in joint compounds. The wall and ceiling materials in the basement are from an earlier period; therefore, the basement drywall and joint compound has been designated as a separate HA (HA-1A) from the newer materials represented by the first three samples. Based on measurements collected during the survey (provided in the Site Plan in Appendix A), the area of drywall and asbestos-containing joint compound on basement walls and ceilings (including the stairwell) is approximately 800 square feet.

Analysis of sample HA-2-1 from the textured ceiling material in Room 4 indicated 3% chrysotile asbestos. This material is present in Rooms 1-4, Room 10, and portions of the hallway (outside of Rooms 1, 2, 8, 9, and 10; and between Rooms 4 and 6). Based on measurements collected during the survey (provided in the Site Plan in Appendix A), the area of textured ceiling material is approximately 900 square feet. Analysis of sample HA-14-1 indicated 20% asbestos content in the cement-composite exterior siding shingles on each end of the house, at the attic level. The area of these siding shingles including both ends of the house is approximately 130 square feet. Analysis of sample HA-17-1 indicated 70% chrysotile asbestos content in the small reflective heat shield in the ceiling-mounted incandescent light fixture in the basement. The heat shield is approximately 6-in square. Analysis of sample HA-19-1 indicated 70% asbestos content in a 3 linear feet, badly deteriorated, horizontal section of thermal piping (Aircell) insulation on the water heater effluent in the basement.

3.0 OTHER HAZARDOUS MATERIALS

The physical survey of the residential structure at 212 Illinois Avenue included an appraisal of other potentially hazardous materials including PCBs, mercury, ODS, and other items that might contain hazardous chemicals and compounds (e.g., unused or discarded chemicals, petroleum liquids or solvents, pesticides, herbicides, etc.). A survey of lead-based paint (LBP) was not included in the scope of work. A summary of the regulations and policies associated with these materials are reviewed in the following sections along with the survey findings for each.

3.1 Polychlorinated Biphenyl Compounds

Regulatory Framework. The Federal PCB regulations can be found 40 CFR 761. The regulations include requirements for the removal and proper handling, and disposal of electrical and other equipment and materials containing PCBs, and the evaluation and cleanup of PCB releases (spills, leaks). PCB-containing products were used between 1926 until their manufacture was banned in 1979 by the Toxic Substances Control Act (TSCA). 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 industrial applications. Through a cooperative agreement with EPA Region 4, the TDEC DSHWM Toxic Substances Program conducts PCB

Compliance Inspections to monitor use, storage, disposal, and management of PCBs by electrical utility companies, industries, scrap metal facilities, and other businesses.

Key Federal and State regulations and information sources for PCBs include:

- EPA 40 CFR 761, Polychlorinated Biphenyl Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
- EPA 40 CFR 261.24, Identification and Listing of Hazardous Waste.
- EPA 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment.
- EPA 40 CFR 273, Standards for Universal Waste Management.
- EPA's PCB Homepage (includes extensive information, regulations, guidance):
<http://www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm>
- TDEC website for PCB information (minimal information, currently under construction):
<http://www.tn.gov/environment/swm/toxicsubstancesprg>

The surveyed structure was constructed and/or renovated during the period of PCB use; therefore, the presence of PCB-containing products is possible. One of the most common sources of PCB-containing products in residential and commercial buildings is fluorescent light ballasts located within fluorescent light fixtures. Other electrical equipment such as older transformers and capacitors may contain significant quantities of PCB insulating oils.

Disposal Options. As specified in the PCB regulations, the handling and disposal of fluorescent light ballasts is primarily dictated by whether or not the potting compound contains PCBs ≥ 50 ppm, and whether or not the small PCB capacitor inside the ballast is intact and non-leaking. "No-PCB" labels may be present depending on the original installation period of the fixture and whether or not the ballast was replaced in more recent years. Fluorescent light ballasts manufactured between July 1, 1979, and July 1, 1998, were required to be marked by the manufacturer with the statement "No-PCBs". Fixtures and ballasts should be assessed for PCB related labels before disposal. Unless the "No-PCB" label is observed on the light ballast, it should be considered PCB-contaminated and recycled/disposed of as PCB bulk product waste, or tested to determine PCB concentrations. The ballasts should be removed and not be disturbed or broken apart as this could result in a release of PCBs, and pose hazards to worker health and safety and to the environment. Disposal of PCB-containing electrical equipment such as light ballasts (i.e., ≥ 50 ppm PCBs) is dictated by State and Federal regulations. Ballasts are commonly removed, containerized, (e.g., in closed 55-gallon drums), and transported off-site for recycling and/or proper disposal.

The management and disposal of PCB items and PCB-contaminated materials are strictly regulated. The EPA provides a list of approved and permitted disposal facilities on their PCBs website at - <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/discobyreg.htm#r4>.

Findings. No potential PCB-containing materials or equipment were identified during the Site reconnaissance. One small fluorescent light fixture with no bulb was noted under a cabinet over the Room 10 kitchen sink. The fixture appeared to be a recent model and would not likely include a PCB-containing ballast.

3.2 Mercury

Regulatory Framework. Mercury-containing wastes and articles that are generated by households and commercial and industrial facilities are in most cases considered hazardous waste and must be managed properly. Common sources of mercury include fluorescent light bulbs and thermostats. Mercury-containing wastes are regulated by TDEC under their Standards for Universal Waste Management (Per TDEC Rule 1200-1-11-.12 and equivalent Federal regulations). These standards address requirements for managing batteries, pesticides, and mercury-containing equipment and lamps. Mercury-containing equipment and items should be handled as a hazardous waste, and are subject to the EPA Land Disposal Restriction Regulations.

Key Federal and State regulations, policies, and information sources for mercury and mercury-containing equipment include:

- EPA 40 CFR 261.24, Identification and Listing of Hazardous Waste.
- EPA 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment.
- EPA 40 CFR 273, Standards for Universal Waste Management.
- EPA 40 CFR 260, 261, 264, etc., Hazardous Waste Management System; Modification of the Hazardous Waste Program; Hazardous Waste Lamps; Final Rule B July 6, 1999.
- TDEC Rule 1200-1-11-.12, Standards For Universal Waste Management.
- TDEC DSHWM Policy for Mercury-containing Batteries and PCB-containing Ballasts and Transformers (July 1999 – published in SW Management).
- TDEC website for the Mercury Product Disposal Control Act (Effective January 1, 2011): <http://www.tn.gov/environment/swm/hazardous/hgproductdisposal/>

Disposal Options. All solid and hazardous wastes, including those covered by the Mercury Products Disposal Control Act, must be disposed in accordance with the Rules of the TDEC DSHWM (1200-1-7 et seq., Solid Waste Processing and Disposal, and 1200-1-11 et seq., Hazardous Waste Management).

Recycling Options. A list of recycling options can be found at the University of Tennessee's Center for Industrial Services website: *Recycling Markets Directory*. Mercury-containing products should be carefully handled and transferred for recycling and reuse to avoid the accidental breakage and release of mercury.

Findings. Appliances with potentially Hg-containing thermostats include several portable heaters and a hot water heater in the basement. The appliances were not dismantled to verify the presence or absence of mercury-containing thermostats. Kitchen appliances have been removed and the home does not have central heat and air conditioning or associated thermostats.

3.3 Ozone-depleting Substances

Regulatory Framework. Any air conditioning or cooling equipment has the potential to contain ODS. Under 40 CFR Part 82, EPA issued a Final Rule (May 14, 1993) promulgating regulations under Section 608 of the CAA that establish a recycling program for ozone-depleting refrigerants recovered during the servicing and disposal of air-conditioning or refrigeration equipment. Together with the prohibition (effective July 1, 1992) on venting during servicing, repair, and disposal of Class I and Class II substances, these regulations are intended to reduce emissions of ODS to the environment. The regulations require that ODS contained “in bulk” (i.e., with refrigerant charge intact) in appliances/equipment be removed prior to disposal. Section 608 contains requirements concerning the safe disposal of Class I and Class II substances. The equipment affected by the Rule includes disposal of most air-conditioning and refrigeration equipment including household air conditioners and refrigerators, commercial air conditioners and chillers, commercial refrigeration, and industrial process refrigeration (among other equipment). The regulations include, Section M, The Safe Disposal Program, which addresses details regarding disposal.

Disposal Options. The regulations state that the final link in the disposal chain be responsible for assuring that refrigerant has been removed from equipment, although refrigerant can be removed before final disposal. The final processor could require that refrigerant be removed before equipment is accepted. According to the EPA regulations, the ultimate disposer, or the last entity in the disposal chain, must either remove the refrigerant or obtain verification that refrigerant has been previously removed. The regulations note that refrigerant lines cannot simply be cut before disposal, which would violate the statute and the regulations prohibiting venting of ODS to the environment.

Key Federal regulations and information sources for ODS include:

- EPA 40 CFR Part 82, Protection of Stratospheric Ozone: Refrigerant Recycling, Final Rule, May 14, 1993.
- EPA’s Ozone Protection Layer Homepage - <http://www.epa.gov/ozone/title6/>

Findings. No appliances or equipment remains with the potential to contain ozone-depleting substances.

3.4 Miscellaneous Hazardous Substances and Conditions

Other hazardous and regulated materials commonly found in residential and commercial structures include batteries (lead acid and others containing metals and chemicals of concern), petroleum-based compounds (gasoline, oils, lubricants, solvents, waste oils, etc.), pesticides/herbicides, electronic scrap (personal computers, monitors, televisions, keyboards, printers, telephones, calculators, copiers, fax machines, and audio equipment), and other unused or discarded chemicals and commercial/industrial products (paint, alcohol, fertilizers, etc.). Mold can also create health concerns if interior renovation or salvage efforts are involved. LBP was not assessed as part of the scope of work for this project.

Disposal Options. Federal, State, and local regulations and policies govern the proper handling and disposal of these materials to eliminate hazards to human health and the environment. Materials and electronics in household quantities do not need special waste permitting, but should be delivered to a local convenience center capable of processing the materials in a safe manner. Mold-impacted building materials are not regulated as hazardous or special waste and can be disposed with other construction and demolition debris. TDEC DSHWM policy indicates that LBP does not need to be removed from demolition debris prior to disposal in a construction and demolition type landfill.

Findings: Miscellaneous hazardous cleaning chemicals were present in the home and basement in household quantities and included oven cleaners, carpet cleaning solutions, bleach, and kitchen and bath cleaning products. Paint cans in various sizes and spray paint containers were present in the home, basement, and storage shed. Petroleum-containing products included a small gasoline can and automotive oils. A weed eater is stored in the basement and likely contains fuel and lubricants. Small containers of insecticides (liquid and spray) and herbicides (weed killer liquid) are stored in the home and basement in household quantities. Potential human pathogens (potentially a bottle of urine) were noted in the home. Electronics and appliances include a computer monitor and parts in the home and basement, a television and phonograph in the attic, several smoke detectors in the home and basement, a microwave, numerous space heaters in the home and basement, and the basement water heater. These items must be properly removed and disposed prior to demolition. Fungal growth was also noted in the structure, but is not a concern with general demolition and disposal. Mold spores could cause allergic symptoms for workers who are sensitive to mold and are exposed for extended time periods. The presence of lead-based paint was not investigated for this survey. City of Oak Ridge officials have been alerted to the presence of a pellet gun in Room 10.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations for the management and disposal of ACM, and potential sources of PCBs, mercury, ODS, and other materials are addressed in the following subsections. The recommendations are presented based on current assumptions that the residence will be demolished. Until demolition occurs, the structure should be periodically inspected or maintained to prevent further deterioration of building materials and the potential release of asbestos fibers, and potential hazardous materials exposures to unauthorized persons who might enter. Personnel involved in planning and contracting for demolition of the residence should identify all applicable environmental, safety, and health regulatory requirements in bid packages and/or contractual documents. A final pre-demolition inspection should be completed shortly before demolition to ensure that conditions have not changed dramatically since the date of the survey.

4.1 Asbestos

Conclusions. The types, asbestos percentages, quantities, and NESHAP categories include:

- joint compound associated with approximately 800 square feet of drywall on some interior basement walls and ceilings, and in the exterior stairwell to the basement - 2% chrysotile asbestos, friable ACM;
- ceiling texture material in Rooms 1, 2, 3, 4, 10, and portions of the hallway, approximately 900 square feet – 3% chrysotile, friable ACM;
- cement-composite exterior shingles on the upper section of the two ends of the structure, approximately 130 square feet – 20% chrysotile asbestos, non-friable Category II ACM, but likely to become friable during demolition;
- one 6-in square heat shield/reflective backing in a ceiling-mounted incandescent light fixture in the basement – 70% chrysotile asbestos, friable ACM; and
- thermal system insulation on approximately three linear feet of piping associated with the hot water heater in the basement – 70% chrysotile asbestos, friable ACM.

No ACM were identified in the exterior shed. Locations for the confirmed HAs are provided in Tables 1 and 2, and photographs and a site sketch are provided in Appendix A.

Recommendations. The submittal of a Notification Form (CN-1055) is recommended to TDEC APC ten days before demolition. The results of the current hazmat survey should be provided with the Notification Form to support the information on the form.

Generally, all RACM (friable and potentially impacted non-friable materials) above regulatory quantities must be removed prior to disturbance. Management and disposal of ACM should meet APC notification and compliance requirements.

While every attempt was made to identify all suspect ACM, the locations of some ACM may have been hidden and inaccessible during the survey (e.g., pipe insulation hidden inside walls, pipe chases, or under debris piles). Should suspect ACM other than that identified during the current survey be identified or uncovered before or during demolition, those materials should be assumed asbestos-containing until sampling and analysis can confirm or deny asbestos content.

4.2 Other Hazardous Materials

Other hazardous and regulated materials identified at the site structure include potential sources of mercury (Hg), chemicals, petroleum compounds, and human pathogens. The following items of concern were identified:

- PCBs or Hg – No potential PCB-containing materials or equipment were identified during the Site reconnaissance. One small fluorescent light fixture with no bulb was noted under a cabinet over the Room 10 kitchen sink. The fixture appeared to be a recent model and would not likely include a PCB-containing ballast. Appliances with potentially Hg-containing thermostats include portable electric heaters and a hot water heater. The home did not contain thermostats related to a central heat and air system.
- No appliances or equipment remains with the potential to contain ozone-depleting substances.
- Household quantities of various cleaning chemicals, paints, automotive products, herbicides, insecticides, and petroleum-based products (less than 5-gallon capacity) were noted in the kitchens, bathrooms, storage closets, basement, and exterior shed. A gas can and a weed eater with minimal amounts of fuel were noted in the basement.
- Remaining electronic equipment includes a television and phonograph in the attic; space heaters, computer equipment, and smoke detectors in the basement; and space heaters, a microwave, and smoke detectors in the home.
- A bottle of urine and a pellet gun were present in Room 10 (south kitchen). The City of Oak Ridge has been notified about the presence of the pellet gun.

Mercury. Although none were noted during the inspection, fluorescent light bulbs, if found, should be carefully removed, containerized, and packaged to prevent breakage, and transferred to a vendor specializing in the reuse and recycling of mercury products. TDEC DSHWM policy does provide an exemption for households, and “Conditionally Exempt” Small Quantity Generators may dispose of fifteen or less fluorescent bulbs per month in a sanitary landfill. If not salvaged prior to demolition, the space heaters and water heater should be checked to determine if Hg-containing thermostats are present. A list of recycling options can be found at the University of Tennessee’s Center for Industrial Services website: *Recycling Markets Directory*. Hg-containing products should be carefully handled and transferred for recycling and reuse to avoid the accidental breakage and release of mercury.

Other Miscellaneous Substances. Households are exempt from hazardous and special waste permitting for minor quantities of household chemicals, and petroleum-containing products in original packaging. The household cleaning chemicals, petroleum products, insecticides and herbicides, lawn equipment, electronics, and appliances should be removed and taken to a facility or municipal convenience center where they properly disposed prior to structure demolition.

LBP was not assessed as part of the scope of work for this project, but based on the date of construction of the structure, LBP could be present. TDEC DSHWM policy indicates that LBP does not need to be removed from demolition debris prior to disposal in a construction and demolition type landfill. If the demolition work includes sanding, scraping, or water-blasting, certain OSHA exposure regulations may apply to workers and employers, and LBP chips and dust will require further testing prior to disposal. These activities are not likely to be included in the demolition of the subject structure.

Significant visible mold was noted in the structure. Although air sampling was not performed, olfactory evidence indicates a significant presence of airborne mold spores. Persons occupying the structure without respiratory protection may suffer allergic symptoms including watery or burning eyes, scratchy throat, headaches, and runny noses. Extended exposure without respiratory protection could lead to more serious conditions including sinus infections.

Mold-impacted items are not regulated for handling or disposal during demolition projects and those items can be demolished and disposed with general construction debris. If any interior demolition or salvage efforts are proposed which would include occupation for extended periods of time, workers should wear protective clothing and respiratory protection (minimum of N-95 NIOSH-rated respirator mask). Any items removed from the structure for re-use should be cleaned and disinfected before relocation. Asbestos abatement workers will be adequately protected under OSHA asbestos regulations and no special considerations for mold exposure are required for those workers.

5.0 DISCLAIMER

The hazardous materials survey reported herein is for the residential structure at 212 Illinois Avenue in Oak Ridge, Tennessee, and relies solely on conditions visually observed and readily accessible for sampling on February 6 and 7, 2013. Building conditions are likely to deteriorate over time due to a general lack of maintenance or active ventilation. Further structural deterioration may warrant a reassessment of conditions at the time of demolition. This report does not constitute an agreement to indemnify or insure any party against any liability of expense.

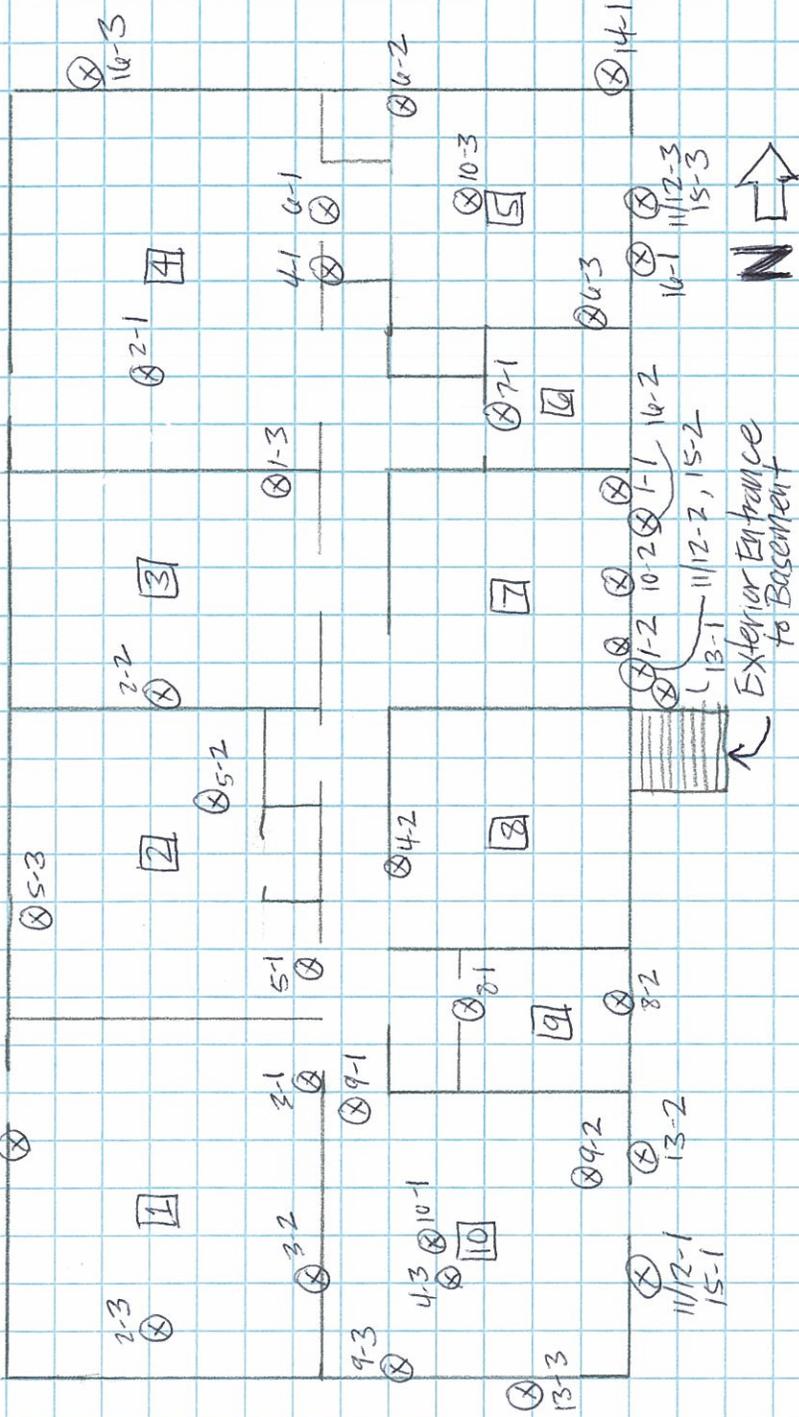
APPENDIX A

Site Sketch and Photographs

MAIN LEVEL
FLOOR PLAN

Site Sketch
212 Illinois Ave
Oak Ridge, Tennessee

February 6-7, 2013



BASEMENT
FLOOR PLAN

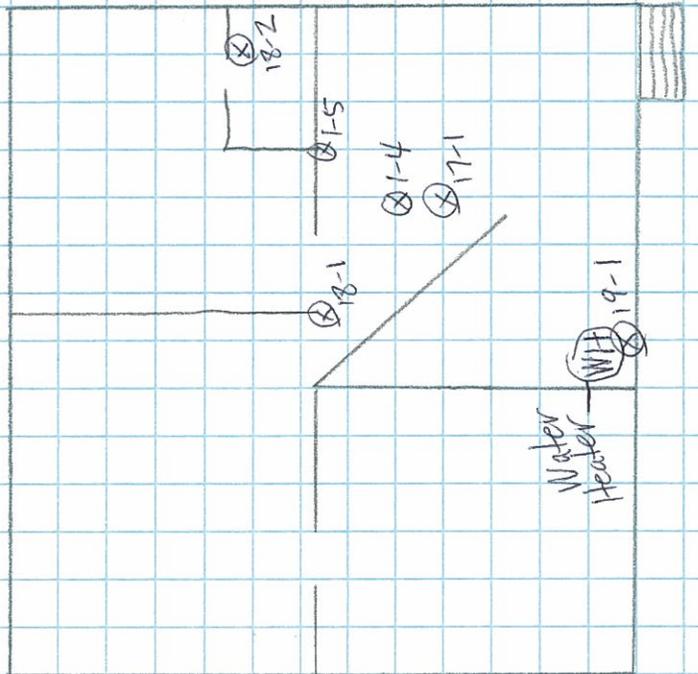




Photo 1. West Exterior



Photo 2. East Exterior



Photo 3. Northeast Corner Exterior



Photo 4. Basement Entrance



Photo 5. Shed



Photo 6. HA-1A, Basement Drywall & Joint Compound



Photo 7. HA-2, Ceiling Texture



Photo 8. HA-14, Asbestos Exterior Siding



Photo 9. HA-17, Heat Shield



Photo 10. HA-19, Thermal Piping Insulation



Photo 11. Oven Cleaner, Oil

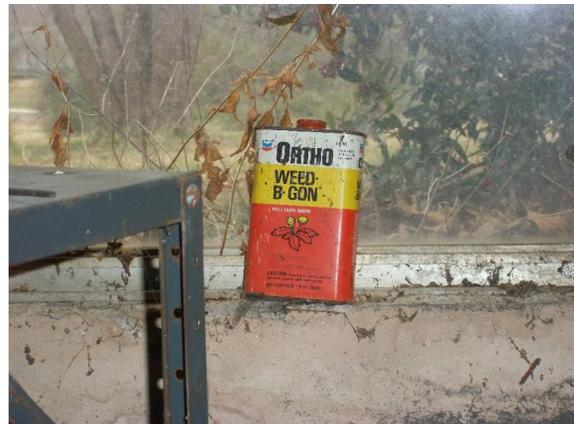


Photo 12. Weed Killer



Photo 13. Spray Paint Cans



Photo 14. Paint Cans



Photo 15. Cleaning Chemicals



Photo 16. Cleaning Compounds, Pellet Gun



Photo 17. Assumed Urine Container



Photo 18. Microwave



Photo 19. Computer Monitor



Photo 20. Smoke Detector



Photo 21. TV in Attic



Photo 22. Water Heater in Basement



Photo 23. Space Heater in Main Level



Photo 24. Space Heater in Basement



Photo 25. Weed Eater in Basement



Photo 26. Mold on Basement Walls

APPENDIX B

Laboratory Data for Asbestos Samples And Chain of Custody Forms

SanAir Technologies Laboratory

Analysis Report

prepared for

**Quantum Environmental &
Engineering Services, LLC**

Report Date: 2/19/2013
Project Name: COR 13-03, 212
Illinois Ave.
Project #: 501036.000.002
SanAir ID#: 13003331



NVLAP LAB CODE 200870-0



Certification # 652931



License # LAB0166



804.897.1177

www.sanair.com



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

Quantum Environmental & Engineering Services, LLC
126 Dante Road
Knoxville, TN 37918

February 19, 2013

SanAir ID # 13003331
Project Name: COR 13-03, 212 Illinois Ave.
Project Number: 501036.000.002

Dear Terry Davis,

We at SanAir would like to thank you for the work you recently submitted. The 46 sample(s) were received on Tuesday, February 12, 2013 via FedEx. The final report(s) is enclosed for the following sample(s): HA-1-1, HA-1-2, HA-1-3, HA-1-4, HA-1-5, HA-2-1, HA-2-2, HA-2-3, HA-3-1, HA-3-2, HA-3-3, HA-4-1, HA-4-2, HA-4-3, HA-5-1, HA-5-2, HA-5-3, HA-6-1, HA-6-2, HA-6-3, HA-7-1, HA-8-1, HA-8-2, HA-9-1, HA-9-2, HA-9-3, HA-10-1, HA-10-2, HA-10-3, HA-11/12-1, HA-11/12-2, HA-11/12-3, HA-13-1, HA-13-2, HA-13-3, HA-14-1, HA-15-1, HA-15-2, HA-15-3, HA-16-1, HA-16-2, HA-16-3, HA-17-1, HA-18-1, HA-18-2, HA-19-1.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:
46 sample(s) in Good condition



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-1-1 / 13003331-001 Drywall & Joint Compound - Room 7 Wall, Drywall	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

HA-1-1 / 13003331-001 Drywall & Joint Compound - Room 7 Wall, Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
--	-------------------------------------	--	------------	---------------

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-1-2 / 13003331-002 Drywall & Joint Compound - Room 7 Wall, Plaster	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

HA-1-2 / 13003331-002 Drywall & Joint Compound - Room 7 Wall, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
---	-------------------------------------	--	------------	---------------

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-1-3 / 13003331-003 Drywall & Joint Compound - Room 3 Wall, Drywall	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

HA-1-3 / 13003331-003 Drywall & Joint Compound - Room 3 Wall, Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
--	-------------------------------------	--	------------	---------------

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-1-4 / 13003331-004 Drywall & Joint Compound - Basement Wall, Drywall	Grey Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

HA-1-4 / 13003331-004 Drywall & Joint Compound - Basement Wall, Joint Compound	Tan Non-Fibrous Homogeneous		98% Other	2% Chrysotile
--	-----------------------------------	--	-----------	---------------

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-1-5 / 13003331-005 Drywall & Joint Compound - Basement Wall, Drywall	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected

HA-1-5 / 13003331-005 Drywall & Joint Compound - Basement Wall, Joint Compound				Not Analyzed
--	--	--	--	--------------

Certification

Signature:

Date: 2/19/2013

Reviewed:

Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services, LLC
Address: 126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-2-1 / 13003331-006 Ceiling Texture - Room 4	White Non-Fibrous Homogeneous		97% Other	3% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-2-2 / 13003331-007 Ceiling Texture - Room 3				Not Analyzed

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-2-3 / 13003331-008 Ceiling Texture - Room 1				Not Analyzed

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-3-1 / 13003331-009 Linoleum & Mastic - Rm 1, Linoleum	Tan Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-3-1 / 13003331-009 Linoleum & Mastic - Rm 1, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-3-2 / 13003331-010 Linoleum & Mastic - Rm 1, Linoleum	Tan Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-3-2 / 13003331-010 Linoleum & Mastic - Rm 1, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-3-3 / 13003331-011 Linoleum & Mastic - Rm 1, Linoleum	Tan Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-3-3 / 13003331-011 Linoleum & Mastic - Rm 1, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-4-1 / 13003331-012 Fiberboard Wall & Ceiling - Room 5 Wall	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-4-2 / 13003331-013 Fiberboard Wall & Ceiling - Room 8 Wall	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-4-3 / 13003331-014 Fiberboard Wall & Ceiling - Room 4 Ceiling	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-5-1 / 13003331-015 12x12 VFT & Mastic - Rm 2, Floor Tile	Tan Non-Fibrous Homogeneous		100% Other	None Detected
HA-5-1 / 13003331-015 12x12 VFT & Mastic - Rm 2, Mastic	Clear Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-5-2 / 13003331-016 12x12 VFT & Mastic - Rm 2, Floor Tile	Tan Non-Fibrous Homogeneous		100% Other	None Detected
HA-5-2 / 13003331-016 12x12 VFT & Mastic - Rm 2, Mastic	Clear Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-5-3 / 13003331-017 12x12 VFT & Mastic - Rm 2, Floor Tile	Tan Non-Fibrous Homogeneous		100% Other	None Detected
HA-5-3 / 13003331-017 12x12 VFT & Mastic - Rm 2, Mastic	Clear Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-6-1 / 13003331-018 Linoleum & Mastic - Rm 5, Linoleum	Grey Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-6-1 / 13003331-018 Linoleum & Mastic - Rm 5, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-6-2 / 13003331-019 Linoleum & Mastic - Rm 5, Linoleum	Grey Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-6-2 / 13003331-019 Linoleum & Mastic - Rm 5, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-6-3 / 13003331-020 Linoleum & Mastic - Rm 5, Linoleum	Grey Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-6-3 / 13003331-020 Linoleum & Mastic - Rm 5, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-7-1 / 13003331-021 Linoleum Backing & Mastic - Room 6, Backing	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected
HA-7-1 / 13003331-021 Linoleum Backing & Mastic - Room 6, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-8-1 / 13003331-022 Linoleum & Mastic - Room 9, Linoleum	White Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-8-1 / 13003331-022 Linoleum & Mastic - Room 9, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services, LLC
Address: 126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-8-2 / 13003331-023 Linoleum & Mastic - Room 9, Linoleum	White Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-8-2 / 13003331-023 Linoleum & Mastic - Room 9, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-9-1 / 13003331-024 Linoleum & Mastic - Room 10, Linoleum	Blue Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-9-1 / 13003331-024 Linoleum & Mastic - Room 10, Mastic	Black Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-9-2 / 13003331-025 Linoleum & Mastic - Room 10, Linoleum	Blue Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-9-2 / 13003331-025 Linoleum & Mastic - Room 10, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-9-3 / 13003331-026 Linoleum & Mastic - Room 10, Linoleum	Tan Non-Fibrous Homogeneous	20% Cellulose	80% Other	None Detected
HA-9-3 / 13003331-026 Linoleum & Mastic - Room 10, Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-10-1 / 13003331-027 Insulation - Attic Above Room 10	Various Fibrous Heterogeneous	60% Cellulose 30% Min. Wool	10% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-10-2 / 13003331-028 Insulation - Room 7 Wall	Grey Fibrous Homogeneous	95% Min. Wool	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-10-3 / 13003331-029 Insulation - Attic Above Room 5	Various Fibrous Heterogeneous	60% Cellulose 30% Min. Wool	10% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-11/12-1 / 13003331-030 Shingle & Felt Base Layer - Roof South, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-11/12-1 / 13003331-030 Shingle & Felt Base Layer - Roof South, Felt	Black Non-Fibrous Homogeneous	30% Cellulose	70% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-11/12-2 / 13003331-031 Shingle & Felt Base Layer - Roof Center, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-11/12-2 / 13003331-031 Shingle & Felt Base Layer - Roof Center, Felt	Black Non-Fibrous Homogeneous	30% Cellulose	70% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-11/12-3 / 13003331-032 Shingle & Felt Base Layer - Roof North, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-11/12-3 / 13003331-032 Shingle & Felt Base Layer - Roof North, Felt	Black Non-Fibrous Homogeneous	30% Cellulose	70% Other	None Detected

Certification

Signature:
Date: 2/19/2013

Reviewed:
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-13-1 / 13003331-033 Exterior Siding Felt - East Wall Center	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-13-2 / 13003331-034 Exterior Siding Felt - East Wall South	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-13-3 / 13003331-035 Exterior Siding Felt - South Wall	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-14-1 / 13003331-036 Exterior Siding Attic Level - North End	Green Non-Fibrous Homogeneous		80% Other	20% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-15-1 / 13003331-037 Roofing Materials - Roof South, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-1 / 13003331-037 Roofing Materials - Roof South, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-1 / 13003331-037 Roofing Materials - Roof South, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
HA-15-1 / 13003331-037 Roofing Materials - Roof South, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-1 / 13003331-037 Roofing Materials - Roof South, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.

Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-15-2 / 13003331-038 Roofing Materials - Roof Center, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-2 / 13003331-038 Roofing Materials - Roof Center, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-2 / 13003331-038 Roofing Materials - Roof Center, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
HA-15-2 / 13003331-038 Roofing Materials - Roof Center, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-2 / 13003331-038 Roofing Materials - Roof Center, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-15-3 / 13003331-039 Roofing Materials - Roof North, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-3 / 13003331-039 Roofing Materials - Roof North, Shingle	Grey Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-3 / 13003331-039 Roofing Materials - Roof North, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected
HA-15-3 / 13003331-039 Roofing Materials - Roof North, Shingle	Green Non-Fibrous Heterogeneous		100% Other	None Detected
HA-15-3 / 13003331-039 Roofing Materials - Roof North, Felt	Black Fibrous Homogeneous	60% Cellulose	40% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-16-1 / 13003331-040 Window Caulk Exterior - Northeast	Grey Non-Fibrous Homogeneous		100% Other	None Detected

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013



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

13003331

FINAL REPORT

Name: Quantum Environmental & Engineering Services,
Address: LLC
126 Dante Road
Knoxville, TN 37918

Project Number: 501036.000.002
P.O. Number:
Project Name: COR 13-03, 212 Illinois Ave.
Collected Date: 2/6/2013
Received Date: 2/12/2013 10:00:00 AM
Report Date: 2/19/2013 1:27:47 PM
Analyst: Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-16-2 / 13003331-041 Window Caulk Exterior - East Central	Grey Non-Fibrous Homogeneous	100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-16-3 / 13003331-042 Window Caulk Exterior - North End	Grey Non-Fibrous Homogeneous	100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-17-1 / 13003331-043 Light Fixture Heatshield - Basement	White Fibrous Homogeneous	25% Cellulose	5% Other	70% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-18-1 / 13003331-044 Wiring Insulation - Basement	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-18-2 / 13003331-045 Wiring Insulation - Basement	Brown Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
HA-19-1 / 13003331-046 TSI - Water Heater Piping - Basement	White Fibrous Homogeneous	25% Cellulose	5% Other	70% Chrysotile

Certification

Signature: 
Date: 2/19/2013

Reviewed: 
Date: 2/19/2013

Disclaimer

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP, AIHA or any other agency of the U.S. government; *and may not be certified by every local, state and federal regulatory agencies.*

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139
804.897.1177 / 888.895.1177 / Fax 804.897.0070

www.sanair.com

Asbestos Chain of Custody

SanAir ID Number

1300333/

Company: Quantum Environmental & Engineering, LLC	Project #: 501036.000.002	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: COR 13-03, 212 Illinois Ave.	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/6/2013	Fax #: 865-689-6844
Samples Collected By: TLD	P.O. Number:	Email: tdavis@qe2llc.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input checked="" type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AHERA <input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABBIK	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBEN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Chatfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>	Water		Dust	
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	ABHE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
OTHER/ Matrix :	<input type="checkbox"/>			ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
Times	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input checked="" type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
HA-1-1	drywall & joint compound - Room 7 wall		Pos Stop bulk		
HA-1-2	drywall & joint compound - Room 7 wall				
HA-1-3	drywall & joint compound - Room 3 wall				
HA-1-4	drywall & joint compound - Basement wall				
HA-1-5	drywall & joint compound - Basement wall				
HA-2-1	ceiling texture - Room 4		Pos Stop		
HA-2-2	ceiling texture - Room 3				
HA-2-3	ceiling texture - Room 1				
HA-3-1	linoleum & mastic parquet patt. - Rm. 1		Pos Stop		
HA-3-2	linoleum & mastic parquet patt. - Rm. 1				
HA-3-3	linoleum & mastic parquet patt. - Rm. 1				

Special Instructions	5-day TAT
----------------------	-----------

Relinquished by	Date	Time	Received by	Date	Time
T. Vance	2/11/13	11:20	[Signature]	FEB 12 2013	10:00

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139
 804.897.1177 / 888.895.1177 / Fax 804.897.0070
 www.sanair.com

Asbestos Chain of Custody

SanAir ID Number

13003331

Company: Quantum Environmental & Engineering, LLC	Project #: 501036.000.002	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: COR 13-03, 212 Illinois Ave.	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/6/2013	Fax #: 865-689-6844
Samples Collected By: TLD	P.O. Number:	Email: tdavis@qe2llc.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input checked="" type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AHERA <input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABB1K	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBEN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Chatfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>				
		Water		Dust	
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	ABHE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
OTHER/ Matrix :	<input type="checkbox"/>			ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around Times	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input checked="" type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
HA-4-1	fiberboard wall & ceiling - Room 5 wall		Pos. Stop bulk		
HA-4-2	fiberboard wall & ceiling - Rm. 8 wall		↓		
HA-4-3	fiberboard wall & ceiling - Rm. 4 ceiling		↓		
HA-5-1	12x12 parquet VFT & mastic - Rm. 2		Pos. Stop		
HA-5-2	12x12 parquet VFT & mastic - Rm. 2		↓		
HA-5-3	12x12 parquet VFT & mastic - Rm. 2		↓		
HA-6-1	linoleum & mastic, 7-in sq. patt. - Rm 5		Pos. Stop		
HA-6-2	linoleum & mastic, 7-in sq. patt. - Rm. 5		↓		
HA-6-3	linoleum & mastic, 7-in sq. patt. - Rm. 5		↓		
HA-7-1	linoleum backing & mastic - Room 6		-		
HA-8-1	linoleum & mastic - ^{white} blue sq. patt. - Rm. 9		Pos. Stop		
HA-8-2	linoleum & mastic - ^{white} blue sq. patt. - Rm. 9		↓		

Special Instructions	5-day TAT
----------------------	-----------

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	2/11/13	1120	<i>[Signature]</i>	FEB 12 2013	1094

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139
 804.897.1177 / 888.895.1177 / Fax 804.897.0070
 www.sanair.com

Asbestos Chain of Custody

SanAir ID Number

13008331

Company: Quantum Environmental & Engineering, LLC	Project #: 501036.000.002	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: COR 13-03, 212 Illinois Ave.	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/6/2013	Fax #: 865-689-6844
Samples Collected By: TLD	P.O. Number:	Email: tdavis@qe2llc.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input checked="" type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AHERA <input type="checkbox"/>	ABSPI	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABBIK	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBEN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Chatfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>	Water		Dust	
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	ABHE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
OTHER/ Matrix :	<input type="checkbox"/>			ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
Times	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input checked="" type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
HA-9-1	linoleum & mastic - blue sq. patt. - Rm. 10	10 Pos. Stop	bulk		
HA-9-2	linoleum & mastic - blue sq. patt. - Rm. 10		↓		
HA-9-3	linoleum & mastic - blue sq. patt. - Rm. 10		↓		
HA-10-1	insulation - Attic above Room 10	Pos. Stop			
HA-10-2	insulation - Room 7 wall		↓		
HA-10-3	insulation - Attic above Room 5		↓		
HA-11/12-1	shingle & felt base layer - Roof south	Pos. Stop			
HA-11/12-2	shingle & felt base layer - Roof center		↓		
HA-11/12-3	shingle & felt base layer - Roof north		↓		
HA-13-1	exterior siding felt - East wall center	Pos. Stop			
HA-13-2	exterior siding felt - East wall south		↓		
HA-13-3	exterior siding felt - South wall		↓		

Special Instructions	5-day TAT
----------------------	-----------

Relinquished by	Date	Time	Received by	Date	Time
<i>TLD</i>	2/11/13	1120	<i>[Signature]</i>	FEB 12 2013	<i>[Signature]</i>

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning.
 Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time.
 Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139
 804.897.1177 / 888.895.1177 / Fax 804.897.0070
 www.sanair.com

Asbestos Chain of Custody

SanAir ID Number

1308331

Company: Quantum Environmental & Engineering, LLC	Project #: 501036.000.002	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: COR 13-03, 212 Illinois Ave.	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/1/2013	Fax #: 865-689-6844
Samples Collected By: TLD	P.O. Number:	Email: tdavis@qe2llc.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input checked="" type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AIHERA <input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABBIK	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Chatfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>				
		Water		Dust	
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	ABIE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
OTHER/ Matrix :	<input type="checkbox"/>			ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around Times	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input checked="" type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
HA-14-1	exterior siding attic level - north end	-	bulk		
HA-15-1	roofing materials - roof south	Pos. Stop	↓		
HA-15-2	roofing materials - roof center	↓			
HA-15-3	roofing materials - roof north	↓			
HA-16-1	window caulk exterior - northeast	Pos. Stop			
HA-16-2	window caulk exterior - east central	↓			
HA-16-3	window caulk exterior - north end	↓			
HA-17-1	light fixture heat shield - basement	-			
HA-18-1	wiring insulation - basement	Pos. Stop			
HA-18-2	wiring insulation - basement	↓			
HA-19-1	TSI - water heater piping - basement	-			

Special Instructions	5-day TAT
----------------------	-----------

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	2/1/13	1120	<i>[Signature]</i>	FEB 12 2013	10:00

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.

Bid Submittal Instructions

Each bid must be submitted in a sealed envelope marked and addressed as follows:

From: Bidder's Name
Bidder's Address
*General Contractor's State of Tennessee License Number
*Bidder's License Date of Registration
*Bidder's License Category or Classification
*Bidder's License Expiration Date

*If bid equals or exceeds \$25,000, include this information if a contractor's license is required for this project per the State of Tennessee's Contractors Licensing Board. (The same information must also be provided for major subcontractors.)

To:	<u>In Person or By Overnight Delivery</u> Attn: Lyn Majeski Finance Department City of Oak Ridge 100 Woodbury Lane Oak Ridge, TN 37830	<u>Regular Mail</u> Attn: Lyn Majeski Finance Department City of Oak Ridge P.O. Box 1 Oak Ridge, TN 37831-0001
-----	---	---

If the bid is submitted by mail rather than hand-delivery, the sealed envelope containing the bid must be enclosed in another envelope addressed as stated above. Bids submitted by mail must indicate on the outside envelope, lower left corner, the following: "Sealed bid for COR 13-11: Abatement and Demolition to be opened March 19, 2013 at 2:00 p.m., local time."

Late bids are not accepted.

BID FORM

Project: Abatement and Demolition of Residential Structure – 212 N. Illinois Avenue

In compliance with the Invitation for Bids, dated March 7, 2013, the undersigned Bidder:

* a corporation organized and existing under the laws of the State of: _____

* a partnership consisting of: _____

*an individual trading as: _____

(*fill in as appropriate)

of the City of _____ in the State of _____ agrees that if this bid is accepted as hereinafter provided, it will furnish all labor, materials, supplies, tools, and equipment necessary to perform all work and services described in the Invitation for Bid and Instructions to Bidders, in strict accordance with the terms and provisions of the Contract attached thereto.

If written Notice of Award is received, the Bidder agrees to furnish to the City of Oak Ridge, within ten (10) working days after receipt of said Notice of Award, the required insurance certificates naming the City of Oak Ridge as an additional insured.

BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA:

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

The concrete removed in the Project may be properly disposed of at a landfill or the Bidder may salvage it. Bidder shall complete the following information pertaining to the concrete:

Salvaged or Landfill? _____

Location of Where Concrete Will Be Taken:

Description of How Salvaged Concrete Will Be Used, If Applicable:

Schedule of Prices*

Abatement of Environmental Issues
at 212 N. Illinois Avenue in accordance with the
Specifications/Scope of Work

Total \$ _____

_____ Dollars and _____ Cents

Demolition and Clean-up of Residential Structure
at 212 N. Illinois Avenue in accordance with the
Specifications/Scope of Work

Total \$ _____

_____ Dollars and _____ Cents

Total for Abatement and Demolition/Clean-up:

Grand Total \$ _____

_____ Dollars and _____ Cents

*The bid price shall be effective for at least ninety (90) days after the bid opening date.

If Bidder intends to subcontract the abatement work, please indicate the name, address and license number of the subcontractor intended to be used for this portion of the work under this Project:

Name: _____
Address: _____
License Number: _____

Bidder attests that no officers or employees of the City of Oak Ridge are members of, or have financial interest in, the business submitting this bid.

By: _____
Signature

Telephone #: _____

Name: _____

Fax #: _____

Title: _____

Email: _____

Business Name: _____

Date: _____

Mailing Address: _____

Physical Address: _____

Tax ID Number: _____

TN Contractors License Number: _____
(if applicable)

NOTE: In accordance with the Invitation to Bid, at least three (3) references and the Drug-Free Workplace Affidavit are attached.

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____)
)
COUNTY OF _____)

The undersigned principal officer of _____, an employer of five (5) or more employees, contracting with the City of Oak Ridge, Tennessee, to provide construction services, hereby states under oath as follows:

1. That the undersigned is a principal officer of _____ (hereinafter referred to as the "Company") and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to Tennessee Code Annotated § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services or who is awarded a contract to provide construction services or who provides construction services to the state or local government to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9 of the Tennessee Code.
3. The Company is in compliance with Tennessee Code Annotated § 50-9-113.

Further affiant saith not.

Principal Officer

State of _____)
)ss.
County of _____)

Before me personally appeared _____ with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and official seal this _____ day of _____, 2013.

Notary Public

My Commission Expires: _____.

CONTRACT

THIS CONTRACT entered into this _____ day of _____, 2013, by and between the CITY OF OAK RIDGE, TENNESSEE, a municipal corporation, hereinafter called the "City," and

_____,
a _____, hereinafter called the "Contractor."

WITNESSETH

In consideration of the mutual promises of the parties hereto, the parties do hereby agree as follows:

ARTICLE 1 – Scope of This Contract

The work to be done consists of furnishing all labor, materials, supplies, tools, equipment and other incidentals necessary to perform all work and services required for abatement and demolition of the residential structure located at 212 N. Illinois Avenue, Oak Ridge, Tennessee 37830, for the City of Oak Ridge, in strict accordance with the terms and provisions of this Contract, the Specifications/Scope of Work, and the bid of the Contractor attached hereto.

In performance of this Contract, the Contractor binds himself to the City to comply fully with all provisions, undertakings, and obligations hereinafter set forth.

ARTICLE 2 – Term

This Contract shall become effective upon its execution and shall continue in full force and effect through June 30, 2013. Work shall commence within twelve (12) business days after the Contractor's receipt of a written Notice to Proceed from the City and shall be completed within ten (10) business days of commencement, unless an alternate schedule is approved by the parties in writing.

ARTICLE 3 – Changes

- A. City may, by written order, and without notice to the Sureties, make changes in the specifications of this Contract within the general scope thereof. If any such changes cause an increase or decrease in the scope of this Contract or in the time required for its performance, an equitable adjustment shall be made and this Contract shall be modified in writing accordingly.
- B. Should the Contractor encounter conditions materially different from those shown in the specifications, the City shall be notified in writing immediately of such conditions before they are disturbed. The City shall thereupon promptly investigate the conditions and if it finds that they do so materially differ from those specified, this Contract shall be modified to provide for any increase or decrease of cost and difference in time resulting from the conditions so found.
- C. Except as otherwise herein provided, no charge for any extra work or material will be allotted unless the same has been approved in writing by the City, and the price stated.

ARTICLE 4 – Inspections and Defective Work

All workmanship and services shall be subject to inspections, examinations and tests by the City at any and all times during the performance of this Contract. The City shall have the right to reject defective workmanship and to require correction. Rejected workmanship shall be satisfactorily corrected without charge therefore. If the Contractor fails to proceed at once to correct such defective workmanship, the City may proceed with such corrective work and the Contractor shall be liable for all direct cost occasioned in the performance therefore.

This provision does not negate, modify or replace any warranties contained elsewhere in this Contract. This provision shall survive the termination or suspension of this Contract.

Neither payment nor any provisions in the Contract document shall relieve the Contractor of responsibility for faulty materials or defective workmanship. The City shall give notice of observed defects with reasonable promptness. The deterioration due to ordinary use and normal wear is excepted from this guarantee.

The Contractor shall reimburse the City for the cost of damage, if any, as well as the cost of replacing defective materials or workmanship. If replacements are not made within ten (10) days after notice is given of such defect in workmanship, or thirty (30) days in case of materials, then the City shall have the right to make replacements and charge the cost of same to Contractor or the Contractor's surety.

ARTICLE 5 – Site Investigation

The Contractor represents that it has visited the site and determined the nature of the work and the difficulties and facilities attending execution of the work, and all other matters, which can in any way affect the work under this Contract.

ARTICLE 6 – Delays, Damages

If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in Article 2, or fails to complete the work within such time, the City may terminate this Contract. In such event, the City may take over the work and prosecute the same to completion by contract or otherwise, and the Contractor shall be liable to the City for any excess cost occasioned thereby. If this Contract is so terminated, the City may take possession of and utilize in completing the work such materials, appliances, tools and equipment as may be on the site of the work and necessary therefore.

ARTICLE 7 – Payment

As consideration for performing all work and services set forth in this Contract, and as full consideration thereof, the City agrees to pay the Contractor \$ _____ in accordance with the bid sheet of the Contractor which is incorporated by reference into this Contract. Payment shall be made after satisfactory completion of the work and approval by the City. The Contractor shall submit invoices for work completed to the City's Project Manager, Matthew Widner, Community Development, for approval and payment.

ARTICLE 8 – Indemnification by Contractor

To the fullest extent permitted by all applicable laws and regulations, the Contractor hereby agrees to protect, indemnify and hold harmless the City and their consultants, agents and employees from and against any and all claims, loss, expense, damage, charges and costs direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professional and court costs), collectively referred to as “claims,” for injury to or death of persons and injury to or destruction of property suffered or alleged to have been suffered as a result of any act or omission on the part of the Contractor, any of the Contractor’s subcontractors, anyone for whose acts any of them may be liable, or others whose services are engaged by the Contractor or anyone directly or indirectly employed or controlled by either of them in the course of the performance of the work provided for in the Contract, except such injury, destruction or death as may be caused by the sole negligence or fault of the City.

When the City submits notice, the Contractor shall promptly defend any aforementioned action. In any and all claims against the City or any of their consultants, agents or employees by any employee of the Contractor, any of the Contractor’s subcontractors, anyone for whose acts any of them may be liable, or others whose services are engaged by the Contractor or anyone directly or indirectly employed or controlled by either of them in the course of the performance of the work provided for in the Contract, the indemnification obligation described herein shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers’ compensation acts, disability benefit acts or other employee benefit acts. The limits of insurance required in this Contract shall not limit the Contractor’s obligations under this article.

The terms of this article shall survive the termination or suspension of this Contract.

~~ARTICLE 9 – Completion and Performance Bond (Deleted by City Prior to Bidding)~~

~~Prior to commencing work under this Contract, the Contractor agrees to furnish and to maintain during the term of this Contract a Completion and Performance Bond in the amount of twenty-five percent (25%) of the Contract price with good and sufficient surety or sureties acceptable to the City in connection with the performance of the work under this Contract, including any amendments or extensions hereof. The form and conditions of said Performance Bond shall be as prescribed by the City.~~

~~In lieu of a Performance Bond, the City will accept other suitable Securities agreed upon by both parties. At all times during the term of this Contract, the Contractor shall provide the City with evidence that the Contractor has obtained such Performance Bond or Securities. A certificate from the surety showing that the bond premiums have been paid by the Contractor shall accompany the bond.~~

ARTICLE 10 – Rate of Progress

Notwithstanding any other provisions in this Contract, the Contractor shall furnish sufficient labor, materials, supplies, tools, and equipment, and shall work such hours, including overtime, Sundays, and/or Holidays, as may be necessary to carry out the work in accordance with the approved schedules for its completion not later than the respective times allowed for completion set forth in these Contract Documents. Should the Contractor refuse or fail to comply with its obligations set forth in the preceding sentence after receipt of any written directive or request by the City that the Contractor furnish additional labor, materials, supplies, tools, and equipment, and/or work additional hours, including overtime, Sundays, and/or Holidays, the City may terminate the Contractor’s right to proceed with the whole or any part of the work under this Contract.

ARTICLE 11 – Compliance with All Laws, Ordinances, Statutes, and Regulations

The Contractor shall comply with all federal, state, county and local laws, ordinances, statutes, and regulations.

ARTICLE 12 – Insurance

The Contractor shall at all times during the Contract maintain in full force and effect Comprehensive General Liability, Workers' Compensation and Property Damage Insurance in the amounts set forth below and naming the City of Oak Ridge, Tennessee as an *additional insured*.

The Contractor shall maintain policies providing the following insurance protection, each policy containing a requirement that, in the event of change or cancellation, thirty (30) days' prior written notice be sent by mail to the City. Certificates of Insurance describing the coverage shall be furnished by the Contractor and shall contain the following express obligation:

"This is to certify that the policies of insurance described herein have been issued to the insured for whom this certificate is issued and are in force at this time. In the event of cancellation or material change in a policy affecting the certificate holder, thirty (30) days' prior written notice will be given the certificate holder."

1. Comprehensive General Liability:

Bodily Injury	\$300,000	each occurrence
	\$700,000	aggregate
Property Damage	\$100,000	each occurrence
Or Combined Single Limit of	\$1,000,000	

2. Workers' Compensation and Employer's Liability as provided for in applicable statutes.

3. Comprehensive Automobile Liability (Including all owned, non-owned and hired vehicles)

Bodily Injury	\$300,000	each person
	\$700,000	each occurrence
Property Damage	\$100,000	each occurrence
Or Combined Single Limit of	\$1,000,000	

The Contractor may purchase at its own expense such additional or other insurance protection as it may deem necessary. Maintenance of the required minimum insurance protection does not relieve the Contractor of responsibility for any losses not covered by the above-required policies.

Before commencement of work hereunder, the Contractor agrees to furnish to the City of Oak Ridge (Legal Department, P.O. Box 1, Oak Ridge, Tennessee 37831-0001) a Certificate of Insurance or other evidence satisfactory to the City to the effect that such insurance has been procured and is in force.

ARTICLE 13 – Permits and Licenses

The Contractor shall obtain, at the Contractor's expense, all permits, licenses and bonds required by law or ordinance and maintain the same in full force and effect.

ARTICLE 14 – Subcontracting and Assignment

- A. The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.
- B. The Contractor shall not award, assign, transfer or pledge any work to any subcontractor without prior written approval of the City, which approval will not be given until the Contractor submits to the city a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the City may require.
- C. The Contractor shall be as fully responsible to the City for the acts and omissions of subcontractors, and of persons either directly or indirectly employed by said subcontractors, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- D. The Contractor shall make a condition of all subcontracts and/or cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the City may exercise over the Contractor under any provision of the Contract Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and the City.

ARTICLE 15 – Superintendence by the Contractor

The Contractor shall give its personal superintendence to the work or have a competent foreman or superintendent satisfactory to the City on the site at all times during the progress of the work, with authority to act on behalf of the Contractor.

ARTICLE 16 – Termination

Notwithstanding any other provisions in this Contract, the Contractor shall furnish all labor, materials, supplies, tools and equipment necessary to perform the work and services within allowed times for completion as set forth in these Contract Documents. Should the Contractor refuse or fail to comply with its obligations, or in the event the Contractor shall violate any of the provisions of this Contract, or the quality or quantity of the work performed is, in the judgment of the City, below standard and therefore unsatisfactory, the City shall have the right to cancel this Contract upon thirty (30) days written notice to the Contractor and to complete the work undertaken by the Contractor without incurring any liability to the Contractor except to pay the Contractor the fair value to the City of the work satisfactorily performed by the Contractor.

ARTICLE 17 – Termination of Contract for Cause

If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the City shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Contractor under this Contract shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of the Contract by the Contractor, and the City may withhold any payments to the Contractor for the purpose of set-off until such time as the exact amount of damages due the City from the Contractor is determined.

ARTICLE 18 – Anti-Discrimination

The Contractor, in performing the work or furnishing the services covered by this Contract, shall not discriminate against any person because of race, creed, color, national origin, age, sex, sexual orientation, disability, religion or other legally protected status. The City of Oak Ridge encourages the utilization of minority and women-owned businesses in its contracting and subcontracting projects and the Contractor is encouraged to actively solicit the participation of these businesses. The Contractor shall inform all of its subcontractors and vendors providing work or services under this Contract of this requirement and shall ensure compliance therewith.

ARTICLE 19 – Personnel

- A. The Contractor represents that it has, or will, secure at the Contractor's expense, all personnel required to perform the work and services outlined in this Contract. Such personnel shall not be employees of or have any contractual relationship with the City.
- B. All of the services required hereunder will be performed by the Contractor or under the Contractor's supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under state and local laws to perform such services.

ARTICLE 20 – Reports and Information

At such times and in such forms as the City may require, the Contractor shall furnish to the City such periodic reports as are requested by the City pertaining to the work and services covered by this Contract, the costs and obligations incurred or to be incurred in connection herewith, and any other matters covered by this Contract. The City can audit the Contractor's and the Contractor's subcontractors' financial records pertaining to this project.

ARTICLE 21 – Governing Law

This Contract is governed by the laws of the State of Tennessee.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written, the City of Oak Ridge, by its City Manager, by authority duly given.

APPROVED AS TO FORM AND LEGALITY:

CITY OF OAK RIDGE, TENNESSEE

City Attorney

City Manager

(CONTRACTOR)

Signature

(Printed or Typed Name and Title)

Attachments: Specifications/Scope of Work
Bid Documents
Contractor's Bid