

ASBESTOS ABATEMENT PROJECT DESIGN

CAMMIE CLAGETT COURTS PHASE 1 – 28 BUILDINGS

Highland Street Spartanburg, South Carolina

Conducted By:

Apex Environmental Management, Inc. 7 Winchester Court Mauldin, South Carolina

Prepared for:

City of Spartanburg P.O. Box 1749 Spartanburg, South Carolina

Apex Project Number 0317-55

November 2, 2017



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Apex Project Number 0317-55

November 2, 2017

Mr. Lynn Coggins City of Spartanburg P.O. Box 1749 Spartanburg, South Carolina 29304

Reference: Asbestos Abatement Project Design Cammie Clagett Courts Highland Street Area Spartanburg, South Carolina

SERVICES

Dear Mr. Coggins:

Indoor Air Quality

Mold Remediation

Asbestos & Lead

Industrial Hygiene

Worker Health & Safety

Mold Consulting

Moisture Management Plans

Safety Assessment

Environmental Site Assessments

> Hazard Communication

Apex Environmental Management, Inc. (Apex) is pleased to provide the City of Spartanburg with an Asbestos Abatement Project Design for the referenced property. Our services were in general compliance with the EPA published guidance document, dated July, 1990, entitled, "Managing Asbestos in Place: A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials."

Apex appreciates the opportunity to be of service during to your project. If you have any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

Apex Environmental Management, Inc.;

Rebecca W. Shultz, CIH, CSP Project Designer # PD-00060 SC Expires: August 8, 2018

Section

. 1 Summary of the Work	
1.1 Description of the Work	
1 1 1 Contract Documents and Related Requirements	
1 1 2 Extent of Work	
1 1 3 Tacke	
1.2. Variations in Quantity	
1.2 Stop Aphaetos Domovol	•••••
1.3 Stop Aspestos Removal	
1.4.1 General	•••••
1.4.2 Glossary	
1.5 Project Requirements	•••••
1.5.1 Federal Requirements	
1.5.2 State Requirements	
1.5.3 Standards	
1.5.4 Notices	
1.5.5 Permits/Licenses	
1.5.6 Posting and Filing of Regulations	
1.5.7 Owner Responsibilities	
1.5.8 Site Security	
1.5.9 Emergency Action Plan and Arrangements	
1.5.10 Pre-Construction Meeting	
1.6 Project Coordination	
1.6.1 Personnel	
1.7 Respiratory Protection	
1.7.1 General – Respiratory Protection Program	
1 7 2 Respiratory Protection Program Coordinator	
1 7 3 Selection and Use of Respirators	
1.7.4 Minimum Respiratory Protection	
1.7.5 Medical Written Opinion	
1.7.6 Despirator Eit Test	
1.7.0 Respirator Fit Test	•••••
1.0 WOIKEI FIOLECIIOII	
1.0.1 Hamming of Abatement Personner	•••••
1.8.2 Protective Clothing	•••••
1.8.3 Regulated Area Entry Procedure	•••••
1.8.4 Decontamination Procedure	•••••
1.8.5 Regulated Area Requirements	
1.9 Material and Equipment	•••••
1.9.1 General Requirements	
1.10 Monitoring, Inspection and Testing	
1.10.1 General	
1.10.2 Scope of Services of the Owner's Consultant	
1.10.3 Monitoring, Inspection and Testing by Abatement Contractor	
1.11 Standard Operating Procedures	
1.12 Submittals	
1.12.1 Pre-Project Submittals	
1.12.2 Submittals during Abatement	
1 12 3 Submittals at Completion of Abatement	

Page

Sect. 2 Execution .		24
2.1 Pi	re-Abatement Activities	24
	2.1.1 Pre-Abatement Meeting	24
	2.1.2 Pre-Abatement Construction and Operations	24
2.2 R	egulated Area Preparation	24
	2.2.1 OSHA Danger Signs	24
	2.2.2 Shut down-Lock out Electrical	24
	2.2.3 Sanitary Facilities	24
2.3 C	ontrolling Access to the Regulated Area	25
2.4 R	emoval of Asbestos Containing Materials	25
	2.4.1 Friable Asbestos-Containing Materials	25
	2.4.2 Mastic	25
	2.4.3 Elevator Doors	26
	2.4.4 HVAC/TSI Mastic	26
	2.4.5 Roof Flashing	26
2.5 Di	isposal of ACM Waste	26
	2.5.1 General	26
	2.5.2 Procedures	26
2.6 Pi	roject Decontamination	27
	2.6.1 General	27
	2.6.2 Regulated Area Clearance	27
	2.6.3 Work Description	27
2.7 Vi	isual Inspection and Clearance Testing	27
	2.7.1 General	27
	2.7.2 Visual Inspection	27
	2.7.3 Air Clearance Testing	28
	2.7.4 Air Monitoring Firm	28
2.8 Al	batement Closeout and Certificate of Compliance	28
	2.8.1 Completion of Abatement Work	28
	Certificate of Compliance	28

Appendix

Table 1: Summary of Asbestos Findings

SECTION 1 SUMMARY OF THE WORK

1.1 DESCRIPTION OF THE WORK

1.1.1 CONTRACT DOCUMENTS AND RELATED REQUIREMENTS

Drawings, general provisions of the contract, including general and supplementary conditions and bonding requirements shall apply to the work of this section. The contract documents show the work to be done under the contract and related requirements and conditions impacting the project. Related requirements and conditions include applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, coordination with other work and the phasing of the work. In the event the Asbestos Abatement Contractor discovers a conflict in the contract documents and/or requirements or codes, the conflict must be brought to the immediate attention of the Owner for resolution. Whenever there is a conflict or overlap in the requirements, the most stringent shall apply. Any actions taken by the Contractor without obtaining guidance from the Owner shall become the sole risk and responsibility of the Asbestos Abatement Contractor.

1.1.2 EXTENT OF WORK

- A. The materials and quantities for abatement are included in the table in the Appendix.
- B. Removal, clean-up and disposal of ACM and asbestos contaminated elements in appropriate regulated areas in the following approximate quantities:

1.1.3 **TASKS**

The work tasks are summarized briefly as follows:

- A. Pre-abatement activities including pre-abatement meeting(s), inspection(s), notifications, permits, submittal approvals, work-site preparations, emergency procedures arrangements and standard operating procedures for asbestos containing material abatement work.
- B. Abatement activities including removal, clean-up and disposal of ACM waste, recordkeeping, security, monitoring and inspections.
- C. Cleaning and decontamination activities including final visual inspection, air monitoring and certification of decontamination.

1.2 VARIATIONS IN QUANTITY

The quantities and locations of ACM as indicated and the extent of the work included in this section are estimates which are limited by the physical constraints of the buildings.

Accordingly, variations (+/- 15%) in quantities of ACM within the regulated areas are considered as having no impact on contract price and time requirements of this contract.

1.3 STOP ASBESTOS REMOVAL

If the owner or their field representative presents a written **Stop Asbestos Removal Order**, the Abatement Contractor/Personnel shall immediately stop all asbestos removal and adequately wet any exposed ACM. The Contractor shall not resume any asbestos removal activity until authorized to do so by Owner. A stop asbestos removal order may be issued at any time Owner determines abatement conditions/activities are not within specification requirements. Work stoppage will continue until conditions have been corrected to the satisfaction of Owner. Standby time and costs for corrective actions will be borne by the Abatement Contractor, including the industrial hygienist's time. The occurrence of any of the following events shall be reported immediately by the Abatement Contractor in writing to the Owner and shall require the Contractor to immediately stop asbestos removal activities and initiate fiber reduction activities:

- A. =/> 0.01 f/cc outside regulated area
- B. breach/break in regulated area barrier(s)
- C. serious injury/death within regulated area
- D. fire/safety emergency within the regulated area
- E. respiratory protection system failure
- F. power failure
- G. excessive airborne fibers (>0.5 f/cc) in the regulated area when wet methods are being used

1.4 **DEFINITIONS**

1.4.1 GENERAL

Definitions and explanations here are neither complete nor exclusive of all terms used in this specification, but are general for the work to the extent they are not stated more explicitly in another element of the contract documents. Drawings must be recognized as diagrammatic in nature and not completely descriptive of the requirements indicated therein.

1.4.2 GLOSSARY

Abatement – Procedures to control fiber release from asbestos-containing materials, typically during removal. Includes removal, encapsulation, enclosure, demolition and renovation activities related to asbestos.

ACM – Asbestos containing material.

Adequately wet – Sufficiently mixed or penetrated with liquid to prevent the release of particulates. If visible emissions are observed coming from the ACM, then that material has not been adequately wetted.

Aggressive method – Removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles or disintegrates intact ACM.

Aggressive sampling – EPA AHERA defined clearance sampling method using air moving equipment such as fans and leaf blowers to aggressively disturb and maintain in the air residual fibers after abatement.

AHERA – Asbestos Hazard Emergency response Act; Asbestos regulations for schools issued in 1987

AIHA – American Industrial Hygiene Association

Air monitoring – The process of measuring the fiber content of a known volume of air collected over a specified period of time. The NIOSH 7400 Method, Issue 2 is used to determine the fiber levels in air.

Air sample filter – The filter used to collect fibers which are then counted. The filter is made of mixed cellulose ester membrane for PCM (Phase Contrast Microscopy) and polycarbonate for TEM (Transmission electron Microscopy).

Amended water – Water to which a surfactant (wetting agent) has been added to increase the penetrating ability of the liquid.

Asbestos – Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that have been chemically treated or altered. Asbestos also includes PACM, as defined below.

Asbestos-containing material (ACM) – Any material containing more than one percent weight of any asbestos of any type or mixture.

Asbestos waste decontamination facility – A system consisting of drum/bag washing facilities and a temporary storage area for cleaned containers of asbestos waste. Used as the exit for waste and equipment leaving the regulated area. In an emergency it may be used to evacuate personnel.

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ASHARA – Asbestos School Hazard Abatement Re-authorization Act, This act on the regulations for implementation requires individuals conducting asbestos inspections to be AHERA trained with current certification.

Authorized person – Any person authorized by the Owner, the Contractor or government agency and required by work duties to be present in regulated areas.

Barrier – Any surface that isolates the regulated area and inhibits fiber migration from the regulated area.

Containment barrier – And airtight barrier consisting of walls, floors and/or ceilings of sealed plastic sheeting which surrounds and seals the outer perimeter of the regulated area.

Critical barrier – The barrier responsible for isolating the regulated area from adjacent spaces, typically constructed of plastic sheeting secured in place at openings such as doors, windows or any other opening into the regulated area.

Primary barrier – Barriers placed over critical barriers and exposed directly to abatement work.

Secondary barrier – Any additional sheeting used to isolate and provide protection from debris during abatement work.

Breathing zone – The hemisphere forward of the shoulders with a radius of about 150-225 mm (6-9 inches) from the worker's nose

Bridging encapsulant – An encapsulant that forms a layer on the surface of the ACM.

Building/facility owner – The legal entity, including a lessee, which exercises control over management and recordkeeping functions relating to a building and/or facility in which asbestos activities take place.

Bulk testing – The collection and analysis of suspect asbestos-containing materials.

Certified Industrial Hygienist (CIH) – One certified in practice of industrial hygiene by the American Board of Industrial Hygiene. An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Class I asbestos work – Activities involving the removal of Thermal System Insulation (TSI) and surfacing SCM and Presumed Asbestos Containing Material (PACM).

Class II asbestos work – Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic.

Class III asbestos work – Repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, may be disturbed

Class IV asbestos work – Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II and III activities.

Clean room/Changing room – An uncontaminated room having facilities for the storage of employee's street clothing and uncontaminated materials and equipment.

Clearance sample – The final air sample taken after all asbestos work has been done and visually inspected. Performed by the Owner's industrial hygiene consultant.

Competent person – In addition to the definition in 29 CFR 1926.32(f) one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them as specified in 29 CFR 1926.32(f); in addition, for Class I and II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor.

Count – Refers to the fiber count or the average number of fibers greater then 5 microns in length per cubic centimeter of air.

Decontamination area/unit – AN enclosed area adjacent to and connected to the regulated area and consisting of an equipment room, shower room and clean room, which is used for the decontamination of workers, materials and equipment that are contaminated with asbestos.

Demolition – The wrecking or taking out of any load-supporting structural member and any related razing, removing or stripping of asbestos products.

DHEC- Department of Health and Environmental Control -Promotes awareness of the potential hazards of asbestos and lead-based paint and the requirements of South Carolina's asbestos and lead-based paint rules, regulations and procedures.

Disposal bag – Typically a 6 mil thick sift-proof, dustproof, leak-tight container used to package and transport asbestos waste from regulated areas to the approved landfill. Each bag/container must be labeled/marked in accordance with EPA, OSHA and DOT requirements.

Disturbance – Activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM or PACM, no greater than the amount that can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that

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which can be contained in one glove bag or disposal bag (which shall not exceed 60 inches in length or width).

Employee exposure – The exposure to airborne asbestos that would occur if the employee were not wearing respiratory protection equipment.

Encapsulant – A material that surrounds or embeds asbestos fibers in an adhesive matrix and prevents the release of fibers.

Enclosure – The construction of an air tight, impermeable, permanent barrier around ACM to control the release of asbestos fibers from the material and also eliminate access to the material.

Equipment decontamination facility (EDF) – The area in which equipment is decontaminated before removal from the regulated area.

Equipment room – A contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Fiber – A particulate form of asbestos, 5 microns or longer, with a length to width ratio of at least 3 to 1.

Fibers per cubic centimeter (f/cc) – Abbreviation for fibers per cubic centimeter, used to describe the level of asbestos fibers in air.

Filter – Media used in respirators, vacuums or other machines to remove particulate from air.

Fire stopping – Material used to close the open parts of a structure in order to prevent a fire from spreading.

Friable asbestos-containing material – Any material containing more than 1 percent asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR 763, Section 1, Polarized Light Microscopy, that , when dry, can be crumbles, pulverized or reduced to powder by hand pressure.

Glovebag – Not more than a 60x60 inch impervious plastic bag-like enclosure affixed around and asbestos containing material, with glove-like appendages through which materials and tools may be handled.

High efficiency particulate air (HEPA) filter – A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 microns or greater in diameter.

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HEPA vacuum – Vacuum collection equipment equipped with a HEPA filter system capable of collecting and retaining asbestos fibers.

Homogeneous area – An area of surfacing, thermal system insulation or miscellaneous ACM that is uniform in color, texture and date of application.

HVAC – Heating, Ventilation and Air Conditioning

Industrial hygienist – A professional qualified by education, training and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards. Meets definition requirements of the American Industrial Hygiene Association (AIHA).

Industrial hygiene technician – A person working under the direction of an IH or CIH who has special training, experience, certifications and licenses required for the industrial hygiene work assigned.

Intact – The ACM has not crumbled, been pulverized or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.

Lockdown – Applying encapsulant, after a final visual inspection, on all abated surfaces at the conclusion of ACM removal prior to removal of critical barriers.

National Emission Standards for Hazardous Air Pollutants (NESHAPs) – EPA's rule to control emissions of asbestos to the environment.

Negative pressure – Air pressure which is lower than the surrounding area, created by exhausting air from a sealed regulated area through HEPA equipped filtration units. OSHA requires maintaining -0.02" water gauge inside the negative pressure enclosure.

Negative pressure respirator – A respirator in which the air pressure inside the facepiece is negative during inhalation relative to the air outside the respirator.

Non-friable ACM – Material that contains more than 1 percent asbestos but cannot be crumbled, pulverized or reduced to powder by hand pressure.

Outside air – The air outside buildings and structures, including, but not limited to, the air under a bridge or in an open ferry dock.

Owner/operator – Any person who owns, leases, operates, controls or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation operation, or both.

Penetrating encapsulant – Encapsulant that is absorbed into the ACM matrix without leaving a surface layer.

Personal sampling/monitoring – Representative air samples obtained in the breathing zone of the person using a cassette and battery operated pump to determine asbestos exposure.

Permissible exposure limit (PEL) – the level of exposure OSHA allows for an 8 hour time weighted average. For asbestos fibers, the PEL is 0.1 fibers per cc.

Polarized light microscopy (PLM) – Light microscopy using dispersion staining techniques and refractive indices to identify and quantify the type(s) of asbestos present in a bulk sample.

Polyethylene sheeting – Strong plastic barrier material 4 to 6 mils thick, semitransparent, sometimes flame retardant in compliance with NFPA 241.

Positive/negative fit check – A method verifying the fit of a respirator by closing off the filters and breathing in or closing off the exhalation valve and breathing out while detecting leakage of the respirator.

Presumed ACM (PACM) – Thermal system insulation, surfacing and flooring material installed in buildings prior to 1981. If the building owner has actual knowledge, or should have known through the exercise or due diligence that other materials are ACM, they too must be treated as PACM. The designation of PACM may be rebutted pursuant to 29 CFR 1926.1101 (k)(5).

Professional IH – An IH who meets the definition requirements of AIHA; meets the definition requirements of OSHA as a "Competent Person" at 29 CFR 1926.1101 (b); must have AHERA type training for supervisors and has completed two specialized EPA approved courses on management and supervision of asbestos abatement projects; has formal training in respiratory protection and waste disposal; and has a minimum of four projects of similar complexity with this project of which at least three projects serving as the supervisory IH.

Project designer – A person who has successfully completed the training requirements for and asbestos abatement project designer as required by 40 CFR 763 Appendix C, Part I; (B)(5).

Protection factor – A value assigned by OSHA/NIOSH to indicate the assigned protection a respirator should provide if worn properly. The number indicates the reduction of exposure level from outside to inside the respirator.

Regulated area – An area established by the employer to demarcate where Class I, II and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work may accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the PEL.

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Regulated ACM (RACM) – Friable ACM; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading; 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 the demolition or renovation operation.

Removal – All operations where ACM, PACM and/or RACM is taken out or stripped from structures or substrates, including demolition operations.

Renovation – Altering a facility or one or more facility components in any way, including the stripping or removal of asbestos from a facility component which does not involve demolition activity.

Repair – Overhauling, rebuilding, reconstructing or reconditioning or structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Shower room – The portion of the PDF where personnel shower before leaving the regulated area. Also used for bag/drum decontamination in the EDF.

Standard operating procedures (SOPs) – Asbestos work procedures required to be submitted by the contractor before work begins.

Supplied air respirator (SAR) – A respirator that utilizes an air supply separate from the air in the regulated area.

Surfacing ACM – A material containing more than 1 percent asbestos that is sprayed, troweled on or otherwise applied to surfaces for acoustical, fireproofing and other purposes.

Surfactant – A chemical added to water to decrease water's surface tension thus making it more penetrating into ACM.

Thermal system ACM – A material containing more than 1 percent asbestos applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Transmission electron microscopy (TEM) – A microscopy method that can identify and count asbestos fibers

Visible emissions – Any emissions, which are visually detectable without the aid of instruments coming from ACM, PACM, RACM, or ACM waste material.

Waste generator – Any owner or operator whose act or process produces asbestoscontaining waste material. Asbestos Abatement Project Design Cammie Clagett Courts Apex Project No. 0317-55

Waste shipment record – The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Wet cleaning – The process of thoroughly eliminating, by wet methods, any asbestos contamination from surfaces or objects.

1.5 PROJECT REQUIREMENTS

1.5.1 FEDERAL REQUIREMENTS

Federal requirements which govern some aspect of asbestos abatement include, but are not limited to, the following regulations:

- A. Occupational Safety and Health Administration (OSHA)
 - 1. Title 29 CFR 1926.1101 Construction Standard for Asbestos
 - 2. Title 29 CFR 1910.132 Personal Protective Equipment
 - 3. Title 29 CFR 1910.134 Respiratory Protection
 - 4. Title 29 CFR 1926 Construction Industry Standards
 - 5. Title 29 CFR 1910.20 Access to Employee Exposure and Medical Records
 - 6. Title 29 CFR 1910.1200 Hazard Communication
 - 7. Title 29 CFR 1910.151 Medical and First Aid
- B. Environmental Protection agency (EPA)
 - 1. Title 40 CFR 61 Subpart A and M (Revised Subpart B) National Emission Standard for Hazardous Air Pollutants Asbestos
 - 2. Title 40 CFR 763.80 Asbestos Hazard Emergency Response Act (AHERA)
- C. Department of Transportation (DOT)

Title 49 CFR 100-185 – Transportation

1.5.2 STATE REQUIREMENTS

State requirements that apply to the asbestos abatement work, disposal, clearance, etc., include, but are not limited to, the following: South Carolina Department of Health

and Environmental Control Regulation 61-86.1 including reference regulations and guidance documents.

1.5.3 STANDARDS

- A. Standards which govern asbestos abatement activities include, but are not limited to, the following:
 - American National Standards Institute (ANSI) Z9.2-79 Fundamentals Governing the Design and Operation of Local Exhaust Systems Z88.2 – Practices for Respiratory Protection.
 - 2. Underwriters Laboratories (UL) 586-90 UL Standard for Safety of HEPA Filter Units, 7th Edition
- B. Standards which govern encapsulation work include, but are not limited to, the following:

American Society for Testing and Materials (ASTM)

- C. Standards for Testing Laboratories:
 - 1. Air Sampling AIHA Accredited
 - 2. Bulk Sampling NIST Accredited
- D. Standards which govern the fire and safety concerns in abatement work include, but are not limited to, the following:
 - 1. National Fire Protection Association (NFPA) 241 Standard for Safeguarding Construction, Alteration and Demolition Operations.
 - 2. NFPA 701 Standard Methods for Flame Resistant Textiles and Film
 - 3. NFPA 101 Life Safety Code

1.5.4 NOTICES

- A. State and Local agencies: Send written notification as required by state and local regulations including the local fire department prior to beginning any work on ACM as follows:
- B. Copies of notifications shall be submitted to the Owner for the facility's records in the same time frame notification is given to EPA, State and Local authorities.

1.5.5 PERMITS/LICENSES

The contractor shall apply for and have all required permits and licenses to perform asbestos abatement work as required by State and Local regulations.

1.5.6 POSTING AND FILING OF REGULATIONS

Maintain two (2) copies of applicable federal, state and local regulations. Post one copy of each at the regulated area where workers will have daily access to the regulations and keep another copy in the contractor's office.

1.5.7 OWNER RESPONSIBILITIES

Prior to commencement of work:

- A. Submit to the Abatement Contractor results of background air sampling including location of samples, person who collected the samples, equipment utilized and method of analysis. During abatement submit to the Asbestos Contractor results of bulk material analysis and air sampling data collected during the course of the abatement. This information shall not release the Contractor from any responsibility for OSHA compliance.
- B. Owner shall supply a source of water. Contractor bears all expense of heating and getting water to the work and decontamination areas.
- C. Owner shall comply with applicable NEMA, NEC and UL standards and governing state and local regulations for materials and layout of temporary electric service.

1.5.8 SITE SECURITY

- A. Regulated area access is to be restricted only to authorized, trained/accredited and protected personnel. These may include the Abatement Contractor's employees, employees of Subcontractors, Owner employees and representatives, State and Local inspectors and any other designated individuals. A list of authorized personnel shall be established prior to commencing the project and be posted in the clean room of the decontamination unit.
- B. Entry into the regulated area by unauthorized individuals shall be reported immediately to the Competent Person by anyone observing the entry.
- C. A log book shall be maintained. Anyone who enters the regulated area must record their name, affiliation, time in and time out for each entry.
- D. Access to the regulated area shall be through barrier tape demarcating the exterior abatement area.

- E. The Abatement Contractor's Competent Person shall control site security during abatement operations in order to isolate work in progress and protect adjacent personnel.
- F. The Abatement Contractor will have the Owner's assistance in notifying adjacent personnel of the presence, location and quantity of ACM in the regulated area and enforcement of restricted access by the Owner's employees.
- G. The regulated area shall be locked during non-working hours and secured by Owner security.

1.5.9 EMERGENCY ACTION PLAN AND ARRANGEMENTS

- A. An Emergency Action Plan shall be developed by the Abatement Contractor prior to commencing abatement activities and shall be agreed to by the Abatement Contractor and the Owner. The Plan shall meet the requirements of 29 CFR 1910.38 (a);(b).
- B. Emergency procedures shall be in written form and prominently posted and available in the regulated area. Everyone, prior to entering regulated area, must read and sign these procedures to acknowledge understanding of the regulated area layout, location of emergency exits and emergency procedures.
- C. Emergency planning shall include written notification of police, fire and emergency medical personnel of planned abatement activities; work schedule and layout or regulated area, particularly barriers that may affect response capabilities.
- D. Emergency planning shall include consideration of fire, explosion, hazardous atmospheres, electrical hazards, slips/trips and falls, confined spaces and heat stress illness. Written procedures for response to emergency situations shall be developed and employee training in procedures shall be provided.
- E. Employees shall be trained in regulated area/site evacuation procedures in the event of workplace emergencies.
 - 1. For non life-threatening situations employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting the regulated area to obtain proper medical treatment.
 - 2. For life-threatening injury or illness worker decontamination shall take least priority. After measures to stabilize the injured worker remove them from the regulated area and secure proper medical treatment.

- F. Telephone numbers of all emergency response personnel shall be prominently posted at the regulated area boundary along with the location of the nearest telephone.
- G. The Abatement Contractor shall provide verification of first aid/CPR training for personnel responsible for providing first aid/CPR. OSHA requires medical assistance within 3 minutes of a life-threatening injury/illness. Bloodborne Pathogen training shall also be verified for those personnel required to provide first aid/CPR.
- H. The Emergency Action Plan shall provide for a contingency plan in the event that an incident occurs that may require the modification of the standard operating procedures during abatement. Such incidents include, but are not limited to, fire, accident and power failure. The Abatement Contractor shall detail procedures to be followed in the event of an incident assuring that work is stopped and wetting is continued until correction of the problem.

1.5.10 PRE-CONSTRUCTION MEETING

Prior to commencing the work the Abatement Contractor shall meet with the Owner, the Designer/Industrial Hygienist/Consultant to present and review, as appropriate, the items following this paragraph. The Abatement Contractor's Competent Person(s) who will be on-site shall participate in the pre-construction meeting. The pre-construction meeting is to discuss and determine procedures to be used during the project. At this meeting the Abatement Contractor shall provide:

- A. Proof of Contractor licensing.
- B. Proof the Competent Person is trained and accredited and approved for working in this State. Verification of the experience of the Competent Person shall also be presented.
- C. A list of all workers who will participate in the project, including experience and verification of training and accreditation.
- D. A list of and verification of training for all personnel who have current first aid/CPR training. A minimum of one person per shift must have adequate training.
- E. Current medical written opinions for all personnel working on-site meeting the requirements of 29 CFR 1926.1101 (m).
- F. Current fit-tests for all personnel wearing respirators on-site meeting the requirements of 29 CFR 1926.1101 (h) and Appendix C.

- G. A copy of the Abatement Contractor's Standard Operating Procedures for Asbestos Abatement. In these procedures the following information must be detailed, specific for this project. Regulated area preparation procedures:
 - 1. Notification requirements procedure of Contractor as required in 29 CFR 1926.1101 (d).
 - 2. Equipment area set-up/layout and decontamination procedures for employees.
 - 3. Abatement methods/procedures and equipment to be used
 - 4. Personal protective equipment to be used
- H. At this meeting the Contractor shall provide all submittals as required.
- I. Procedures for handling, packaging and disposal of asbestos waste.
- J. Emergency Action Plan and Contingency Procedures.

1.6 PROJECT COORDINATION

The following are the minimum administrative and supervisory personnel necessary for coordination of the work.

1.6.1 PERSONNEL

- A. Administrative and supervisory personnel shall consist of a qualified Competent Person as defined by OSHA in the Construction Standards of the Asbestos Construction Standard; Industrial Hygiene Technicians and current South Carolina accredited, trained and certified personnel. These employees are the Contractor's representatives responsible for compliance with these specifications and all other applicable requirements.
- B. Non-supervisory personnel shall consist of an adequate number of qualified personnel to meet the schedule requirements of the project. Personnel shall meet required qualifications. Personnel utilized on-site shall be pre-approved by the Owner's representative. A request for approval shall be submitted for any person to be employed during the project giving the person's name, social security number, qualifications, Certificate of Worker's Acknowledgement, and Affidavit of Medical Surveillance and Respiratory Protection.
- C. Minimum qualifications for Abatement Contractor and assigned personnel:
 - 1. The abatement contractor must have been licensed as an asbestos abatement contractor by the state for a minimum of three (3) years. The

Abatement Contractor has conducted within the last three (3) years, two (2) projects of similar complexity and dollar value as this project; has not been cited and/or penalized for serious violations of asbestos regulations in the past twelve (12) months; has adequate and qualified personnel available to complete the work; has comprehensive standard operation procedures for asbestos work; has adequate materials, equipment and supplies to perform the work.

- 2. The Competent Person has four (4) years of abatement experience of which two (2) years were as the Competent Person on the project; meets the OSHA definition of a Competent Person; has been the Competent Person on two (2) projects of similar size and complexity as this project; has completed EPA/OSHA/State/Local training requirements and refreshers; and has all required OSHA documentation related to medical and respiratory protection.
- 3. The Abatement Personnel shall have completed the EPA OSHA abatement worker course; have training on the standard operating procedures of the Abatement Contractor; has applicable medical and respiratory protection documentation; has certificate of training and State accreditation/license.

1.7 RESPIRATORY PROTECTION

1.7.1 GENERAL- RESPIRATORY PROTECTION PROGRAM

The Abatement Contractor shall develop and implement a Respiratory Protection Program (RPP) which is in compliance with the January 8, 1998 OSHA requirements found at 29 CFR 1926.1101 and 29 CFR 1910.132;134. ANSI Standard Z88.2-1992 provides excellent guidance for developing a respiratory protection program. All respirators used must be NIOSH approved for asbestos abatement activities. The written respiratory protection shall, at minimum, contain the basic requirements found at 29 CFR 1910.134 (c)(1)(i-ix) – Respiratory Protection Program.

1.7.2 RESPIRATORY PROTECTION PROGRAM COODINATOR

The Respiratory Protection Program Coordinator (RPPC) must be identified and shall have two (2) years of experience coordinating the program. The RPPC must provide a signed statement attesting to the fact that the program meets the above requirements.

1.7.3 SELECTION AND USE OF RESPIRATORS

The procedure for the selection and use of respirators must be submitted to the Owner as part of the Abatement Contractor's qualification. The procedure must be written clearly enough for workers to understand. A copy of the Respiratory Protection Asbestos Abatement Project Design Cammie Clagett Courts Apex Project No. 0317-55

Program must be available in the clean room of the decontamination unit for reference by employees or authorized visitors.

1.7.4 MINIMUM RESPIRATORY PROTECTION

Minimum respiratory protection shall be a half face air purifying respirator when fiber levels are maintained consistently at or below 0.1 f/cc. A higher level of respiratory protection may be provided or required depending on fiber levels. Respirator selection shall meet the requirements of 29 CFR 1926.1101 (h); Table 1, except as indicated in this paragraph. Abatement personnel must have a respirator for their exclusive use.

1.7.5 MEDICAL WRITTEN OPINION

No employee shall be allowed to wear a respirator unless a physician has determined they are capable of doing so and has issued a written opinion for that person.

1.7.6 RESPIRATOR FIT TEST

All personnel wearing respirators shall have a current qualitative/quantitative fit test which was conducted in accordance with 29 CFR 1910.134 (f) and Appendix A

1.8WORKER PROTECTION

1.8.1 TRAINING OF ABATEMENT PERSONNEL

Prior to beginning any abatement activity all personnel shall be trained in accordance with OSHA 29 CFR 1926.1101 (k)(9) and any additional State/Local requirements. Training must include, at a minimum, the elements listed at 29 CFR 1926.1101 (k)(9)(viii). Training shall have been conducted by a third party, EPA/State approved trainer meeting the requirements of EPA 40 CFR 763 Appendix C (AHERA MAP). Initial training certificates and current refresher and accreditation proof must be submitted for each person working at the site.

1.8.2 PROTECTIVE CLOTHING

Provide boots, booties, hard hats, goggles, clothing, respirators and any other personal protective equipment as determined by conducting the hazard assessment required by OSHA at 29 CFR 1910.132 (d). Provide all personnel entering the regulated area with disposable full body coveralls, disposable head covering, and 18 inch boot coverings. The Competent Person shall ensure the integrity of personal protective equipment worn for the duration of the project. Provide plastic/rubber disposable gloves for hand protection. Cloth type gloves may be worn under plastic/rubber gloves, but cannot be used alone. Duct tape shall be used to secure all suits sleeves to wrists and to secure foot coverings at the ankle.

1.8.3 REGULATED AREA ENTRY PROCEDURE

The Competent Person shall ensure that each time workers enter the regulated area they observe and follow all required procedures and wear appropriate personal protective equipment.

1.8.4 DECONTAMINATION PROCEDURE

The Competent Person shall require all personnel to adhere to following decontamination procedures whenever they leave the regulated area:

When exiting the regulated area remove and dispose of disposable coveralls, disposable head coverings, and foot coverings or boots in the equipment room.

1.8.5 REGULATED AREA REQUIREMENTS

The Competent Person shall meet all requirements of 29 CFR 1926.1101 (o) and assure that all requirements for regulated areas at 29 CFR 1926.1101 (e) are met. All personnel in the regulated area shall not be allowed to eat, drink, smoke, chew tobacco or gum, apply cosmetics, or in any way interfere with the fit of their respirator.

1.9 MATERIAL AND EQUIPMENT

1.9.1 GENERAL REQUIREMENTS

Prior to the start of the work, the abatement contractor shall provide and maintain sufficient quantity of materials and equipment to assure continuous and efficient work throughout the duration of the project.

- A. All materials shall be delivered in their original package, container or bundle bearing the name of the manufacturer and the brand name (where applicable).
- B. Store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient enough to prevent damage or contamination. Flammable materials cannot be stored inside buildings. Replacement materials shall be stored outside of the regulated/work area until abatement is completed.
- C. The Abatement Contractor shall not place materials/equipment in any unauthorized place.
- D. The Competent Person shall inspect for damaged, deteriorating or previously used materials. Such materials shall not be used and shall be removed from the worksite and disposed of properly.
- E. Poly sheeting used for isolation purposes shall be a minimum of 6 mils in thickness.

- F. Method of attachment of polyethylene sheeting may include any combination of moisture resistant duct tape or other waterproof tape, furring strips, spray glue, staples, nails, screws, lumber and plywood for enclosures or other effective procedures capable of sealing polyethylene to dissimilar finished or unfinished surfaces under both wet and dry conditions (including the use of amended water)
- G. An adequate number of HEPA vacuums, air sampling pumps and loaded filter cassettes shall be provided.
- H. An adequate number of infrared heating units, scrapers, nylon brushes, brooms, disposable mops, rags, sponges, staple guns, and shovels shall be provided. All electrically operated hand tools, equipment, and electric cords shall be equipped with ground-fault circuit protection.
- I. Special protection for objects in the regulated are shall be detailed.
- J. Impermeable drums and 6 mil disposal bags for asbestos waste shall be preprinted with labels and markings as required by OSHA, EPA and DOT regulations.
- K. Impermeable asbestos disposal drums shall be metal or fiberboard with locking ring tops with required OSHA, EPA and DOT labels and markings.
- L. The Owner shall be provided a copy of the MSDS as required for all hazardous chemical under OHSA 29 CFR 1910.1200 Hazard Communication. Methylene chloride shall not be used with any spray adhesive or other product. Appropriate encapsulant(s) shall be provided.
- M. DANGER signs, as many as required by OSHA 29 CFR 1926.1101(k)(7) shall be provided and placed by the Competent Person. All other posters and notices required by Federal and State regulations shall be posted in the Clean Room.
- N. Adequate respirators, disposable protective clothing, hard hats, goggles, gloves and footwear for the project/number of personnel/shifts shall be provided. All personal protective equipment issued must be based on a hazard assessment conducted under 29 CFR 1910.132(d).

1.10 MONITORING, INSPECTION AND TESTING

1.10.1 GENERAL

A. Perform abatement work monitoring, inspection and testing inside and around the regulated area in accordance with the OSHA requirements and these specifications. The Contractor's supervisor/competent person shall continuously inspect and monitor conditions inside the regulated area to ensure compliance with these specifications. In addition, the Contractor's Competent Person or IH shall personally manage air sample collection, analysis and evaluation for personnel samples to satisfy OSHA requirements. Additional inspection and testing requirements are also indicated in other parts of this specification.

B. The Owner will employ an independent industrial hygienist consultant and/or South Carolina Air Monitor (AM) to perform various services on behalf of the Owners. The AM will perform the necessary monitoring, inspection, testing and other support services to ensure that the abated areas or abated buildings have been successfully decontaminated. The work of the AM consultant in no way relieves the Abatement Contractor from their responsibility to perform the work in accordance with contract/specification requirements, to perform continuous inspection, monitoring and testing for the safety of their employees, and to perform other such services as specified. The cost of the AM and their services will be borne by the Owner except for any repeat of final inspection and testing that may be required due to unsatisfactory initial results. Any repeated final inspections and/or testing, if required, will be paid for by the Abatement Contractor.

1.10.2 SCOPE OF SERVICES OF THE OWNER'S CONSULTANT

- A. The purpose of the work of the Owner's Consultant is to: assure quality; resolve problems; conduct daily and clearance air monitoring to comply with State regulations; and prevent the spread of contamination beyond the regulated area. In addition, their work includes performing the final inspection and testing to determine whether the regulated area or building has been adequately decontaminated. The Owner's AM will perform the following tasks:
 - 1. Establish background levels before abatement begins by collecting background samples.
 - 2. Perform continuous air monitoring, inspection and testing outside the regulated area during actual abatement work to detect visible air emissions, potential exposure to persons downwind of the project or other adverse impacts on the surroundings from regulated area activities.
 - 3. Perform unannounced visits to spot check overall compliance of work with contract/specifications. These visits may include inspection, monitoring and testing around the regulated area or other aspects of the operation except personnel monitoring.
 - 4. Provide support to the Owner's representative such as evaluation of submittals from the Abatement Contractor, resolution of unforeseen developments, etc.

- 5. Perform, in the presence of the Owner's representative, final inspection of a decontaminated area or building at the conclusion of the abatement and clean-up work to evaluate compliance with the Owner requirements.
- B. Data, inspection results and testing results generated by the Owner's AM consultant will be available to the Abatement Contractor for information and consideration. The Abatement Contractor shall cooperate with and support the Owner's AM consultant for efficient and smooth performance of their work.
- C. The monitoring and inspection results of the Owner's AM consultant will be used by the Owner to issue stop removal orders to the Abatement Contractor during abatement work and to accept or reject a regulated area or building as decontaminated.

1.10.3 MONITORING, INSPECTION AND TESTING BY ABATEMENT CONTRACTOR

The contractor's Competent Person/Supervisor is responsible for the continuous monitoring of subsystems and procedures that could affect the health and safety of the Abatement Contractor's personnel. Safety and health conditions and the provision of those conditions inside the regulated area for persons entering the area are the exclusive responsibility of the Abatement Contractor/Competent Person. The Abatement Contractor/Competent Person shall be responsible for and shall maintain a log for personnel air monitoring to comply with OSHA requirements for air monitoring for asbestos in 29 CFR 1926.1101(f), (g) and Appendix A. This log shall be made available to the Owner's representative. The log will contain, at a minimum, information on personnel or area sampled, other persons represented by the sample, the date of sample collection, start and stop times for sampling, sample volume, flow rate, and fibers/f/cc.

1.11 STANDARD OPERATING PROCEDURES

The Asbestos Abatement Contractor shall have established Standard Operating Procedures (SOPs) in printed form consisting of simplified text, diagrams, sketches and pictures that establish and explain clearly the ways and procedures to be followed during phases of the work by the contractor's personnel. The SOPs must be modified as needed to address specific requirements of the project. The SOPs shall be submitted for review and approval prior to the start of abatement work. The minimum topics and areas to be covered by the SOPs are:

- A. Minimum Personnel Qualifications
- B. Contingency Plans and Arrangements
- C. Security and Safety Procedures
- D. Respiratory Protection/Personal Protective Equipment Program and Training

- E. Medical Surveillance Program and Recordkeeping
- F. Regulated Area Requirements for Floor Tile/Mastic Abatement
- G. Decontamination Procedures
- H. Monitoring, Inspections and Testing
- I. Removal Procedures for Floor Tile and Mastic
- J. Disposal of Waste ACM and ACE
- K. Regulated Area Decontamination/Clean-up
- L. Regulated Area Visual and Air Clearance
- M. Project Completion/Closeout

1.12 SUBMITTALS

1.12.1 PRE-PROJECT SUBMITTALS

Submit to the Owner with prior to beginning work, the following for review and approval.

- A. Submit Standard Operating Procedures developed specifically for this project, incorporating the requirements of the specifications.
- B. Submit the name, location and phone number of the approved landfill; proof/verification that landfill is approved for ACM disposal; the landfill's requirements for ACM waste; the type of vehicle to be used for transportation; and name, address and phone number of subcontractor, if used. Proof of asbestos training for transportation personnel shall be provided.
- C. Submit required notifications and arrangements made with regulatory agencies having regulatory jurisdiction and the specific contingency/emergency arrangements made with local health, fire, ambulance, hospital authorities and any other notifications/arrangements.
- D. Submit information on personnel.
 - 1. Competent Person(s)/Supervisor(s): Number; names; social security numbers: experience Competent vears of abatement as Person/Supervisor; list of similar projects Competent as Person/Supervisor; as a worker; certificates; licenses; accreditations; proof of South Carolina DHEC specialized asbestos training; maximum

number of personnel supervised on a project; medical opinion; and current respirator fit test.

- 2. Workers: Numbers; names; social security numbers; certificates; licenses; accreditations; training courses in asbestos abatement and respiratory protection; medical opinion; and current respirator fit test.
- E. Submit copies of State license for asbestos abatement; copy of insurance policy, including exclusions with a letter from agent stating in plain English the coverage provided and the fact that asbestos abatement activities are covered by the policy; copy of SOPs incorporating the requirements of this specification; information on who provides your training, how often; who does and how is air monitoring conducted; a list of references of independent laboratories/AMs familiar with your air monitoring projects listed as analytical method(s) used.
- F. When rental equipment is to be used in regulated area or used to transport asbestos waste, the Contractor shall assure complete decontamination of the rental equipment before return to the rental agency.

1.12.2 SUBMITTALS DURING ABATEMENT

- A. The Competent Person/Supervisor shall maintain and submit a daily log at the regulated area documenting the dates and times of the following: purpose, attendees and summary of meetings; all personnel entering/exiting the regulated area; document and discuss the resolution of unusual events such as equipment failures, emergencies and any cause for stopping work. Submit this daily log to Owner's representative.
- B. The Contractor's Competent Person/Supervisor shall maintain documentation of disposal of ACM/ACE waste materials; copies of Waste Shipment Records/landfill receipts to the Owner's representative on a weekly basis.

1.12.3 SUBMITTALS AT COMPLETION OF ABATEMENT

The Contractor's Competent Person or AM shall submit a project report consisting of the daily log book requirements and documentation of events during the abatement project including Waste Shipment Records signed by the landfill's agent. The report shall include a certificate of visual inspection, signed and dated by the Contractor's Supervisor, in accordance with Attachment #1.

SECTION 2 – EXECUTION

2.1 PRE-ABATEMENT ACTIVITIES

2.1.1 PRE-ABATEMENT MEETING

The Owner's representative, upon receipt, review and approval of pre-abatement submittals, will arrange for a pre-abatement meeting between the abatement contractor, the Owner's representative(s) and the Owner's AM. The purpose of the meeting is to discuss any aspect of the submittals needing clarification or amplification and to discuss any aspect of the project execution and the sequence of the operation. The abatement contractor shall be prepared to provide any supplemental information/documentation to the Owner's representative regarding any submittals, documentation, materials or equipment. Upon satisfactory resolution of any outstanding issues the Owner's representative will issue a written order to proceed to the Abatement Contractor. No abatement work of any kind described in the following provisions shall be initiated prior to the Owner's written order to proceed.

2.1.2 PRE-ABATEMENT CONSTRUCTION AND OPERATIONS

A. Provide demarcation (barrier tape/signage) of the areas to be abated by exterior removal. Provide barrier demarcation and signage as specified in the document.

2.2 REGULATED AREA PREPARATIONS

2.2.1 OSHA DANGER SIGNS

Post OSHA DANGER signs meeting the specifications of OSHA 29 CFR 1926.1101 at any location and approaches to the regulated area where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from the regulated area to permit any personnel to read the sign and take the necessary measures to avoid exposure.

2.2.2 SHUT DOWN-LOCK OUT ELECTRICAL

Provide temporary power and lighting. Insure safe installation including GFCI of temporary power sources and equipment by compliance with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. Electricity shall be provided by the Abatement Contractor.

2.2.3 SANITARY FACILITIES

The contractor shall provide temporary toilet facilities to be used by contractor's employees.

2.3 CONTROLLING ACCESS TO THE REGULATED AREA

Access to the regulated area shall be permitted only by the Competent Person. All other means of access shall be closed off by proper seating and DANGER signs posted on the clean side of the regulated area where it is adjacent to or within view of any area to be occupied. Provide an appropriate number of OSHA DANGER signs for each visual and physical barrier. Any alternative method must be given a written approval by the Owner's representative.

2.4 REMOVAL OF ASBESTOS CONTAINING MATERIALS

- 2.4.1 Friable Asbestos Materials Floor tile and mastic (due to floor tile quantity and likelihood that mastic will be removed using solvents and buffing machines) and drywall with joint compound.
 - 1. The contractor will meet the requirements listed under the OSHA standard 29 CFR 1926.1101 section g(4) for Class 1 friable materials.
 - 2. Minimum requirements for abatement of friable materials are:
 - a. A full decontamination unit (five-chambered) including a shower and separate bag load out will be constructed at the entrance to the work area. See Appendix B for the tentative layout of the decontamination unit.
 - b. Critical barriers shall be placed over all doors, windows, walls and wall penetrations, HVAC equipment, electrical equipment, etc.
 - c. Negative air pressure of 0.02 inches of water shall be maintained in the work area at all times.
 - d. Minimum personnel protection equipment for the abatement workers shall be PAPR respiratory protection, disposable clothing, gloves and boots during gross removal.
 - e. After the negative pressure decontamination unit is constructed and prior to gross removal, ECS will conduct a poly visual inspections and air monitoring during the project per AHERA regulations.
 - 3. Remove and dispose of all friable asbestos materials in accordance with all state, local and federal regulations.
- **2.4.2 Mastic** When removing asbestos-containing mastic from the floor surface, the contractor shall use a product in accordance with the following criteria:

- a. The product shall not create a hazardous waste as a by-product.
- b. The product shall be "low to no odor".
- c. The product shall not contain any carcinogenic or chlorinated hydrocarbons.
- d. The contractor shall add cat litter, oil-sorb or equivalent so that no free standing liquid will be left in the asbestos bag.
- e. Potential health problems associated with the mastic remover in buildings that are occupied by the general public shall be addressed. A negative pressure enclosure with a specified number of air changes per hour or some other means may be needed due to vapor concentrations or odor considerations.
- **2.4.3 Sinks with Mastic** shall be removed intact so as not to disturb the material underneath. The sinks will be wrapped in plastic and removed to an approved landfill for disposal.

If the contractor desires to use methods different than the one stated here, a written request should be submitted to the owner's consultant for review. An amendment to the project design will be completed if the variation in method is appropriate.

Visual inspections and daily air monitoring will be performed throughout the project duration. Following abatement activities, Apex will perform a final visual inspection and TEM air clearance sampling per AHERA regulations. The above minimum requirements are intended as a guide and do not supersede EPA, State of South Carolina or OSHA asbestos requirements.

2.5 DISPOSAL OF ACM WASTE

2.5.1 GENERAL

Dispose of waste ACM/ACE and debris, in accordance with these specifications, OSHA, EPA and DOT. The landfill requirements for packaging must also be met. Disposal shall be done at the approved landfill. Disposal of non-friable ACM/ACE shall be done in accordance with applicable regulations.

2.5.2 PROCEDURES

A. Asbestos waste shall be packaged and moved into a covered transport container in accordance with NESHAP's packaging requirements. Waste shall be doublebagged prior to disposal. Bags shall not be overfilled. Bags shall be securely sealed to prevent accidental opening and/or leakage. The top shall be tightly twisted and goose necked prior to tightly sealing with at least three wraps of duct tape. Ensure that unauthorized persons do not have access to the waste material once it is outside the regulated area. Transport containers must be covered at all times when not in use. NESHAP's signs must be on containers during loading and unloading. Material shall not be transported in open vehicles. If drums are used for packaging, the drums shall be labeled properly and shall not be re-used.

B. All waste shipments shall be manifested by EPA requirements.

2.6 PROJECT DECONTAMINATION

2.6.1 GENERAL

The entire work related to project decontamination shall be performed under the close supervision and monitoring of the Owner's IH.

2.6.2 REGULATED AREA CLEARANCE

Air testing and other requirements, which must be met before release of the Abatement Contractor, are specified in Final Testing Procedures.

2.6.3 WORK DESCRIPTION

Decontamination includes the cleaning and clearance of the regulated area.

2.7 VISUAL INSPECTION AND CLEARANCE TESTING

2.7.1 GENERAL

The final visual inspection and testing will be performed by the Owner's AM starting no sooner then 24 hours after finishing the final cleaning.

2.7.2 VISUAL INSPECTION

Final visual inspection will include the entire regulated area, any poly sheeting, doorways, windows and any other openings. If any debris, residue, dust or any other suspect material is detected, the cleaning shall be repeated at no cost to the Owner. Dust/material samples may be collected and analyzed at no cost to the Owner at the discretion of the Owner's AM to confirm visual findings. When the regulated area is visually clean and the final testing can be done.

2.7.3 AIR CLEARANCE TESTING

- A. During the air testing, the accredited air monitor shall cause disruptive air currents as described in the EPA-AHERA regulations (40 CFR Part 763, Subpart E, Appendix A).
- B. Daily air samples will be analyzed using PCM.
- C. Final air samples are to be analyzed using TEM, the Mandatory Transmission Electron Microscopy Method described in 40 CFR Part 763, Subpart E, Appendix F shall be used. Clearance criteria shall be less than or equal to 70 structures per square millimeter per sample.
- B. Final clearance criteria shall be in accordance with AHERA Program Rules. TEM clearance will be performed for this project. Five TEM air samples will be collected inside the work area, 5 TEM samples will be collected outside the work area and 2 TEM blanks will be used for quality control. **A variance may be requested for this project to provide clearance by PCM method. If accepted by DHEC, PCM clearance will be acceptable per this project design*
- C. The industrial hygiene firm shall immediately report the final air sampling clearance results to the designer.
- D. The use of the negative pressure system may be discontinued after the industrial hygiene firm instructs the contractor that he has passed the final project decontamination inspection.
- E. If release criteria are met, proceed to perform the abatement closeout and to issue the certificate of completion in accordance with these specifications.

2.7.4 AIR MONITORING FIRM:

- A. The Air Monitoring Firm shall perform work area inspections and collection and analysis of the daily air samples.
- B. This does not relieve the Contractor from performing OSHA compliance exposure monitoring for his own employees as required by government regulations.

2.8 ABATEMENT CLOSEOUT AND CERTIFICATE OF COMPLIANCE

2.8.1 COMPLETION OF ABATEMENT WORK

After thorough decontamination, complete asbestos abatement work upon meeting the regulated area clearance criteria and fulfilling the following:

A. Remove all equipment, materials and debris from project area.

Asbestos Abatement Project Design Cammie Clagett Courts Apex Project No. 0317-55

B. Package and dispose of all asbestos waste as required.

CERTIFICATE OF VISUAL INSPECTION

Work Area(s):_____

In the Contractor and the Air Monitor have visually inspected the Work Area and all surfaces and have found no dust, debris or residue.

CONTR/	ACTOR		
By:	(S	IGNATURE)	Date:
	(P	RINT NAME)	
	(P	RINT TITLE)	
<u>Air Moni</u>	tor		
By:	(S	IGNATURE)	Date:
	(P	RINT NAME)	
	(P	RINT TITLE)	
		END OF SECTION	

APPENDIX

Table 1

Summary of Asbestos Findings
Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 7

Building Unit No.: 201 & 203

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Drywall with joint	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8		Dischargerith fisish seen				
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	800 SF
10						
11		Leveling compound			Good	340 SF
12	201-kitchen; 203-kitchen & 1/2 bathroom		PLM - NAD	Friable		
13						
14						1,960 SF
15	201 & 203-throughout except in bathrooms & HVAC closets	tiles and mastic (top laver)		Non-Friable	Good	
16			TEM - NAD			
17	203-throughout except in 1/2		PLM - NAD (tile);			
18	bathroom, HVAC closet & 2nd floor	and mastic (bottom laver)	2% Chry (mastic)	Non-Friable	Good	805 SF
19	front bedroom		TEM - NAD (tile)			
20			ΡΙΜ - ΝΑΟ			
21	Kitchen counters	Kitchen counter caulk		Non-Friable	Good	20 LF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 7

Building Unit No.: 201 & 203

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23						
24	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	90 LF
25			TEM - NAD			
26						
27	201-Kitchen stove back splash	Stove backsplash mastic		Non-Friable	Good	5 SF
28			TEM - NAD			
29						
30	201 & 203-2nd floor front bedrooms	Interior window caulk	PLIVI - NAD	Non-Friable	Good	4 EA
31			TEM - NAD			
32						
33	Kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
34						
35						
36	Doors	Grey door caulk		Non-Friable	Good	4 EA
37			TEM - NAD			
38						
39	Windows	Black window caulk		Non-Friable	Good	16 EA
40			TEM - NAD			
41						
42	Brick wall penetrations	Red wall penetration mastic	PLIVI - INAU	Non-Friable	Good	2 SF
43			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 7

Building Unit No.: 201 & 203

Date: 4/26/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
44						
45	Roof gable vents	Roof gable caulk - white	PLW - NAD	Non-Friable	Good	2 EA
46			TEM - NAD			
47						
48	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
49			TEM - NAD			
50						
51	Roof gable vents	Roof gable caulk - cream		Non-Friable	Good	2 EA
52			TEM - NAD			
53						
54	Awning roofs	2nd layer of felt paper	PLW - NAD	Non-Friable	Good	50 SF
55			TEM - NAD			
56						
57	Awnings/flashing	Awning/flashing caulk	PLW - NAD	Non-Friable	Good	10 LF
58			TEM - NAD			
Assumed	201-throughout except in bathrooms & HVAC closet; 203-2nd floor front bedroom	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,150 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 8

Building Unit No.: 512 & 523

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
Assumed	Building/Debris Piles	Building/Debris Piles	Assumed Positive	Friable	Significantly Damaged	2,800 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive For Asbestos		SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 9

Building Unit No.: 517 & 519

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2		Drawell with joint				
3	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6		Disstant with finish such				
7	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	400 SF
8						
9						
10	ceiling	Beige HVAC mastic		Friable	Good	60 SF
11			TEM - NAD			
12		12" x 12" brown/orange speckled floor tile and mastic (bottom layer)	PLM - NAD (tile);		Good	150 SF
13	519-living room		2% Chry (mastic)	Non-Friable		
14			TEM - NAD (tile)			
15			PLM - NAD (tile);			
16	517 & 519-throughout except in bathrooms & HVAC closets	tile and mastic (top laver)	3% Chry (mastic)	Non-Friable	Good	950 SF
17			TEM - NAD (tile)			
18						
19	Kitchens	Kitchen counter caulk		Non-Friable	Good	25 LF
20			TEM - NAD			
21						
22	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	80 LF
23			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 9

Building Unit No.: 517 & 519

Date: 4/26/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24 25 26	Kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
27 28	Doors	Grey door caulk	PLM - NAD	Non-Friable	Good	4 EA
29 30 31	Windows	Black window caulk	PLM - NAD	Friable	Good	8 EA
32 33 34	Main roof	Roof shingles (3) and felt (1)	TEM - NAD PLM - NAD	Non-Friable	Good	1,350 SF
35 36 37	Roof gable vents	Roof gable caulk - white	TEM - NAD PLM - NAD	Non-Friable	Good	2 EA
38 39 40 41	Roof penetrations	Black roof mastic	PLM - NAD	Non-Friable	Good	4 EA
Assumed	517-throughout except in kitchen, bathroom & HVAC closet; 519- throughout except living room, bathroom & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	635 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 10

Building Unit No.: 513 & 515

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6		Discound finish such				
7	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	400 SF
8		, ,				
9						
10	bathrooms & HVAC closets	tile and mastic (top layer)		Friable	Good	950 SF
11			TEM - NAD			
12		Beige HVAC mastic	PLM - NAD		Good	60 SF
13	Ceiling			Non-Friable		
14			TEM - NAD			
15						
16	Kitchens	Kitchen counter caulk		Non-Friable	Good	25 LF
17			TEM - NAD			
18		Dethere are also used at all and				
19	Bathrooms	sink caulk		Non-Friable	Good	80 LF
20			TEM - NAD			
21						
22	Kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
23						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 10

Building Unit No.: 513 & 515

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24						
25	Doors	Grey door caulk		Non-Friable	Good	4 EA
26			TEM - NAD			
27						
28	Windows	Black window caulk		Friable	Good	8 EA
29			TEM - NAD			
30						
31	Main roof	Roof shingles (3) and felt (1)		Non-Friable	Good	1,350 SF
32			TEM - NAD			
33						
34	Roof gable vents	Roof gable caulk - white		Non-Friable	Good	2 EA
35			TEM - NAD			
36						
37	Roof penetrations	Black roof mastic		Non-Friable	Good	4 EA
38			TEM - NAD			
Assumed	513 & 515-throughout except for bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	950 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 11

Building Unit No.: 509 & 511

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2		Drawall with joint				
3	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6		Disstantial finish area				
7	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	400 SF
8						
9			PIM - NAD			
10	bathrooms & HVAC closets	tile and mastic (top laver)		Friable	Good	950 SF
11			TEM - NAD			
12		Beige HVAC mastic	PLM - NAD			60 SF
13	ceiling			Non-Friable	Good	
14	5		TEM - NAD			
15						
16	Kitchens	Kitchen counter caulk		Non-Friable	Good	25 LF
17			TEM - NAD			
18		Dethere are also used at all and				
19	Bathrooms	sink caulk		Non-Friable	Good	80 LF
20	1		TEM - NAD			
21						
22	Kitchens (double sinks)	White sink coating		Friable	Good	2 EA
23			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 11

Building Unit No.: 509 & 511

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24			PIM - NAD			
25	Doors	Grey door caulk		Non-Friable	Good	4 EA
26			TEM - NAD			
27						
28	Windows	Black window caulk		Friable	Good	8 EA
29			TEM - NAD			
30						
31	Main roof	Roof shingles (3) and felt (1)		Non-Friable	Good	1,350 SF
32			TEM - NAD			
33						
34	Roof gable vents	Roof gable caulk - white	F LWI - NAD	Non-Friable	Good	2 EA
35			TEM - NAD			
36						
37	Roof penetrations	Black roof mastic		Non-Friable	Good	4 EA
38			TEM - NAD			
Assumed	509 & 511-throughout except for bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	950 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 501, 503, 505, 507

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						12,000 SF
2						
3		Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable		
4	Throughout interior				Good	
5						
6						
7						
8			PI M - NAD			900 SF
9	Bathrooms	Plaster with finish over		Friable	Good	
10	Datitoonis	unfinished drywall		Thable		
11						
12		Tan HVAC tape	PLM - NAD		Damaged	80 SF
13	Above ceilings			Friable		
14			TEM - NAD			
15	501 & 505-throughout except in HVAC					3,535 SF
16	closets; 503 & 507-throughout except	12" x 12" tan speckled floor tile and mastic (top laver)	F LWI - NAD	Non-Friable	Good	
17	in bathrooms & HVAC closets		TEM - NAD			
18		12" x 12" brown/orange	PLM - NAD (tile);			
19	501 & 503- bathrooms; 505 & 507- kitchens	speckled floor tile and	2% Chry (mastic)	Non-Friable	Good	475 SF
20		mastic (bottom layer)	TEM - NAD (tile)			
21			PLM - NAD (tile);	Non-Friable	Good	75 SF
22	507-2nd floor middle bedroom (1/2 of floor in checker pattern)	12" x 12" cream floor tile	4% Chry (mastic)			
23			TEM - NAD (tile)			

Building Number: 12

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 12

Building Unit No.: 501, 503, 505, 507

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24		12" x 12" white speckled floor	PLM - NAD			
25	505-bathroom	tile with no mastic		Non-Friable	Good	25 SF
26		(bottom layer)	TEM - NAD			
27						
28	HVAC closets	HVAC caulk		Non-Friable	Good	25 LF
29		Í	TEM - NAD			
30						
31	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	55 LF
32			TEM - NAD			
33						
34	Bathrooms	Bathroom shower stall and	PLM - NAD	Non-Friable	Good	160 LF
35		Sink Caulk	TEM - NAD			
36						
37	507 & 505-kitchens (double sinks)	Black sink coating	3% Chrysotile	Friable	Good	2 EA
38						
39	505-kitchen, living room, 2nd floor					
40	middle & back bedrooms; 507-2nd	Interior window caulk		Non-Friable	Good	8 EA
41	floor middle & back bedrooms		TEM - NAD			
42						
43	501 & 503-kitchens (double sinks)	White sink coating	PLM - NAD	Friable	Good	2 EA
44	(double sinks)		TEM - NAD			
45						
46	Doors	Grey door caulk	PLIVI - NAD	Non-Friable	Good	8 EA
47	1		TEM - NAD	1		

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building L

Building Unit No.: 501, 503, 505, 507

Date: 4/27/2017

Building Number: 12

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48			PLM - NAD			
49	Windows	Black window caulk		Non-Friable	Good	28 EA
50			TEM - NAD			
51						
52		SAMPLES NUME	BERS NOT USED			
53						
54						
55	Awnings/flashing	Awning/flashing caulk	I LWI- NAD	Non-Friable	Good	20 LF
56			TEM - NAD			
57						
58	Main roof & awning roofs	Roof shingles (2) and felt (1)	F LWI - NAD	Non-Friable	Good	2,500 SF
59			TEM - NAD			
60						
61	Awning roofs	2nd layer of felt paper	F LWI - NAD	Non-Friable	Good	100 SF
62			TEM - NAD			
63						
64	Roof gable vents	Roof gable caulk	F LWI - NAD	Non-Friable	Good	2 EA
65			TEM - NAD			
Assumed	501, 503, 505 & 507-throughout except bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,525 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 300, 302, 304, 306

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						12,000 SF
2						
3		Drywall with joint compound and tape				
4	Throughout interior		PLM - 2% Chrysotile	Friable	Good	
5						
6						
7						
8		Diastor with finish over				900 SF
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	
10						
11		Tan HVAC tape	PLM - NAD			80 SF
12	Above ceilings			Friable	Damaged	
13			TEM - NAD			
14	200, 202, 204 & 206 throughout	12" v 12" top speakled floor				3,525 SF
15	except bathrooms & HVAC closets	tile and mastic (top layer)		Non-Friable	Good	
16			TEM - NAD			
17	300-2nd floor front & middle		PLM - NAD (tile);			
18	bedrooms; 302-2nd floor front and	12" x 12" grey floor tile and	<1% Chry (mastic)	Non-Friable	Good	540 SF
19	back bedrooms		TEM - NAD (tile); 0.41% Chry (mastic)			
20	202 and floor bothroom and	12" x 12" brown/orange	PLM - NAD (tile);	Non-Friable	Good	90 SF
21	hallway; 306-2nd floor bathroom	speckled floor tile and	3% Chry (mastic)			
22		mastic (bottom layer)	TEM - NAD (tile)			

Building Number: 13

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 13

Building Unit No.: 300, 302, 304, 306

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23						
24	Kitchens	Kitchen counter caulk	I LWI-NAD	Non-Friable	Good	55 LF
25			TEM - NAD			
26						
27	HVAC closets	HVAC caulk	I LWI-NAD	Non-Friable	Good	25 LF
28			TEM - NAD			
29						
30	Bathrooms	sink caulk	I LWI-NAD	Non-Friable	Good	160 SF
31			TEM - NAD			
32						
33	Kitchens (double sinks)	White sink coating	I LWI-NAD	Friable	Good	4 EA
34			TEM - NAD			
35						
36	300-kitchen stove back splash	Back splash mastic		Friable	Good	5 SF
37			TEM - NAD			
38						
39	306-living room	Interior window caulk		Non-Friable	Good	1 EA
40			TEM - NAD			
41						
42	Windows	Black window caulk		Friable	Good	28 EA
43		Γ Γ	TEM - NAD			
44						
45	Doors	Grey door caulk		Non-Friable	Good	8 EA
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 13

Building Unit No.: 300, 302, 304, 306

Project Number: 0317-55

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Roof gable vents	Roof gable caulks - cream and white		Non-Friable	Good	2 EA
49			TEM - NAD			
50						
51	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,500 SF
52			TEM - NAD	7		
53						
54	Awning roofs	2nd layer of felt paper		Non-Friable	Good	100 SF
55			TEM - NAD			
56						
57	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	20 LF
58			TEM - NAD			
Assumed	300-throughout downstairs, 2nd floor back bedroom, bathroom & hallway; 302-throughout downstairs & 2nd floor middle bedroom; 304-throughout; 306- throughout except bathroom	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,000 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 308, 310, 312, 314

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3		Drawell with inint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	12,000 SF
5						
6						
7						
8		Plaster with finish over				900 SF
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	
10						
11	000 040 040 8 044 (keessek est	12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD		Good	3,525 SF
12	except bathrooms & HVAC closets			Non-Friable		
13			TEM - NAD			
14						
15	Kitchens	Kitchen counter caulk		Non-Friable	Good	55 SF
16			TEM - NAD			
17		Bathroom shower stall and				
18	Bathrooms	sink caulk		Non-Friable	Good	160 LF
19			TEM - NAD			
20			PLM - NAD			
21	HVAC closets	HVAC caulk		Non-Friable	Good	25 LF
22			TEM - NAD			

Building Number: 14

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 14

Building Unit No.: 308, 310, 312, 314

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23			PLM - NAD			
24	Above ceilings	Tan HVAC tape		Friable	Damaged	80 SF
25			TEM - NAD			
26			PI M - NAD			
27	308-kitchen (double sink)	Black sink coating		Friable	Good	1 EA
28			TEM - NAD			
29						
30	310, 312 &314-kitchens (double sinks)	White sink coating	PLM - 3% Chrysotile	Friable	Good	3 EA
31	(200010 01110)					
32						
33	3142nd floor front bedroom	Interior window caulk		Non-Friable	Good	1 EA
34			TEM - NAD			
35						
36	314-kitchen stove back splash	Back splash mastic		Friable	Good	5 SF
37			TEM - NAD			
38						
39	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,500 SF
40			TEM - NAD			
41						
42	Awning roofs	2nd layer of felt paper	PLW - NAD	Friable	Good	100 SF
43			TEM - NAD			
44						
45	Awnings/flashing	Awning/flashing caulk	PLIVI - NAU	Non-Friable	Good	20 LF
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 14

Building Unit No.: 308, 310, 312, 314

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Windows	Black window caulk	FLIVI - NAD	Non-Friable	Good	28 EA
49			TEM - NAD			
50						
51	Doors	Grey door caulk	F LIVI - NAD	Non-Friable	Good	8 EA
52			TEM - NAD			
53						
54	Roof gable vents	Roof gable caulk		Non-Friable	Good	2 EA
55			TEM - NAD			
56						
57	Brick wall penetrations	Red wall penetration mastic	PLIM - NAD	Non-Friable	Good	4 SF
58			TEM - NAD			
Assumed	308, 310, 312 & 314-throughout except bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,525 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

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Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 205, 207, 209, 211

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						12,000 SF
3		Drawell with isint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	
5		·····				
6						
7						
8						875 SF
9	Bathrooms	Plaster with finish over	PLM - NAD	Friable	Good	
10						
11		12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD		Good	3,025 SF
12	205, 207, 209 & 211-throughout except bathrooms & HVAC closets			Non-Friable		
13			TEM - NAD			
14		12" x 12" brown/orange	PLM - NAD (tile);			
15	207, 209 & 211-bathrooms	speckled floor tile and	2% Chry (mastic)	Non-Friable	Good	75 SF
16		mastic (bottom layer)	TEM - NAD (tile)			
17						
18	Kitchens	Kitchen counter caulk		Non-Friable	Good	50 LF
19			TEM - NAD			
20		Bathroom shower stall and	PLM - NAD	Non-Friable		160 LF
21	Bathrooms	Bathroom shower stall and sink caulk			Good	
22			TEM - NAD			

Building Number: 15

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 15

Building Unit No.: 205, 207, 209, 211

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23			PLM - NAD			
24	HVAC closets	HVAC caulk		Non-Friable	Good	25 LF
25			TEM - NAD			
26						
27	Above ceilings	Tan HVAC tape		Friable	Damaged	80 SF
28			TEM - NAD			
29						
30	Kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	4 EA
31						
32						
33	205, 207 & 209-2nd floor front bedrooms	Interior window caulk		Non-Friable	Good	5 EA
34			TEM - NAD			
35						
36	Main roof and awning roofs	Roof shingles (2) and felt (1)		Friable	Good	2,500 SF
37			TEM - NAD			
38						
39	Awning roofs	2nd layer of felt paper		Non-Friable	Good	100 SF
40			TEM - NAD			
41						
42	Windows	Black window caulk		Friable	Good	28 EA
43			TEM - NAD			
44						
45	Doors	White and grey door caulk		Non-Friable	Good	8 EA
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 15

Building Unit No.: 205, 207, 209, 211

Project Number: 0317-55

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Awnings/flashing	Awning/flashing caulk	F LIM - NAD	Non-Friable	Good	20 LF
49			TEM - NAD			
50		Roof gable caulks - white and cream	PLM - NAD		Good	2 EA
51	Roof gable vents			Non-Friable		
52			TEM - NAD			
53		Red wall penetration mastic			Good	4 SF
54	Brick wall penetrations			Non-Friable		
55			TEM - NAD			
56						
57	Roof penetrations	Paint coated metal		Non-Friable	Good	6 SF
58			TEM - NAD			
Assumed	205, 207, 209 & 211-throughout except bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,025 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

artanburg, South Carolina

Building Number: 16

Building Unit No.: 525 & 527

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3		Drawell with inint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5		p				
6						
7						
8		Diastan with finish swar				
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10		,				
11	EDE & EDZ throughout event	12" x 12" tan speckled floor tile and mastic (top layer)	PIM - NAD		Good	1,960 SF
12	bathrooms & HVAC closets			Non-Friable		
13			TEM - NAD			
14		12" x 12" orongo/vollow	PLM - NAD (tile & top			
15	525-throughout 1st floor except in	speckled floor tile and	(bottom mastic)	Non-Friable	Good	480 SF
16		mastic (bottom layer)	TEM - NAD (tile & top mastic)			
17		Grev square pattern vinvl				
18	525- 2nd floor bathroom	floor with mastic		Non-Friable	Good	25 SF
19			TEM - NAD			
20			PLM - NAD			
21	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 16

Building Unit No.: 525 & 527

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23			PI M - NAD			
24	HVAC closets	HVAC caulk		Non-Friable	Good	15 LF
25			TEM - NAD			
26						
27	527-2nd floor bathroom	Bathroom shower stall mastic	F LIWI - NAD	Non-Friable	Good	40 SF
28			TEM - NAD			
29						
30	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	90 LF
31			TEM - NAD			
32						
33	Above ceilings	Tan HVAC tape	PLW - NAD	Friable	Damaged	40 SF
34			TEM - NAD			
35						
36	525 & 527-front & back doors	Interior door caulk		Friable	Good	4 EA
37			TEM - NAD			
38						
39	Kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
40						
41						
42	Windows	Black window caulk		Friable	Good	16 EA
43			TEM - NAD			
44						
45	Doors	Grey door caulk		Non-Friable	Good	4 EA
46]		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

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Building Unit No.: 525 & 527

Building Number: 16

Project Number: 0317-55

Date: 4/27/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Roof gable vents	cream		Non-Friable	Good	2 EA
49		orodini	TEM - NAD			
50						
51	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	10 LF
52			TEM - NAD			
53						
54	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
55			TEM - NAD			
56						
57	Roof penetrations	Paint coated metal		Non-Friable	Good	6 SF
58			TEM - NAD			
Assumed	525-throughout 2nd floor including bathroom; 527-throughout except bathrooms & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,480 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

LF = Linear Feet SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 17

Building Unit No.: 529 & 531

Date: 5/11/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						7,000 SF
2						
3						
4	Throughout interior	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	
5						
6						
7						
8		Disstant with finish aver				875 SF
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	
10		,				
11		12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD		Good	1,960 SF
12	529 & 531-throughout except in bathrooms & HVAC closets			Non-Friable		
13			TEM - NAD			
14						
15	531-stairwell	Drywall wall patches	PLM - NAD	Friable	Good	10 SF
16						
17		Bathroom shower stall and				
18	Bathrooms	sink caulk		Non-Friable	Good	90 LF
19			TEM - NAD			
20			PLM - NAD	Non-Friable	Good	15 LF
21	HVAC closets	HVAC caulk				
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 17

Building Unit No.: 529 & 531

Date: 5/11/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23						
24	Above ceilings	Tan HVAC tape	PLM - NAD	Friable	Damaged	40 SF
25						
26						
27	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
28			TEM - NAD			
29						
30	529-2nd floor bathroom	mastic (bottom laver)		Non-Friable	Good	25 SF
31			TEM - NAD			
32						
33	531-kitchens (double sink)	Black sink coating	PLM - 3% Chrysotile	Friable	Good	1 EA
34						
35						
36	529-kitchen (double sink)	White sink coating		Friable	Good	1 EA
37			TEM - NAD			
38			PLM - NAD			
39	Windows	Black window caulk		Non-Friable	Good	16 EA
40			TEM - NAD			
41			PIM - NAD			
42	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
43			TEM - NAD			
44			PIM - NAD			
45	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	10 LF
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 17

Building Unit No.: 529 & 531

Date: 5/11/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47					Good	
48	Roof gable vents	Roof gable caulks - white and cream		Non-Friable		2 EA
49			TEM - NAD			
50						
51	Doors	Grey door caulk		Non-Friable	Good	4 EA
52			TEM - NAD			
53						
54	Brick wall penetrations	white wall penetration mastic		Non-Friable	Good	2 SF
55			TEM - NAD			
56						
57	Roof penetrations	Paint coated metal		Non-Friable	Good	6 SF
58			TEM - NAD			
Assumed	529-throughout except in bathrooms & HVAC closet; 531- throughout except in 1/2 bathroom & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,985 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

nue, Spartanburg, South Carolina

Building Number: 18

Building Unit No.: 533 & 535

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3		Drawell with isint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8		Disstant with finish such				
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10						
11						
12	bathrooms & HVAC closets	tile and mastic (top layer)		Non-Friable	Good	1,960 SF
13			TEM - NAD			
14	533-2nd floor middle bedroom; 535-	12" x 12" brown/orange	PLM - NAD (tile);	Non-Friable	Good	605 SF
15	throughout 1st floor except in 1/2	floor tile & mastic	4% Chry (mastic)			
16	bathroom & HVAC closet	(bottom layer)	TEM - NAD (tile)			
17	533-throughout 1st floor except in	12" x 12" vellow floor tile &	PLM - NAD (tile);			
18	1/2 bathroom & HVAC closet	mastic (bottom layer)	3% Chry (mastic)	Non-Friable	Good	480 SF
19			TEM - NAD (tile)			
20						
21	Above ceilings	Tan HVAC tape	PLM - NAD	Friable	Damaged	40 SF
22						
23			PLM - NAD			
24	Kitchens (double sinks)	White sink coating		Friable	Good	2 EA

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 18

Building Unit No.: 533 & 535

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 18

Building Unit No.: 533 & 535

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
26		Dethroom chower stall and				
27	Bathrooms	sink caulk		Non-Friable	Good	90 LF
28			TEM - NAD			
29						
30	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
31			TEM - NAD			
32						
33	HVAC closets	HVAC caulk		Non-Friable	Good	15 LF
34			TEM - NAD			
35						
36	535 - stairwell	Drywall wall patches	PLM - NAD	Friable	Good	10 SF
37						
38	533-2nd floor middle bedroom; 535-					
39	2nd floor front, middle & back	Interior window caulk		Non-Friable	Good	8 EA
40	bedrooms		TEM - NAD			
41						
42		SAMPLE NUMB	ERS NOT USED			
43						
44			ΡΙΜ - ΝΔΟ			
45	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
46			TEM - NAD			
47						
48	Roof gable vents	cream		Non-Friable	Good	2 EA
49			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 18

Building Unit No.: 533 & 535

Date: 4/28/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
50	_		PLM - NAD			
51	Doors	Grey door caulk		Non-Friable	Good	4 EA
52			TEM - NAD			
53			PIM - NAD			
54	Windows	Black window caulk		Non-Friable	Good	16 EA
55			TEM - NAD			
56						
57	Awnings/flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	10 LF
58			TEM - NAD			
59						
60	Awning roofs	2nd layer of felt paper	PLM - NAD	Non-Friable	Good	50 SF
61	1		TEM - NAD			
62						
63	Brick wall penetrations	Red wall penetration mastic	PLM - NAD	Non-Friable	Good	4 SF
64	1		TEM - NAD			
65						
66	Roof penetrations	Paint coated metal	PLIM - NAD	Non-Friable	Good	6 SF
67	1		TEM - NAD			
Assumed	533-throughout 2nd floor & full bathroom except in middle bedroom; 535-throughout 2nd floor & full bathroom	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	925 SF
NAD = No Asbes	stos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

24

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Drywall with joint	PLM - 3% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9						
10	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	875 SF
11						
12						
13			PLM - NAD	Non-Friable	Good	1,960 SF
14	331 & 333-throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top laver)				
15			TEM - NAD			
16		12" x 12" brown/orange	PLM - NAD (tile);			
17	331 & 333-kitchens	floor tile & mastic	4% Chry (mastic)	Non-Friable	Good	325 SF
18		(bottom layer)	TEM - NAD (tile)			
19		12" x 12" cream speckled	PLM - NAD (tile);			
20	331-downstairs hallway	floor tile & mastic	2% Chry (mastic)	Non-Friable	Good	60 SF
21		(bottom layer)	TEM - NAD (tile)]		
22						
23	Kitchens (double sinks)	White sink coating	PLM - 5% Chrysotile	Friable	Good	2 EA

Building Number: 19

Building Unit No.: 331 & 333

Date: 5/3/2017

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 19

Building Unit No.: 331 & 333

Date: 5/3/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25			PLM - NAD			
26	Above ceilings	Tan HVAC tape and mastic		Friable	Damaged	40 SF
27			TEM - NAD			
28						
29	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
30			TEM - NAD			
31						
32	331-2nd floor front bedroom	Interior window caulk		Non-Friable	Good	1 EA
33			TEM - NAD			
34						
35	HVAC closets	HVAC caulk	PLM - NAD	Non-Friable	Good	15 LF
36			TEM - NAD			
37						
38	Bathrooms	Bathroom shower stall and	PLM - NAD	Non-Friable	Good	90 LF
39		SILIK CAUK	TEM - NAD			
40		12" v 12" cream streaked				
41	333-2nd floor bathroom under ceramic	floor tile & mastic	PLM - NAD	Non-Friable	Good	25 SF
42		(bottom layer)	TEM - NAD			
43						
44	Windows	Black window caulk	PLM - NAD	Non-Friable	Good	16 EA
45			TEM - NAD			
46						
47	Doors	Grey door caulk	PLM - NAD	Non-Friable	Good	2 EA
48	1		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 19

Building Unit No.: 331 & 333

Date: 5/3/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49			PLM - NAD			
50	Doors	White door caulk		Non-Friable	Good	2 EA
51			TEM - NAD			
52						
53	Roof gable vents	Roof gable caulks - white and		Non-Friable	Good	2 EA
54]		TEM - NAD			
55						
56	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
57			TEM - NAD			
58						
59	Awning roofs	2nd and 3rd layers of felt	PLM - NAD	Non-Friable	Good	50 SF
60		paper	TEM - NAD			
61						
62	Awnings/flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	10 LF
63			TEM - NAD			
64						
65	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
66						
Assumed	331-1st floor bedroom & living room & 2nd floor bedrooms (3); 333- throughout except in kitchen, bathrooms & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,030 SF
NAD = No Asbes	stos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Drywall with joint	PLM - 3% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9						
10	Bathrooms	Plaster with finish over	PLM - NAD	Friable	Good	875 SF
11						
12						
13		12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD	Non-Friable	Good	1,960
14	335 & 337-throughout except in					
15			TEM - NAD			
16						
17	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	20 LF
18			TEM - NAD			
19						
20	Bathrooms	sink caulk	PLM - NAD	Non-Friable	Good	90 LF
21	1		TEM - NAD			
22						
23	Above ceilings	Tan HVAC tape and mastic		Friable	Damaged	40 SF
24			TEM - NAD			

Building Number: 20

Building Unit No.: 335 & 337

Date: 5/3/2017
Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 20

Building Unit No.: 335 & 337

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25			PLM - NAD			
26	HVAC closets	HVAC caulk		Non-Friable	Good	15 LF
27			TEM - NAD			
28						
29	Kitchens (double sinks)	White sink coating	PLM - 5% Chrysotile	Friable	Good	2 EA
30						
31						
32	337-2nd floor front bedroom	Interior window caulk		Non-Friable	Good	1 EA
33			TEM - NAD			
34						
35	Main roof and awning roofs	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	2,000 SF
36			TEM - NAD			
37						
38	Roof gable vents	Roof gable caulks - white and	PLM - NAD	Non-Friable	Good	2 EA
39		เลก	TEM - NAD	-		
40						
41	Awning roofs	2nd layer of felt paper	PLM - NAD	Non-Friable	Good	50 SF
42			TEM - NAD			
43						
44	Awnings/flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	10 LF
45			TEM - NAD			
46						
47	Doors	Grey door caulk	PLM - NAD	Non-Friable	Good	4 EA
48	1		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 20

Building Unit No.: 335 & 337

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49						
50	Windows	Black window caulk	PLIVI - INAD	Non-Friable	Good	16 EA
51			TEM - NAD	-		
52						
53	Under brick & vinyl siding	OSB board with felt		Non-Friable	Good	2,000 SF
54			TEM - NAD	-		
55						
56	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
57						
Assumed	335 & 337-throughout except in bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,960 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 21

Building Unit No.: 339 & 341

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3		Drawell with inint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						875 SF
9		Dission with finish such				
10	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	
11						
12						
13		12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD	Non-Friable	Good	1,960 SF
14	bathrooms & HVAC closets					
15			TEM - NAD			
16		12" x 12" yellow speckled	PLM - NAD (tile);			
17	339-kitchen	floor tile and mastic	2% Chry (mastic)	Non-Friable	Good	160 SF
18		(bottom layer)	TEM - NAD (tile)			
19		Stopo oguara pattarn vinvi	PIM - NAD			
20	339-2nd floor bathroom	floor with mastic (top layer)		Non-Friable	Good	25 SF
21			TEM - NAD			
22	220 and floor both soom under	12" x 12" brown/orange	PLM - NAD (tile);			185 SF
23	wood; 341-kitchen	speckled floor tile and	3% Chry (mastic)	Non-Friable	Good	
24		mastic (bottom layer)	TEM - NAD (tile)			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 21

Building Unit No.: 339 & 341

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25			PI M - NAD			
26	339-kitchen stove back splash	Back splash mastic		Non-Friable	Good	5 SF
27			TEM - NAD			
28						
29	441-kitchen stove back splash	Back splash mastic	F LWI - NAD	Non-Friable	Good	5 SF
30			TEM - NAD			
31						
32	339 & 341-throughout	Black interior window caulk		Non-Friable	Good	16 EA
33			TEM - NAD			
34						
35	HVAC closets	HVAC caulk	PLIVI - NAD	Non-Friable	Good	15 LF
36			TEM - NAD			
37						
38	Bathrooms	Bathroom shower stall and	PLM - NAD	Non-Friable	Good	90 LF
39		SILIK CAUIK	TEM - NAD			
40						
41	339 & 341-2nd floor bedrooms	White interior window caulk	PLIVI - NAD	Non-Friable	Good	6 EA
42			TEM - NAD			
43						
44	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	20 LF
45			TEM - NAD			
46						
47	Kitchens (double sinks)	White sink coating	PLIVI - NAD	Friable	Good	2 EA
48	1		TEM - NAD	1		

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 339 & 341

Date: 5/3/2017

Building Number: 21

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49			PLM - NAD			
50	Above ceilings	Tan HVAC tape and mastic		Friable	Damaged	40 SF
51			TEM - NAD			
52						
53	Windows	Black window caulk		Non-Friable	Good	16 EA
54			TEM - NAD			
55			PLM - NAD	Non-Friable		4 EA
56	Doors	Door caulk			Good	
57			TEM - NAD			
58						
59	Awning roofs	2nd layer of felt paper	PLM - NAD	Non-Friable	Good	50 SF
60			TEM - NAD			
61						
62	Main roof and awning roofs	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	2,000 SF
63			TEM - NAD			
64						
65	Awnings/flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	10 LF
66			TEM - NAD			
67						
68	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
69						
70						
71	Roof gable vents	Roof gable caulks - white and	PLM - NAD	Non-Friable	Good	2 EA
72		cream	TEM - NAD	-	0000	

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 21

Building Unit No.: 339 & 341

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
73 74	Under brick & vinyl siding	OSB board with felt	PLM - NAD	Non-Friable	Good	2,000 SF
75			TEM - NAD			
Assumed	339-throughout except in kitchen, bathrooms & HVAC closet; 341- throughout except in kitchen & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,675 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 22

Building Unit No.: 351 & 353

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Compound and tape	PLM - 3% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10						
11		12" x 12" tan speckled floor tile and mastic (top layer)				1,960 SF
12	351 & 353-throughout except in bathrooms & HVAC closets			Non-Friable	Good	
13			TEM - NAD			
14						
15	351-kitchen & downstairs bedroom; 353-kitchen	and mastic (bottom laver)	PLM - 3% (tile & mastic)	Non-Friable	Good	425 SF
16			(ine a maene)			
17		Adhesive and leveling				
18	351 & 353-downstairs 1/2 bathrooms	compound beneath ceramic	T EM- NAD	Non-Friable	Good	50 SF
19		tile	TEM - NAD			
20						
21	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 22

Building Unit No.: 351 & 353

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23						
24	353-2nd floor front bedroom	Interior window caulk		Non-Friable	Good	2 EA
25			TEM - NAD			
26		Dethere are also used at all and				
27	Bathrooms	sink caulk		Non-Friable	Good	90 LF
28			TEM - NAD			
29				Non-Friable		15 LF
30	HVAC closets	HVAC caulk			Good	
31			TEM - NAD			
32			PLM - NAD			
33	Above ceilings	Tan HVAC tape and mastic		Friable	Damaged	40 SF
34			TEM - NAD			
35						
36	Kitchen (double sinks)	Coating on kitchen sinks	PLM - 6% Chrysotile	Friable	Good	2 EA
37						
38	252 and floor middle 8 heat		PIM - NAD			
39	bedrooms	Interior window caulk		Non-Friable	Good	2 EA
40			TEM - NAD			
41						
42	353-living room & downstairs hallway	Drywall wall patches	PLM - NAD	Friable	Good	5 SF
43						
44						
45	351-downtsairs nallway, stairwell & kitchen hallway	Drywall wall patches	PLM - NAD	Friable	Good	5 SF
46						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

actions 100 Concerned Avenue Coortenhum Courth Correline

Building Number: 22

Building Unit No.: 351 & 353

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	351-2nd floor bathroom shower stall	Mastic beneath shower stall		Non-Friable	Good	40 SF
49			TEM - NAD			
50						
51	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
52						
53						
54	Main roof and awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
55			TEM - NAD			
56						
57	Roof gable vents	Roof gable caulks - white and cream		Non-Friable	Good	2 EA
58		oroun	TEM - NAD			
59						
60	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	10 LF
61			TEM - NAD			
62						
63	Doors	Door caulk		Non-Friable	Good	4 EA
64			TEM - NAD			
65						
66	Windows	Black window caulk		Non-Friable	Good	16 EA
67			TEM - NAD			
68						
69	Under brick & vinyl siding	OSB board with felt		Non-Friable	Good	2,000 SF
70			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 22

Building Unit No.: 351 & 353

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
71						
72	Awning roofs	4 layers of felt paper		Non-Friable	Good	50 SF
73			TEM - NAD			
Assumed	351-throughout except in kitchen, downstairs bedroom, bathrooms & HVAC closet; 353-throughout except in kitchen, bathrooms & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,540 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive	For Asbestos	SF = Square Feet	Chry = Chrysotile			

Sample Description

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Sample No.

1

24

Unit No. / Location

2 2

3						
4	Throughout interior	Drywall with joint compound and tape	PLM - 3% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9						
10	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	875 SF
11						
12						
13						
14	347 & 349-throughout except in bathrooms & HVAC closets	tile and mastic (top layer)		Non-Friable	Good	1,960 SF
15			TEM - NAD			
16			PLM - NAD (tile);			
17	347 & 349-kitchen	and mastic (bottom laver)	4% Chry (mastic)	Non-Friable	Good	180 SF
18			TEM - NAD (tile)			
19						
20	347-HVAC closet	HVAC caulk		Non-Friable	Good	6 LF
21			TEM - NAD			
22						
23	Above ceilings	Yellow HVAC tape		Friable	Damaged	40 SF
	7			7	1	1

Building Number: 23

Building Unit No.: 347 & 349

Condition

Quantity

Date: 5/4/2017

Analytical Results

TEM - NAD

Friable/Non

Friable

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 23

Building Unit No.: 347 & 349

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25		Bathroom shower stall and	PLM - NAD			
26	Bathrooms	sink caulk		Non-Friable	Good	90 LF
27			TEM - NAD			
28						
29	Kitchens (double sinks)	White sink coating	FLIVI - NAD	Friable	Good	2 EA
30			TEM - NAD			
31		12" x 12" thin cream floor	PLM-NAD (top mastic);			
32	349-kitchen	tile and mastic	3% Chry (tile); 5% Chry (bottom mastic)	Non-Friable	Good	140 SF
33		(bottom layer)	TEM - NAD (top mastic)			
34						
35	347 & 349-throghout	Black interior window caulk	PLM - NAD	Non-Friable	Good	16 EA
36	_		TEM - NAD			
37						
38	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	20 LF
39			TEM - NAD			
40						
41	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
42						
43						
44	Under brick & vinyl siding	OSB board with felt	PLM - NAD	Non-Friable	Good	2,000 SF
45	, , , , , , , , , , , , , , , , , , ,		TEM - NAD			ŕ
46						
47	Windows	Black window caulk	PLM - NAD	Non-Friable	Good	16 EA
48	1		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Number: 0317-55

Project Location	422 Concord Avenue Sp	partanburg South Carolina	
Tojoot Loodiion		ananbarg, ooan oaronna	

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49						
50	Doors	Door caulk	PLIN - NAD	Non-Friable	Good	4 EA
51			TEM - NAD			
52						
53	Roof gable vents	Roof gable caulks - white and	PLIN - NAD	Non-Friable	Good	2 EA
54		ordani	TEM - NAD			
55						
56	Main roof and awning roofs	Roof shingles (2) and felt (1)	PLIM - INAD	Non-Friable	Good	2,000 SF
57			TEM - NAD			
58						
59	Awning roofs	2nd layer of felt paper	PLIM - INAD	Non-Friable	Good	50 SF
60			TEM - NAD			
61						
62	Awnings/flashing	Awning/flashing caulk	PLIM - INAD	Non-Friable	Good	10 LF
63			TEM - NAD			
	347 & 349-throughout except in	12" x 12" brown streaked				
Assumed	kitchens, bathrooms & HVAC	floor tile and mastic	Assumed Positive	Non-Friable	Good	1,640 SF
		LE – Linear Feet	EA – Each	Amos – Amosito		
NAD = NO ASDES	ios Delected For Ashestos	SF - Square Feet	Chry – Chrysotile	Amos = Amosile		

Building Unit No.: 347 & 349

Date: 5/4/2017

Building Number: 23

Project Name: Cammie Clagett Housing Complex ACM

Project Number: 0317-55

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 24

Building Unit No.: 343 & 345

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3		Drawell with joint				
4	Throughout interior	compound and tape	PLM - 3% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8		Diastan with finish swar				
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10						
11						
12	343 & 345-throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top laver)		Non-Friable	Good	1,960 SF
13			TEM - NAD			
14						
15	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
16			TEM - NAD			
17						
18	HVAC closets	HVAC caulk		Non-Friable	Good	15 LF
19			TEM - NAD			
20		Dethere we also use a tall and				
21	Bathrooms	sink caulk		Non-Friable	Good	90 LF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Friable/Non Sample No. Unit No. / Location **Sample Description Analytical Results** Condition Quantity Friable 23 PLM - NAD Tan HVAC tape and mastic Above ceilings 24 Friable Damaged 40 SF 25 TEM - NAD 26 PLM - NAD 345-2nd floor front bedroom Interior window caulk Non-Friable Good 2 EA 27 TEM - NAD 28 29 Kitchen (double sinks) Coating on kitchen sinks PLM - 6% Chrysotile Friable 2 EA 30 Good 31 32 PLM - NAD (tile); 12" x 12"white floor tile and 4% Chry (mastic) 343-kitchen Non-Friable 160 SF 33 Good mastic (bottom layer) 34 TEM - NAD (tile) 35 PLM - NAD 343-2nd floor front & middle 36 Interior window caulk Non-Friable Good 2 EA bedrooms TEM - NAD 37 38 Roof penetrations Paint coated metal PLM - NAD Non-Friable Good 6 SF 39 40 41 PLM - NAD Roof shingles (2) with tar and Main roof and awning roofs 2,000 SF 42 Non-Friable Good felt (1) 43 TEM - NAD 44 PLM - NAD Roof gable caulks - white and Roof gable vents 2 EA Non-Friable Good 45 cream 46 TEM - NAD

Building Number: 24

Building Unit No.: 343 & 345

Project Name: Cammie Clagett Housing Complex ACM

Project Number: 0317-55

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	10 LF
49			TEM - NAD			
50						
51	Under brick & vinyl siding	OSB board with felt		Non-Friable	Good	2,000 SF
52			TEM - NAD			
53						4 EA
54	Doors	Door caulk		Non-Friable	Good	
55			TEM - NAD			
56						
57	Windows	Black window caulk		Non-Friable	Good	16 EA
58			TEM - NAD			
59						
60	Awning roofs	2nd layer of felt paper		Non-Friable	Good	50 SF
61			TEM - NAD			
Assumed	343-throughout except in kitchen, bathrooms & HVAC closet; 345- throughout except in bathrooms & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,800 SF

NAD = No Asbestos Detected

Bold = Positive For Asbestos

LF = Linear Feet SF = Square Feet

Chry = Chrysotile

EA = Each

Building Number: 24

Building Unit No.: 343 & 345

Date: 5/4/2017

Friable/Non

Amos = Amosite

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

venue, Spartanburg, South Carolina

Building Number: 25

Building Unit No.: 319, 321, 323, 325

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						12,000 SF
2						
3		Drawell with isint				
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	
5						
6						
7						
8		Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	900 SF
9	Bathrooms					
10						
11		12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD		Good	3,525 SF
12	except in bathrooms & HVAC closets			Non-Friable		
13			TEM - NAD			
14						
15	325-living room	Drywall wall patch	PLM - NAD	Friable	Good	5 SF
16						
17	319-2nd floor bathroom & a portion		PLM - NAD (tile);			
18	into hallway; 325-2nd floor front	tile and mastic (bottom laver)	<1% Chry (mastic)	Non-Friable	Good	160 SF
19	bedroom	······································	TEM - NAD (mastic)			
20	319-2nd floor hallway; 321 & 323-	12" x 12" brown/orange	DIM 2% Chrucostile	Non-Friable	Good	125 SF
21	2nd floor bathroom; 325-2nd floor	floor tile and mastic	PLM - 2% Chrysotile (tile, mastic & leveler)			
22	bathroom & hallway	(bottom layer)				

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 25

Building Unit No.: 319, 321, 323, 325

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23						
24	323-downstairs hallway	Drywall wall patch	PLM - NAD	Friable	Good	5 SF
25						
26						
27	321-downstairs hallway	Drywall wall patch	PLM - NAD	Friable	Good	5 SF
28						
29			ΡΙΜ - ΝΔΟ			
30	319-2nd floor bathroom	floor with mastic (top layer)		Non-Friable	Good	25 SF
31			TEM - NAD			
32		Brown mastic under 12" x 12"				40 SF
33	(bottom laver under wood)	brown/orange floor tiles		Non-Friable	Good	
34		(mastic only)	TEM - <1% Chrysotile			
35						
36	Kitchens	Kitchen counter caulk		Non-Friable	Good	55 LF
37			TEM - NAD			
38						
39	HVAC closets	HVAC caulk		Non-Friable	Good	25 LF
40			TEM - NAD			
41						
42	Above ceilings	Tan HVAC tape		Friable	Damaged	80 SF
43		[TEM - NAD			
44						
45	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	160 SF
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 25

Building Unit No.: 319, 321, 323, 325

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Kitchens (double sinks)	White sink coating	PLM - 5% Chrysotile	Friable	Good	4 EA
49						
50						
51	319, 321 & 323-Kitchen Stove back splash	Back splash mastic		Non-Friable	Good	15 SF
52			TEM - NAD			
53	319-2nd floor front & back bedrooms;				Good	
54	2nd floor middle bedroom; 323-	Interior window caulk		Non-Friable		5 EA
55	floor front bedroom		TEM - NAD			
56						
57	door; 325-front door	Interior door caulk		Non-Friable	Good	4 EA
58			TEM - NAD			
59						
60	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
61						
62						
63	Main roof & awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,500 SF
64			TEM - NAD			
65						
66	Awnings/flashing	Awning/flashing caulk		Non-Friable	Good	20 LF
67			TEM - NAD			
68						
69	Doors	Grey door caulk		Non-Friable	Good	8 EA
70			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 25

Building Unit No.: 319, 321, 323, 325

Project Number: 0317-55

Date: 5/4/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
71			PLM - NAD			
72	Windows	Black window caulk		Friable	Good	28 EA
73			TEM - NAD			
74						
75	Roof gable vents	Roof gable caulks - grey and tan		Non-Friable	Good	2 EA
76			TEM - NAD			
77						
78	Roof penetrations	Black roof tar		Non-Friable	Good	7 SF
79			TEM - NAD			
80						
81	Under brick & vinyl siding	OSB board with felt		Non-Friable	Good	3,000 SF
82			TEM - NAD			
Assumed	319-throughout except in bathroom, HVAC closet & 2nd floor hallway; 321 & 323-throughout except in bathroom & HVAC closets; 325-throughout except in bathroom, HVAC closet, 2nd floor hallway & front bedroom	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,315 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 26

Building Unit No.: 311, 313, 315 & 317

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	12,000 SF
5						
6						
7						
8		Disctor with finish over				
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	900 SF
10		,				
11						
12	except in bathrooms & HVAC closets	tile and mastic (top laver)		Non-Friable	Good	3,525 SF
13			TEM - NAD			
14		40" v 40" ereen fleer tile	PLM - NAD (tile);			
15	317-2nd floor bathroom	and mastic (bottom laver)	3% Chry (mastic)	Non-Friable	Good	25 SF
16			TEM - NAD (tile)			
17			PI M - NAD			
18	HVAC closets	HVAC caulk		Non-Friable	Good	25 LF
19			TEM - NAD			
20			PI M - NAD			
21	Above ceilings	Yellow HVAC tape		Friable	Damaged	80 SF
22			TEM - NAD			

Cammie Clagett Housing Complex ACM Project Name:

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

46

Friable/Non Sample No. Unit No. / Location Sample Description **Analytical Results** Condition Quantity Friable 23 PLM - NAD Bathroom shower stall and **Bathrooms** 24 Non-Friable Good 160 SF sink caulk TEM - NAD 25 26 SAMPLES NUMBERS NOT USED 27 28 29 311 & 317-kitchens (double sinks) White sink coating PLM - 4% Chrysotile 30 Friable 2 EA Good 31 32 PLM - NAD 311, 313, 315 & 317-throughout Black interior window caulk Non-Friable Good 28 EA 33 34 TEM - NAD 35 PLM - NAD 36 Kitchens Kitchen counter caulk Non-Friable Good 55 LF TEM - NAD 37 38 PLM - NAD Brown mastic beneath 315-2nd floor bathroom Non-Friable Good 40 SF 39 shower stall 40 TEM - NAD 41 315-stairway Drywall wall patch 5 SF 42 PLM - NAD Friable Good 43 44 PLM - NAD (tile); 12" x 12" brown/orange 313 & 315-2nd floor bathroom; 317-3% Chry (mastic) 45 floor tile and mastic Non-Friable 500 SF Good kitchen & living room (bottom layer)

TEM - NAD (tile)

Building Number: 26

Building Unit No.: 311, 313, 315 & 317

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

70

Friable/Non Sample No. Unit No. / Location Sample Description **Analytical Results** Condition Quantity Friable 47 SAMPLE NUMBERS NOT USED 48 49 50 313 & 315-kitchens (double sinks) White sink coating PLM - 3% Chrysotile Friable 2 EA 51 Good 52 53 PLM - NAD 311-2nd floor bathroom under ceramic 12" x 12" white speckled floor Non-Friable 25 SF 54 Good tile tile and mastic (bottom layer) TEM - NAD 55 56 **Roof penetrations** Paint coated metal PLM - NAD Non-Friable Good 6 SF 57 58 59 PLM - NAD Main roof & awning roofs Roof shingles (2) and felt (1) 60 Non-Friable Good 2.500 SF TEM - NAD 61 62 SAMPLE NUMBERS NOT USED 63 64 65 PLM - NAD Roof gable caulks - white and Roof gable vents 2 EA 66 Non-Friable Good cream 67 TEM - NAD 68 PLM - NAD Awning roofs 2nd layer of felt paper 50 SF Non-Friable Good 69

TEM - NAD

Building Number: 26

Building Unit No.: 311, 313, 315 & 317

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 26

Building Unit No.: 311, 313, 315 & 317

Date: 5/4/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
71						
72		SAMPLE NUMB	ERS NOT USED			
73						
74						
75	Windows	Black window caulk		Friable	Good	28 EA
76			TEM - NAD			
77						
78	Doors	Grey door caulk		Non-Friable	Good	8 EA
79			TEM - NAD			
Assumed	311-throughout except in bathroom & HVAC closet; 313 & 315- throughout except in bathrooms & HVAC closets; 317-throughout except in kitchen, living room, bathroom & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	3,000 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		
Rold Desitive	Far Ashastas	SE - Squara East	Chry - Chrycotilo			

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity	
1				Friable			
2							
3					Good	7,000 SF	
4	Throughout interior	Drywall with joint	PLM - 2% Chrysotile				
5							
6							
7							
8					Good		
9	Bathrooms	Plaster with finish over	PLM - NAD	Friable		875 SF	
10							
11				Non-Friable	Good		
12	409 & 411-throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor	PLW - NAD			1,960 SF	
13			TEM - NAD				
14		12" x 12" yellow speckled	PLM - NAD (tile);				
15	409 & 411-kitchens	floor tile and mastic	3% Chry (mastic)	Non-Friable	Good	315 SF	
16		(bottom layer)	TEM - NAD (tile)				
17							
18	Above ceilings	HVAC tape with mastic		Friable	Damaged	40 SF	
19			TEM - NAD				
20		12" x 12" brown/orange	PLM - NAD (tile);				
21	409 & 411-2nd floor bathrooms	floor tile and mastic	4% Chry (mastic)	Non-Friable	Good	50 SF	
22		(bottom layer)	TEM - NAD (tile)	1			

Building Number: 27

Building Unit No.: 409 & 411

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Building Number: 27

Building Unit No.: 409 & 411

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23		Tan aquara pattern vinul flaar	PLM - NAD		Good	
24	409-2nd floor bathroom	and mastic (top laver)		Non-Friable		25 SF
25			TEM - NAD			
26					Good	90 SF
27	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable		
28			TEM - NAD			
29						
30	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
31			TEM - NAD			
32						
33	HVAC closets	HVAC caulk	PLIVI - NAD	Non-Friable	Good	15 SF
34			TEM - NAD			
35					Good	2 EA
36	Kitchens (double sinks)	White sink coating	PLIVI - NAD	Friable		
37			TEM - NAD			
38						
39	411-2nd floor middle bedroom	Interior window caulk	PLIVI - NAD	Non-Friable	Good	1 EA
40			TEM - NAD			
41						
42	Roof gable vents	Roof gable caulks - white and	PLM - NAD	Non-Friable	Good	2 EA
43		Cream	TEM - NAD			
44						
45	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
46	1					

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Unit No.: 409 & 411

Building Number: 27

Date: 5/5/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Awning roofs	2nd layer of felt paper		Non-Friable	Good	50 SF
49			TEM - NAD			
50						
51	Main roof & awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
52			TEM - NAD]		
53						
54	Doors	Door caulk		Non-Friable	Good	4 EA
55			TEM - NAD			
56						
57	Windows	Black window caulk		Friable	Good	16 EA
58			TEM - NAD			
	409 & 411-throughout except in	12" x 12" brown streaked				
Assumed	kitchen, bathrooms & HVAC closets	floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,650 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 28

Building Unit No.: 405 & 407

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10						
11						
12	405 & 407-throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top laver)	F LWI - NAD	Non-Friable	Good	1,960 SF
13			TEM - NAD			
14		12" x 12" yellow speckled	PLM - NAD (tile);		Good	
15	407-kitchen	floor tile and mastic	2% Chry (mastic)	Non-Friable		160 SF
16		(bottom layer)	TEM - NAD (tile)			
17						
18	407-downstairs 1/2 bathroom	Leveling compound under ceramic tile	PLM - NAD	Friable	Good	25 SF
19]					
20						
21	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	90 SF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 28

Building Unit No.: 405 & 407

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23			PLM - NAD			
24	Above ceilings	HVAC tape with mastic		Friable	Damaged	40 SF
25			TEM - NAD			
26		12" x 12" brown/orange	PLM - NAD (tile);			
27	405 & 407-2nd floor bathrooms	floor tile and mastic	3% Chry (mastic)	Non-Friable	Good	50 SF
28		(bottom layer)	TEM - NAD (tile)			
29						
30	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
31			TEM - NAD			
32						
33	HVAC closets	HVAC caulk	PLW - NAD	Non-Friable	Good	15 SF
34			TEM - NAD			
35						
36	Kitchens (double sinks)	Black sink coating	PLM - 5% Chrysotile	Friable	Good	2 EA
37						
38						
39	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
40						
41						
42	Roof gable vents	Roof gable caulks - white and	PLW - NAD	Non-Friable	Good	2 EA
43	1	Cream	TEM - NAD			
44						
45	Awning roofs	2nd layer of felt paper	PLM - NAD	Non-Friable	Good	50 SF
46			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 28

Building Unit No.: 405 & 407

Date: 5/5/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Main roof & awning roofs	Roof shingles (2) and felt (1)		Non-Friable	Good	2,000 SF
49			TEM - NAD			
50						
51	Awnings/flashing	Awning/flashing caulk	F LIW - NAD	Non-Friable	Good	20 LF
52			TEM - NAD			
53						
54	Doors	Grey door caulk	F LIW - NAD	Non-Friable	Good	4 EA
55			TEM - NAD			
56						
57	Windows	Black window caulk	F LIW - NAD	Non-Friable	Good	16 EA
58			TEM - NAD			
Assumed	405-throughout except in bathrooms & HVAC closet; 407- throughout except in kitchen, bathrooms & HVAC closet	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,800 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

LF = Linear Feet SF = Square Feet

Chry = Chrysotile

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 29

Building Unit No.: 411 & 413

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5						
6						
7						
8						
9	Bathrooms	unfinished drywall	PLM - NAD	Friable	Good	875 SF
10						
11						
12	411 & 413-throughout except in bathrooms & HVAC closets	tile and mastic (top laver)		Non-Friable	Good	1,960 SF
13			TEM - NAD			
14		12" x 12" thin brown floor				
15	411 & 413-kitchens	tile and mastic	4% Chrv (mastic)	Non-Friable	Good	325 SF
16		(bottom layer)	, , , , , , , , , , , , , , , , , , ,			
17						
18	Above ceilings	HVAC tape and mastic		Friable	Damaged	40 SF
19			TEM - NAD			
20		10" v 10" white appending flags	ΡΙ Μ - ΝΑΠ			
21	413-2nd floor bathroom	tile and mastic (bottom laver)		Non-Friable	Good	25 SF
22			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 29

Building Unit No.: 411 & 413

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity			
23		Pathroom shower stall and	PI M - NAD						
24	Bathrooms	sink caulk		Non-Friable	Good	90 SF			
25			TEM - NAD						
26		12" x 12" brown/orange							
27	411-2nd floor bathroom	floor tile and mastic	4% Chry (tile)	Non-Friable	Good	25 SF			
28		(bottom layer)							
29									
30	413-kitchen (double sink)	White sink coating		Friable	Good	1 EA			
31			TEM - NAD						
32									
33	411-kitchen (double sink)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	1 EA			
34									
35									
36	411-kitchen stove back splash	Back splash mastic		Non-Friable	Good	5 SF			
37			TEM - NAD						
38									
39	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF			
40			TEM - NAD						
41									
42	HVAC closets	HVAC caulk		Non-Friable	Good	15 SF			
43			TEM - NAD						
44									
45	411 & 413-throughout	Black interior window caulk	PLIVI - NAU	Non-Friable	Good	16 EA			
46			TEM - NAD						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 29

Building Unit No.: 411 & 413

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47						
48	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
49						
50						
51	Awnings/flashing	Awning/flashing caulk	F LIM - NAD	Non-Friable	Good	20 LF
52			TEM - NAD			
53						
54	Awning roofs	2nd layer of felt paper		Non-Friable	Good	50 SF
55			TEM - NAD			
56						
57	Main roof & awning roofs	Roof shingles (2) and felt (1)	F LIM - NAD	Non-Friable	Good	2,000 SF
58			TEM - NAD	1		
59						
60	Roof gable vents	Roof gable caulks - white and cream		Non-Friable	Good	2 EA
61		TEM - NAD				
62						
63	Doors	Grey door caulk		Non-Friable	Good	4 EA
64			TEM - NAD			
65						
66	Windows	Black window caulk		Non-Friable	Good	16 EA
67			TEM - NAD			
	411 & 413-throughout except in	12" x 12" brown streaked				
Assumed	kitchens, bathrooms & HVAC	floor tile and mastic	Assumed Positive	Non-Friable	Good	1,650 SF
	closets	(bottom layer)				

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 29

Building Unit No.: 411 & 413

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
NAD = No Asbestos Detected		LF = Linear Feet	EA = Each	Amos = Amosite		
Bold = Positive For Asbestos		SF = Square Feet	Chry = Chrysotile			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 30

Building Unit No.: Office Building

Date: 5/10/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2	Throughout opilings and partition	Drawoll with joint				
3	walls in large back office area	compound & tape	2% Chrysotile	Friable	Good	4,000 SF
4						
5						
6	Lorgo hook office area with partition		PIM - NAD			
7	walls	Black cove base mastic		Non-Friable	Good	80 LF
8			TEM - NAD			
9		Painted cove base mastic	PLM - NAD	Non-Friable	Good	
10	Office with key box					18 LF
11			TEM - NAD			
12		12" x 12" tan streaked floor tile with mastic	DIM 20/ Chart (tile)			1,950 SF
13	Lobby, large back office area with partition walls & large open room		5% Chry (tile)	Non-Friable	Good	
14	F					
15						
16	Office with key box	12" X 12" brown streaked	5% Chrv (mastic)	Non-Friable	Good	135 SF
17						
18			PLM - NAD (tile);			
19	Hallway	floor tile with mastic	2% Chry (mastic)	Non-Friable	Good	20 SF
20	7		TEM - NAD (tile)			
21						
22	Reception area	tile with mastic	4% Chry (mastic)	Non-Friable	Good	165 SF
23						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 30

Building Unit No.: Office Building

Date: 5/10/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24		Black and tan/brown cove				
25	Lobby, hallway & reception area	base mastic	PLM - 2% Chrysotile	Non-Friable	Good	60 LF
26						
27	Large back office area with	12" x 12" white/cream	PLM - NAD (tile);			
28	partition walls & large open room	speckled floor tile with		Non-Friable	Good	28 SF
29			TEM - NAD (tile)			
30			PI M - NAD			
31	Large reception window	Interior window caulk		Non-Friable	Good	20 LF
32			TEM - NAD			
33						
34	Above ceilings	Tan HVAC tape and mastic	PLW - NAD	Friable	Damaged	40 SF
35			TEM - NAD			
36						
37	Hallway bathroom on sink and	Bathroom caulk	PLM - NAD	Non-Friable	Good	17 LF
38			TEM - NAD			
39						
40	Roof	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	3,500 SF
41			TEM - NAD			
42						
43	Metal windows	Window glazing	PLM - NAD	Non-Friable	Good	16 EA
44			TEM - NAD			
45						
46	Metal windows	Window caulk - tan	PLM - NAD	Non-Friable	Good	16 EA
47	1		TEM - NAD			
Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 30

Building Unit No.: Office Building

Date: 5/10/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48						
49	Metal windows and doors	grey		Non-Friable	Good	30 EA
50			TEM - NAD			
51						
52	Roof penetrations	Mastic on roof penetrations		Non-Friable	Good	20 SF
53			TEM - NAD			
54						
55	Roof flashing	Grey flashing putty	F LWI - NAD	Non-Friable	Good	35 LF
56			TEM - NAD			
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 31

Building Unit No.: 351 & 353

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3						
4	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	7,000 SF
5		compound and tape				
6						
7						
8		Plaster with finish over unfinished drywall				875 SF
9	Bathrooms		PLM - NAD	Friable	Good	
10						
11		HVAC tape and mastic	PLM - NAD		Damaged	40 SF
12	Above ceilings			Friable		
13			TEM - NAD			
14		Pothroom chower stall and	PI M - NAD			
15	Bathrooms	sink caulk		Non-Friable	Good	90 SF
16			TEM - NAD			
17			PIM - NAD			
18	Kitchens	Kitchen counter caulk		Non-Friable	Good	20 LF
19			TEM - NAD			
20		12" x 12" brown/orange	PLM - NAD (tile);	Non-Friable		
21	351-2nd floor front bedroom	floor tile and mastic	3% Chry (mastic)		Good	175 SF
22		(bottom layer)	TEM - NAD (tile)			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23			PLM - NAD			
24	HVAC closets	HVAC caulk		Non-Friable	Good	15 SF
25			TEM - NAD			
26						25 SF
27	tile	tile and mastic (bottom laver)		Non-Friable	Good	
28		······································	TEM - NAD			
29					Good	25 SF
30	351-2nd floor bathroom	I an square pattern vinyl floor with mastic (top laver)		Non-Friable		
31			TEM - NAD			
32						
33	351 & 353-throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor		Non-Friable	Good	1,960 SF
34			TEM - NAD			
35						
36	351-kitchen	Leveling compound & mastic	PLM - 3% Chrysotile	Non-Friable	Good	160 SF
37		mastro				
38						
39	Doors	Grey door caulk		Non-Friable	Good	4 EA
40			TEM - NAD			
41						
42	Windows	Black window caulk	PLIVI - INAU	Non-Friable	Good	16 EA
43	1		TEM - NAD			
44						
45	353-kitchen (double sink)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	1 EA
46	1					

Duilding Number

Building Unit No.: 351 & 353

Date: 5/8/2017

Building Number: 31

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 31

Building Unit No.: 351 & 353

Date: 5/8/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47			PLM - NAD			
48	353-kitchen (double sink)	White sink coating		Friable	Good	1 EA
49			TEM - NAD			
50						
51	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
52						
53						
54	Roof gable vents	Roof gable caulks - white and	PLM - NAD	Non-Friable	Good	2 EA
55		Cream	TEM - NAD			
56						
57	Main roof & awning roofs	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	2,000 SF
58			TEM - NAD			
59						
60	Awning roofs	2nd layer of felt paper	PLM - NAD	Non-Friable	Good	50 SF
61			TEM - NAD			
62						
63	Awnings/flashing	Awning/flashing caulk	PLIVI - NAD	Non-Friable	Good	20 LF
64			TEM - NAD			
Assumed	351 & 353-throughout except in bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	Assumed Positive	Non-Friable	Good	1,960 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 32

Building Unit No.: 420 & 422

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2		Drawell with isint				
3	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6		Plaster with finish over unfinished drywall				400 SF
7	Bathrooms		PLM - NAD	Friable	Good	
8						
9						950 SF
10	420 & 422-throughout except for bathrooms & HVAC closets	tile and mastic (top laver)		Non-Friable	Good	
11			TEM - NAD			
12		12" x 12" thin brown floor tile and mastic (bottom				
13	420 & 422-throughout except for bathrooms & HVAC closets		(tile & mastic)	Non-Friable	Good	950 SF
14		layer)				
15						
16	Kitchens	Kitchen counter caulk		Non-Friable	Good	25 LF
17			TEM - NAD			
18						
19	Bathrooms	sink caulk	T EW- NAD	Non-Friable	Good	80 LF
20			TEM - NAD			
21						
22	507 & 505-kitchens (double sinks)	White sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
23						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 32

Building Unit No.: 420 & 422

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24			PLM - NAD			
25	420-kitchen stove back splash	Back splash mastic		Non-Friable	Good	5 SF
26			TEM - <0.1% Chry			
27	LIVAC algorithm and shows the drawell		PIM - NAD			
28	ceiling	HVAC tape and mastic		Friable	Damaged	50 SF
29			TEM - NAD			
30				Non-Friable	Good	25 LF
31	HVAC closets	HVAC caulk-red				
32			TEM - NAD			
33	HVAC vents					
34		HVAC vent caulk	PLIVI - NAD	Non-Friable	Good	10 LF
35			TEM - NAD			
36						
37	Main roof	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	1,350 SF
38			TEM - NAD			
39						
40	Exterior doors and behind window	Exterior door and window	PLM - NAD	Non-Friable	Good	12 EA
41	indifies	Caulk	TEM - NAD			
42						
43	Windows	Black window caulk	PLM - NAD	Friable	Good	8 EA
44	1		TEM - NAD			
45						
46	Brick wall penetrations	Cementicious brick wall filler	PLM - NAD	Friable	Good	4 SF
47						

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 32

Building Unit No.: 420 & 422

Date: 5/8/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48						
49	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
50						
51		Black roof mastic	PLM - NAD	Non-Friable	Good	4 EA
52	Roof penetrations					
53			TEM - NAD			
54						
55	Roof gable vents	Roof gable caulks - tan and	F LWI - NAD	Non-Friable	Good	2 EA
56		gicy	TEM - NAD	7		
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 33

Building Unit No.: 456 & 458

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2		Drawell with joint				
3	Throughout interior	compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6			PLM - NAD			
7	Bathrooms	unfinished drywall		Friable	Good	400 SF
8						
9						
10	456 & 458-throughout except for bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top laver)	F LWI - NAD	Non-Friable	Good	950 SF
11			TEM - NAD			
12						
13	HVAC closets	HVAC caulk-red		Non-Friable	Good	25 LF
14			TEM - NAD			
15						
16	458-hallway	Leveling compound & mastics	PLM - 4% Chrysotile	Non-Friable	Good	20 SF
17		machie				
18						
19	Kitchens	Kitchen counter caulk		Non-Friable	Good	25 LF
20			TEM - NAD			
21						80 LF
22	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	
23			TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 33

Building Unit No.: 456 & 458

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24			PLM - NAD			
25	456 & 458-throughout	Interior window caulk		Non-Friable	Good	8 EA
26			TEM - NAD			
27			PI M - NAD			
28	Main roof	Roof shingles (2) and felt (1)		Non-Friable	Good	1,350 SF
29			TEM - NAD		ļ	
30						
31	Windows	Black window caulk		Friable	Good	8 EA
32			TEM - NAD			
33						
34	Doors	Grey door caulk	PLIVI - NAD	Non-Friable	Good	4 EA
35			TEM - NAD			
36						
37	HVAC vents	HVAC vent caulk	PLM - NAD	Non-Friable	Good	10 LF
38			TEM - NAD			
39						
40	Windows	White window caulk	PLM - NAD	Friable	Good	8 EA
41			TEM - NAD			
42						
43	Brick wall penetrations	Cementicious brick wall filler	PLM - NAD	Friable	Good	4 SF
44	1					
45						
46	HVAC closets and above the drywall	Mud on HVAC duct insulation	PLM - NAD	Non-Friable	Good	60 SF
47	cenng		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 33

Building Unit No.: 456 & 458

Date: 5/8/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48						
49	456 & 458-kitchens (double sinks)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
50						
51						
52	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
53						
54		Black roof mastic	PLM - NAD	Non-Friable	Good	4 EA
55	Roof penetrations					
56			TEM - NAD			
57						
58	Roof gable vents	Roof gable caulks - tan and		Non-Friable	Good	2 EA
59		9.09	TEM - NAD			
Assumed	456 & 458-throughout except for bathrooms & HVAC closets	12" x 12" brown streaked floor tile & mastic	Assumed Positive	Non-Friable	Good	950 SF
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

LF = Linear Feet SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 34

Building Unit No.: 105 & 107

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1						
2						
3	Throughout interior	Compound and tape	PLM - 2% Chrysotile	Friable	Good	3,400 SF
4						
5						
6		Dission with finish such				
7	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	400 SF
8						
9						950 SF
10	105 & 107-throughout except for bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top laver)		Non-Friable	Good	
11			TEM - NAD			
12		12" x 12" thin brown floor				950 SF
13	105 & 107-throughout except for bathrooms & HVAC closets	tile and mastic (bottom layer)	PLM - 2% Chry (tile) 4% Chry (mastic)	Non-Friable	Good	
14						
15		SAMPLE NUME	BER NOT USED			
16						
17	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	80 LF
18			TEM - NAD			
19						
20	Main roof	Roof shingles (2) and felt (1)		Non-Friable	Good	1,350 SF
21			TEM - NAD			
22						
23	Windows	Black window caulk		Friable	Good	8 EA
24			TEM - NAD	1		

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 34

Building Unit No.: 105 & 107

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25	_		PLM - NAD			
26	Doors	Grey door caulk		Non-Friable	Good	4 EA
27			TEM - NAD			
28			PI M - NAD			
29	HVAC closets	HVAC caulk-red		Non-Friable	Good	25 LF
30			TEM - NAD			
31						
32	107-kitchen (double sink)	Black sink coating	PLM - 2% Chrysotile	Friable	Good	1 EA
33						
34						
35	105-kitchen (double sink)	White sink coating		Friable	Good	1 EA
36			TEM - NAD			
37						
38	HVAC vents	HVAC vent caulk-white	PLIM - NAD	Non-Friable	Good	10 LF
39			TEM - NAD			
40						
41	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	25 LF
42			TEM - NAD			
43						
44	105 & 107-throughout	Interior window caulk	PLM - NAD	Non-Friable	Good	8 EA
45			TEM - NAD			
46						
47	HVAC closets and above the drywall	Beige HVAC mastic	PLM - NAD	Non-Friable	Good	60 SF
48	Centrig		TEM - NAD			

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 34

Building Unit No.: 105 & 107

Date: 5/5/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49						
50	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
51						
52	Roof penetrations	Black roof mastic and caulk	PLM - NAD		Good	4 EA
53				Non-Friable		
54			TEM - NAD			
55	Roof gable vents	Roof gable caulks - tan and grey	PLM - NAD			
56				Non-Friable	Good	2 EA
57			TEM - NAD			
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Project Name: Cammie Clagett Housing Complex ACM

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Project Number: 0317-55

Building Number: 35

Building Unit No.: 447 & 449

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1			PLM - NAD		_	
2	Main roof	Roof shingles (2) and felt (1)		Non-Friable	Good	1,350 SF
3			TEM - NAD			
4			PIM - NAD			
5	Windows	Black window caulk		Friable	Good	8 EA
6			TEM - NAD]		
7						
8	Doors	Grey door caulk		Non-Friable	Good	4 EA
9			TEM - NAD	1		
10						
11						
12	Throughout interior	Drywall with joint	PLM - 2% Chrysotile	Friable	Good	3,400 SF
13	1					
14						
15		Plaster with finish over	PLM - NAD	Friable G		400 SF
16	Bathrooms				Good	
17	1					
18			PLM - NAD			
19	Bathrooms	Bathroom shower stall and sink caulk		Non-Friable	Good	80 LF
20			TEM - NAD			
21	447 & 449-throughout except for bathrooms & HVAC closets	12" x 12" tan speckled floor	PLM - NAD			
22				Non-Friable	Good	950 SF
23			TEM - NAD	1		

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Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	447-throughout except in bathroom	12" x 12" thin brown floor				
25	except in kitchen entry, bathroom &	tile and mastic (bottom	PLM - 5% Chry (tile) 8% Chry (mastic)	Non-Friable	Good	940 SF
26	HVAC closet	layer)				
27	449-kitchen entry by the washing machine hook-up	12" x 12" thick brown speckled floor tile and mastic (bottom layer)	PLM - NAD (tile); 3% Chry (mastic)	Non-Friable	Good	10 SF
28						
29			TEM - NAD (tile)			
30		Kitchen counter caulk	PLM - NAD		Good	25 LF
31	Kitchens			Non-Friable		
32			TEM - NAD			
33						
34	HVAC closets	HVAC caulk-red		Non-Friable	Good	25 LF
35			TEM - NAD			
36						
37	447 & 449-throughout	Interior window caulk		Non-Friable	Good	8 EA
38			TEM - NAD			
39						
40	447 & 449-kitchens (double sinks)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	2 EA
41						
42						
43	HVAC vents	HVAC vent caulk-white		Non-Friable	Good	10 LF
44]		TEM - NAD			
45						
46	HVAC closets and above the drywall	Beige HVAC mastic		Non-Friable	Good	60 SF
47			TEM - NAD			

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Building Number: 35

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Roof penetrations	Paint coated metal	PLM - NAD	Non-Friable	Good	6 SF
49						
50						
51	Roof penetrations	Black roof mastic and caulk	PLM - NAD		Good	4 EA
52				Non-Friable		
53			TEM - NAD			
54	Roof gable vents	Roof gable caulks - white and grey	PLM - NAD			
55				Non-Friable	Good	2 EA
56			TEM - NAD			
NAD = No Asbes	tos Detected	LF = Linear Feet	EA = Each	Amos = Amosite		

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

AIII05 = AIII05I