INTRODUCTION

Vortex, Inc. conducted a 3 year Re-inspection of friable and non-friable asbestos-containing building material(s) (ACBM) and "presumed" asbestos-containing building material(s) (PACM) within the South Kingstown School Bldgs.. This Re-inspection was performed in accordance with 40 CFR Part 763.85, AHERA FINAL RULE. This Reinspection was approved by the School's Local Education Agencies (LEA) (Russell Hill). This inspection was conducted on **FEBRUARY 28, 2018** by John Carbone from Vortex Inc. (RIDOH Asbestos Consultant Cert. #177 IS / MP). **Attached is the AHERA RE-INSPECTION CHART FOR THE APPLICABLE SEVEN (7) SCHOOL BUILDINGS. BROAD ROCK SCHOOL IS EXEMPT (NO ASBESTOS] FROM THIS REPORT.**

The inspection was conducted in accordance with the AHERA Regulations. Original inspection reports as well as Re-inspection reports were utilized to ascertain the locations of the pre-assessed asbestos-containing building materials and all functional/accessible areas of the school building. These areas included; classrooms, utility closets, janitor's closets, above drop ceilings, and crawlspaces...etc. Building plans and reports were obtained through the school. The identified asbestos-containing building materials are denoted on the asbestos hazard inspection forms for further reference.

Assessment of the previously identified (original AHERA inspection and/or subsequent re-inspections) asbestos-containing materials consists of the information collected during the inspection portion of this project and the potential for the material to become damaged or significantly damaged. The assessment includes the following considerations; deteriorated condition, the friability of the material, vibration, water damage, air erosion, changes in the accessibility of the ACBM, new damage or increased damage to the ACBM, increase or decrease on the potential for significant damage or damage.

INSPECTION

The AHERA Re-inspection evaluation is conducted least once every 3 years after a management plan is in effect, each local education agency (LEA) shall have a Re-inspection evaluation performed by accredited and state certified individual(s). This Reinspection shall consist of all friable and nonfriable, known or assumed ACBM in each school building that they lease, own, or otherwise use as a school building. For each area of the school buildings, the inspector conducted the following assessment criteria:

1) Visually reinspect and reassess the condition of all known or assumed ACBM/PACM.

2) Visually inspected the material that was previously considered non-friable ACBM/PACM and touched the materials to determine whether it has become friable since the last Re-inspection.

3) Identified any homogenous areas with material that has become friable since the last Re-inspection.

4) For each homogenous area of newly friable material that is already assumed to be ACBM, bulk material samples were collected and submitted for asbestos analysis by a RI DOH certified laboratory.

5) Assessed the condition of the newly friable material in areas where samples were collected and newly friable materials that are assumed to be ACBM. *Suspect ACM bulk material sampling was not performed as part of this re-inspection and shall remain assumed to contain asbestos.*

6) Reassessed the condition of the friable, known or assumed ACBM previously identified.

7) Recorded the previous information for the submittal of this AHERA Re-inspection report and management plan.

Vortex, Inc. inspecting personnel utilized the original and the subsequent Re-inspection reports for this school building. This aided the inspection process and evaluation as to the location, amount, and former condition of the previously assessed asbestos-containing material(s) within the building. This management plan reports on all pre-assessed asbestos containing materials within the building whether there is a physical change or not. Refer to attached Chart of ACBM and PACM for homogeneous areas.

ASSESSMENT

The previously identified asbestos-containing building material was identified within its current condition and assessed as to the potential for damage or significant damage. If previously assumed asbestos-contained material is observed to be friable and/or damaged, bulk material sample(s) shall be collected/analyzed for asbestos content. The previously identified asbestos-containing material were classified and categorized to determine the appropriate response actions. The identified, assumed, or suspect asbestos-containing building materials are homogenized under one (1) of the three (3) types of asbestos-containing building materials. They are either:

1) Thermal System Insulation

2) Surfacing Materials, and/or

3) Miscellaneous materials and insulation's

PHYSICAL ASSESSMENT

The Physical Assessment is divided into the following seven categories and describes the material condition at the time of inspection to include:

1) Damaged or significantly damaged thermal system insulation
2) Damaged friable surfacing ACM
3) Significantly damaged friable surfacing ACM
4) Damaged or significantly damaged friable miscellaneous ACM
5) ACBM with potential for damage.
6) ACBM with potential for significant damage
7) Any remaining friable ACBM or friable suspect ACBM

HAZARD ASSESSMENT

The Hazard Assessment is divided into the following seven categories and includes a combination of the physical assessment combined with the *potential* for disturbance (vibration, air movement, etc.) to include:

1) Good Condition and *Low* potential for disturbance
2) Good Condition and *Moderate* potential for disturbance
3) Good Condition and *High* potential for disturbance
4) Fair Condition and *Low* potential for disturbance
5) Fair Condition and *Moderate* potential for disturbance
6) Fair Condition and *High* potential for disturbance
7) *Poor Condition* (Significant Damage)

RECOMMENDED RESPONSE ACTION KEYS USED WITHIN ATTACHED CHARTS

Key #	THERMAL INSULATION [T]
1	***Isolate area and restrict access***. Abate as soon as possible.
2	***Continue O&M.*** Repair or remove as soon as possible, or reduce potential for disturbance.
3-5	***Repair, Continue O&M.*** Number indicates priority if all cannot be done immediately.
6-7	***Continue O&M.*** Take preventative measures to reduce disturbance. Number indicates priority for removal.
8	***Continue O&M*** until major renovation or demolition requires removal under NESHAP's or until hazard factors change.
Key #	**SURFACING MATERIALS [S]**
1	***Isolate area and restrict access.*** Abate as soon as possible.
2	***Continue O&M.*** Repair or remove as soon as possible, or reduce potential for disturbance.
3	***Continue O&M.*** Schedule removal when practical and cost-effective or reduce disturbance.
4-5	***Continue O&M.*** Schedule removal when practical and cost effective. Number indicates priority for removal.
6-7	***Continue O&M.*** Take preventative measures to reduce disturbance. Number indicates priority for removal.
8	***Continue O&M*** until major renovation or demolition requires removal under NESHAP's or until hazard factors change.

Key #	MISCELLANEOUS MATERIALS [M]
1	***Isolate area and restrict access.*** Abate as soon as possible.
2	***Continue O&M.*** Repair or remove as soon as possible, or reduce potential for disturbance.
3	***Continue O&M.*** Schedule removal when practical and cost-effective or reduce disturbance.
4-5	***Continue O&M.*** Schedule removal when practical and cost effective. Number indicates priority for removal.
6-7	***Continue O&M.*** Take preventative measures to reduce disturbance. Number indicates priority for removal.
8	***Continue O&M*** until major renovation or demolition requires removal under NESHAP's or until hazard factors change.

PREVENTIVE MEASURES

Preventive measures include any action(s) taken in order to eliminate or reduce the possibility of disturbing ACBM. All preventive measures taken must be properly recorded. Examples of precautions to take include the following:
1. Do not cut, sand, drill, break, nail into, or otherwise disturb ACBM or create dust.
2. Avoid contact damage to any ACBM. Remove any adjacent items that may contact ACBM.
3. Keep suspended ceiling tiles in place wherever any ACBM exists above them. Do not remove or displace ceiling tiles without taking the proper precautionary measures outlined in 'ACBM Above Ceilings', in Part VII below.
4. Do not hang fixtures, wires, etc. from ACBM.
5. Prevent water damage to ACBM.
6. Do not disturb asbestos-containing materials when replacing lights, etc.
7. Do not allow doors or dividers to rub against ACBM.
8. Isolate, redirect, or eliminate direct airflow onto any friable or damaged ACM.

CLEANING

INITIAL CLEANING

Areas of the school that where identified and assumed friable ACBM and damaged or significantly damaged Thermal System Insulation ACBM that are present, are required according to Section 763.91(c)(1) of the AHERA Regulations to be cleaned at least once after the completion of the inspection and before the initiation of any response actions other than O & M.

ADDITIONAL CLEANING

In addition to initial cleaning and that which is required after any fiber release episode, the LEA is required to perform additional cleaning according to Section 763.91(c)(2) and Section 763.91(c)(1) of the AHERA Regulations. Cleaning recommendations include: cleaning all surfaces of the areas previously identified and/or.....

a. Areas containing ACBM where a suspect film or dust occurs.
b. Anytime any friable or non-friable ACBM becomes damaged or significantly damaged.
c. Anytime the Designated Person determines cleaning is necessary to protect the health and environment of the building occupants.

All cleaning be completed prior to the initiation of other response actions [if necessary]. The initial cleaning will prevent / greatly reduce the possibility of further contamination within an affected area and reduce the possibility of exposure to school occupants.

TYPES OF ACM PRESENT

Refer to the original AHERA and subsequent/attached Re-Inspection Reports for PACM and ACBM locations.

In summary, Vortex Inc. conducted the required three (3) year AHERA Re-inspection within the applicable **South Kingstown** School buildings. As a results of this Re-inspection, the following materials were observed and determined to be in need of repair and/or removal or changes since the previous AHERA Re-inspection included:

REFER TO ATTACHED CHART OF ACM & PACM

PHYSICAL ASSESSMENT

THE REMAINING ACBM OR PACM WITHIN THIS SCHOOL BUILDING WAS INTACT AND IN GOOD CONDITION AT THE TIME OF THE RE-INSPECTION.

OUTSIDE CONTRACTORS

Prior to any outside contractor performing work that may disturb/impact the ACM or PACM building components (pipes, wall plasters, etc.) throughout this school building, they shall be informed (by the LEA) about the suspect material locations. The LEA shall collect/analyze (by a RIDOH licensed Asbestos Inspector) these materials to determine if they contain asbestos (>1%). All lab reports shall be inserted into the AHERA Management Planner book. If lab results confirm the material to contain asbestos, then a RI licensed contractor or competent person (<3') shall remove the ACM prior to repairs/renovation activities. In any event, the contractor shall complete the attached form OUTSIDE CONTRACTOR - ACKNOWLEDGEMENT STATEMENT FORM and it shall be inserted into the Management Planner.

STEPS TO INFORM BUILDING OCCUPANTS / GUARDIANS

Workers and building occupants, or their legal guardians shall be informed about Re-inspections, response actions, and post-response action activities, including periodic Re-inspection and surveillance activities that are planned or in progress through postings in the teachers lunch room and information sent home in the annual AHERA Notification letter sent out in early May of each year.

ASBESTOS
STANDARD OPERATING PROCEDURES

Operations and Maintenance Compliance Guide

SECTION I - INTRODUCTION

The purpose of having Standard Operating Procedures (SOP's) is to aid the "Competent Person", custodial, maintenance, and other building staff, who may come into contact with asbestos-containing building materials (ACBM) during every day normal work activities, to control the release of asbestos fibers and asbestos-containing materials. All asbestos-related work conducted by the **South Kingstown Schools** Competent Persons and outside asbestos abatement contractors must adhere to the procedures set forth in this standard operating procedure guideline and the RI Rules and Regulations for Asbestos Control for spot abatement projects.

This Standard Operating Procedure are divided into six (6) sections. Each section explains specific work and activity procedures when dealing with or removing asbestos containing materials or asbestos fibers. Those sections include:

SECTION #2 - Maintenance and custodial personnel basic material identification and condition assessment.

SECTION #3 - Competent Person asbestos-containing building material(s) evaluation procedures.

SECTION #4 - Specific removal/repair work procedures for spot abatement for RI Competent Persons employed by **The South Kingstown Schools**.

SECTION #5 – Specific removal procedures

SECTION #6 - Job Notification and Completion Forms.

If you have any questions regarding these Standard Operating Procedures or if you encounter asbestos-containing materials which are damaged or are proposing a spot abatement please contact the following individuals:

Asbestos Coordinator Name	Day-time Phone #	Night-time Phone #
Russell Hill		

SECTION 2 - MAINTENANCE AND CUSTODIAL PERSONNEL

Special work practices are required when the disturbance of ACBM is likely. For example, working adjacent to non-friable ACM is not likely to cause a fiber release unless the ACM is directly impacted upon by abrading, sanding, chipping, breaking, Technical speed buffing, grinding, or cutting. If there is any doubt about the possibility of disturbing asbestos-containing materials during routine maintenance and cleaning activities, adequate precautions should be taken to prevent potential fiber release episodes and building contamination.

Maintenance and Custodial Personnel, who are not certified "Competent Persons", may encounter damaged building materials during the course of their every day work activities. These damaged materials may be in the form of broken floor tiles, deterioration of ceiling tiles, water damage of plaster ceilings, or any other type of damage. Damage building materials are any and all building materials that are visually observable within the school building.

Observable building materials are defined as:

plaster ceilings
ceiling tiles or acoustical panels
ceiling tile adhesive (glue dots)
pipe elbow insulation
duct insulation
water tank insulation
cinderblock wall and mortar
brick or veneer walls and mortar
window glazing
fire doors
cement wall board or panels
base molding and adhesives
linoleum
fire blankets
spray-applied or troweled applied ceiling surfaces
pipe insulation
boiler insulation
exhaust stack insulation
plaster walls
textured wall material
window caulking
window putty
adhesives for blackboards or bulletin boards
glue dots or liquid nails
floor tile and adhesives
other floor coverings
lab benches & tabletops

Damage to these listed materials or any other building material may be observed in the following forms:

water damage
damage caused by impact
deterioration
contact damage

When encountering damaged building materials, you must initially assume that they are suspect asbestos-containing materials (ACM). Damage can be caused by the following activities: abrasive actions (i.e., sanding, dry buffing) cutting , drilling, sawing, breaking, chipping.

Prior to initiating any abrasive activities as defined above, or planned disturbances (i.e. renovation work) to any building material consult with your immediate supervisor or asbestos coordinator to confirm that the building materials are not asbestos-containing.
Whether the damage was caused by accidental damage during maintenance or custodial activities, a leaking or broken pipe, leaking roof, improper maintenance, or any other cause, the following procedures shall be adhered to as a response to the incident(s):

* Restrict entry into the area by closing and locking all entries into the affected area.

* Notify your immediate supervisor of the particular school or the Asbestos Coordinator.

* Wait for further instructions from your area supervisor or the Asbestos Coordinator for the determination of whether the damaged building material is asbestos-containing or not.

SECTION 3 - EVALUATION PROCEDURES

A Competent Person or agency certified asbestos inspector, shall act on behalf of the Local Educational Agency (LEA) in so much as to determine if the building material in question is asbestos containing material or assumed asbestos-containing (by utilizing the AHERA Operation and Maintenance plan located within the "white book"), assess the cause, location, and amount of damaged asbestos-containing building material(s) (or assumed ACM). Once the Competent Person has evaluated the building material(s) which have become damaged, he/she shall notify the Asbestos Coordinator. The Competent Person shall also ensure that the following steps shall be followed to protect the building occupants:

* Ensure that the affected area has been property sealed off and the appropriate signs have been posted to warn employees/building occupants from unknowingly entering area. This is accomplished by complying with the following:

* Lockout/Tagout all Heating (follow the written Lockout/Tagout procedures), Ventilation, and Air Conditioning (HVAC) systems within the work area, or systems which may be affected by the asbestos abatement work procedures and work methods.

* Post asbestos WARNING signs at every entrance to that particular section of the building, and DANGER signs directly adjacent to the asbestos abatement work area (the area where there was damage to the asbestos-containing or assumed asbestos-containing material).

* Assess the condition, quantity, and type of ACM or assumed ACM which has been damaged. Determine whether the damaged material can be repaired/removed utilizing spot repair/removal regulations and procedures.

* Notify the Asbestos Coordinator as to the result of the assessment, and discuss removal/repair options in accordance with the RI-DOH Asbestos Control Rules and Regulations. Also complete the appropriate section of the "Job Notification/Completion Form".

* If it is feasible (as decided by the Asbestos Coordinator) for the certified "Competent Person" to perform the work within the room and/or area of the damaged material(s), all appropriate procedures must be followed. Also, the "Job Notification/Completion Form" must be filled out completely and submitted to the Asbestos Coordinator immediately after the work has been completed. This form shall be processed, copied, and placed within the appropriate schools AHERA Management Plan.

SECTION 4 - SPOT REMOVAL/REPAIR SPECIFIC WORK PRACTICES

If maintenance and/or repair activities take place which will unavoidably disturb asbestos containing material or assumed ACM in any area of the building, then a competent person shall initiate spot repair/removal techniques prior to the disturbance of these asbestos containing materials. Maintenance activities are defined as but not limited to the following examples;

1) Installing new sprinkler or piping systems which would entail hanging pipes from structural members of ceilings. If the beams or ceilings are sprayed-on with asbestos containing material, the ACM would have to be scraped away to install the hangers.

2) Installation of cable or wire must be run through spaces with ACM or asbestos containing debris, settled dust on top of tiles have the potential for becoming suspended into the air. Additionally, if the beams or decking above the ceiling are covered with ACM, the dust will most likely contain asbestos fibers.

3) Replacement of asbestos-containing or contaminated ceiling tile or acoustical tiles which have become water damaged.

4) Replacement or repair of floor covering which has become damaged (chipped, cracked, or abraded) and the associated floor adhesive.

5) Or any other maintenance and/or repair operation which may asbestos containing material(s).

If the disturbance of asbestos-containing material(s) involve more than 3 linear feet or 3 square feet an asbestos-containing materials they must be completed by a Rhode Island licensed asbestos abatement contractor.

The information presented below outlines the step-by-step procedures that shall be followed by the certified 'Competent Person' during removal/repair activities. The procedures outlined within this section involves specific work practice techniques for the removal/repair of Thermal, Surfacing, and Miscellaneous asbestos-containing materials. These procedures shall be adhered to for any maintenance activities (by either a certified "Competent Person" or a certified Asbestos Abatement Contractor) which involve the removal of less than three (3) linear or three (3) square feet of asbestos-containing building material or asbestos-containing debris:

GENERAL PROCEDURES:

The information presented below outlines the procedures that the Competent Person shall follow at the initiation of any spot repair/removal of thermal, surfacing, or miscellaneous asbestos-containing materials.

* No asbestos-related work will be undertaken without prior written or verbal approval of the Asbestos Coordinator and the written completion of the "Job Notification/Completion Form'. Asbestos related work less than three (3) linear or three (3) square feet (Spot Repair) will be performed by either a licensed RI Competent Person, or by a qualified certified asbestos abatement contractor approved by the Asbestos Coordinator. All other asbestos-related work beyond the scope of a spot repair, will be conducted by a RI licensed asbestos abatement contractor in accordance with a state approved asbestos abatement plan.

* Submit the "Job Notification/Completion" to the Asbestos Coordinator or acquire a verbal affirmation prior to the commencement of work. The asbestos coordinator should make an initial visit to the work site if at all possible.

* Control access to the work area by locking doors from the inside so as to prevent persons from unknowingly entering the work area. However, emergency exits must remain in operation at all times during any asbestos related work. All air handling systems and ventilation shall be shut off and lock-out/tag-out or temporarily modified to prevent the possibility of asbestos fiber contamination of the system or to the areas outside the work area.

* All entrances to that section or wing (i.e., corridor leading to the room or area) of the school building shall be posted with WARNING SIGNS. These signs shall read as follows:

"WARNING "
ASBESTOS ABATEMENT ACTIVITIES IN PROGRESS.
THE WORK AREA IS LIMITED TO:_____

A space shall appear at the end of the sentence to indicate the location of the project.

* At all entrances directly adjacent to the work area DANGER SIGNS must be posted and shall read as follows: "DANGER - ASBESTOS; CANCER AND -LUNG DISEASE HAZARD; AUTHOMAZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA".

* There shall be no dry sweeping or vacuuming of ACBM except with HEPA vacuum system.

* Only NIOSH-approved respirators and HEPA filter cartridges for asbestos dust shall be worn during ACBM related work.

* A copy of each completed "Job Notification/Completion" form generated in connection with the SOP shall be provided to the Asbestos Coordinator. Copies of all such correspondence shall be kept in the Maintenance Building, the Administration Building, and at the school building at which the ACBM related work took place.

SECTION #5 - SPECIFIC REMOVAL PROCEDURES

SURFACING MATERIALS

1) CEILING MATERIALS

The following precautions and procedures should be used if accidental disturbance of ACM (or dust and debris containing asbestos fibers) occurs:

A rectangular enclosure shall be constructed of 6-mil polyethylene sheeting on a frame and be positioned under the work area (and abutted to the ceiling and the top of the enclosure) to prevent fallen asbestos fibers from contaminating adjacent areas.

Construct a two chamber decontamination unit with water available for worker decontamination Also, the workers shall don two suits within the containment area. Upon exiting the containment,

one suit shall be disposed of within the containment and the second suit shall be disposed of within the dirty chamber.

Workers must wear at least air-purifying respirators with HEPA filters and protective clothing including a Tyvek or polypropylene suits with attached booties and hood.

Thoroughly wet the damaged ACM with amended water (a combination of surfactant and water) and remove those sections of material which require it. Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, mineral wool, insulation, or other non-asbestos-containing: material, or alternatively, seal the material with a latex-based paint or encapsulant.

Place the asbestos-containing material or contaminated material(s) into two properly labeled 6-mil polyethylene disposal bags or leak-tight containers.

After the maintenance work is completed, HEPA-vacuum or wet wipe fixtures, registers, or other components, and all tools, ladders and other equipment. If any visible debris remains on the polyethylene sheeting, floor or elsewhere, it should be HEPA-vacuumed.

Prior to dismantling the enclosure, or prior to folding the polyethylene sheeting, the entire surface area of the enclosure shall be wet wiped with a damp cloth, and disposed of as asbestos-contaminated waste.

All disposable clothing, vacuum bags/filters, and other disposable materials should be discarded in two 6-mil polyethylene sealed, labeled plastic bags and properly labeled as asbestos waste.

2) SPACES ABOVE DROP OR SUSPENDED CEILINGS

If the competent person must enter into a space above a drop or suspended ceiling, the initial entry file(s) should be removed with minimal impact. A layer of 6-mil polyethylene sheeting secured on the floor directly under the area of possible disturbance. The air space above the removed tile, the top of the removed tile, all tiles surrounding the grid opening, and the ACM likely to be disturbed should be sprayed with amended water to prevent fibers from dispersing into the air.

* Clean the ceiling files with a HEPA vacuum.

* All ACM which is removed during these work activities, shall be collected by the HEPA-vacuum. The vacuum hose shall be placed directly adjacent to the ACM which is being removed.

* Upon completion of the work, any visible debris on top of the suspended ceiling, on the polyethylene sheeting or the floor, or anywhere else in the area should be removed using either HEPA vacuuming or wet-wiping techniques.

* All equipment and tools should be HEPA-vacuumed or wiped with a damp cloth.

* The plastic sheeting or enclosure should be thoroughly wet-wiped with a damp cloth, and disposed of as asbestos-contaminated waste.

* All debris, disposal clothing, and other disposable materials should be discarded in sealed, labeled plastic bags and properly disposed of as asbestos waste.

3) SPRAY-APPLIED INSULATION

If maintenance and repair activities take place above the ceilings, personnel will unavoidably disturb the ACM spray-applied insulation (beams or decking sprayed with ACM fire-proofing), and dust located above the ceilings. In order to limit the amount of disturbance to the possible asbestos-containing dust and to control the work area, the Competent Person shall comply with the following procedures;

A 6-mil thick polyethylene drop cloth should placed below the location of the work, and should extend at least five (5) feet beyond all sides of the work area. If the competent person deems it necessary, a rectangular enclosure may be constructed of 6-mil polyethylene sheeting on a frame can be positioned under the work area (and abutted to the ceiling and the top of the enclosure) to prevent fallen asbestos fibers from contaminating adjacent areas.

·Workers must wear at least an air-purifying respirators with HEPA filters and protective clothing including a Tyvek or polypropylene suit, attached booties and hood.

·Thoroughly wet the ACM with amended water (a combination of surfactant and water).

·Place the asbestos-containing material or contaminated material(s) into two properly labeled bags or leak-tight containers.
·After the maintenance work is completed, HEPA-vacuum or wet wipe fixtures, registers, or other components, and all tools, ladders and other equipment. If any visible debris remains on the poly sheeting, floor or elsewhere, it should be HEPA-vacuumed.

·Prior to dismantling the enclosure, or prior to folding the drop cloth, the entire area of the drop cloth/enclosure shall be wet wiped with a damp cloth, and disposed of as asbestos-contaminated waste.

·All disposable clothing, vacuum bags/filters, and other disposable materials should be discarded in sealed, labeled plastic bags and properly labeled as asbestos waste.

4) Thermal Systems Insulation

Maintenance activities affecting asbestos-containing thermal system insulation may involve plumbing repairs, repairs to the heating system, ventilation, and air conditioning (HVAC) system.

Accidental Disturbance of ACBM Possible

Maintenance tasks that involve no direct contact with ACBM may cause accidental disturbance. For example, vibrations created by maintenance activities in one part of a piping network may be transmitted to other parts. Vibrations could then cause fibers to be released from insulation which is exposed (not covered with a protective jacket) or not in good condition. If in doubt about the possibility of fiber release, thoroughly inspect the thermal insulation before undertaking the maintenance or repair work. Then, either correct the problem before starting or assume that the maintenance work may cause accidental disturbance and fiber release. In this case, the procedures below should be adhered to:

A) Thermal Insulation Repair:

For thermal pipe insulation on which has sustained only minor damage and requires only repair (NOT REMOVAL), the procedures outlined shall be followed,

* A 6-mil polyethylene drop cloth should placed below the location of the work, and should extend at least five (5) feet beyond all sides of the work area. If the competent person deems it necessary, a rectangular enclosure may be constructed of 6-mil polyethylene sheeting on a frame can be positioned under the work area (and abutted to the ceiling utilizing 6" fiber glass insulation between the ceiling and the top of the enclosure) to prevent fallen asbestos fibers from contaminating adjacent areas.

* Workers must wear at least air-purifying respirators with HEPA filters and protective clothing including a Tyvek or polypropylene suit with attached booties and hood.

* Thoroughly wet the ACM with amended water (a combination of surfactant and water).

* Repair the area of damaged ACM with materials such as re-wettable cloth, or other non-asbestos-containing material and seal the material with a latex-based paint or encapsulant.

* Place the asbestos-containing material or contaminated material(s) into two properly labeled 6-mil polyethylene disposal bags or leak-fight containers.

* After the maintenance work is completed, HEPA-vacuum or wet wipe fixtures, registers, or other components, and all tools, ladders and other equipment. If any visible debris remains on the drop cloth, floor or elsewhere, it should be HEPA-vacuumed.

* Prior to dismantling the enclosure, or prior to folding the drop cloth, the entire surface area of the drop cloth/enclosure shall be wet wiped with a damp cloth. and disposed of as asbestos-contaminated waste.

* All disposable clothing, vacuum bags/filters, and other disposable materials should be discarded in sealed, labeled 6-mil poly disposal bags and properly labeled as asbestos waste.

B) Removal of thermal pipe on:

The following procedures direct the Competent Person in the proper techniques for the removal of asbestos-containing pipe insulation.

Glove - Bag Procedures

Thoroughly wet the insulation with amended water or an encapsulant and allow it to soak in. Wet the insulation adequately to penetrate, and soak the material through to the substrate. After the material is saturated, remove it using a glovebag enclosure according to the following procedure:

1. Check the pipe where work will be performed. Wrap the damaged (broken lagging, hanging, etc.) pipe in 6-mil plastic and "candy-stripe" it with duct tape. Place one layer of duct tape around the undamaged pipe at each end where the glove-bag will be attached.

2. Slit the top of the glove-bag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two (2) inches longer than the pipe diameter).

3 . Place the necessary tool into the pouch located inside the glove-bag. These tools will usually include: a bone saw, utility knife, rags, scrub brush/pad, wire cutters, tin snips and pre-wetted cloth.

4. Place one strip of duct tape along the edge of the open top slit of the glove-bag for reinforcement.

5. Place the glove-bag around the section of the pipe to be worked on and staple the top together through the reinforcing duct tape. Next, duct tape the ends of the glove-bag to the pipe itself, where it was previously covered with plastic or duct tape.

6. Use a smoke tube and aspirator bulb to test the seal. Place the tube into the water sleeve (two-inch opening to the glove-bag) squeezing the bulb and filling the bag with visible smoke. Remove the smoke tube and twist the water sleeve closed. While holding the water sleeve tightly, gently squeeze the glove-bag and look for smoke leaking out, (especially at the top and ends of the glove-bag). If leaks are found, tape the leak closed with duct tape and re-test.

7. Insert the wand from the garden sprayer through the water sleeve. Duct tape the water sleeve tightly around the wand to prevent leakage.

8. One person places his/her hands into the long-sleeved gloves while the second person directs the garden sprayer at work.

9. Use the bone saw, if required, to cut the insulation at each end of the section to be removed. A bone saw is a serrated heavy gauge wire with ring-type handles at each end. Throughout this process, spray mended water or removal encapsulant on the cutting area to keep dust to a minimum.

10. Remove the insulation using putty knives or other tools. Place the pieces of insulation in the bottom of the glove bag without dropping them.

11. Rinse all tools with water inside the bag and place them back into the pouch.

12. Using the scrub brush, rags and water, scrub and wipe down the exposed pipe.

13. Remove the water wand from the water sleeve and attach the small nozzle from the HEPA-filtered vacuum. Turn on the vacuum only briefly to collapse the bag.

14. Remove the vacuum nozzle, twist the water sleeve closed and seal with duct tape.

15. From outside the bag, pull the tool pouch away from the bag. Place the duct tape over the twisted portion of the bag and then cut the tool bag from the glove-bag, cutting through the twisted/taped section. Contaminated tools may then be placed directly into the next glove-bag without cleaning. Alternatively, the tool pouch with the tools can be placed directly into a bucket of water, opened underwater, and the tools cleaned and dried. Discard the rags and scrub brush as asbestos waste. If more than one adjacent section of pipe is to be removed, the glove-bag may be loosened at each end and slid along the pipe to the next section. In this case, the tools may remain in the bag for continued use.

16. With removed insulation in the bottom of the bag, twist the glove-bag several times and tape it to keep the material in the bottom during removal of the glovebag from the pipe.

17. Slip a 6-mil disposal bag over the glove-bag (still attached to the pipe). Remove the tape or cut the bag and open the top of the glove-bag and fold it down into the disposal bag.

17. Clean all surfaces in the work area using disposable cloths wetted with amended water or water with removal encapsulant added. When these have dried, clean them with a HEPA filtered vacuum. Material, adhered to a with removal encapsulant, may require the application of additional removal encapsulant to facilitate cleaning.

29. Seal the exposed ends of the remaining pipe insulation with encapsulant.

20. Remove disposable suits and place these into a waste bag with other debris.

21. Collapse the bag with a HEPA vacuum, twist the top of the bag, seal with at least three wraps of duct tape, fold over and seal again at least three wraps of duct tape.

5) Miscellaneous ACBM

Other asbestos-containing materials may include vinyl asbestos floor tile, asbestos-containing ceiling tile, transite wall board, countertops, asbestos roof tiles, and various textiles products such as stage curtains and fume hoods. Disturbance of these materials should be avoided. Cutting, drilling, grinding, sanding, Technical speed buffing, or removal of this ACBM must be performed by an asbestos abatement contractor certified by the RI Department of Health. There is no one set approach or method to these types of spot repair situations. The following information outlines some of the procedures and methods which can be utilized for minor removal and repair situations.

A) Cutting And Patching ACBM

Perform cutting, drilling, abrading, or otherwise disturbing asbestos-containing building material in a manner so as to minimize the dispersal of asbestos fibers into the air.

·Provide adequate local exhaust to capture fibers produced by cutting, drilling, or abrading by means of an approved HEPA filter vacuum. Use specialized equipment such as drills or saws having integral ventilation hoods which are connected to a HEPA vacuum with a flexible hose. Handle and dispose of HEPA filters as contaminated material.

·Thoroughly saturate absorbent surfaces of the asbestos-containing building material to be disturbed with amended water or a penetrating type encapsulant. Allow the amended water or encapsulant to penetrate to the substrate before working on materials.

·Seal the edges of the asbestos-containing building material exposed by cutting, drilling, or abrading with two (2) coats of an approved penetrating encapsulant applied in accordance with the manufacturer's printed instructions for use of the encapsulant as an asbestos coating.

B) REPAIR OF DAMAGED MATERIALS

This section applies to the repair of damaged insulation on piping, boilers, water tanks, exhaust stack insulations and equipment covered with asbestos-containing materials on which the majority of insulation is to remain. This may be accomplished by cutting loose sections of the ACM and filling the remaining un-insulated section with non-asbestos-containing fibers. Products which may be used for these activities are:

· Mineral Wool insulating Cement: job mixed insulating plaster manufactured for use on plumbing equipment.

· Waterproof Cement: pre-mixed or job mixed cement manufactured for coating of thermal insulation lagging.

· Non-woven Fibrous Glass Mat: felt approximately 3/32' thick fabricated from glass fibers.

· Open-Weave Glass Fiber Mat: cloth with approximately 1/4" openings in weave, fabricated from glass fibers twisted or braided into strands approximately 1/128" in diameter.

· Bridging Type Encapsulant:

The following paragraphs address the types of asbestos-containing insulations or materials which may be encountered by certified RI Competent Persons and the methods utilized to repair small sections of damage. Remember, this type of repair is still considered an abatement action and all protective equipment and engineering controls are still required for example; lockout/tagout, polyethylene barriers, HEPA vacuum and/or HEPA negative air machine, polyethylene sheeting, decontamination station , personal protective equipment.

Pipe Insulation

1. Remove any loose material with a cutting tool and a HEPA vacuum. No existing jacket material in good condition should be removed.

2. Fill holes or open sections with mineral wool insulating cement and cover damaged areas with a non-woven fibrous glass mat or loose insulation. Dampen the new non-asbestos-containing filter insulation with bridging type encapsulant.

3. Wrap open joints or new non-asbestos filler insulation with non-woven fibrous glass mat or re-wettable cloth embedded in bridging type encapsulant. This wrap should be placed on the insulation in such a way as to prevent gravity from loosening or dislodging the wrapping.

4. Smooth wrap to a wrinkle- free condition. Allow the wrap to dry and coat the entire surface of the mat with an additional coat of bridging type encapsulant and brush to a smooth uniform appearance.

Fitting Insulation

1. Remove any loose material from the fitting insulation with a cutting tool and a HEPA vacuum. No existing jacket material in good condition should be removed.

2. Fill holes or open sections with mineral wool insulating cement and cover damaged areas with a non-woven fibrous glass mat or loose insulation. Dampen the new non-asbestos- containing filler insulation with bridging type encapsulant.

3. Wrap openings or new non-asbestos filler insulation with non-woven fibrous glass mat or re-wettable cloth embedded in bridging-type encapsulant. This wrap should be placed on the insulation in such a way as to prevent gravity from loosening or dislodging the wrapping.

4. Stretch the fibrous mat to conform to the shape of the fitting and smooth to a uniform appearance without wrinkles. Allow the wrap to dry and coat the entire surface of the mat with an additional coat of bridging-type encapsulant and brush to a smooth uniform appearance.

5. Overlap jackets of adjacent straight insulation sections by three (3) inches. Allow to dry, and coat entire of mat with bridging-type encapsulant and brush to a smooth , finished appearance.

Equipment Lagging

1. Fill damaged portion of lagging, as required, with mineral wool insulating cement, and cover with non-woven fibrous glass mat completely embedded in bridging-type encapsulant.

2. Coat the area of repair and six (6) inches on all sides of the damaged area with a bridging-type encapsulant, brush to a uniform appearance. DO NOT leave hanging portions of the wrapped portion of the lagging. This may cause delamination of the material(s).

3. Completely coat lagging which do not possess a canvas jacket with a layer of re-wettable cloth and two (2) coats of bridging-type encapsulant.

Boiler and Smoke Hoods Breaching Lagging

1. Remove any loose material with a cutting tool and HEPA vacuum. No existing jacket material in good condition should be removed.

2. Fill holes or open sections with mineral wool insulation cement and cover damaged areas with a non-woven fibrous glass mat of loose insulation. Dampen the new non-asbestos-containing filler insulation with bridging type encapsulant.

3. Coat the entire surface of the lagging with 1/4" minimum thickness of mineral wool insulating cement reinforced with open weave fiber mat.

4. Trowel surface to a smooth finish.

C) LABELING

Label all asbestos-containing pipe insulation, fitting insulation, lagging, etc. in unoccupied areas with a 3" x 5" yellow sticker containing the words: "**CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.**" Apply these labels at a minimum of two (2) labels per side or a maximum of five (5) feet apart on boilers, breaching and equipment and a minimum of eight feet apart on pipe runs. Labels must be applied to both sides of pipe runs which are accessible from both sides. In occupied areas, provide labels shaped like stop signs approximately three (3) inches across with text reading: "STOP - Before Doing Work In This Area, See Asbestos Coordinator."

D) ENCAPSULATION

Prior to performing encapsulation, submit the Material Safety Data Sheet, or the equivalent to the Asbestos Coordinator, in accordance with the OSHA Standard (29 CFR 2910.1101) for each surfactant and encapsulating material proposed for use in the work. Include a separate attachment for each sheet, indicating the specific worker-protective equipment proposed for use with the material indicated. The following information outlines the specific steps on how to apply this type of liquid encapsulant.

Apply encapsulating materials only when environmental conditions in the work area are as required by the manufacturer's instructions. Utilize only penetrating or bridging-type encapsulants specifically designed for application to asbestos containing building material. These materials should have a flame spread index of less than 25 when dry and when tested in accordance with ASTM E-84.

* Prior to applying any encapsulating material, ensure that application of the sealer will not cause the base material to fail and allow the sealed material to fall of its own weight and separate from the substrate. Should personnel doubt the ability of the installation to support the sealant, request direction from the Asbestos Coordinator before proceeding with the encapsulating work.

* Before beginning work with any material for which a Material Safety Data Sheet has been submitted, provide workers with the required personal protective equipment (PPE). Require that appropriate PPE be utilized at all times.

* In addition to protective respiratory equipment required by OSHA requirements or by this SOP, use painting pre-filters on respirators to protect the dust filter when organic-solvent based encapsulants are in use.

Encapsulation techniques vary according to what type of material is being encapsulated be sure to consult the insulation manual prior to starting any encapsulating project.

The following sections encapsulating procedures for asbestos-containing plaster and thermal and miscellaneous insulation and materials. Consult the instruction manual or product dealer prior to applying the liquid encapsulant(s).

Scratch Coat Plaster

Apply two (2) coats of encapsulant to the scratch coat after all asbestos-containing building material has been removed. Apply in strict accordance with the manufacturer's printed instructions for use of the encapsulant as an asbestos coating. Any deviations from such printed instructions must be approved by the Asbestos Coordinator in writing prior to commencing work.

Apply the encapsulant with an airless spray gun with air pressure and nozzle orifice as recommended by the encapsulant manufacturer. Apply the first coat of the encapsulant while the scratch coat is still damp from asbestos removal procedures. If the surface has been permitted to dry, vacuum the surface with a HEPA filtered vacuum cleaner prior to spraying with the encapsulant. Apply the second coat over the first in strict accordance with the manufacturer's instructions.

* Color the encapsulant contrasting colors in alternate coats so that visual conformation of complete and uniform coverage of each coat is possible. Adhere to the manufacturer's instructions for coloring. At the completion of work, the encapsulated surface must be a uniform third color produced by the mixture.

Sealing Exposed Edges:

* Seal edges of the asbestos-containing building material exposed by removal up to inaccessible spot such as a sleeve, wall penetration, etc. with two (2) coats of encapsulant to the exposed edges to dry completely to permit penetration of the sealer.

* Color the encapsulant contrasting colors in alternate coats so that visual confirmation of complete and uniform coverage of each coat is possible. Adhere to the manufacturer's instructions for coloring. At the completion of work, the encapsulated surface must be a uniform third color produced by the mixture.

E) EQUIPMENT REQUIREMENTS:

1. HEPA filtered vacuum with extensions, hoses, and attachments.

2. Rolls of 4-mil and 6-mil polyethylene sheeting with dimensions of at least 20' feet in width by 100- feet in length.

3. 6-mil polyethylene disposal bags labeled with an asbestos-material warning sign.

4. Several rolls of two (2) inch and three (3) inch wide duct tape.

5. NIOSH approved half-face cartridge respirators with filters approved for asbestos dust (HEPA filters).

6. Garden Sprayer for misting amended water or liquid encapsulants.

7. Liquid surfactant.

8. Personal protective equipment (PPE) - which includes full body suits, goggles or face shields, and gloves

9. Negative air machines with HEPA filtration capabilities.

10. Hand tools - squeegees, plastic shovels, razor knives, bone saws, putty knives, hammers, scrubbing cloths, rags ... etc.

11. Glovebags - multiple sizes and dimensions.

12. Re-wettable cloth and re-insulation materials.

SECTION #6 - Job Notification and Completion Forms.

Refer to attached forms.

ASBESTOS
"SPOT REPAIR" FORM

School Building: _____ Date: _____

Area/location within building: _____

Type of ACM being abated: _____

Quantity of ACM being abated: _____

Competent Person
performing the abatement: Name: _____ Lic. #: _____

Explanation for performing spot repair: _____

_____

ACM Disposal: Date Disposed: _____

Quantity/Type: _____ Bag _____ Drum

Ship Location: _____

_____

C.O.C. Date Received: _____

Competent Person Signature: _____

OUTSIDE CONTRACTOR
ACKNOWLEDGEMENT STATEMENT FORM

Name: _____ Date: ____/____/____

Company Name: _____

Address: _____

City: _____ State:_____ Zip Code: _____

Type of Business: _____

Location of Contract Work: Area: _____

Type of work being performed: _____

I have read the pertinent section(s) of the Operations and Maintenance Management Plan regarding locations and conditions of existing asbestos-containing building materials (ACBM) within the school building. I acknowledge the location(s) and conditions of ACBM and PACM as identified in the plan and agree to comply with all requirements (personal protection, training requirements, etc.) and the procedures outlined therein.

Corporate Officer or Principal:

_____
(Signature)

_____
(Print name)

_____
(Date)

Supervisor or Foreman:

_____
(Signature)

_____
(Print name)

_____
(Date)

Employees performing work at site: (Duplicate as necessary for additional employees)

Employee # _____

_____
(Signature)

_____
(Print name)

_____
(Date)

Employee # _____

_____
(Signature)

_____
(Print name)

_____
(Date)

_____
Asbestos Coordinator

*****ASBESTOS *****

OUTSIDE CONTRACTOR
ACKNOWLEDGEMENT STATEMENT FORM

I have read the pertinent section(s) of the Operations and Maintenance Management Plan regarding locations and conditions of existing asbestos-containing building materials (ACBM) within the applicable South Kingstown Public School Building. By signing below, I acknowledge the location(s) and conditions of ACBM and PACM as identified in the plan and agree to comply with all requirements (personal protection, training requirements, etc.) and the procedures outlined therein.

Date:	Name/Signature	Company / Name	Work Performed

Display on the front counter within the Main Office.

SCHOOL SYSTEM LETTERHEAD

Date: ____/____/____

To: Employees and Parents

Re: Asbestos AHERA Information Report

This is the annual updated, compliance letter required by the Asbestos Hazard Emergency Response Act (AHERA). This act requires all school districts, public and private, grades K through 12, to inspect each of their school buildings for asbestos-containing materials. Management Plans have been developed outlining how asbestos-containing materials will be handled in each of the school buildings.

The South Kingstown School is committed to remaining a safe and healthy environment for all children, employees and guests in our schools. We will continue, as we have in the past, to monitor, inspect and repair any asbestos containing materials. Copies of our Management Plan and Inspection Reports are available upon request for review at each school office, as well as the Office of Russell Hill, located within the **Maintenance Bldg.**

We intend to have our Asbestos Operations and Maintenance Program updated every six (6) months and shall notify occupants, in advance, if abatement will be performed within your school building. Unless an emergency arises, all asbestos abatement will be performed during the weekend or school holiday period.

We have contracted John Carbone of Vortex Inc. Environmental Management, Consulting, and Training Services as our professional asbestos consultant.

GENERAL LOCAL EDUCATION AGENCY RESPONSIBILITIES

RUSSELL HILL, as the LEA shall:

(a) Ensure that the activities of any persons who perform inspections, re-inspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with subpart E of this part.

(b) Ensure that all custodial and maintenance employees are properly trained as required by this subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).

(c) Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic re-inspection and surveillance activities that are planned or in progress.

(d) Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.

(e) Ensure that warning labels are posted in accordance with 763.95.

(f) Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under 763.93(g).

(g)(1) Designate a person to ensure that requirements under this section are properly implemented.
(2) Ensure that the designated person receives adequate training to perform duties assigned under this section. Such training shall provide, as necessary, basic knowledge of:
(i) Health effects of asbestos.
(ii) Detection, identification, and assessment of ACM.
(iii) Options for controlling ACBM.
(iv) Asbestos management programs.
(v) Relevant Federal and State regulations concerning asbestos, including those in this subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Labor, the U.S. Department of Transportation and the U.S. Environmental Protection Agency.

(h) Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under this subpart.

ASBESTOS COORDINATOR ACCEPTANCE STATEMENT

On behalf of the **South Kingstown Public Schools,** in my capacity as LEA Asbestos Coordinator / Designated Person, I hereby accept the responsibilities, procedures, guidelines and recommendations detailed in this Asbestos Operations and Maintenance Management Plan, will, to the best of my ability and in a timely fashion, adhere to the requirements contained herein.

_____/_____/_____
Date

Russell Hill
Name (Printed)

_____
Signature

_____
Witnessed by:

ASSURANCE OF ACCREDITATION

All Vortex, Inc. personnel who contributed to this AHERA Re-inspection, report, and/or management plan have been trained in accordance with 40 CFR Part 763. Also persons contributing to this project have been certified by the Rhode Island Department of Health for this purpose.

_____ _____
John Carbone Date
RI Cert# AAC-177 IS /MP

The next six (6) month surveillance dates should be performed in ..... *August 2018*

and the

3 Year Re-inspections performed in ..... *February 2021*