

Asbestos Abatement Project Monitoring Closeout Report

**Bourne High School, James F. Peebles Elementary School and
Otis Memorial Elementary School**

July 14 – August 25, 2015

Bourne Public Schools
Bourne, Massachusetts

October 2015



Fuss & O'Neill EnviroScience, LLC
50 Redfield Street, Suite 100
Boston, MA 02122



October 2, 2015

Mr. Ed Donoghue
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, MA 02532

RE: Asbestos Abatement Project Monitoring
Bourne High School, James F. Peebles Elementary School and
Otis Memorial Elementary School
Bourne, Massachusetts
Fuss & O'Neill EnviroScience Project No. 20121141.B4E

Dear Mr. Donoghue:

Enclosed please find the asbestos abatement project monitoring closeout report for the project completed at the Bourne High School, the James F. Peebles Elementary School and the Otis Memorial Elementary School located in Bourne, Massachusetts. Abatement occurred from July 14, 2015 to August 25, 2014. The building owner should obtain the Waste Shipment Records (WSR) from the Asbestos Abatement Contractor in post-abatement closeout documents when available, but no later than 45 calendar days from when the waste was removed from the project site.

Additionally, this report is important documentation that must be placed with the Asbestos Hazard Emergency Response Act (AHERA) Management Plan that was generated for the Bourne High School, James F. Peebles Elementary, and Otis Memorial Elementary School. A copy should be placed at each school, as well as the central location where the Asbestos Management Plans are stored.

If you should have any questions regarding the enclosed report, please do not hesitate to contact me at (617)282-4675 extension 4703. Thank you for this opportunity to have served your environmental needs.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. A. Diedricksen'.

Dustin A. Diedricksen
Project Manager

DD/amf

Enclosure

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1 Introduction

Fuss & O'Neill EnviroScience, LLC (EnviroScience) was retained to provide asbestos abatement project monitoring services at the Bourne High School, the James F. Peebles Elementary School, and the Otis Memorial Elementary School (the "Site"). The scope of services were performed in accordance with our written agreement dated May 6, 2015 and is subject to the general terms and conditions of the agreement and the limitations included in *Appendix A*. Asbestos abatement was necessary due to ongoing renovations and improvements at each Site building. Asbestos abatement work occurred from July 14 through July 22, 2015 at Bourne High School, through August 24, 2015 at Otis Memorial Elementary School, and through August 25, 2015 at James F. Peebles Elementary School. Please refer to *Appendix B* for the EnviroScience staff Commonwealth of Massachusetts Department of Labor Standards (MADLS) asbestos certifications and United States Environmental Protection (EPA) accreditations.

Mr. Dustin Diedricksen of EnviroScience prepared two Asbestos Abatement Work Plans (AWP) for the work. Mr. Diedricksen is a MADLS-certified Project Designer. Please refer to *Appendix B* for a copy of the project designer state certification and EPA accreditation and *Appendix C* for copies of the Asbestos Abatement Work Plans. The Asbestos Abatement Contractor who performed the work at all three schools was Allstate Asbestos Abatement of Lowell, Massachusetts (Allstate).

2 Scope of Work

The abatement scope of work included the removal and disposal of the following ACM:

Type of Material	Estimated Quantity	Location
Bourne High School		
9" x 9" Floor Tile	8,390 SF	1 st & 2 nd Floors C-Wing & 1 st Floor Boy's & Girl's Bathrooms
Otis Memorial Elementary School		
9" x 9" Floor Tile	70 SF	Rooms 6, 7, 10, 12, 15, & Main Office
Peebles Elementary School		
Window Glazing Compound	6 Window Panes	Cafeteria Kitchen, Cafeteria Kitchen Bathroom, & Room 5

SF = Square Feet

3 Discussion

The asbestos abatement projects were conducted at Bourne High School, Otis Memorial Elementary School, and Peebles Elementary School on the following dates:

- Bourne High School began on July 14, 2015 and was completed on July 22, 2015;
- Otis Memorial Elementary School was performed on August 24, 2015; and
- Peebles Elementary was performed on August 25, 2015.

EnviroScience was on-site throughout the abatement projects to document work practices, to conduct visual inspections, and to collect and analyze air samples. Negative pressure enclosures (NPEs) were established in accordance with procedures detailed in the project design, and included erection of protective barriers to isolate the work areas from the rest of the building. Negative pressure was established inside the work areas relative to the outside spaces.

Prior to the beginning of abatement activities, EnviroScience conducted a pre-commencement inspection in each work area. This was to document that work area preparations were performed in accordance with the AWP, as well as federal, state, and local regulations.

Upon commencement of abatement activities, area air samples were collected for analysis utilizing Phase Contrast Microscopy (PCM) and National Institute of Occupational Safety and Health Method 7400. These air samples were collected at various locations, such as the entrance to the worker decontamination facility, outside NPE barriers, and at the negative air pressure filtration unit exhaust. These air samples were collected and analyzed to monitor the air quality outside the NPE during asbestos abatement. This was performed to assess the air quality at the Site during the abatement project. Please refer to *Appendix D* for copies of the PCM Area Air Monitoring Worksheets.

EnviroScience analyzed PCM air samples on-site by an Asbestos Project Monitor who is currently listed on the Asbestos Analysts Registry (AAR) that is maintained by the American Industrial Hygiene Association (AIHA).

During removal activities, progress inspections were conducted inside the work areas to assess work progress and work practices and procedures utilized by Allstate. Work was completed by MADLS-certified Asbestos Workers using wet-removal methods. Allstate recorded a daily log of the Asbestos Workers and Supervisors who conducted asbestos abatement on the project.

Following the completion of abatement, EnviroScience performed a final visual inspection in each work area to comply with federal and state asbestos regulations. Final visual inspections were conducted to verify that the work areas met the “no visible suspect debris” criteria prior to conducting final clearance air sampling. Refer to *Appendix E* for copies of the Final Visual Inspection Forms

Following the completion of final cleaning and work area encapsulation, aggressive final clearance air sampling was performed inside the work areas to comply with state and federal regulatory requirements. In compliance with AHERA and MADLS regulations, air samples were analyzed by PCM or Transmission Electron Microscopy (TEM), based on quantity of asbestos-containing materials (ACM) that were abated. Refer to *Appendix D* for copies of the PCM Area Air Monitoring Worksheets and *Appendix F* for copies of the TEM Air Samples Laboratory Report.

4 Conclusion

All work areas successfully passed pre-sealant visual inspections prior to work area encapsulation by the Abatement Contractor. Following encapsulation, aggressive final clearance air sampling was conducted in accordance with the MADLS and MassDEP requirements. All work areas successfully passed final clearance air sampling. Air clearance samples collected utilizing PCM indicated airborne fiber concentrations were below the AHERA and MADLS re-occupancy standard of 0.010 fibers per cubic centimeter of air (f/cc). Air clearance samples collected utilizing TEM were reported to be below the AHERA and MADLS re-occupancy standard of 70 structures per square millimeter (s/mm²).

PCM air samples were analyzed on-site by a trained EnviroScience Asbestos Project Monitor listed on the AAR maintained by the AIHA.

TEM analysis was performed by EMSL Analytical, Inc. of Woburn, Massachusetts, a Massachusetts-certified asbestos laboratory.

Report prepared by Environmental Technician, Robert Mallett.

Reviewed by:



Dustin A. Diedricksen
Project Manager



Timothy M. Downey
Senior Project Manager

Appendix A

Limitations



APPENDIX A

Bourne Public Schools

Bourne, Massachusetts

1. This environmental report has been prepared for the exclusive use of the Bourne Public Schools and is subject to, and is issued in connection with the general terms and conditions of the original Agreement and all of its provisions. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and Fuss & O'Neill EnviroScience, LLC, (EnviroScience) shall be at the User's individual risk.
2. EnviroScience has obtained and relied upon information from multiple sources to form certain conclusions regarding likely environmental issues at and in the vicinity of the subject property in conducting this inspection. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information or verify compliance by any party with federal, state or local laws or regulations.
3. EnviroScience has obtained and relied upon laboratory analytical results in conducting the scope of work. This information was used to compare sample results to existing federal and state regulations for re-occupancy levels following asbestos abatement. EnviroScience has not performed an independent review of the reliability of this laboratory data.
4. The observations and conclusions presented in this report are limited by the scope of services outlined in our original Agreement May 6, 2015, which reflects schedule and budgetary constraints imposed by the Client. Furthermore, the scope of services has been conducted in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made.
5. The conclusions presented in this report are based solely upon information gathered by EnviroScience to date. Should further environmental or other relevant information be discovered at a later date, the Client should immediately bring the information to EnviroScience's attention. Based upon an evaluation and assessment of relevant information, EnviroScience may modify the report and its conclusions.

Appendix B

Fuss & O'Neill EnviroScience State Asbestos Certifications and EPA Accreditations

Commonwealth of Massachusetts
Department of Labor Standards

Heather E. Rowe, Director

Asbestos Designer



DUSTIN A. DIEDRICKSEN

Eff. Date 08/18/14

Exp. Date 08/22/15

AD000037

Member of C.O.N.E.S.

BOSR BOS-RENEW

15





This is to certify that

Dustin A. Diedricksen

*has completed the requisite training, and has passed an examination for
reaccreditation*

Asbestos Designer Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education, Inc.
16 Upton Drive Wilmington, MA 01887

July 17, 2015

Course Dates

15-0299-128-208040

Certificate Number

July 17, 2015

Examination Date

July 17, 2016

Expiration Date

Wentworth

Training Director

16 Upton Drive, Wilmington, MA 01887

Telephone 978.658.5272

www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

Commonwealth of Massachusetts
Department of Labor Standards

Heather E. Rowe, Director

Asbestos Project Monitor



MICHAEL COFFEY

Eff. Date 03/04/15

Exp. Date 03/03/16

AM900533

Member of C.O.N.E.S.

HV HV - NEW

16



CERTIFICATE OF ACHIEVEMENT

This certifies that

Michael Coffey

has successfully completed the

8-Hour Asbestos Project Monitor Refresher Training Course

conducted by

Cardno ATC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Principal Instructor: Tom Dion

August 11, 2015

Date of Course

August 11, 2016

Expiration Date

Regional Training Manager: Gregory Morsch

PMR-1987

Certificate Number

August 11, 2015

Examination Date

Appendix C

Asbestos Abatement Work Plans



FUSS & O'NEILL
EnviroScience, LLC

May 18, 2015

Mr. Ed Donoghue
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, MA 02532

Re: Asbestos Abatement Work Plan
Bourne High School & Otis Memorial Elementary School
Bourne, Massachusetts
Fuss & O'Neill EnviroScience, LLC. No. 20121141.B4E

Dear Mr. Donoghue:

Attached please find the Asbestos Abatement Work Plan for conducting summer asbestos abatement at the Bourne High School and the Otis Memorial Elementary School located in Bourne, Massachusetts.

The Asbestos Abatement Contractor is required to complete and submit an asbestos notification form. The form must be submitted to the Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) and to the Commonwealth of Massachusetts Department of Labor Standards (MADLS).

Should you have any questions regarding this procedure, please do not hesitate to call me at (617) 282-4675, extension 4703.

Sincerely,

Dustin A. Diedricksen
Project Manager

DAD/amf

50 Redfield Street
Suite 100
Boston, MA
02122
t 617.282.4675
f 617.282.8253

www.fando.com

Attachments

Connecticut
Massachusetts
Rhode Island
South Carolina

WORK PLAN
FOR REMOVAL AND DISPOSAL
OF ASBESTOS-CONTAINING MATERIALS
BOURNE HIGH SCHOOL AND OTIS MEMORIAL ELEMENTARY SCHOOL
BOURNE, MASSACHUSETTS

BACKGROUND

- A. Asbestos abatement activities shall include repair and/or removal of floor tile and associated mastics/adhesives at the Bourne High School located at 75 Waterhouse Road in Bourne Massachusetts and the Otis Elementary School located at 5500 Curtis Boulevard, Bourne, Massachusetts.
- B. Abatement activities are anticipated to occur in July 2015. A Massachusetts-licensed Asbestos Abatement Contractor (the "Contractor") will conduct the asbestos abatement work.
- C. Abatement activities will occur while the school is not operational (i.e., during summer vacation).

DESCRIPTION OF WORK

- A. The scope of abatement work shall include removal of asbestos-containing vinyl floor tile at the aforementioned schools. Note that the associated mastics/adhesives are non-asbestos; however, selective removal of mastics/adhesives as asbestos-containing waste material (ACWM) may be required to prepare the floor surface for floor tile replacement.
- B. Asbestos abatement activities are being performed in accordance with the United States Environmental Protection Agency (EPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), Commonwealth of Massachusetts Department of Labor Standards (MADLS), and EPA Asbestos Hazard Emergency Response Act (AHERA) requirements prior to renovation or demolition work that would otherwise disturb or impact asbestos-containing material(s) (ACM).
- C. Work shall be performed by a Commonwealth of Massachusetts Department of Labor Standards (MADLS)-licensed Contractor with certified Asbestos Workers and Supervisor(s). Training shall be in accordance with MADLS Regulation 453 CMR 6.00.
- D. The Town of Bourne (the "Owner") shall retain the services of Fuss & O'Neill EnviroScience, LLC (EnviroScience), or other consulting firm at their discretion, who shall be responsible for providing project monitoring, final visual inspection, and final clearance air sampling services. Final clearance air samples shall be conducted using phase contrast microscopy (PCM) or transmission electron microscopy (TEM) as required.

- E. Interior asbestos abatement shall be performed (as appropriate) within negative pressure enclosures (NPEs) as established herein.
- F. The following table summarizes the locations of work at each school and includes estimated ACM quantities to be repaired/removed.

Scope of Work

Asbestos-Containing Material	Location	Estimated Quantity	Recommended Repair/Removal Method
Bourne High School			
9” x 9” Vinyl Floor Tile	Classroom 11C	924 SF	The Contractor shall remove and dispose ACM within a NPE.
9” x 9” Vinyl Floor Tile	Classroom 13C	864 SF	
9” x 9” Vinyl Floor Tile	Classroom 15C	783 SF	
9” x 9” Vinyl Floor Tile	1 st Floor C- Wing Storage Room	168 SF	
9” x 9” Vinyl Floor Tile	Classroom 20C	756 SF	The Contractor shall remove and dispose ACM within a NPE.
9” x 9” Vinyl Floor Tile	Classroom 21C	783 SF	
9” x 9” Vinyl Floor Tile	Classroom 22C	1,107 SF	
9” x 9” Vinyl Floor Tile	Classroom 23C	864 SF	
9” x 9” Vinyl Floor Tile	Classroom 24C	1,188 SF	
9” x 9” Vinyl Floor Tile	Classroom 25C	783 SF	
9” x 9” Vinyl Floor Tile	2 nd Floor C- Wing Storage Room	75 SF	
Otis Memorial Elementary School			
9” x 9” Vinyl Floor Tile	Classroom 6	3 SF	The Contractor shall remove and dispose damaged ACM within a NPE.
9” x 9” Vinyl Floor Tile	Classroom 7	8 SF	The Contractor shall remove and dispose damaged ACM within a NPE.
9” x 9” Vinyl Floor Tile	Classroom 10	10 SF	The Contractor shall remove and dispose damaged ACM within a NPE.
9” x 9” Vinyl Floor Tile	Classroom 12	5 SF	The Contractor shall remove and dispose damaged ACM within a NPE.

Asbestos-Containing Material	Location	Estimated Quantity	Recommended Repair/Removal Method
9" x 9" Vinyl Floor Tile	Classroom 15	25 SF	The Contractor shall remove and dispose damaged ACM within a NPE.
9" x 9" Vinyl Floor Tile	Foyer and Hallway Outside of Teacher's Room	20 SF	The Contractor shall remove and dispose damaged ACM within a NPE.

SF = Square Feet

WORK PROCEDURES

- A. The Contractor shall file a notification to the Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Prevention (BWP) on standard form BWP AQ 06 "Notification Prior to Construction or Demolition" and submit form ANF-001 to MassDEP and MADLS for asbestos abatement work notification.
- B. Workers work will utilize disposable clothing and varied personal protective equipment (PPE) as required to the work task including respiratory protection as required by selection chart established in Occupational Safety and Health Administration (OSHA) Title 29 CFR, Part 1926.1101 and MADLS Regulation 453 CMR, Part 6.00.
- C. The Contractor shall perform personal exposure monitoring of workers as required by OSHA Title 29 CFR, Part 1926.1101. Personal air exposure monitoring, at a minimum, shall include monitoring for twenty-five percent (25%) of the on-site work personnel, or a minimum of two (2) workers per work shift.
- D. Ensure no electrical equipment is energized during decontamination work and electrical power shall be obtained from external power source from the Work Areas or with proper Ground Fault Circuit Interrupter (GFCI) protection. The Contractor shall be responsible for the electrical work; this work must be performed by a Massachusetts-licensed electrician. Observe all OSHA lock out tag out procedures.

WORK AREA PREPARATIONS

- A. Deactivate and/or isolate heating, ventilating, and air conditioning (HVAC) systems or zones to prevent contamination and fiber dispersal to other areas of the school. During the work, vents within the Work Area shall be "sealed" with duct tape and 2 layers of six (6)-mil thickness polyethylene (poly) sheeting.
- B. The Contractor shall be responsible for removing moveable objects remaining within the Work Area. The Contractor shall pre-clean moveable objects within the proposed Work Areas using high-efficiency particulate air (HEPA)-filtered vacuum equipment and/or wet-cleaning methods as appropriate, and remove such objects from Work Area to a temporary storage location.

- C. After HEPA-vacuum cleaning, cover fixed walls with 2 layers of four (4)-mil minimum thickness poly sheeting. Where fixed walls are not used, two layers of 6-mil poly sheeting shall be applied to a rigid framework of wood, metal, or PVC. Where floor tile/mastic is not being abated, cover the floor with 2 layers of 6-mil poly sheeting. Where ceiling materials are not being abated, cover ceilings with 4-mil poly sheeting in accordance with revised MassDEP regulations (310 CMR, Part 7.15(7)(c)(6)). All overlaps shall be sealed with tape and spray adhesive.
- D. Pursuant to MassDEP Regulation 310 CMR, Part 7.15(7)(c)(4), large openings such as open doorways, elevator doors, and passageways shall be first sealed with solid construction materials, such as plywood over studding, which shall constitute the outermost boundary of the asbestos work area. All cracks, seams and openings in such solid construction materials shall be caulked or otherwise sealed, so as to prevent the movement of asbestos fibers out of the work area.
- E. Asbestos-cement laboratory fume hood ductwork is present with cabinetry. Care should be exercised if cabinetry will be disturbed. Ductwork shall be covered with 2 layers of 6-mil poly sheeting if exposed.
- F. Create pressure differential to obtain a minimum of four air changes per hour within the Work Areas by use of acceptable HEPA-filtered Work Area ventilation units (HWAVUs) rated for at least 1,000 cubic feet per minute (CFM). At least one 1,000 CFM HWAVU shall be used in each NPE.
- G. Pre-clean fixed objects within the Work Areas, using HEPA-filtered vacuum equipment and/or wet-cleaning methods as appropriate, and enclose with 6-mil poly sheeting sealed with duct tape.
- H. Clean the proposed Work Areas using HEPA-filtered vacuum equipment or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment that is not equipped with HEPA filters.
- I. Post asbestos warning signs in accordance with OSHA Title 29 CFR, Part 1926.1101 at all approaches to the Work Area. Signs shall be conspicuously posted to permit a person to read signs and take precautionary measures to avoid exposure to airborne asbestos fiber concentrations.
- J. Occupied areas and/or building space not within the Work Areas shall be separated from asbestos abatement Work Areas by means of airtight barriers.
- K. The Contractor and the Asbestos Project Monitor shall visually inspect barriers several times daily to assure effective seal; defects shall be repaired immediately.

DECONTAMINATION SYSTEM

- A. The Contractor shall establish a three-chambered decontamination facility (decon) contiguous to the negative pressure enclosure. The decon shall consist of an equipment room, a shower room, and a clean room, in series. The only access between contaminated and uncontaminated areas shall be through the decon. If it is not feasible to construct the decon contiguous to the NPE, the Contractor shall establish a remote decon in close proximity. A single change-out unit may be utilized (with a remote decon) for

each mini-enclosure containment that will be established at the Otis Memorial Elementary School to abate lifting/damaged asbestos-containing floor tile.

- B. Access between the decon chambers shall be through double-flap curtain openings.
- C. Occupied areas and/or building space not within the abatement Work Areas shall be separated from asbestos abatement Work Areas by means of airtight barriers.
- D. Construct the decontamination system with wood or metal framing, 3/8-inch sheathing and cover both sides with 2 layers of 6-mil poly sheeting, sealed with spray glue and taped at the joints. Caulk joints watertight at floor, walls, and ceiling.
- E. The Contractor shall visually inspect work area barriers several times daily to assure effective seal. The Contractor shall immediately repair defects.

ASBESTOS REMOVAL PROCEDURE - INTERIOR

- A. The Contractor shall have a competent and qualified designated person on the project at all times during the project to ensure establishing a proper enclosure system, and proper work practices are followed, throughout the project.
- B. Clean all movable objects within the proposed Work Areas using HEPA-filtered vacuum equipment and/or wet cleaning methods as appropriate, and remove such objects from Work Areas to a temporary location (if necessary).
- C. Clean all fixed objects within the Work Areas; using HEPA-filtered vacuum equipment and/or wet-cleaning methods as appropriate, and enclose with a minimum of 6-mil poly sheeting sealed with tape. (Examples include electronic equipment).
- D. Spray asbestos materials with amended water using airless spray equipment or apply approved removal encapsulant to reduce the release of fibers during abatement activities. Fill disposal containers as removal proceeds. Seal filled containers and clean containers before removal to wash area. Wet clean each container thoroughly, double bag, and apply proper labels before moving to a holding area. Ensure that workers do not enter from uncontaminated areas into the washroom or the Work Area.
- E. After completion of removal work, all surfaces from which asbestos has been removed shall be cleaned using HEPA-filtered vacuum equipment and wet-wiped, or cleaned by an equivalent method, to remove visible material (wire brushes are not permitted). During this work, the surfaces being cleaned shall be kept wet.
- F. If at any time during asbestos abatement, should the Owner's on-site Asbestos Project Monitor suspect areas outside the Work Area are contaminated, they shall stop all abatement work until the Contractor takes steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections certify decontamination.

- G. Remove and containerize all visible accumulations of ACM and/or asbestos-containing waste material(s) (ACWM).
- H. Sealed disposal containers, and all equipment used in the Work Area, shall be included in the cleanup and shall be removed from Work Areas. Asbestos waste shall be placed in 6-mil poly disposal bags, outside of bags shall be cleaned and they shall be placed in a second disposal bag (double-bagged) before removal from the Work Area. Clean all surfaces with HEPA-filtered vacuum equipment before wet cleaning all surfaces within Work Area.
- I. The Owner's on-site Project Monitor shall conduct a post-abatement visual inspection with the critical barriers and door and window coverings in place. If visible accumulations or any suspect asbestos-containing dust or debris are identified in the Work Area, the Contractor shall repeat the cleaning until the area is in compliance. This shall be conducted solely at the Contractor's expense. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate cleanup of the Work Area. In addition, the on-site Project Monitor shall conduct a post-abatement visual inspection after the Contractor dismantles the work area barriers to confirm that no visible, suspect debris became trapped behind critical barriers (e.g., behind radiators, etc.) during abatement.

ASBESTOS REMOVAL PROCEDURE - FLOORING AND MASTICS

- A. Prior to beginning the removal of any resilient floor covering, remove all movable objects from the Work Area. The Contractor shall remove all layers of floor tile and associated underlayments.
- B. Before using wet methods to remove resilient flooring, seal openings and penetrations in the floor to prevent water leakage.
- C. Debris and Waste
 - 1. Whole floor tiles shall be removed and stacked in boxes or wrapped in felt and then placed in labeled disposal bags. At the Contractor's option, floor tiles may be placed directly into durable leak-tight containers and/or fiber drums.
 - 2. Shovel broken floor tiles and debris into nylon-reinforced bags; these bags shall be placed in a disposal bag or placed directly into leak-tight drums.
 - 3. Place bagged waste in a second disposal bag during decontamination and dispose as asbestos waste.
- D. After completion of floor tile removal, the Contractor shall remove non-ACM mastics/adhesives as necessary for proper floor tile replacement. Mastics/adhesives shall be disposed as ACWM.
- E. After completion of all resilient flooring removal work, the Contractor shall conduct final cleaning.

DISPOSAL OF WASTE

- A. The disposal of ACM and/or ACWM, supplies, rags, disposable clothing, respirator cartridges, etc., shall be completed in accordance with MassDEP and EPA regulations.

- B. Disposal approvals shall be obtained prior to start of asbestos removal activities.
- C. A copy of approved disposal authorization shall be provided to the Owner and Owner's Authorized Representative prior to ACM and/or ACWM leaving the Site.
- D. Copies of all Waste Shipment Records (WSRs) shall be provided to the Owner no later than 35 calendar days from when the waste was removed from the Site. WSRs shall be signed by the landfill operator upon receipt, and the quantity of asbestos debris leaving the work site and arriving at the landfill shall be acknowledged.
- E. All wash water and shower water shall be collected and filtered through a five-micron filter before discharge.
- F. All asbestos debris shall be transported in covered/sealed vans, boxes, or dumpsters that are physically isolated from the driver by an airtight barrier. All vehicles must be properly licensed to meet Commonwealth of Massachusetts DOT requirements.

END OF PLAN

Work Plan Prepared by:

Fuss & O'Neill EnviroScience, LLC.
50 Redfield Street, Suite 100
Boston, MA 02122



Project Designer: Dustin A. Diedricksen
Asbestos Designer Certification No. AD000037



July 27, 2015
Revised September 4, 2015

Mr. Ed Donoghue
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, MA 02532

Re: Asbestos Abatement Work Plan
James F. Peebles Elementary School
Bourne, Massachusetts
Fuss & O'Neill EnviroScience, LLC No. 20121141.B4E

Dear Mr. Donoghue:

Attached please find the Asbestos Abatement Work Plan for conducting summer asbestos abatement at the James F. Peebles Elementary School located at 70 Trowbridge Road in Bourne, Massachusetts.

The Asbestos Abatement Contractor is required to complete and submit an asbestos notification form. The form must be submitted to the Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) and to the Commonwealth of Massachusetts Department of Labor Standards (MADLS).

If you should have any questions regarding this procedure or this work plan, please do not hesitate to call me at (617) 282-4675, extension 4703.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. A. Diedricksen'.

Dustin A. Diedricksen
Project Manager

DD/amf

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Connecticut
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Rhode Island
South Carolina

WORK PLAN
FOR REMOVAL AND DISPOSAL
OF ASBESTOS-CONTAINING MATERIALS
JAMES F. PEEBLES ELEMENTARY SCHOOL
BOURNE, MASSACHUSETTS

BACKGROUND

- A. Asbestos abatement activities shall include window glazing removal associated with broken window-pane replacement to occur at the James F. Peebles Elementary School located at 70 Trowbridge Road in Bourne Massachusetts (the "Site").
- B. Abatement activities are anticipated to occur in August 2015. A Massachusetts-licensed Asbestos Abatement Contractor (the "Contractor") will conduct the asbestos abatement work.
- C. Abatement activities will occur while the school is not operational (i.e., during summer vacation).

DESCRIPTION OF WORK

- A. The scope of abatement work shall include removal of asbestos-containing window glazing at the Site.
- B. Asbestos abatement activities will be performed in accordance with the United States Environmental Protection Agency (EPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), Commonwealth of Massachusetts Department of Labor Standards (MADLS), and EPA Asbestos Hazard Emergency Response Act (AHERA) requirements prior to renovation or demolition work that would otherwise disturb or impact asbestos-containing material(s) (ACM).
- C. Work shall be performed by a Commonwealth of Massachusetts Department of Labor Standards (MADLS)-licensed Contractor with certified Asbestos Workers and Supervisor(s). Training shall be in accordance with MADLS Regulation 453 CMR 6.00.
- D. Bourne Public Schools (the "Owner") shall retain the services of Fuss & O'Neill EnviroScience, LLC (EnviroScience) who shall be responsible for providing project monitoring, final visual inspection, and final clearance air sampling services (if applicable). Final clearance air samples shall be conducted using phase contrast microscopy (PCM) or transmission electron microscopy (TEM) as required.
- E. Exterior asbestos abatement shall be performed (as appropriate) as established herein.
- F. The following table summarizes the ACM removal locations and estimated quantities:

Scope of Work

Asbestos-Containing Material	Location	Estimated Quantity	Recommended Repair/Removal Method
Window Glazing	Rooms 1, 3, 4, 7, 8, & Kitchen Bathroom (at Broken Panes)	125 LF (10 Windows)	Contractor Shall Remove & Dispose ACM from Exterior to Facilitate Window Repairs. Exterior Protections & Interior Critical Barriers Shall be Established.

LF = Linear Feet

WORK PROCEDURES

- A. The Contractor shall file an asbestos notification to the Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Prevention (BWP) on standard form BWP AQ 06 "Notification Prior to Construction or Demolition" and submit form BWP-AQ-04 - ANF-001 to MassDEP and MADLS for asbestos abatement work notification.
- B. Workers work will utilize disposable clothing and varied personal protective equipment (PPE) as required to the work task including respiratory protection as required by selection chart established in Occupational Safety and Health Administration (OSHA) Title 29 CFR, Part 1926.1101 and MADLS Regulation 453 CMR, Part 6.00.
- C. The Contractor shall perform personal exposure monitoring of workers as required by OSHA Title 29 CFR, Part 1926.1101. Personal air exposure monitoring, at a minimum, shall include monitoring for twenty-five percent (25%) of the on-site work personnel, or a minimum of two (2) workers per work shift.
- D. Ensure no electrical equipment is energized during decontamination work and electrical power shall be obtained from external power source from the work areas or with proper Ground Fault Circuit Interrupter (GFCI) protection. The Contractor shall be responsible for the electrical work; this work must be performed by a Commonwealth of Massachusetts-licensed electrician. Observe all OSHA lock out - tag out procedures.

WORK AREA PREPARATIONS

- A. Seal off all openings (e.g., windows, doors, ventilation openings, drains, grilles, diffuser grates, etc.) with two layers of polyethylene (poly) sheeting (minimum 6-mil thickness) sealed securely with tape. Doorways and openings that will not be used for passage during work must be sealed with critical barriers as required for separation of work area and occupied areas.
- B. Heating, ventilating, and air conditioning (HVAC) systems shall remain deactivated during removal activities. During the work, vents within the work area shall be sealed with duct tape and two layers of 6-mil poly sheeting.
- C. Post asbestos warning signs in accordance with OSHA Title 29 CFR, Part 1926.1101 at all approaches to the work area. Warning signs shall be conspicuously posted to permit a person to read signs and take precautionary measures to avoid asbestos exposure.
- D. Maintain emergency and fire exits from the work area, or establish alternative exits satisfactory to fire officials.
- E. Pre-clean floors and all horizontal surfaces (e.g., window sills, etc.) within work areas. Windows shall be sealed as critical barriers with two layers of 6-mil poly sheeting after appropriate pre-cleaning (as determined by Asbestos Project Monitor).

DECONTAMINATION SYSTEM

- A. The Contractor shall establish a three-chambered remote decontamination facility (decon). The decon shall consist of an equipment room, a shower room, and a clean room, in-series.
- B. Access between the decon chambers shall be through double-flap curtain openings.
- C. Occupied areas and/or building space outside the abatement work areas shall be separated from asbestos abatement work areas by means of rigid and airtight barriers.
- D. Construct the decontamination system with wood or metal framing, 3/8-inch sheathing and cover both sides with a two layers of 6-mil poly sheeting, completely sealed with spray adhesive or taped at the joints. Caulk joints watertight at floor, walls, and ceiling.
- E. The Contractor shall visually inspect work area barriers several times daily to assure effective seal. The Contractor shall immediately repair defects.

ASBESTOS REMOVAL PROCEDURE

- A. The Contractor shall have a competent and qualified designated person on the project at all times during the project to ensure establishing a proper enclosure system, and proper work practices are followed, throughout the project.
- B. Spray asbestos materials with amended water to reduce the fiber release during abatement activities. Fill disposal bags as removal proceeds; then double-bag, and apply proper labels for disposal.

- C. After completion of removal work, all surfaces from which asbestos has been removed shall be cleaned using HEPA-filtered vacuum equipment and wet-wiped, or cleaned by an equivalent method, to remove visible material (wire brushes are not permitted). During this work, the surfaces being cleaned shall be kept wet.
- D. Should the Owner's on-site Asbestos Project Monitor suspect areas outside the Work Area are contaminated during asbestos abatement, they shall stop all abatement work until the Contractor takes steps to decontaminate these areas, and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections certify decontamination.
- E. Remove and containerize all visible ACM accumulations and/or asbestos-containing waste material(s) (ACWM).
- F. Sealed disposal containers/bags, and all equipment used in the work area, shall be included in the cleanup, and shall be removed from the work areas. Asbestos waste shall be placed in 6-mil poly disposal bags, outside of bags shall be cleaned, and they shall be placed in a second disposal bag (double-bagged) before removal from the work area. Clean all surfaces with HEPA-filtered vacuum equipment before wet-cleaning all surfaces within the work area.
- G. The Owner's on-site Project Monitor shall conduct a post-abatement visual inspection with the critical barriers and window coverings in-place. If visible accumulations or any suspect asbestos-containing dust or debris are identified in the work area, the Contractor shall repeat the cleaning until the area is in compliance. This shall be conducted solely at the Contractor's expense. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate cleanup of each work area. In addition, the on-site Project Monitor shall conduct a post-abatement visual inspection after the Contractor dismantles the work area barriers to confirm that no visible, suspect debris became trapped behind critical barriers during abatement.

DISPOSAL OF WASTE

- A. The disposal of ACM and/or ACWM, supplies, rags, disposable clothing, used PPE, unfiltered water used in removal or decontamination, etc., shall be completed in accordance with MassDEP and EPA regulations.
- B. Disposal approvals shall be obtained prior to start of asbestos removal activities.
- C. A copy of approved disposal authorization shall be provided to the Owner and Owner's Authorized Representative prior to ACM and/or ACWM leaving the Site.
- D. Copies of all Waste Shipment Records (WSRs) shall be provided to the Owner no later than 35 calendar days from when the waste was removed from the Site. WSRs shall be signed by the landfill operator upon receipt, and the quantity of asbestos debris leaving the work site and arriving at the landfill shall be acknowledged.

- E. All wash water and shower water shall be collected and filtered through a five-micron filter before discharge.
- F. All asbestos debris shall be transported in covered/sealed vans, boxes, or dumpsters that are physically isolated from the driver by an airtight barrier. All vehicles must be properly licensed to meet Commonwealth of Massachusetts DOT requirements.

END OF PLAN

Work Plan Prepared by:

Fuss & O'Neill EnviroScience, LLC.
50 Redfield Street, Suite 100
Boston, MA 02122



Project Designer: Dustin A. Diedricksen
Asbestos Designer Certification No. AD000037

Appendix D

PCM Area Air Monitoring Worksheets





FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High school & Oris Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 2nd Floor- B Wing

Project Number: 20121141.B4E
Project Manager: Dustin Dietricksen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229

Sampler Name: Mike Coffey
Sample Date: 07/15/15
Analyst Name: Mike Coffey
Analysis Date: 07/15/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0715	Field Blank									<5.5/100	<7	
FB2-MC-0715	Field Blank									<5.5/100	<7	
01-MC-0715	Room 25 C	1	0940	1430	290	5	5	5	1450	09/100	11.5	0.0030
02-MC-0715	OWA Room 25 C	1	0941	1431	290	5	5	5	1450	07/100	8.9	0.0024
03-MC-0715	Room 23 C	1	0942	1432	290	5	4.9	4.95	1436	<5.5/100	<7	<0.0019
04-MC-0715	OWA Room 20 C	1	0943	1433	290	5	4.7	4.85	1407	<5.5/100	<7	<0.0019
05-MC-0715	OWA Room 23 C	1	0944	1434	290	5	5.2	5.1	1479	<5.5/100	<7	<0.0018
06-MC-0715	OWA Room 21 C	1	1440	1650	130	10	10	10	1300	<5.5/100	<7	<0.0021
07-MC-0715	OWA Room 20 C	1	1441	1651	130	10	10	10	1300	<5.5/100	<7	<0.0021
08-MC-0715	OWA Room 24 C	1	1442	1652	130	10	10.1	10.05	1307	5.5/100	7	0.0022
09-MC-0715	OWA Room 25 C	1	1443	1653	130	10	10	10	1300	06/100	7.6	0.0023
10-MC-0715	Room 25 C	1	1444	1654	130	10	9.8	9.9	1287	<5.5/100	<7	<0.0021
01-MC-0715	Duplicate Count									11/100	14	0.0037

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/filter
(0.00785 mm²/field) x liters x 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 fibers/100 fields)	0.28	0.52
3 (>50 fibers/100 fields)	0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



FUSS & O'NEILL

EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High school & Otis Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 2nd Floor- B Wing

Project Number: 20121141.B4E
Project Manager: Dustin Dieckhsen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229

Sampler Name: Mike Coffey
Sample Date: 07/16/15
Analyst Name: Mike Coffey
Analysis Date: 07/16/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (fibers/fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0716	Field Blank									<5.5/100	<7	
FB2-MC-0716	Field Blank									<5.5/100	<7	
01-MC-0716	Room 24 C	1	0930	1300	210	6.5	6.3	6.4	1344	06/100	7.6	0.0022
02-MC-0716	Room 23 C	1	0931	1301	210	6.5	6.5	6.5	1365	<5.5/100	<7	<0.0020
03-MC-0716	OWA RM 21 C	1	0932	1302	210	6.5	6.7	6.6	1386	<5.5/100	<7	<0.0020
04-MC-0716	OWA RM 23 C	1	0933	1303	210	6.5	6.5	6.5	1365	<5.5/100	<7	<0.0020
05-MC-0716	OWA RM 25 C	1	0934	1304	210	6.5	6.4	6.45	1355	<5.5/100	<7	<0.0020
06-MC-0716	Room 21 C	1	1310	1320	130	10	10	10	1300	07/100	8.9	0.0026
07-MC-0716	Room 25 C	1	1311	1321	130	10	9.9	9.95	1294	06/100	7.6	0.0023
08-MC-0716	OWA RM 21 C	1	1312	1322	130	10	10	10	1300	7.5/100	9.6	0.0028
09-MC-0716	OWA RM 23 C	1	1313	1323	130	10	10	10	1300	6.5/100	8.3	0.0025
10-MC-0716	OWA RM 25 C	1	1314	1324	130	10	10.1	10.05	1300	07/100	8.9	0.0026
01-MC-0716	Duplicate Count									<5.5/100	<7	0.0020

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/filter
(0.00785 mm²/field) x liters x (1000 cc/liter)

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Otis Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 2nd Floor- B Wing

Project Number: 20121141.B4E
Project Manager: Dustin Diedrichsen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229
Sampler Name: Mike Coffey
Sample Date: 07/18/15
Analyst Name: Mike Coffey
Analysis Date: 07/18/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0718	Field Blank									<5.5/100	<7	
FB2-MC-0718	Field Blank									<5.5/100	<7	
01-MC-0718	Room 21 C	1	0730	1200	270	6.5	6.5	6.5	1755	08/100	10.2	0.0022
02-MC-0718	OWA Room 25 C	1	0731	1201	270	6.5	6.6	6.55	1769	07/100	8.9	0.0019
03-MC-0718	Room 23 C	1	0732	1202	270	6.5	6.5	6.5	1755	08/100	10.2	0.0022
04-MC-0718	OWA Room 20 C	1	0733	1203	270	6.5	6.5	6.5	1755	09/100	11.5	0.0025
05-MC-0718	OWA Room 23 C	1	0734	1204	270	6.5	6.4	6.45	1742	06/100	7.6	0.0017
06-MC-0718	OWA Room 21 C	1	1210	1515	185	8	8	8	1480	07/100	8.9	0.0023
07-MC-0718	OWA Room 23 C	1	1211	1516	185	8	7.9	7.95	1471	<5.5/100	<7	<0.0018
08-MC-0718	OWA Room 25 C	1	1222	1517	185	8	8	8	1480	<5.5/100	<7	<0.0018
09-MC-0718	OWA Room 24 C	1	1223	1518	185	8	8.1	8.05	1489	<5.5/100	<7	<0.0018
10-MC-0718	OWA Room 22 C	1	1224	1519	185	8	8	8	1480	<5.5/100	<7	<0.0018
04-MC-0718	Duplicate Count									07/100	8.9	0.0020

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)
CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/filter
(0.00785 mm²/field) x liters x (1000 cc/liter)

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab St	Inter Lab St
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 fibers/100 fields)	0.28	0.52
3 (>50 fibers/100 fields)	0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



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EnviroScience, LLC

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Form 7400-05
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50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High school & Ois Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 2nd Floor- B Wing

Project Number: 20121141.B4E
Project Manager: Dustin Diedrichsen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229

Sampler Name: Mike Coffey
Sample Date: 07/19/15
Analyst Name: Mike Coffey
Analysis Date: 07/19/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0719	Field Blank									<5.5/100	<7	
FB2-MC-0719	Field Blank									<5.5/100	<7	
01-MC-0719	OWA Decon	1	0715	1158	283	6.5	6.5	6.5	1840	<5.5/100	<7	<0.0015
02-MC-0719	OWA Room 25 C	1	0716	1159	283	6.5	6.5	6.5	1840	<5.5/100	<7	<0.0015
03-MC-0719	OWA Room 24 C	1	0717	1200	283	6.5	6.5	6.5	1840	<5.5/100	<7	<0.0015
04-MC-0719	OWA Room 22 C	1	0718	1201	283	6.5	6.4	6.45	1825	<5.5/100	<7	<0.0015
05-MC-0719	OWA Room 23 C	1	0719	1202	283	6.5	6.5	6.5	1840	<5.5/100	<7	<0.0021
06-MC-0719	OWA Decon	1	1210	1530	200	6.5	6.5	6.5	1300	<5.5/100	<7	<0.0021
07-MC-0719	OWA Room 23 C	1	1211	1531	200	6.5	6.5	6.5	1300	<5.5/100	<7	<0.0021
08-MC-0719	OWA Room 25 C	1	1212	1532	200	6.5	6.7	6.6	1320	<5.5/100	<7	<0.0021
09-MC-0719	OWA Room 24 C	1	1213	1533	200	6.5	6.5	6.5	1300	<5.5/100	<7	<0.0021
10-MC-0719	OWA Room 22 C	1	1214	1534	200	6.5	6.6	6.55	1310	<5.5/100	<7	<0.0021
01-MC-0719	Duplicate Count									<5.5/100	<7	<0.0021

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/filter
(0.00785 mm²/field) x liters x (1000 cc/liter)

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



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EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

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50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Otis Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 2nd & 1st Floor- B & C Wing

Project Number: 20121141.B4E
Project Manager: Dustin Diedrichsen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229

Sampler Name: Mike Coffey
Sample Date: 07/20/15
Analyst Name: Mike Coffey
Analysis Date: 07/20/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0720	Field Blank									<5.5/100	<7	
FB2-MC-0720	Field Blank									<5.5/100	<7	
01-MC-0720	OWA Room 21 C	1	0800	1258	298	4.5	4.5	4.5	1341	<5.5/100	<7	<0.0020
02-MC-0720	OWA Room 25 C	1	0801	1259	298	4.5	4.3	4.4	1311	<5.5/100	<7	<0.0020
03-MC-0720	OWA Room 24 C	1	0802	1300	298	4.5	4.5	4.5	1341	<5.5/100	<7	<0.0020
04-MC-0720	OWA Room 15 C	1	0803	1301	298	4.5	4.6	4.55	1356	<5.5/100	<7	<0.0020
05-MC-0720	OWA Room 12 C	1	0804	1302	298	4.5	4.5	4.5	1341	<5.5/100	<7	<0.0020
02-MC-0720	Duplicate Count									<5.5/100	<7	<0.0020

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field

Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor

CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) ÷ (BLANK fibers/field)

(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) ÷ (BLANK fibers/field) × (385 mm²/filter)

(0.00785 mm²/field) × liters × 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.43

*Project Activity Code:

Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet
For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High school & Otis Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 1st Floor-C Wing

Project Number: 20121141.B4E Sample Name: Mike Coffey
Project Manager: Dustin Dieckhsen Sample Date: 07/21/15
Rotometer Number: 101415 Analyst Name: Mike Coffey
Rotometer Cal. Date: 2/20/15 Analysis Date: 07/21/15 AAR#: 9467
Microscope Number: 100229 Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0721	Field Blank									<5.5/100	<7	
FB2-MC-0721	Field Blank		Submit at least 2 blanks or 10% of the number of samples							<5.5/100	<7	
01-MC-0721	OWA Room 14 C	1	0830	1615	465	4	4	4	1860	11/100	14	0.0029
02-MC-0721	OWA Room 14 C	1	0832	1615	463	4	4	4	1852	<5.5/100	<7	<0.0015
03-MC-0721	OWA Room 15 C	1	0833	1615	462	4	4.1	4.05	1871	06/100	7.6	0.0016
04-MC-0721	OWA Decon	1	0834	1616	462	4	4	4	1848	<5.5/100	<7	<0.0015
05-MC-0721	OWA Decon	1	0835	1616	461	4	3.9	3.95	1821	<5.5/100	<7	<0.0015
05-MC-0721	Duplicate Count									<5.5/100	<7	<0.0015

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)
CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/liter
(0.00785 mm²/field) x liters x 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range		Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Clearance
5	Environmental
6	Personal
7	Other



FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Oris Memorial Elementary School
Building Name/Number: Bourne High School
Site Address: Bourne, Ma
Work Area: 1st Floor-C Wing & Men and Woman Bathroom (B Wing)

Project Number: 20121141.B4H
Project Manager: Dustin Dieckhsen
Rotometer Number: 101415
Rotometer Cal. Date: 2/20/15
Microscope Number: 100229

Sampler Name: Mike Coffey
Sample Date: 07/22/15
Analyst Name: Mike Coffey
Analysis Date: 07/22/15 AAR#: 9467
Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0722	Field Blank									<5.5/100	<7	
FB2-MC-0722	Field Blank									<5.5/100	<7	
01-MC-0722	Woman's Room	4	1424	1551	87	14.9	14.9	14.9	1296	10/100	13	0.0038
02-MC-0722	Woman's Room	4	1424	1551	87	14.9	14.9	14.9	1296	09/100	11.5	0.0034
03-MC-0722	Woman's Room	4	1424	1552	88	14.9	14.9	14.9	1311	06/100	7.6	0.0022
04-MC-0722	Woman's Room	4	1425	1552	87	14.9	14.9	14.9	1296	12/100	15.3	0.0045
05-MC-0722	Woman's Room	4	1425	1552	87	14.9	14.9	14.9	1296	<5.5/100	<7	<0.0021
06-MC-0722	Men's Room	4	1429	1555	86	14.9	14.9	14.9	1281	<5.5/100	<7	<0.0021
07-MC-0722	Men's Room	4	1429	1555	86	14.9	14.9	14.9	1281	<5.5/100	<7	<0.0021
08-MC-0722	Men's Room	4	1430	1555	85	14.9	14.9	14.9	1267	<5.5/100	<7	<0.0021
09-MC-0722	Men's Room	4	1430	1556	85	14.9	14.9	14.9	1267	<5.5/100	<7	<0.0021
10-MC-0722	Men's Room	4	1430	1556	85	14.9	14.9	14.9	1267	<5.5/100	<7	<0.0021
03-MC-0722	Duplicate Count									<5.5/100	<7	<0.0021

Submit at least 2 blanks or 10% of the number of samples

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)
CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/liter
(0.00785 mm²/field) x liters x 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range	Intra Lab St	Inter Lab St
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.43

*Project Activity Code:	Code	Type
1	Background	
2	Set-Up	
3	During	
4	Cleanance	
5	Environmental	
6	Personal	
7	Other	



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EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Otis Memorial Elementary School
Building Name/Number: Otis Elementary
Site Address: Bourne, Ma
Work Area: Room 15

Project Number: 20121141.B4E Sampler Name: Mike Coffey
Project Manager: Dustin Dieckhsen Sample Date: 08/27/15
Rotometer Number: 101415 Analyst Name: Mike Coffey
Rotometer Cal. Date: 2/20/15 Analysis Date: 08/27/15 AAR#: 9467
Microscope Number: 100229 Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (fibers/fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0827	Field Blank									<5.5/100	<7	
FB2-MC-0827	Field Blank									<5.5/100	<7	
01-MC-0827	Room 15	4	1530	1710	100	13	12.9	12.95	1295	<5.5/100	<7	<0.0021
02-MC-0827	Room 15	4	1530	1711	101	13	13	13	1313	<5.5/100	<7	<0.0021
03-MC-0827	Room 15	4	1531	1711	100	15	14.9	14.95	1495	<5.5/100	<7	<0.0018
04-MC-0827	Room 15	4	1531	1711	100	15	14.8	14.9	1490	<5.5/100	<7	<0.0018
05-MC-0827	Room 15	4	1531	1712	101	15	15	15	1515	<5.5/100	<7	<0.0018
02-MC-0827	Duplicate Count									<5.5/100	<7	<0.0021

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field
Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor
CONCENTRATION (fibers/mm²) = (SAMPLE fibers/field) ÷ (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) ÷ (BLANK fibers/field) x (385) mm²/filter
(0.00785 mm/field) x liters x 1000 cc/liter

IC	Inside Containment	
OCB	Outside Critical Barrier	
Decon	Decontamination Facility	
Range	Intra Lab Sr	Inter Lab Sr
1 (5-20 fibers/100 fields)	0.34	0.57
2 (>20-50 Fibers/100 fields)	0.28	0.52
3 (>50 Fibers/100 fields)	0.27	0.43

*Project Activity Code:	Code	Type
	1	Background
	2	Set-Up
	3	During
	4	Clearance
	5	Environmental
	6	Personal
	7	Other



FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Otis Memorial Elementary School
Building Name/Number: Otis Elementary
Site Address: Bourne, Ma
Work Area: Main Office

Project Number: 20121141.B4E Sampler Name: Mike Coffey
Project Manager: Dustin Dieckmann Sample Date: 08/27/15
Rotometer Number: 101415 Analyst Name: Mike Coffey
Rotometer Cal. Date: 2/20/15 Analysis Date: 08/27/15 AAR#: 9467
Microscope Number: 100229 Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm ²	Fibers/cc
FB1-MC-0827	Field Blank									<5.5/100	<7	
FB2-MC-0827	Field Blank									<5.5/100	<7	
Submit at least 2 blanks or 10% of the number of samples												
01-MC-0827	Main Office	4	1105	1240	95	13	13	13	1235	12/100	15.27	0.0048
02-MC-0827	Main Office	4	1105	1240	95	13	13	13	1235	10/100	12.74	0.0040
03-MC-0827	Main Office	4	1106	1241	95	13	13	13	1235	09/100	11.46	0.0036
04-MC-0827	Main Office	4	1106	1241	95	15	15	15	1425	13/100	16.56	0.0045
05-MC-0827	Main Office	4	1106	1241	95	15	15	15	1425	11/100	14.01	0.0038
01-MC-0827	Duplicate Count									10/100	12.74	0.0040

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field

Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor

CONCENTRATION (Fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385 mm²/filter)
(0.00785 mm²/field) x liters x 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range		Initial Lab Str.	Inter Lab Str.
1 (5-20 fibers/100 fields)		0.34	0.57
2 (>20-50 Fibers/100 fields)		0.28	0.52
3 (>50 Fibers/100 fields)		0.27	0.43

*Project Activity Code:

Code	Type
1	Background
2	Set-Up
3	During
4	Cleanance
5	Environmental
6	Personal
7	Other



FUSS & O'NEILL
EnviroScience, LLC

Area Air Monitoring Worksheet
For Asbestos Field Analysis

Form 7400-05
Edition September 2014
Supersedes previous editions

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High school & Otis Memorial Elementary School
Building Name/Number: Otis Elementary
Site Address: Bourne, Ma
Work Area: Room 12

Project Number: 20121141.B4E Sampler Name: Mike Coffey
Project Manager: Dustin Diedricksen Sample Date: 08/27/15
Rotometer Number: 101415 Analyst Name: Mike Coffey
Rotometer Cal. Date: 2/20/15 Analysis Date: 08/27/15 AAR#: 9467
Microscope Number: 100229 Reviewed By: _____

Sample ID Number (#-Initials-Date)	Sample Location	Activity Code*	Sample Time		Sample Duration Minutes	Flow Rate (LPM)			Total Volume Liters	Fiber Count (Fibers/Fields)	Concentration	
			On	Off		Pre	Post	Ave			Fibers/mm²	Fibers/cc
FB1-MC-0827	Field Blank		Submit at least 2 blanks or 10% of the number of samples							<5.5/100	<7	
FB2-MC-0827	Field Blank									<5.5/100	<7	
01-MC-0827	Room 12	4	1245	1422	97	13	13	13	1261	<5.5/100	<7	<0.0022
02-MC-0827	Room 12	4	1245	1422	97	13	13	13	1261	<5.5/100	<7	<0.0022
03-MC-0827	Room 12	4	1245	1423	98	15	15	15	1470	<5.5/100	<7	<0.0019
04-MC-0827	Room 12	4	1246	1423	97	15	15	15	1455	<5.5/100	<7	<0.0019
05-MC-0827	Room 12	4	1246	1423	97	15	15	15	1455	<5.5/100	<7	<0.0019
01-MC-0827	Duplicate Count									<5.5/100	<7	<0.0022

Reference Method: NIOSH 7400 Issue 2, 8/15/94 Limit of Detection: 0.055 fibers/field

Sample Type: 25 mm 3 piece 0.8µ mixed cellulose ester PCM Air Monitor

CONCENTRATION (fibers/mm²) = (SAMPLE fibers/field) - (BLANK fibers/field)
(0.00785 mm²/field)

CONCENTRATION (fibers/cc) = (SAMPLE fibers/field) - (BLANK fibers/field) x (385) mm²/liter
(0.00785 mm²/field) x liters x 1000 cc/liter

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

Range		Intra Lab St.	Inter Lab St.
1 (5-20 fibers/100 fields)		0.34	0.57
2 (>20-50 Fibers/100 fields)		0.28	0.52
3 (>50 Fibers/100 fields)		0.27	0.43

*Project Activity Code:	
Code	Type
1	Background
2	Set-Up
3	During
4	Cleanance
5	Environmental
6	Personal
7	Other

Appendix E

Final Visual Inspection Forms





FUSS & O'NEILL
EnviroScience, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 7/20/15



Removal



Encapsulation



Enclosure



Repair



Cleanup

PROJECT NAME:

Bourne High School & Otis Memorial Elementary School

BUILDING:

Bourne High School

Project No.:

20121411.B4E

SITE ADDRESS:

Bourne, Ma

WORK AREA:

2nd Floor B-Wing

CONTRACTOR:

Allstate Asbestos Abatement

☒ Pass

☐ Fail

☒ Neg. Pressure Enclosure



Mini-Enclosure



Glovebag



Other (Describe Below)



None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9 x 9 Floor Tile

QTY:

5556

QTY:

QTY:

QTY:

QTY:

QTY:

QTY:

QTY:

QTY:

QTY:

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

QTY:

QTY:

QTY:

QTY:

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor

☒ Horizontal Surfaces

☒ Pipes

☒ Mechanical Equipment

☒ Duct Work

☒ Vertical Surfaces

☒ Decon Unit

☒ Contractor's Equipment

☒ Fixtures

☒ Enclosed Items

☒ Waste Load Out

☒ Other:

FIELD OBSERVATIONS

1 Negative Pressure Enclosure

Rooms 20C, 21C, 22C, 23C, 24C, 25C, 2nd Floor C-Wing Storage RM.

AIR CLEARANCE:



PCM (# of Samples=

)



TEM



Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector:

Mike Coffey
PRINTED

Mike Coffey
SIGNATURE

I have read and understand these results.

Contractor's Supervisor:

Zak Savlong
PRINTED

SIGNATURE



FUSSELL & O'NEILL
Environmental Science, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 7/22/15	☒ Removal	☐ Encapsulation	☐ Enclosure	☐ Repair	☐ Cleanup
PROJECT NAME:	Bourne High School & Otis Memorial Elementary School				
BUILDING:	Bourne High School	Project No.:	20121411.B4E		
SITE ADDRESS:	Bourne, Ma				
WORK AREA:	1 st Floor C-Wing			☒ Pass ☐ Fail	
CONTRACTOR:	Allstate Asbestos Abatement				
☒ Neg. Pressure Enclosure ☐ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☐ None					

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9 x 9 Floor Tile	QTY:	2743 sf	QTY:	
	QTY:		QTY:	
	QTY:		QTY:	
	QTY:		QTY:	
	QTY:		QTY:	

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

	QTY:		QTY:	
	QTY:		QTY:	

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

- | | | | |
|---|---|--|--|
| ☒ Floor | ☒ Horizontal Surfaces | ☒ Pipes | ☒ Mechanical Equipment |
| ☒ Duct Work | ☒ Vertical Surfaces | ☒ Decon Unit | ☒ Contractor's Equipment |
| ☒ Fixtures | ☒ Enclosed Items | ☒ Waste Load Out | ☒ Other: |

FIELD OBSERVATIONS

1 Negative Air Pressure Enclosure

Rooms 11C, 13C, 15C, & 1st Floor C-Wing Storage Room

AIR CLEARANCE: ☐ PCM (# of Samples=) ☐ TEM ☒ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector: Mike Coffey
PRINTED

Mike Coffey
SIGNATURE

I have read and understand these results.

Contractor's Supervisor: Zak Sawlong
PRINTED

SIGNATURE



FUSS & O'NEILL
EnviroScience, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 7/22/15 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

PROJECT NAME: Worcester Public Schools

BUILDING: Bourne High School

Project No.: 20121141.04E

SITE ADDRESS: Bourne, Ma

WORK AREA: Boys & Girls Bathroom (1st Floor Side Entrance)

CONTRACTOR: Allstate Asbestos Abatement

☒ Pass
☐ Fail

☒ Neg. Pressure Enclosure ☐ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☐ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9" x 9" Floor Tile	QTY: 95 sf		QTY:
	QTY:		QTY:
	QTY:		QTY:
	QTY:		QTY:
	QTY:		QTY:

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

	QTY:		QTY:
	QTY:		QTY:

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor ☒ Horizontal Surfaces ☒ Pipes ☒ Mechanical Equipment
☒ Duct Work ☒ Vertical Surfaces ☒ Decon Unit ☒ Contractor's Equipment
☒ Fixtures ☒ Enclosed Items ☒ Waste Load Out ☐ Other:

FIELD OBSERVATIONS

Two negative pressure enclosures in each bathroom

AIR CLEARANCE: ☒ PCM (# of Samples=) ☐ TEM ☐ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector: Mike Coffey
PRINTED

SIGNATURE

I have read and understand these results.

Contractor's Supervisor:
PRINTED

SIGNATURE



FUSS & O'NEILL
EnviroScience, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 8/24/15

☒ Removal

☐ Encapsulation

☐ Enclosure

☐ Repair

☐ Cleanup

PROJECT NAME:

Bourne High School & Otis Memorial Elementary

BUILDING:

Otis Memorial Elementary

Project No.:

20121141.04E

SITE ADDRESS:

WORK AREA:

Room 12, 15 & Outside Main Office

CONTRACTOR:

All State Abatement

☒ Pass

☐ Fail

☐ Neg. Pressure Enclosure

☐ Mini-Enclosure

☐ Glovebag

☐ Other (Describe Below)

☐ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9'x9" Floor tile	QTY :	506F	QTY :
	QTY :		QTY :
	QTY :		QTY :
	QTY :		QTY :
	QTY :		QTY :

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

QTY :	QTY :
----------	----------

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor

☒ Horizontal Surfaces

☒ Pipes

☒ Mechanical Equipment

☒ Duct Work

☒ Vertical Surfaces

☒ Decon Unit

☒ Contractor's Equipment

☒ Fixtures

☒ Enclosed Items

☒ Waste Load Out

☒ Other:

FIELD OBSERVATIONS

Standard Containment with negative air pressure

AIR CLEARANCE:

☐ PCM (# of Samples=)

☐ TEM

☒ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector:

Mike Coffey

PRINTED

Mike Coffey

SIGNATURE

I have read and understand these results.

Contractor's Supervisor:

Zak Souloris

PRINTED

Zak Souloris

SIGNATURE



FUSS & O'NEILL
EnviroScience, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 8/29/15 ☐ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

PROJECT NAME: Bourne High School & OTIS Memorial Elementary

BUILDING: Peebles Elementary

Project No.: 20121141.B4E

SITE ADDRESS:

WORK AREA: Exterior

CONTRACTOR: All State Abatement

☒ Pass

☐ Fail

☐ Neg. Pressure Enclosure ☐ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☒ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

Window Glazing	QTY	6 Window Panes	QTY
	QTY		QTY
	QTY		QTY
	QTY		QTY
	QTY		QTY

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

QTY	QTY

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor ☒ Horizontal Surfaces ☒ Pipes ☒ Mechanical Equipment
☒ Duct Work ☒ Vertical Surfaces ☒ Decon Unit ☒ Contractor's Equipment
☒ Fixtures ☒ Enclosed Items ☒ Waste Load Out ☒ Other:

FIELD OBSERVATIONS

~~Standard Containment with negative air pressure~~
Critical barriers in place. Poly on ground (Interior & Exterior)

AIR CLEARANCE:

☐ PCM (# of Samples=) ☐ TEM ☒ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector:

PRINTED

SIGNATURE

I have read and understand these results.

Contractor's Supervisor:

PRINTED

SIGNATURE



FUSSELL & O'NEILL
EnviroScience, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 8/24/15 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

PROJECT NAME: Bourne High School & Otis Memorial Elementary School
BUILDING: Otis Elementary School Project No.: 20121141.B4E
SITE ADDRESS: Bourne, Ma
WORK AREA: Classroom 6 ☐ Pass
CONTRACTOR: Allstate Asbestos Abatement ☒ Fail

☒ Neg. Pressure Enclosure ☒ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☐ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9" x 9" Floor Tile	QTY:	3 SF		QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

	QTY:		QTY:	
	QTY:		QTY:	

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☐ Floor ☒ Horizontal Surfaces ☒ Pipes ☒ Mechanical Equipment
☒ Duct Work ☒ Vertical Surfaces ☒ Decon Unit ☐ Contractor's Equipment
☒ Fixtures ☒ Enclosed Items ☒ Waste Load Out ☐ Other:

FIELD OBSERVATIONS

1 mini-enclosure with negative air pressure

Floor tile was heated with a torch and removed as a whole

component without any breakage of the tile.

AIR CLEARANCE: ☐ PCM (# of Samples=) ☐ TEM ☐ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector: Mike Coffey
PRINTED

Mike Coffey
SIGNATURE

I have read and understand these results.

Contractor's Supervisor: _____
PRINTED

SIGNATURE



FUSSELL O'NEILL
Environmental Science, LLC

Final Visual Inspection Form

Asbestos Abatement

Date: 8/24/15 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

PROJECT NAME: Bourne High School & Otis Memorial Elementary School

BUILDING: Otis Elementary School Project No.: 20121141.B4E

SITE ADDRESS: Bourne, Ma

WORK AREA: Classroom 7

CONTRACTOR: Allstate Asbestos Abatement

☒ Pass
☐ Fail

☒ Neg. Pressure Enclosure ☒ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☐ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9" x 9" Floor Tile	QTY:	8 SF		QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

	QTY:			QTY:	
	QTY:			QTY:	

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor ☒ Horizontal Surfaces ☒ Pipes ☒ Mechanical Equipment
☒ Duct Work ☐ Vertical Surfaces ☒ Decon Unit ☒ Contractor's Equipment
☒ Fixtures ☒ Enclosed Items ☒ Waste Load Out ☐ Other:

FIELD OBSERVATIONS

3 Separate mini-enclosures around 3 different areas in Classroom 7. Each area containing 3 sf of tile. Floor tile was heated with torch and removed as a full component without any deterioration in the process of removing.

AIR CLEARANCE: ☐ PCM (# of Samples=) ☐ TEM ☒ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector: Mike Coffey
PRINTED

Mike Coffey
SIGNATURE

I have read and understand these results.

Contractor's Supervisor: Zak Soudage
PRINTED

SIGNATURE



F. J. PLUSS & O'NEILL
EnviroScience, Inc.

Final Visual Inspection Form

Asbestos Abatement

Date: 8/24/15 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

PROJECT NAME: Bourne High School & Otis Memorial Elementary School

BUILDING: Otis Elementary School Project No.: 20121141.B4E

SITE ADDRESS: Bourne, Ma

WORK AREA: Classroom 10

CONTRACTOR: Allstate Asbestos Abatement

☒ Pass
☐ Fail

☒ Neg. Pressure Enclosure ☒ Mini-Enclosure ☐ Glovebag ☐ Other (Describe Below) ☐ None

MATERIALS ABATED IN THIS SPECIFIC WORK AREA

9" x 9" Floor Tile	QTY:	10 SF		QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	
	QTY:			QTY:	

SUSPECT ACM REMAINING IN THIS WORK AREA NOT SPECIFIED FOR REMOVAL

	QTY:			QTY:	
	QTY:			QTY:	

SURFACES INSPECTED

Instructions: Check surfaces that pass. Circle surfaces that fail. Strike through N/A.

☒ Floor ☒ Horizontal Surfaces ☒ Pipes ☒ Mechanical Equipment
☒ Duct Work ☒ Vertical Surfaces ☒ Decon Unit ☒ Contractor's Equipment
☒ Fixtures ☒ Enclosed Items ☒ Waste Load Out ☐ Other:

FIELD OBSERVATIONS

4 Separate Mini-enclosures with negative air exhaust. There were 4 separate circles throughout classroom 10 with less than 3 sf of damaged tile.

All floor tile was removed by heating it and removing it as a whole component w/out any breakage of tile.

AIR CLEARANCE: ☐ PCM (# of Samples=) ☐ TEM ☒ Visual Only

ACKNOWLEDGEMENT

I acknowledge that I inspected this work area on this day.

EnviroScience Inspector: Mike Ciffrey

PRINTED

Mike Ciffrey
SIGNATURE

I have read and understand these results.

Contractor's Supervisor: Zak Soudary

PRINTED

SIGNATURE

Appendix F

TEM Air Sample Laboratory Reports and Chain-of-Custody Forms

**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com>bostonlab@emsl.com

EMSL Order: 131504100
 CustomerID: ENVI54
 CustomerPO: 20121141.B4E
 ProjectID:

Attn: **Dustin Diedricksen**
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 07/21/15 9:33 AM
 Analysis Date: 7/22/2015
 Collected: 7/20/2015

Project: **20121141.B4E / Bourne High School & Otis Memoiral Elementary School, Bourne, MA / Bourne High School 2nd Floor - B Wing**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)

Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥ 0.5μ < 5μ	≥ 5μ		(S/mm ²)	(S/cc)
01-MC-0720-TEM 131504100-0001	Room 25 C - Clearance	1440.00	0.0650	0	None Detected			0.0041	<15.00	<0.0041
02-MC-0720-TEM 131504100-0002	Room 23 C - Clearance	1503.00	0.0520	0	None Detected			0.0049	<19.00	<0.0049
03-MC-0720-TEM 131504100-0003	Room 20 C - Clearance	1546.00	0.0520	0	None Detected			0.0048	<19.00	<0.0048
04-MC-0720-TEM 131504100-0004	Room 22 C - Clearance	1476.00	0.0650	0	None Detected			0.0040	<15.00	<0.0040
05-MC-0720-TEM 131504100-0005	Room 24 C - Clearance	1404.00	0.0650	0	None Detected			0.0042	<15.00	<0.0042
06-MC-0720-TEM 131504100-0006	2nd Floor Hallway - B Wing - Clearance	1454.00			Not Analyzed					
07-MC-0720-TEM 131504100-0007	2nd Floor Hallway - B Wing - Clearance	1224.00			Not Analyzed					
08-MC-0720-TEM 131504100-0008	2nd Floor Hallway - B Wing - Clearance	1427.00			Not Analyzed					
09-MC-0720-TEM 131504100-0009	2nd Floor Hallway - B Wing - Clearance	1208.00			Not Analyzed					
10-MC-0720-TEM 131504100-0010	2nd Floor Hallway - B Wing - Clearance	1408.00			Not Analyzed					

Analyst(s)

Alexander Maxinoski (5)

Steve Grise, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in both structures/cm3 and structures/mm2 are dependent on the volume of air sampled and measured by non-laboratory personnel are not the responsibility of EMSL and are not covered by the laboratory's NVLAP accreditation. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL998919

Initial report from 07/22/2015 07:35:25

**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com>bostonlab@emsl.com

EMSL Order: 131504100
CustomerID: ENVI54
CustomerPO: 20121141.B4E
ProjectID:

Attn: **Dustin Diedricksen**
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 07/21/15 9:33 AM
Analysis Date: 7/22/2015
Collected: 7/20/2015

Project: 20121141.B4E / Bourne High School & Otis Memoiral Elementary School, Bourne, MA / Bourne High School 2nd Floor - B Wing

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)
Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥ 0.5μ < 5μ	≥ 5μ		(S/mm ²)	(S/cc)
BI-MC-0720-TEM 131504100-0011	Blank - Open In					Not Analyzed				
BO-MC-0720-TEM 131504100-0012	Blank - Open Out					Not Analyzed				
BU-MC-0720-TEM 131504100-0013	Blank - Unopened					Not Analyzed				

Analyst(s)

Alexander Maxinoski (5)

Steve Grise, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL998919

Initial report from 07/22/2015 07:35:25



FUSS & O'NEILL
EnviroScience, LLC

131504100

TEM AHERA Air Sampling Chain-of-Custody

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

Project Name: Bourne High School & Onis Memorial Elementary School

Project Number: 20121141.BAF

Building Name/Number: Bourne High School

Project Manager: Dustin Dieckhsen

Site Address: Bourne, Ma

Rotometer Number: 101415

Work Area: 2nd Floor- B Wing

Rotometer Cal. Date: 2/20/15

Sample ID Number (#-Initials-Date-TEM)	Sample Location	I / O	Project Activity	Sample Time		Sample Duration (Min.)	Flow Rate			Total Volume (Liters)
				On	Off		Pre	Post	Average	
01-MC-0720-TEM	Room 25 C	I	Clearance	1330	1610	160	9	9	9	1440
02-MC-0720-TEM	Room 23 C	I	Clearance	1331	1610	159	9.5	9.4	9.45	1503
03-MC-0720-TEM	Room 20 C	I	Clearance	1333	1610	157	9.9	9.8	9.85	1546
04-MC-0720-TEM	Room 22 C	I	Clearance	1334	1611	157	9.5	9.3	9.4	1476
05-MC-0720-TEM	Room 24 C	I	Clearance	1335	1611	156	9	9	9	1404
06-MC-0720-TEM	2nd Floor Hallway-B Wing	O	Clearance	1339	1613	153	9.5	9.5	9.5	1454
07-MC-0720-TEM	2nd Floor Hallway-B Wing	O	Clearance	1340	1613	153	8	8	8	1224
08-MC-0720-TEM	2nd Floor Hallway-B Wing	O	Clearance	1342	1613	151	9.5	9.4	9.45	1427
09-MC-0720-TEM	2nd Floor Hallway-B Wing	O	Clearance	1343	1614	151	8	8	8	1208
10-MC-0720-TEM	2nd Floor Hallway-B Wing	O	Clearance	1345	1614	149	9.5	9.4	9.45	1408
11-MC-0720-TEM	Blank - Open In	I	Clearance							
12-MC-0720-TEM	Blank - Open Out	O	Clearance							
13-MC-0720-TEM	Blank - Unopened	—	Clearance							

Analysis Method: TEM AHERA

Turnaround Time 24 hrs

Please call EnviroScience at (617) 282-4675 if analyses will not be completed for requested t/a/t listed above.

Email Results to: Ddieckhsen @fando.com

Do Not Mail Hard Copy Report

FAX Results to: 888-838-1160.

Special Instructions:

Samples Collected by: Mike Coffey Date: 7/20/15 Samples Sent by: MC Date: 7/20/15 Time: pm

Shipped To: ☒ ENSL ☐ Other

Cell 795050065137



**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com>bostonlab@emsl.com

EMSL Order: 131504178
 CustomerID: ENVI54
 CustomerPO: 20121141.B4E
 ProjectID:

Attn: **Dustin Diedricksen**
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax: (888) 838-1160
 Received: 07/23/15 9:10 AM
 Analysis Date: 7/24/2015
 Collected: 7/22/2015

Project: **20121141.B4E / Bourne High School & Otis Memorial Elementary School, Bourne, MA / Bourne High School - 1st Floor - C Wing**

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)

Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥ 0.5μ < 5μ	≥ 5μ		(S/mm ²)	(S/cc)
01-MC-0722-TEM 131504178-0001	Inside - Clearance	1493.00	0.0520	0	None Detected			0.0050	<19.00	<0.0050
02-MC-0722-TEM 131504178-0002	Inside - Clearance	1485.00	0.0520	0	None Detected			0.0050	<19.00	<0.0050
03-MC-0722-TEM 131504178-0003	Inside - Clearance	1477.00	0.0650	0	None Detected			0.0040	<15.00	<0.0040
04-MC-0722-TEM 131504178-0004	Inside - Clearance	1320.00	0.0650	0	None Detected			0.0045	<15.00	<0.0045
05-MC-0722-TEM 131504178-0005	Inside - Clearance	1485.00	0.0520	0	None Detected			0.0050	<19.00	<0.0050
06-MC-0722-TEM 131504178-0006	Outside - Clearance	1486.00			Not Analyzed					
07-MC-0722-TEM 131504178-0007	Outside - Clearance	1494.00			Not Analyzed					
08-MC-0722-TEM 131504178-0008	Outside - Clearance	1336.00			Not Analyzed					
09-MC-0722-TEM 131504178-0009	Outside - Clearance	1494.00			Not Analyzed					
10-MC-0722-TEM 131504178-0010	Outside - Clearance	1494.00			Not Analyzed					
11-MC-0722-TEM 131504178-0011	Blank - Open In				Not Analyzed					
12-MC-0722-TEM 131504178-0012	Blank - Open Out				Not Analyzed					

Analyst(s)

Alexander Maxinoski (5)

Steve Grise, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL998919

Initial report from 07/24/2015 08:16:14

**EMSL Analytical, Inc.**

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com>bostonlab@emsl.com

EMSL Order: 131504178
CustomerID: ENVI54
CustomerPO: 20121141.B4E
ProjectID:

Attn: **Dustin Diedricksen**
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax: (888) 838-1160
Received: 07/23/15 9:10 AM
Analysis Date: 7/24/2015
Collected: 7/22/2015

Project: 20121141.B4E / Bourne High School & Otis Memorial Elementary School, Bourne, MA / Bourne High School - 1st Floor - C Wing

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM)
Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥ 0.5μ < 5μ	≥ 5μ		(S/mm ²)	(S/cc)
13-MC-0722-TEM	Blank - Unopened					Not Analyzed				
131504178-0013										

Analyst(s)

Alexander Maxinoski (5)

Steve Grise, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL998919

Initial report from 07/24/2015 08:16:14



FUSS & O'NEILL
EnviroScience, LLC

50 Redfield Street, Suite 100, Boston, MA 02122 (617) 282-4675

131504178

TEM AHERA Air Sampling Chain-of-Custody

Project Name: Bourne High School & Chris Memorial Elementary School Project Number: 20121141.B4E
Building Name/Number: Bourne High School Project Manager: Dustin Dieckmann
Site Address: Bourne, Ma Rotometer Number: 101415
Work Area: 1st Floor - C Wing Rotometer Cal. Date: 2/20/15

Sample ID Number (#-Initials-Date-TIME)	Sample Location	I / O	Project Activity	Sample Time		Sample Duration (Min)	Flow Rate			Total Volume (Liters)
				On	Off		Pre	Post	Average	
01-MC-0722-T13M	Inside	I	Clearance	1129	1314	165	9	9.1	9.05	1493
02-MC-0722-T13M	Inside	I	Clearance	1129	1314	165	9	9	9	1485
03-MC-0722-T13M	Inside	I	Clearance	1130	1315	165	9	8.9	8.95	1477
04-MC-0722-T13M	Inside	I	Clearance	1130	1315	165	8	8	8	1320
05-MC-0722-T13M	Inside	I	Clearance	1130	1315	165	9	9	9	1485
06-MC-0722-T13M	Outside	O	Clearance	1135	1321	166	9	8.9	8.95	1486
07-MC-0722-T13M	Outside	O	Clearance	1135	1321	166	9	9	9	1494
08-MC-0722-T13M	Outside	O	Clearance	1135	1322	167	8	8	8	1336
09-MC-0722-T13M	Outside	O	Clearance	1136	1322	166	9	9	9	1494
10-MC-0722-T13M	Outside	O	Clearance	1136	1322	166	9	9	9	1494
BL-MC-0722-T13M	Blank - Open In	I	Clearance							
BO-MC-0722-T13M	Blank - Open Out	O	Clearance							
BU-MC-0722-T13M	Blank - Unopened	---	Clearance							

Analysis Method: TEM AHERA

Turnaround Time 24 hrs

Please call EnviroScience at (617) 282-4675 if analyses will not be completed for requested t/a/r listed above.

Email Results to: Dieckmann @fando.com

Do Not Mail Hard Copy Report

FAX Results to: 888-838-1160.

Special Instructions:

Samples Collected by: Mike Coffey Date: 7/22/15 Samples Sent by: MC Date: 7/22/15 Time: pm

Shipped To: ☒ EMSL

☐ Other

Method of Shipment: ☒ FedEx

☐ Lab Drop Off

☐ Other

Fedex 7950 5086 5192

g.c.o

