# Asbestos Abatement Project Monitoring Report

**Peebles Elementary School, Bourne High School, & Otis Memorial Elementary School**

**February 15, 2013 – February 20, 2013**

## Bourne Public Schools

**Bourne, Massachusetts**

September 3, 2013

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

20121141.A3E

FUSS & O'NEILL
EnviroScience, LLC

September 3, 2013

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

RE: **Asbestos Abatement Project Monitoring Report**
**Peebles Elementary School, Bourne High School,**
**& Otis Memorial Elementary School**
**Bourne, Massachusetts**
Fuss & O'Neill EnviroScience Project No. 20121141.A3E

Dear Mr. Donoghue:

Enclosed please find the final report for the asbestos abatement project completed at Peebles Elementary School, Bourne High School, and Otis Memorial Elementary School located in Bourne, Massachusetts. Due to the turnaround time associated with the receipt of the Waste Shipment Record (WSR), these documents have not been included with the report. Upon receipt of the WSR, you should include them with the final report. Please withhold final payment to the Asbestos Abatement Contractor until these documents are received.

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

Sincerely,

Dustin A. Diedricksen
Project Manager/Senior Scientist

Enclosure

FUSS & O'NEILL
EnviroScience, LLC

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## Bourne Public Schools


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# 1 Introduction

Fuss & O'Neill EnviroScience, LLC (EnviroScience) was retained to provide asbestos abatement project monitoring services at Peebles Elementary School, Bourne High School, and Otis Memorial Elementary School located in Bourne, Massachusetts. Asbestos abatement work occurred from February 15, 2013 to February 20, 2013. Fuss & O'Neill EnviroScience, LLC provided on-site licensed Asbestos Project Monitor(s) to perform daily monitoring during active asbestos removal work. Daily monitoring data and site logs are provided as *Appendix A* and *Appendix B* respectively. Refer to *Appendix C* for a copy of each Asbestos Project Monitor license.

The Asbestos Abatement Contractor (hereinafter referred to as the "Contractor") was New England Surface Maintenance (NESM) of Weymouth, Massachusetts. The Contractor is licensed as an Asbestos Abatement Contractor in the Commonwealth of Massachusetts. The Contractor utilized licensed Asbestos Supervisor(s) and Workers to perform the work.

Asbestos abatement was necessary to fix deficiencies noted in the last AHERA inspection prepared by Fuss & O'Neill EnviroScience, LLC for Bourne Public Schools. The Contractor provided a notification for this phase of work involving removal activities; refer to *Appendix D*.

Following the completion of final cleaning and encapsulation of the work areas, a final visual inspection and aggressive final air clearance sampling was performed inside each work area to comply with State and Federal regulatory requirements. Refer to *Appendix E* for a copy of each Certificate of Final Visual Inspection. Refer to *Appendix F* for analysis results of final clearance air samples using Phase Contrast Microscopy (PCM).

Final clearance analysis results were compared to the regulatory limit of 0.01 fibers per cubic centimeter (f/cc) of air by PCM analysis, or 70 structures per square millimeter (s/mm$^2$) by TEM analysis. PCM air samples were analyzed on-site by a trained Asbestos Project Monitor listed on the Asbestos Analysts Registry (AAR) maintained by the American Industrial Hygiene Association (AIHA). TEM air samples were analyzed off-site by EMSL Analytical Inc. (EMSL) of Woburn, Massachusetts. EMSL is listed on the Asbestos Analysts Registry (AAR) maintained by the American Industrial Hygiene Association (AIHA), and is a certified laboratory in the Commonwealth of Massachusetts. Refer to *Appendix G* for TEM analytical results.

In addition to air sampling, EnviroScience representatives performed job-site inspections. Prior to the beginning of removal activities, pre-commencement inspections were conducted. This was to document that work area preparations were performed in accordance with the written Asbestos Abatement Work Plan prepared by EnviroScience, dated February 15, 2013, refer to *Appendix H*. Pre-sealant inspections were also conducted to verify that the work areas met the no-visible dust criteria prior to conducting final air clearance.

# 2 Scope of Work

A scope of work and project design for asbestos abatement was developed for Bourne Public Schools. The scope of the abatement work included the removal and disposal of the ACM listed for each of the following locations listed in Table 1.

**Table 1**
**Scope of Asbestos Abatement Work**

| Location | Material Removed | Quantity |
|---|---|---|
| **Peebles Elementary School** | | |
| Storage Room across from Classroom 13 | Ceiling Plaster Skim Coat (Repaired and Encapsulated) | 75 SF (100 LF) |
| Storage Room across from Classroom 13 | Thermal System Pipe Insulation | 1 SF |
| Stairway (Gym to Cafeteria) & Landings/Hallways | 9x9 Floor Tile | 250 SF @ Stairway (Gym to Cafeteria) & Landings/Hallways |
| Stairway at Annex Hallway | 9x9 Floor Tile | 6 SF |
| Basement Main Hallway from Classroom 13 to Cafeteria | 9x9 Floor Tile | 2 SF @ Stairway Doors<br><br>8 SF @ Cafeteria Threshold<br><br>6 SF @ Storage Threshold<br><br>8 SF @ Exit Doors o/s Classroom 13<br><br>3 SF @ Double Doors<br><br>4 SF @ Small Girls Bathroom o/s Classroom 10<br><br>9 SF @ Small Girls Bathroom o/s Classroom 13 |
| Main Hallway from Main Office to Sp. Ed. Office | 9x9 Floor Tile | 4 SF @ Threshold o/s Copy Room<br><br>5 SF @ Radiator by Main Door |
| Vestibule | 9x9 Floor Tile | 145 SF |
| **Bourne High School** | | |
| Classroom 17A | 9x9 Floor Tile | 130 SF |
| **Otis Memorial Elementary School** | | |

| Location | Material Removed | Quantity |
|---|---|---|
| Boiler Room | Boiler Insulation | 1 SF @ Front<br><br>5 SF @ Breeching |
| Boiler Room | Boiler Breeching Insulation | 3 SF behind Boiler |
| Boiler Room | Hot Water Tank Insulation | 1 SF behind Hot Water Tank |
| Boiler Room | Mudded Insulation on Pipe Fittings | 1 EA behind Breeching<br><br>1 EA @ Pipe Tunnel Entrance |
| Boiler Room (behind Boiler #1) | Mudded Insulation on Pipe Fittings | 1 EA behind Boiler |
| Kitchen | Mudded Insulation on Pipe Fittings | 2 EA (Fittings) & 2 LF (All Pipe Insulation) @ Desk |

# 3 Discussion

The project to remove damaged asbestos-containing materials at Peebles Elementary School, Bourne High School, and Otis Memorial Elementary School began on February 15, 2013. Abatement activities were carried out as response actions corresponding to damaged Asbestos-Containing Building Materials (ACBM) noted in the "Short-Term Asbestos Abatement Plan" provided in the Six-Month AHERA Asbestos Periodic Surveillance report completed by Fuss & O'Neill EnviroScience, LLC, dated January 9, 2013.

The Contractor established regulated areas for each area of asbestos abatement; this included either a contiguous three-chamber decontamination facility with sufficient negative air exhaust (for full containment), or glovebags with polyethylene drop clothes (for glovebag removal). Mini-enclosure containments were also utilized in conjunction with a remote decontamination facility (where appropriate). After removal was complete in each area, the Project Monitor(s) performed a final visual inspection. Final air-clearance sampling was also completed for each area established under full containment for asbestos abatement in accordance to AHERA regulations. All areas passed final air clearance. Work was completed for this phase on February 20, 2013.

Fuss & O'Neill EnviroScience, LLC was on-site during each stage of abatement. Containment areas were established in accordance with procedures detailed in the project design, and included erection of protective barriers using multiple layers of polyethylene sheeting of 4 or 6 mil thicknesses to form walls to isolate work areas. Background air samples were collected during asbestos removal at representative locations adjacent to containment areas.

Small areas of floor tile removal were completed in mini-enclosure containments, and were removed whole component in order to minimize disturbance to the ACM. Black mastic associated with all floor tile has been determined to be non-ACM, and was left in place. Each mini-enclosure containment was cleared by PCM analysis.

The damaged asbestos-containing skim-coat ceiling plaster in the Storage Room at Peebles Elementary School was repaired under full containment. The Asbestos Abatement Contractor removed damaged

areas of the ceiling on both sides of cracking (utilizing wet methods) until the skim-coat layer was intact.

A new skim-coat layer was then applied to better match the existing ceiling; this application involved wet sanding between drying periods. The entire ceiling was then encapsulated with two coats of Kilz2 latex primer (applied by air sprayer), as approved by the EPA. The Storage Room containment was cleared by TEM analysis.

The Asbestos Abatement Contractor removed or repaired damaged Thermal System Insulation (TSI) as specified in the Asbestos Abatement Work Plan. Limited removal of pipe insulation was completed using glovebags with drop cloths underneath. In areas where entire removal was not completed, any exposed ends of the remaining pipe insulation were appropriately wet-wrapped. Only areas of damaged TSI were targeted during this abatement period.

At the Otis Memorial School Elementary School, small areas of damaged Thermal System Insulation (TSI) (i.e. boiler insulation and hot water tank insulation) were repaired by applying wet-wrap over delaminating areas of TSI (cloth) coverings. In addition, a mini-enclosure containment was established to repair damaged boiler-breeching insulation (with wet wrap), and to clean associated debris on floor. PCM analysis was utilized for background air sampling during removal, and for final air-clearance sampling, at the Boiler Room.

Work within containment was completed by licensed Asbestos Workers using wet-removal methods. All Asbestos Workers and Supervisor(s) were signed-in each day so the number of workers and documentation of licenses could be checked. Refer to *Appendix I* for a copy of sign-in logs. Select Asbestos Workers were also monitored using personal air-sample pumps as required in accordance with OSHA regulatory requirements. Samples were analyzed by a laboratory retained by the Contractor. Workers wore ½ face negative pressure respirators, and personal protective suits during removal work.

Final visual inspections were performed for each containment area by both a Fuss & O'Neill EnviroScience, LLC representative and a representative from NESM. Once the visual inspection was complete, and no dust or debris was observed, the Contractor applied lock-down encapsulant to the work area. Fuss & O'Neill EnviroScience, LLC Project Monitor(s) then collected and analyzed final air-clearance samples by PCM or (as appropriate) TEM analysis. Final air-clearance samples were conducted using TEM analysis for all areas exceeding AHERA regulatory requirements for air sampling by TEM of 160 square feet or 260 linear feet of asbestos-containing material.

# 4 Conclusion

All work areas passed pre-sealant visual inspections for asbestos prior to work area encapsulation by the Contractor. Following encapsulation, final air-clearance sampling by PCM or TEM was conducted for each interior containment area in accordance with the requirements of the MassDEP Regulations 310 CMR 7.00, 7.09 and 7.15, and DLS Section 453 CMR 6.00, Standards for Asbestos Abatement and the United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) Regulation (40 CFR Par 763 Final Rule and Notice). All interior work areas (under full containment or mini-enclosure containment) passed final air clearance.

All work was performed within the allotted time frame. There were no delays caused by, or incurred by, the Contractor.

PCM air samples were analyzed on-site by a trained Asbestos Project Monitor listed on the Asbestos Analysts Registry (AAR) maintained by the American Industrial Hygiene Association (AIHA).

TEM air samples were analyzed by a Massachusetts-certified laboratory, EMSL Analytical, Inc. of Woburn Massachusetts.

Report prepared by Senior Environmental Technician, Jonathan Hand.

Reviewed by:

Dustin A. Diedricksen
Project Manager/Senior Scientist

Robert L. May, Jr.
President

# Appendix A

## Daily Monitoring Data

FUSS & O'NEILL
EnviroScience, LLC

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50 Redfield Street, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

# Asbestos Daily Monitoring Data

Date: 2/18/13 Project Number: 20121141-A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Peebles Elementary School

Area: Throughout

| Inspections* | Work Area | Time |
|---|---|---|
| 1. FV | Main Door & Copy room | 0800 |
| 2. FV | Exit Doors o/s 13 & Bath o/s 10 | 0930 |
| 3. FV | Annex Hall stairs | 1030 |
| 4. PR | Storage near 13 | 1115 |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity *** | Results (F/CC) |
|---|---|---|---|
| 1. 218JH-01 | FB | ---------- | ---------- |
| 2. -02 | SB | ---------- | ---------- |
| 3. -03 | Radiator By Main Door | FAC | < .0022 |
| 4. -04 | ↓ | ↓ | < .0022 |
| 5. -05 | Copy Room Threshold | ↓ | < .0022 |
| 6. -06 | ↓ | ↓ | < .0022 |
| 7. -07 | Hall o/s Rm 12 | BG | < .0022 |
| 8. -08 | Hall o/s Rm 9 | ↓ | < .0022 |
| 9. -09 | Exit Doors o/s 13 | FAC | < .0022 |
| 10 -10 | ↓ | ↓ | < .0022 |
| 11 -11 | Bath o/s 10 | ↓ | < .0022 |
| 12 -12 | ↓ | ↓ | < .0022 |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 2/18/13 Project Number: 20121141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Peebles Elementary School

Area: Throughout

| Inspections* | Work Area | Time |
|---|---|---|
| 1. FV | Bath o/s Room 13 | 1300 |
| 2. PC | Cafe Threshold | 1330 |
| 3. FV | ↓ | 1400 |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (F/CC) |
|---|---|---|---|
| 1. 218J1-#3 | FB | ---------- | ---------- |
| 2. -14 | SB | ---------- | ---------- |
| 3. -15 | Annex Hall stairs | FAC | <.0022 |
| 4. -16 | ↓ | ↓ | <.0022 |
| 5. -17 | Hall o/s 13 | DR | <.0022 |
| 6. -18 | ↓ 9 | ↓ | <.0022 |
| 7. -19 | Hall o/s 13 | ↓ | <.0022 |
| 8. -20 | ↓ 9 | ↓ | <.0022 |
| 9. -21 | Bath o/s 13 | FAC | <.0022 |
| 10 -22 | ↓ | ↓ | <.0022 |
| 11 -23 | Cafe Threshold | FAC | <.0022 |
| 12 -24 | ↓ | ↓ | <.0022 |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

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# Asbestos Daily Monitoring Data

Date: 2/18/13 Project Number: 20121141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Peebles Elementary School

Area: Throughout

| Inspections* | Work Area | Time |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (F/CC) |
|---|---|---|---|
| 1. 218JH-25 | FB | ---------- | ---------- |
| 2. -26 | SB | ---------- | ---------- |
| 3. -27 | Cafe Threshold | FAC | <.0022 |
| 4. -28 | ↓ | ↓ | <.0022 |
| 5. -29 | ↓ | ↓ | <.0022 |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 7/19/13 Project Number: 2012 1141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Peebles Elementary School

Area: kitchen & storage across from 13

| Inspections* | Work Area | Time |
|---|---|---|
| 1. FV | Kitchen | 0900 |
| 2. PR | Storage near 13 | 1000 |
| 3. TD | kitchen | 1300 |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (F/CC) |
|---|---|---|---|
| 1. 219JH-01 | FB | ---------- | ---------- |
| 2. -02 | SB | ---------- | ---------- |
| 3. -03 | Cafe OCB | DR | < .002 |
| 4. -04 | Hall o/s 9 | ↓ | .0029 |
| 5. -05 | Hall o/s 13 | ↓ | .0029 |
| 6. -06 | kitchen | FAC | < .002 |
| 7. -07 | ↓ | ↓ | < .002 |
| 8. -08 | | | < .002 |
| 9. -09 | | | < .002 |
| 10 -10 | ↓ | ↓ | < .002 |
| 11 -11 | Hall o/s 9 | DR | < .002 |
| 12 -12 | ↓ 13 | ↓ | < .002 |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 2/19/13 Project Number: 20121141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Beedle Elementary + Bourne High

Area: Storage near 13 + Rm 17A

| Inspections* | Work Area | Time |
|---|---|---|
| 1. PC | Rm 17A | 1230 |
| 2. FV | ↓ | 1330 |
| 3. FV | Storage near 13 | 1400 |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity *** | Results (F/CC) |
|---|---|---|---|
| 1. 219JH-13 | FB | ---------- | ---------- |
| 2. -14 | SB | ---------- | ---------- |
| 3. -15 | Rm 17A OCB | BG, DR | < .002 |
| 4. -16 | Hall o/s Rm 17A | BG, DR | .0029 |
| 5. -17 | Hall o/s 9 | BG, DR | < .002 |
| 6. -18 | ↓ 13 | BG, DR | < .002 |
| 7. -19 | Rm 17A | FAC | < .002 |
| 8. -20 | ↓ | ↓ | < .002 |
| 9. -21 | ↓ | ↓ | < .002 |
| 10 -22 | ↓ | ↓ | < .002 |
| 11 -23 | ↓ | ↓ | < .002 |
| 12 -24 | Storage near 13 | FAC | < .002 |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 2/19/13 Project Number: 2012-1141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: Peebles Elementary + Bourne Hzh

Area: Storage near Rm 13 + Rm 17A

| Inspections* | Work Area | Time |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (F/CC) |
|---|---|---|---|
| 1. 219JH-25 | FB | ---------- | ---------- |
| 2. -26 | SB | ---------- | ---------- |
| 3. -27 | storage near 13 | FAC | < .002 |
| 4. -28 | ↓ | ↓ | < .002 |
| 5. -29 | | | < .002 |
| 6. -30 | | | < .002 |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

** Location Key: NAE = Negative Air Exhaust, DECON: OCB = Outside Critical Barrier, IC = Inside Containment, FB = Field Blank, SB = Sealed Blank

*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 2/20/13 Project Number: 20121141.A3E

Technician: Jonathan Hand AAR Number: 9027

Building: O+s Elementary School

Area: Boiler Room + kitchen

| Inspection* | Work Area | Time |
|---|---|---|
| 1. PC | Kitchen | 0945 |
| 2. FV | " | 1015 |
| 3. PC | Boiler Room Boiler #1 | 1015 |
| 4. FV | " | 1115 |
| 5. PC | Boiler Room | 1115 |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (f/cc) |
|---|---|---|---|
| 1. 220 JH-01 | FB | ---------- | ---------- |
| 2. -02 | SB | ---------- | ---------- |
| 3. -03 | Boiler Room | BG, DR | .0045 |
| 4. -04 | Gym O/S Kitchen | ↓ | < .002 |
| 5. -05 | Kitchen OCB | ↓ | < .002 |
| 6. -06 | Gym | ↓ | < .002 |
| 7. -07 | Boiler Room | ↓ | .0045 |
| 8. -08 | Gym O/S Kitchen | ↓ | < .002 |
| 9. -09 | Gym | ↓ | < .002 |
| 10 -10 | Back of Boiler 1 | FAC | .0037 |
| 11 -11 | ↓ | ↓ | .0049 |
| 12 -12 | ↓ | ↓ | .0033 |

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*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

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# Asbestos Daily Monitoring Data

Date: 2/20/13

Project Number: 20121141.A3E

Technician: Jonathan Hand

AAR Number: 9027

Building: Otis Memorial School

Area: Boiler Room + kitchen

| Inspection* | Work Area | Time |
|---|---|---|
| 1. FV | Boiler Room | 1215 |
| 2. TD | " | 1330 |
| 3. | | |
| 4. | | |
| 5. | | |

* Inspection Key: PC = Pre-commencement, PR = Progress, FV = Final Visual, TD = Teardown

| Sample Number | Location** | Activity*** | Results (f/cc) |
|---|---|---|---|
| 1. 220JH-13 | FB | ---------- | ---------- |
| 2. -14 | SB | ---------- | ---------- |
| 3. -15 | Back of Boiler 1 | FAC | .0069 |
| 4. -16 | " | " | .0049 |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

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*** Activity Key: BG = Background, SU = Setup, DR = During Removal, FC = Final Cleaning, FAC = Final Air Clearance

# Appendix B

## Site Logs

FUSS & O'NEILL
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(617) 282-4675 Fax (617) 282-8253

# Site Log

Project Number: 20121141.A3E
Date: 2/15/13
Project Name: BOURNE PUBLIC SCHOOLS
Page Number: 1
Work Area: FEBRUARY BREAK - SHORT TERM ASBESTOS ABATEMENT PLAN
Consultant/Technician (on site): DUSTIN NIEDRICKSEN

| Time | Comments | Initials |
|---|---|---|
| 1200 | INDUSTRIAL HYGIENIST (IH), DUSTIN NIEDRICKSEN, ARRIVES AT SITE. ABATEMENT CREW ONSITE (NEW ENGLAND SURFACE MAINTENANCE - (NESM)) OF WEYMOUTH, MA) CONSISTS OF 6 ASBESTOS WORKERS AND ONE SUPERVISOR, KEN FURTNEY. IH GOES OVER SCOPE OF WORK WITH SUPERVISOR. | D.D. |
| 1230 | CONTAINMENT PREPARATION STARTING AT STAIRWELL BETWEEN GYMNASIUM AND CAFETERIA. AREA TO BE UNDER FULL CONTAINMENT FOR REMOVAL OF APPROX. 250 SF OF VINYL FLOOR TILE. | D.D. |
| 1250 | IH AND SUPERVISOR MARK AREAS REQUIRING MINI-ENCLOSURE CONTAINMENTS FOR SMALL AREAS OF FLOOR TILE REMOVAL (THROUGHOUT SCHOOL). | D.D. |
| 1340 | CONTAINMENT PREPARATION COMPLETE FOR STAIRWELL AREA, IH PASSES CONTAINMENT WITH VISUAL INSPECTION, AND INFORMS SUPERVISOR THAT REMOVAL MAY BEGIN. | D.D. |
| 1350 | FLOOR TILE REMOVAL BEGINS INSIDE OF FULL CONTAINMENT. CONTAINMENT PREPARATION BEGINNING AT VESTIBULE AND STORAGE ROOM ACROSS FROM CLASSROOM 13. | D.D. D.D. |

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# Site Log

Project Number: 20121141.A3E
Date: 2/15/13
Project Name: BOURNE PUBLIC SCHOOLS
Page Number: 2
Work Area: FEBRUARY BREAK - SHORT TERM ASBESTOS ABATEMENT PLAN
Consultant/Technician: DUSTIN DIEDRICKSEN
(on site)

| Time | Comments | Initials |
|---|---|---|
| 1350 | IH OFF SITE TO PICK UP ADDITIONAL HIGH-FLOW VACUUM PUMPS OFF SITE (IN SOUTH YARMOUTH). IH TELEPHONES ED DONOGHUE TO GO OVER PROGRESS OF ABATEMENT WORK. | D.D. |
| CONT. | | |
| 1445 | IH BACK ON SITE. FINAL CLEANING OCCURRING INSIDE FULL CONTAINMENT. VESTIBULE CONTAINMENT CLEARED FOR REMOVAL TO BEGIN. | D.D. |
| 1515 | FINAL CLEANING COMPLETE; IH ENTERS CONTAINMENT FOR FINAL VISUAL INSPECTION. CONTAINMENT PASSES FINAL VISUAL; ALL 9x9 VAT HAS BEEN REMOVED AND NON-ACM MASTIC REMAINS ACCORDING TO ASBESTOS WORK PLAN. | D.D. |
| 1530 | ED DONOGHUE ON SITE FOR PROGRESS INSPECTION. CONTAINMENT CONSTRUCTION CONTINUES AT STORAGE ROOM. ASBESTOS REMOVAL CONTINUES INSIDE FULL CONTAINMENT AT VESTIBULE. | D.D. |
| 1645 | IH ENTERS VESTIBULE CONTAINMENT AND PASSES FINAL VISUAL INSPECTION, FINAL AIR CLEARANCE (FAC) SAMPLING BEGINS (I.E. PCM ANALYSIS). ED DONOGHUE OFF SITE. | D.D |
| 1730 | SUPERVISOR SIGNS CERTIFICATES OF FINAL VISUAL INSPECTION FOR TWO FULL CONTAINMENTS. | D.D |
| 1823 | FAC STOPPED INSIDE VESTIBULE; IH TO READ PCM SAMPLES ON SITE. JON HAND ON SITE AS OVERLAPPING INDUSTRIAL HYGIENIST. | D.D. |

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EnviroScience, LLC

www.fando.com

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(617) 282-4675 Fax (617) 282-8253

# Site Log

Project Number: 20121141.A3E
Date: 2/15/13
Project Name: BOURNE PUBLIC SCHOOLS
Page Number: 3
Work Area: FEBRUARY BREAK - SHORT TERM ABATEMENT
Consultant/Technician: DUSTIN DIEDRICKSEN
(on site)

| Time | Comments | Initials |
|---|---|---|
| 1830 | I.H. PASSED CONTAINMENT (PRE-COMMENCEMENT) D.D | |
| | FOR STORAGE ROOM & SMALL BATHROOM G/S | |
| | CLASSROOM 13. CONTAINMENT CONSTRUCTION | |
| | OCCURRING AT KITCHEN AND ANNEX | |
| | STAIRWAY. | |
| 1911 | CONTAINMENT AT VESTIBULE IS DOWN AFTER | |
| | FINAL AIR CLEARANCE PASSED. TEM SAMPLING | |
| | RUNNING INSIDE STAIRWELL CONTAINMENT. | |
| | D.D. GOES OVER REMAINING SCOPE OF | |
| | WORK WITH JON MAND. | |
| 1935 | DUSTIN DIEDRICKSEN OFF SITE - JON | |
| | HAND TO FINISH TEM CLEARANCE SAMPLING. | |
| | | |
| | | |
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# Site Log

Project Name: Peebles Elementary School
Project Number: 20121141.A3E
Work Area:
Consultant/Technician: Jon Hand (on site)

Date: 2/15/13
Page Number: 1

| Time | Comments | Initials |
|---|---|---|
| 1815 | I arrive on site to take over for Dustin. They have removed some areas of tile already and are ready for a TEM clearance in the Gym to Cafe stairway. I get settled and start setting up the pumps while Dustin clears the Foyer. | JH |
| 1900 | The Clearance is running. I walk through with Dustin to see the other areas and what the workers are doing. | |
| 1935 | Dustin leaves the site. We have walked all the areas. | |
| 1945 | The workers leave. | |
| 2015 | The janitor leaves. I will lock up and shut off the lights when done. | |
| 2045 | I start pulling the TEM samples. They will be delivered this weekend for analysis Monday. | |
| 2115 | I am packing up to leave the site. | |
| 2130 | I leave the site. | |

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# Site Log

Project Name: Peebles Elementary School
Project Number: 20121141.A3E
Work Area: Through out
Consultant/Technician: Jon Hand (on site)

Date: 2/18/13
Page Number: 1

| Time | Comments | Initials |
|---|---|---|
| 0800 | I arrive on site. They have begun working. They will be doing many of the small tile containments today as well as the storage room ceiling. | JH |
| 0815 | They are ready for visuals on the radiator by main door and copy room threshold containments. I start the pumps. They move down stairs to the Exit doors o/s room 13 and bathroom o/s Room 10 areas. | |
| 0830 | I set up background pumps where they are working. | |
| 0930 | They finish cleaning and I do a visual on the Exit doors o/s 13 and Bathroom o/s 10. They are setting up containment for the Tiles o/s the cafeteria and are starting removal in the stairway at Annex Hallway. | |
| 0945 | I pull the samples From the lobby and start the clearances of 13 + 10. | |
| 1015 | I clear the lobby samples, | |
| 1030 | I do a visual on the annex Hall stairs and start my pumps. They begin cleaning + removal in the storage room on the ceiling. | |
| 1115 | I pull the samples From Exit o/s 13 + Bath o/s 10 and clear them. They continue removal in the storage near 13. | |

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# Site Log

Project Name: Peeble Elementary School
Project Number: 20121141.A3E
Work Area: Throughout
Consultant/Technician: Jon Hand (on site)

Date: 2/18/13
Page Number: 2

| Time | Comments | Initials |
|---|---|---|
| 1145 | I pull the clearance Samples From the Annex stairway and clear the area. They have been pre-cleaning the storage room and cleaning out the cracks in the ceiling. They begin applying the First coat of joint compound to the ceiling cracks. | JH |
| 1215 | They begin work in the Bathroom Hall of S 13. It's another Small Tile spot. | |
| 1230 | I get a call From EMSL that the TEMs passed. They tear down that containment. | |
| 1300 | I start the clearance outside room 13. While pulling up containment in the annex stairs, one tile came up whole and was disposed of. They are setting up containment outside the cafe. | |
| 1330 | They begin removal at the cafe Threshold. Duston calls to check in. I update him. | |
| 1400 | The cafe Threshold is Finished. I start the clearance. All but one worker leaves. | |
| 1430 | I pull the samples From outside room 13 and clear the area. | |
| 1530 | I pull the samples from the cafe Threshold | |
| 1545 | I clear the cafe Threshold and they tear down. I inspect the kitchen containment. They will start removal tommorow. | |
| 1600 | I leave the site. | |

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# Site Log

Project Name: Peebles Elementary School
Project Number: 20121141.A3E
Work Area: Kitchen & Storage near 13
Consultant/Technician: Jon Hand (on site)

Date: 2/19/13
Page Number: 1

| Time | Comments | Initials |
|---|---|---|
| 0730 | I arrive on site. They are finishing containment in the kitchen so removal of caulking can begin. | JH |
| 0745 | The containment in the kitchen is ready. They begin removal. | |
| 0800 | One worker enters the storage room to fill any drying cracks in the ceiling. Background samples are running. | |
| 0820 | They are cleaning up in the kitchen containment. | |
| 0900 | I do a visual on the kitchen. They spot clean one area and I start my pumps. They go to finish work filling cracks and covering the walls with poly for painting. | |
| 0930 | We go take a look at what needs to be done at the high school. We will go there next. | |
| 1000 | They continue work in containment. They realized they still need to remove the floor tile at the threshold. | |
| 1030 | I pull the samples from the kitchen & read them. | |
| 1045 | The kitchen clears. They will tear down. | |
| 1100 | Two guys go to the High school to begin prepping rm 17A. I set up backgrounds. | |
| 1145 | They begin spraying the storage ceiling with Kilz 2 to encapsulate it. | |

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# Site Log

Project Name: Peebles Elementary + Bourne HS Date: 2/19/13
Project Number: 20182141.A3E Page Number: 2
Work Area: Storage near 13 + Rm 17A
Consultant/Technician: Jon Hand (on site)

| Time | Comments | Initials |
|---|---|---|
| 1230 | I do an inspection on containment in 17A. They start removal. | JH |
| 1330 | I do a visual on 17A and start the clearance. | |
| 1400 | The storage area 13 is dry enough to run clearance after 2 coats of paint. I visual and start clearance. | |
| 1415 | The workers leave site. | |
| 1430 | The supervisor leaves site. They will Tear down Tommorow. | |
| 1500 | I pull the sangles from the high school (17A) and clean the area. | |
| 1545 | I pull the sangles from the storage Room. | |
| 1615 | I clean the storage Room and start packing up. | |
| 1700 | I leave the site. | |

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# Site Log

Project Name: Otis Memorial school
Project Number: 20121141.A3E
Work Area: Boiler Room & kitchen
Consultant/Technician: Jon Hand (on site)

Date: 2/20/13
Page Number: 1

| Time | Comments | Initials |
|---|---|---|
| 0800 | We are let on to the base & taken to the school. | JH |
| 0815 | We walk around and see what work needs to be done. They will be wet wrapping and cleaning some areas in the boiler room as well as glovebagging some pipe fittings in the boiler room & kitchen. | |
| 0830 | They begin setting up in both locations. I set up background samples to run. | |
| 0945 | They are almost done setting up in the kitchen and setting up the containment area at the back of the boiler. | |
| 0945 | I check the kitchen glovebags. They begin removal in the kitchen. | |
| 1015 | They finish in the kitchen. They tear down the poly. They are ready for removal at the back of the boiler. | |
| 1045 | The kitchen is torn down and they are setting up more glovebags in the Boiler Room. | |
| 1115 | The back of the boiler area is done. I start the clearance. They begin glovebagging. | |
| 1215 | I do a visual on the glovebagged areas. | |
| 1245 | I pull the samples from the boiler room. | |
| 1310 | They start tearing down containment. | |
| | They pack up. | |

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# Site Log

Project Name: Otis Memorial School
Project Number: 20121141.A3E
Work Area: Boiler Room + Kitchen
Consultant/Technician: Jon Hand (on site)

Date: 2/20/13
Page Number: 2

| Time | Comments | Initials |
|---|---|---|
| 1330 | They are packed up and off site. I pull my backgrounds and read them. | JH |
| 1345 | I pack up. | ↓ |
| 1430 | I leave the site. I will stop at Peebles To take some pictures of the glazing compound For Duston. | JH ↓ |

# Appendix C

## Monitor Licenses

**Commonwealth of Massachusetts**

**Department of Labor Standards**

*Heather E. Rowe, Director*

**Asbestos Project Monitor**

**JONATHAN L. HAND**

Eff. Date 02/23/12
Exp. Date 03/07/13
AM041946
Member of C.O.N.E.S.
NB

**13**



NB-RENEWAL

***Commonwealth of Massachusetts***

***Department of Labor Standards***

*Heather E. Rowe, Director*

**Asbestos Project Monitor**

**DUSTIN A. DIEDRICKSEN**

Eff. Date 04/26/12
Exp. Date 04/26/13
AM041868
Member of C.O.N.E.S.
NBR

**13**



NB-RENEW

# Appendix D

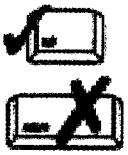
## State and Federal Notification Form

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171730
Decal Number

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



INSTRUCTIONS

1. All sections of this form must be completed in order to comply with DEP notification requirements of 310 CMR 7.15 and the Division of Occupational Safety (DOS) notification requirements of 453 CMR 6.12

## A. Asbestos Abatement Description

1. a. Is this facility fee exempt - city, town, district, municipal housing authority, owner-occupied residence of four units or less? ☑ Yes ☐ No

   b. Provide blanket decal number if applicable: _____ Blanket Decal Number

2. Facility Location:

   PEEBLES ELEMENTARY SCHOOL — a. Name of Facility
   70 TROWBRIDGE RD. — b. Street Address
   Bourne — c. City/Town
   MA — d. State
   02532 — e. Zip Code
   _____ — f. Telephone Number

3. Worksite Location:

   TRROUGHOUT — a. Building Name/Building Location
   _____ — b. Building #
   _____ — c. Wing
   _____ — d. Floor
   _____ — e. Room

4. Is the facility occupied? ☑ Yes ☐ No

5. Asbestos Contractor:

   NEW ENGLAND SURFACE MAINTENANCE — a. Name
   850 WASHINGTON STREET — b. Address
   WEYMOUTH — c. City/Town
   02189 — d. Zip Code
   7813372117 — e. Telephone Number
   AC000196 — f. DOS License Number
   g. Contract Type: ☐ Written ☐ Verbal
   _____ — h. Facility Contact Person
   _____ — i. Contact Person's Title

6. JOHN S BUTTS JR — a. Name of On-Site Supervisor/Foreman
   AS040209 — b. Supervisor/Foreman DOS Certification Number

7. OWNER'S REP — a. Name of Project Monitor
   N/A — b. Project Monitor DOS Certification Number

8. OWNER'S REP — a. Name of Asbestos Analytical Lab
   N/A — b. Asbestos Analytical Lab DOS Certification Number

9. 02/15/2013 — a. **Project Start Date (mm/dd/yyyy)**
   02/23/2013 — b. **End Date (mm/dd/yyyy)**
   7-5 — c. Work hours Mon-Fri.
   _____ — d. Work hours Sat-Sun.

10. a. What type of project is this?

    ☐ Demolition ☐ Renovation
    ☑ Repair ☐ Other, please specify:

    _____ b. Describe

11. a. Check abatement procedures:

    ☐ Glove bag ☐ Encapsulation
    ☐ Enclosure ☐ Disposal only
    ☐ Cleanup ☐ Other, specify:
    ☑ Full containment

    _____ b. Describe

12. Is the job being conducted: ☑ Indoors? ☐ Outdoors?

Go To Top

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171730
Decal Number

## A. Asbestos Abatement Description (cont.)

13. Total amount of each type of Asbestos Containing Materials (ACM) to be removed, enclosed, or encapsulated:

| | | | | | |
|---|---|---|---|---|---|
| a. Total pipes or ducts (linear ft): 125 | | b. Total other surfaces (square ft): 320 | | | |
| c. Boiler, breaching, duct, tank surface coatings | Lin. ft. | Sq. ft. | d. Insulating cement | Lin. ft. 25 | Sq. ft. |
| e. Corrugated or layered paper pipe insulation | Lin. ft. | Sq. ft. | f. Trowel/Sprayer coatings | Lin. ft. | Sq. ft. |
| g. Spray-on fireproofing | Lin. ft. | Sq. ft. | h. Transite board, wall board | Lin. ft. | Sq. ft. |
| i. Cloths, woven fabrics | Lin. ft. | Sq. ft. | j. Other, please specify: | Lin. ft. 100 | Sq. ft. 320 |
| k. Thermal, solid core pipe insulation | Lin. ft. | Sq. ft. | l. Specify: VAT/CEILING | | |

14. Describe the decontamination system(s) to be used:

AS REQUIRED

15. Describe the containerization/disposal methods to comply with 310 CMR 7.15 and 453 CMR 6.14(2) (g):

AS REQUIRED

16. For Emergency Asbestos Operations, the DEP and DOS officials who evaluated the emergency:

a. Name of DEP Official
b. Title
c. Date (mm/dd/yyyy) of Authorization
d. DEP Waiver #
e. Name of DOS Official
f. DOS Official Title
g. Date (mm/dd/yyyy) of Authorization
h. DOS Waiver #

17. Do prevailing wage rates as per M.G.L. c. 149, § 26, 27 or 27A–F apply to this project? ☑ Yes ☐ No

## B. Facility Description

1. Current or prior use of facility: SCHOOL

2. Is the facility owner-occupied residential with 4 units or less? ☐ Yes ☑ No

3. a. Facility Owner Name: TOWN OF BOURNE
b. Address
c. City/Town
d. Zip Code
e. Telephone Number (area code and extension)

4. a. Name of Facility Owner's On-Site Manager
b. On-Site Manager Address
c. City/Town
d. Zip Code
e. Telephone Number (area code and extension)

ANF001002

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171730
Decal Number

## B. Facility Description (cont.)

5. a. Name of General Contractor | b. Address

c. City/Town | d. Zip Code | e. Telephone Number (area code and extension)

f. Contractor's Worker's Comp. Insurer | g. Policy Number | h. Exp. Date (mm/dd/yyyy)

6. What is the size of this facility? a. Square Feet | b. Number of floors

## C. Asbestos Transportation and Disposal

1. Transporter of asbestos-containing material from site to temporary storage site (if necessary):

NESM LLP
a. Name of Transporter | b. Address

c. City/Town | d. Zip Code | e. Telephone Number

Note: Transfer Stations must comply with the Solid Waste Division Regulations 310 CMR 19.000

2. Transporter of asbestos-containing waste material from removal/temporary site to final disposal site:

RED TECHNOLOGIES
a. Name of Transporter | b. Address

c. City/Town | d. Zip Code | e. Telephone Number

3. a. Refuse Transfer Station and Owner | b. Address

c. City/Town | d. Zip Code | e. Telephone Number

4. MINERVA ENTERPRISES INC
a. Final Disposal Site Location Name | b. Final Disposal Site Location Owner's Name

9000 MINERVA ROAD
c. Final Disposal Site Address | WAYNESBURG
d. City/Town

OH
e. State | 44688
f. Zip Code | g. Telephone Number

## D. Certification

The undersigned hereby states, under the penalties of perjury, that he/she has read the Commonwealth of Massachusetts regulations for the Removal, Containment or Encapsulation of Asbestos, 453 CMR 6.00 and 310 CMR 7.15, and that the information contained in this notification is true and correct to the best of his/her knowledge and belief.

KEN FURTNEY
a. Name | b. Authorized Signature

2/1/2013
c. Position/Title | d. Date (mm/dd/yyyy)

e. Telephone Number | f. Representing

g. Address

h. City/Town | i. Zip Code

ANF001002003

Go To Top

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171732
Decal Number

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

## A. Asbestos Abatement Description

1. a. Is this facility fee exempt - city, town, district, municipal housing authority, owner-occupied residence of four units or less? ☑ Yes ☐ No

   b. Provide blanket decal number if applicable: _____ Blanket Decal Number

2. Facility Location:

   BOURNE HIGH SCHOOL — a. Name of Facility
   75 WATERHOUSE RD. — b. Street Address
   Bourne — c. City/Town
   MA — d. State
   02532 — e. Zip Code
   _____ — f. Telephone Number

INSTRUCTIONS

1. All sections of this form must be completed in order to comply with DEP notification requirements of 310 CMR 7.15 and the Division of Occupational Safety (DOS) notification requirements of 453 CMR 6.12

3. Worksite Location:

   ROOM 17A — a. Building Name/Building Location
   _____ — b. Building #
   _____ — c. Wing
   _____ — d. Floor
   _____ — e. Room

4. Is the facility occupied? ☑ Yes ☐ No

5. Asbestos Contractor:

   NEW ENGLAND SURFACE MAINTENANCE — a. Name
   850 WASHINGTON STREET — b. Address
   WEYMOUTH — c. City/Town
   02189 — d. Zip Code
   7813372117 — e. Telephone Number
   AC000196 — f. DOS License Number
   g. Contract Type: ☐ Written ☐ Verbal
   _____ — h. Facility Contact Person
   _____ — i. Contact Person's Title

6. JOHN P. VALLIQUETTE — a. Name of On-Site Supervisor/Foreman
   AS060773 — b. Supervisor/Foreman DOS Certification Number

7. OWNER'S REP — a. Name of Project Monitor
   N/A — b. Project Monitor DOS Certification Number

8. OWNER'S REP — a. Name of Asbestos Analytical Lab
   N/A — b. Asbestos Analytical Lab DOS Certification Number

9. 02/18/2013 — a. **Project Start Date (mm/dd/yyyy)**
   02/18/2013 — b. **End Date (mm/dd/yyyy)**
   7-5 — c. Work hours Mon-Fri.
   _____ — d. Work hours Sat-Sun.

10. a. What type of project is this?

    ☐ Demolition ☐ Renovation
    ☑ Repair ☐ Other, please specify:

    _____ b. Describe

11. a. Check abatement procedures:

    ☐ Glove bag ☐ Encapsulation
    ☐ Enclosure ☐ Disposal only
    ☐ Cleanup ☐ Other, specify:
    ☑ Full containment

    _____ b. Describe

12. Is the job being conducted: ☑ Indoors? ☐ Outdoors?

ANF001 02001 10

Go To Top

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171732
Decal Number

## A. Asbestos Abatement Description (cont.)

13. Total amount of each type of Asbestos Containing Materials (ACM) to be removed, enclosed, or encapsulated:

| | Lin. ft. | Sq. ft. |
|---|---|---|
| a. Total pipes or ducts (linear ft) | 0 | |
| b. Total other surfaces (square ft) | | 130 |
| c. Boiler, breaching, duct, tank surface coatings | | |
| d. Insulating cement | | |
| e. Corrugated or layered paper pipe insulation | | |
| f. Trowel/Sprayer coatings | | |
| g. Spray-on fireproofing | | |
| h. Transite board, wall board | | |
| i. Cloths, woven fabrics | | |
| j. Other, please specify: | | 130 |
| k. Thermal, solid core pipe insulation | | |

l. Specify: VAT

14. Describe the decontamination system(s) to be used:

AS REQUIRED

15. Describe the containerization/disposal methods to comply with 310 CMR 7.15 and 453 CMR 6.14(2) (g):

AS REQUIRED

16. For Emergency Asbestos Operations, the DEP and DOS officials who evaluated the emergency:

a. Name of DEP Official
b. Title
c. Date (mm/dd/yyyy) of Authorization
d. DEP Waiver #
e. Name of DOS Official
f. DOS Official Title
g. Date (mm/dd/yyyy) of Authorization
h. DOS Waiver #

17. Do prevailing wage rates as per M.G.L. c. 149, § 26, 27 or 27A–F apply to this project? ☑ Yes ☐ No

## B. Facility Description

1. Current or prior use of facility: SCHOOL

2. Is the facility owner-occupied residential with 4 units or less? ☐ Yes ☑ No

3. a. Facility Owner Name: TOWN OF BOURNE
   b. Address
   c. City/Town
   d. Zip Code
   e. Telephone Number (area code and extension)

4. a. Name of Facility Owner's On-Site Manager
   b. On-Site Manager Address
   c. City/Town
   d. Zip Code
   e. Telephone Number (area code and extension)

ANF001100202

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171732
Decal Number

## B. Facility Description (cont.)

5.
a. Name of General Contractor
b. Address
c. City/Town
d. Zip Code
e. Telephone Number (area code and extension)
f. Contractor's Worker's Comp. Insurer
g. Policy Number
h. Exp. Date (mm/dd/yyyy)

6. What is the size of this facility?
a. Square Feet
b. Number of floors

## C. Asbestos Transportation and Disposal

1. Transporter of asbestos-containing material from site to temporary storage site (if necessary):

NESM LLP
a. Name of Transporter
b. Address
c. City/Town
d. Zip Code
e. Telephone Number

Note: Transfer Stations must comply with the Solid Waste Division Regulations 310 CMR 19.000

2. Transporter of asbestos-containing waste material from removal/temporary site to final disposal site:

RED TECHNOLOGIES
a. Name of Transporter
b. Address
c. City/Town
d. Zip Code
e. Telephone Number

3.
a. Refuse Transfer Station and Owner
b. Address
c. City/Town
d. Zip Code
e. Telephone Number

4. MINERVA ENTERPRISES INC
a. Final Disposal Site Location Name
b. Final Disposal Site Location Owner's Name
9000 MINERVA ROAD
c. Final Disposal Site Address
WAYNESBURG
d. City/Town
OH
e. State
44688
f. Zip Code
g. Telephone Number

ANF001002003

## D. Certification

The undersigned hereby states, under the penalties of perjury, that he/she has read the Commonwealth of Massachusetts regulations for the Removal, Containment or Encapsulation of Asbestos, 453 CMR 6.00 and 310 CMR 7.15, and that the information contained in this notification is true and correct to the best of his/her knowledge and belief.

KEN FURTNEY
a. Name
b. Authorized Signature
2/1/2013
c. Position/Title
d. Date (mm/dd/yyyy)
e. Telephone Number
f. Representing
g. Address
h. City/Town
i. Zip Code

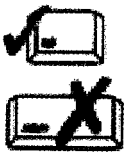
Go To Top

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171731
Decal Number

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



INSTRUCTIONS

1. All sections of this form must be completed in order to comply with DEP notification requirements of 310 CMR 7.15 and the Division of Occupational Safety (DOS) notification requirements of 453 CMR 6.12

## A. Asbestos Abatement Description

1. a. Is this facility fee exempt - city, town, district, municipal housing authority, owner-occupied residence of four units or less? ☑ Yes ☐ No

   b. Provide blanket decal number if applicable: _____ Blanket Decal Number

2. Facility Location:

   OTIS ELEMENTARY SCHOOL — a. Name of Facility
   5500 CURTIS BLVD. — b. Street Address
   Bourne — c. City/Town
   MA — d. State
   02532 — e. Zip Code
   _____ — f. Telephone Number

3. Worksite Location:

   BOILER RM. KITCHEN — a. Building Name/Building Location
   _____ — b. Building #
   _____ — c. Wing
   _____ — d. Floor
   _____ — e. Room

4. Is the facility occupied? ☑ Yes ☐ No

5. Asbestos Contractor:

   NEW ENGLAND SURFACE MAINTENANCE — a. Name
   850 WASHINGTON STREET — b. Address
   WEYMOUTH — c. City/Town
   02189 — d. Zip Code
   7813372117 — e. Telephone Number
   AC000196 — f. DOS License Number
   g. Contract Type: ☐ Written ☐ Verbal
   _____ — h. Facility Contact Person
   _____ — i. Contact Person's Title

6. KENNETH M FURTNEY — a. Name of On-Site Supervisor/Foreman
   AS040208 — b. Supervisor/Foreman DOS Certification Number

7. OWNER'S REP — a. Name of Project Monitor
   N/A — b. Project Monitor DOS Certification Number

8. OWNER'S REP — a. Name of Asbestos Analytical Lab
   N/A — b. Asbestos Analytical Lab DOS Certification Number

9. 02/18/2013 — a. **Project Start Date (mm/dd/yyyy)**
   02/22/2013 — b. **End Date (mm/dd/yyyy)**
   7-5 — c. Work hours Mon-Fri.
   _____ — d. Work hours Sat-Sun.

10. a. What type of project is this?

    ☐ Demolition ☐ Renovation
    ☑ Repair ☐ Other, please specify:

    _____ b. Describe

11. a. Check abatement procedures:

    ☑ Glove bag ☐ Encapsulation
    ☐ Enclosure ☐ Disposal only
    ☐ Cleanup ☐ Other, specify:
    ☐ Full containment

    _____ b. Describe

12. Is the job being conducted: ☑ Indoors? ☐ Outdoors?

ANF001A02001100

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Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171731
Decal Number

## A. Asbestos Abatement Description (cont.)

13. Total amount of each type of Asbestos Containing Materials (ACM) to be removed, enclosed, or encapsulated:

| | | | | | |
|---|---|---|---|---|---|
| a. Total pipes or ducts (linear ft) | 12 | | b. Total other surfaces (square ft) | 10 | |
| c. Boiler, breaching, duct, tank surface coatings | Lin. ft. | 10 Sq. ft. | d. Insulating cement | Lin. ft. | Sq. ft. |
| e. Corrugated or layered paper pipe insulation | Lin. ft. | Sq. ft. | f. Trowel/Sprayer coatings | Lin. ft. | Sq. ft. |
| g. Spray-on fireproofing | Lin. ft. | Sq. ft. | h. Transite board, wall board | Lin. ft. | Sq. ft. |
| i. Cloths, woven fabrics | Lin. ft. | Sq. ft. | j. Other, please specify: | Lin. ft. | Sq. ft. |
| k. Thermal, solid core pipe insulation | 12 Lin. ft. | Sq. ft. | l. Specify | | |

14. Describe the decontamination system(s) to be used:

AS REQUIRED

15. Describe the containerization/disposal methods to comply with 310 CMR 7.15 and 453 CMR 6.14(2) (g):

AS REQUIRED

16. For Emergency Asbestos Operations, the DEP and DOS officials who evaluated the emergency:

a. Name of DEP Official
b. Title
c. Date (mm/dd/yyyy) of Authorization
d. DEP Waiver #
e. Name of DOS Official
f. DOS Official Title
g. Date (mm/dd/yyyy) of Authorization
h. DOS Waiver #

17. Do prevailing wage rates as per M.G.L. c. 149, § 26, 27 or 27A–F apply to this project? ☑ Yes ☐ No

## B. Facility Description

1. Current or prior use of facility: SCHOOL

2. Is the facility owner-occupied residential with 4 units or less? ☐ Yes ☑ No

3. TOWN OF BOURNE
a. Facility Owner Name
b. Address
c. City/Town
d. Zip Code
e. Telephone Number (area code and extension)

4. a. Name of Facility Owner's On-Site Manager
b. On-Site Manager Address
c. City/Town
d. Zip Code
e. Telephone Number (area code and extension)

ANF001102002

Commonwealth of Massachusetts

# Asbestos Notification Form ANF-001

100171731
Decal Number

## B. Facility Description (cont.)

5.
a. Name of General Contractor

b. Address

c. City/Town

d. Zip Code

e. Telephone Number (area code and extension)

f. Contractor's Worker's Comp. Insurer

g. Policy Number

h. Exp. Date (mm/dd/yyyy)

6. What is the size of this facility?

a. Square Feet

b. Number of floors

## C. Asbestos Transportation and Disposal

1. Transporter of asbestos-containing material from site to temporary storage site (if necessary):

NESM LLP
a. Name of Transporter

b. Address

c. City/Town

d. Zip Code

e. Telephone Number

Note: Transfer Stations must comply with the Solid Waste Division Regulations 310 CMR 19.000

2. Transporter of asbestos-containing waste material from removal/temporary site to final disposal site:

RED TECHNOLOGIES
a. Name of Transporter

b. Address

c. City/Town

d. Zip Code

e. Telephone Number

3.
a. Refuse Transfer Station and Owner

b. Address

c. City/Town

d. Zip Code

e. Telephone Number

4. MINERVA ENTERPRISES INC
a. Final Disposal Site Location Name

b. Final Disposal Site Location Owner's Name

9000 MINERVA ROAD
c. Final Disposal Site Address

WAYNESBURG
d. City/Town

OH
e. State

44688
f. Zip Code

g. Telephone Number

## D. Certification

The undersigned hereby states, under the penalties of perjury, that he/she has read the Commonwealth of Massachusetts regulations for the Removal, Containment or Encapsulation of Asbestos, 453 CMR 6.00 and 310 CMR 7.15, and that the information contained in this notification is true and correct to the best of his/her knowledge and belief.

KEN FURTNEY
a. Name

b. Authorized Signature

2/1/2013
d. Date (mm/dd/yyyy)

c. Position/Title

e. Telephone Number

f. Representing

g. Address

h. City/Town

i. Zip Code

ANF001002003

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# Appendix E

## Certificate of Final Visual Inspection

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Certificate of Final Visual Inspection after Asbestos Removal, Repair or Encapsulation

☒ Final Date 2/15/13
☐ Interim Date

Project Name: BOURNE PUBLIC SCHOOLS Project Number: 20121141.A3E
Site Location: PEEBLES ELEMENTARY SCHOOL
Building Identification: PEEBLES ELEMENTARY SCHOOL
Containment Location: VESTIBULE

☒ Inspection Passed ☐ Inspection Failed

| CHECKLIST: | YES | NO |
|---|---|---|
| 1. All surfaces dry: | ✓ | |
| 2. Visible dust on: | | ✓ |

| | YES | NO | | YES | NO |
|---|---|---|---|---|---|
| a. Floor | | | e. Vertical surfaces | | |
| b. Horizontal surfaces | | | f. Decon unit | | |
| c. Piping Systems | | | g. Duct work | | |
| d. Mechanical Equipment | | ✓ | h. Contractor's Equip. | | |
| | | | i. Other | | ✓ |

FIELD NOTES:

145 SF OF 9x9 VINYL ASBESTOS FLOOR TILE

NOTE: APPROX 10SF OF 12x12 NON-ACM TILE REMOVED; ALL MASTIC IS NON-ACM AND SHALL REMAIN

- TWO EXPOSED ENDS OF AIRCELL PIPE INSULATION WET UNWRAPPED AT FLOOR PENETRATION ASSOCIATED WITH WALL-MOUNTED RADIATORS

INSPECTOR: DUSTIN DIEDRICKSON (Printed) (Signature)

CONTRACTOR'S SUPERVISOR: KEN FURTNEY (Printed) (Signature)

& O'Neill EnviroScience Form No. _____

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield St, Suite 100, Boston, MA 02122

(617) 282-4675 Fax (617) 282-8253

Certificate of Final Visual Inspection after Asbestos Removal, Repair or Encapsulation

☒ Final Date 2/15/13
☐ Interim Date

Project Name: BOURNE PUBLIC SCHOOLS Project Number: 20121141.A3E
Site Location: PEEBLES ELEMENTARY SCHOOL
Building Identification: PEEBLES ELEMENTARY SCHOOL
Containment Location: STAIRWELL FROM GYMNASIUM TO CAFETERIA

☒ Inspection Passed ☐ Inspection Failed

| CHECKLIST: | YES | NO |
|---|---|---|
| 1. All surfaces dry: | ✓ | |
| 2. Visible dust on: | | ✓ |

| | YES | NO | | YES | NO |
|---|---|---|---|---|---|
| a. Floor | | | | | |
| b. Horizontal surfaces | | ✓ | e. Vertical surfaces | | |
| c. Piping Systems | | | f. Decon unit | | |
| d. Mechanical Equipment | | ✓ | g. Duct work | | |
| | | | h. Contractor's Equip. | | |
| | | | i. Other | | ✓ |

FIELD NOTES:

250 SF OF 9x9 ASBESTOS VINYL FLOOR TILE REMOVED INSIDE OF FULL CONTAINMENT.

ALL NON-ACM MASTIC REMAINS PER AGREEMENT

INSPECTOR: DUSTIN DIEDRICKSEN (Printed) (Signature)

CONTRACTOR'S SUPERVISOR: KEN FURTNEY (Printed) (Signature)

☐ & O'Neill EnviroScience Form No. _____

FUSS & O'NEILL EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/18/13 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | Peebles Elementary School | | PROJECT NO.: | 20121141.A3E |
| SITE LOCATION: | Bourne, MA | BUILDING: | Peebles Elementary | ☒ PASS ☐ FAIL |
| CONTAINMENT: | Through out | | | |
| CONTRACTOR: | New England Surface Maintenance, LLP | | | |

☐ Standard Containment ☐ AWP Containment ☒ Mini-Enclosure ☐ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. 9x9 Floor Tile | QTY: | Noted Below | 2. Copy Room Threshold | QTY: | 45F |
| 3. Radiator By main Door | QTY: | 55F | 4. Exit Doors o/s Rm 13 | QTY: | 85F |
| 5. Small girls Bath o/s Rm 10 | QTY: | 45F | 6. Stairway to Annex Hall | QTY: | 65F |
| 7. Bathroom o/s Rm 13 | QTY: | 95F | 8. Cafe Threshold | QTY: | 85F |
| 9. Double Doors o/s cafe | QTY: | 35F | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

Each removed in mini-containment and cleared with 2-5 pcm's. Black mastic is negative. 2 pcm's were used in enclosures where >35F was damaged and whole tiles were removed.

AIR CLEARANCE: ☒ PCM ☐ TEM ☐ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: KEN FURTNEY (PRINTED) _____ (SIGNATURE)

FUSS & O'NEILL EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/19/13 ☐ Removal ☒ Encapsulation ☐ Enclosure ☒ Repair ☐ Cleanup

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NAME: | Peebles Elementary School | | | PROJECT NO.: | 20121141.A3E |
| SITE LOCATION: | Bourne, MA | BUILDING: | Peebles | ☒ PASS ☐ FAIL | |
| CONTAINMENT: | Storage near Rm 13 | | | | |
| CONTRACTOR: | NESM | | | | |

☒ Standard Containment ☐ AWP Containment ☐ Mini-Enclosure ☐ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. Plaster ceiling skim | QTY: | 100 lf | 2. | QTY: | |
| 3. 9x9 Floor tile at threshold | QTY: | 6 sf | 4. | QTY: | |
| 5. | QTY: | | 6. | QTY: | |
| 7. | QTY: | | 8. | QTY: | |
| 9. | QTY: | | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

Cracking cleaned and filled then entire ceiling painted w/ airless sprayer

AIR CLEARANCE: ☒ PCM ☐ TEM ☐ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: KEN FURTNEY (PRINTED) _____ (SIGNATURE)

FUSS & O'NEILL
EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/19/13 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | Peebles Elementary School | | PROJECT NO.: | 20121141.A3E |
| SITE LOCATION: | Bourne, MA | BUILDING: | Peebles | ☒ PASS ☐ FAIL |
| CONTAINMENT: | Kitchen | | | |
| CONTRACTOR: | NESM | | | |

☒ Standard Containment ☐ AWP Containment ☐ Mini-Enclosure ☐ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. Caulking @ ceiling | QTY: | 25 lf | 2. | QTY: | |
| 3. | QTY: | | 4. | QTY: | |
| 5. | QTY: | | 6. | QTY: | |
| 7. | QTY: | | 8. | QTY: | |
| 9. | QTY: | | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

### AIR CLEARANCE:

☒ PCM ☐ TEM ☐ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: Ken Furney (PRINTED) _____ (SIGNATURE)

FUSS & O'NEILL EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/19/13 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | Bourne High School | | PROJECT NO.: | 20121141.A3E |
| SITE LOCATION: | Bourne, MA | BUILDING: | Bourne HS | ☒ PASS ☐ FAIL |
| CONTAINMENT: | Rm 17A | | | |
| CONTRACTOR: | NESM | | | |

☒ Standard Containment ☐ AWP Containment ☐ Mini-Enclosure ☐ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. Floor Tile (9x9) | QTY: | 1305F | 2. | QTY: | |
| 3. | QTY: | | 4. | QTY: | |
| 5. | QTY: | | 6. | QTY: | |
| 7. | QTY: | | 8. | QTY: | |
| 9. | QTY: | | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

Cleared w/ 5 pcms

AIR CLEARANCE: ☒ PCM ☐ TEM ☐ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: Ken Furnary (PRINTED) _____ (SIGNATURE)

FUSS & O'NEILL EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/20/13 ☒ Removal ☒ Encapsulation ☐ Enclosure ☒ Repair ☐ Cleanup

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | Otis Memorial School | | PROJECT NO.: | 20121141.A3E |
| SITE LOCATION: | Bourne, MA | BUILDING: | Otis School | ☒ PASS ☐ FAIL |
| CONTAINMENT: | Boiler Room | | | |
| CONTRACTOR: | AVESAM | | | |

☐ Standard Containment ☐ AWP Containment ☒ Mini-Enclosure ☒ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. Boiler insulation Front | QTY: | 15F wrapped | 2. Breeching Insulation | QTY: | 15F wrapped |
| 3. & Back | QTY: | 5SF wrapped | 4. Hot water Tank TSI | QTY: | 15F wrapped |
| 5. Mudded Fittings | QTY: | 3EA | 6. | QTY: | |
| 7. | QTY: | | 8. | QTY: | |
| 9. | QTY: | | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

Backgrounds run in & out of Boiler room.

AIR CLEARANCE: ☒ PCM ☐ TEM ☐ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: John Vellgutts (PRINTED) John Vellgutts (SIGNATURE)

FUSS & O'NEILL EnviroScience, LLC

# Certificate of Final Visual Inspection

## Asbestos Abatement

Date: 2/20/13 ☒ Removal ☐ Encapsulation ☐ Enclosure ☐ Repair ☐ Cleanup

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NAME: | Otis Memorial School | | | PROJECT NO.: | 20121141.ABE |
| SITE LOCATION: | Bourne, MA | BUILDING: | Otis School | ☒ PASS ☐ FAIL | |
| CONTAINMENT: | Kitchen | | | | |
| CONTRACTOR: | NESM | | | | |

☐ Standard Containment ☐ AWP Containment ☐ Mini-Enclosure ☒ Glovebag ☐ None

### MATERIALS REMOVED

| | | | | | |
|---|---|---|---|---|---|
| 1. mudded Fitting | QTY: | 2ea | 2. | QTY: | |
| 3. | QTY: | | 4. | QTY: | |
| 5. | QTY: | | 6. | QTY: | |
| 7. | QTY: | | 8. | QTY: | |
| 9. | QTY: | | 10. | QTY: | |

### SUSPECT MATERIALS REMAINING IN CONTAINMENT NOT SPECIFIED FOR REMOVAL

| | | | | | |
|---|---|---|---|---|---|
| 1. | QTY: | | 2. | QTY: | |
| 3. | QTY: | | 4. | 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 | ☐ Other: | |

### FIELD NOTES

1 Fitting glovebagged. Backgrounds run.

AIR CLEARANCE: ☐ PCM ☐ TEM ☒ None performed

### CERTIFICATION

I certify that this containment was inspected by me this day.

EnviroScience Inspector: Jon Hand (PRINTED) Jon Hand (SIGNATURE)

I have read and understand these results.

Contractor's Supervisor: John Valiquette (PRINTED) John Valiquette (SIGNATURE)

# Appendix F

## Final Air Analysis Results

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Bourne Public Schools

Project Number: 20121141.A3E

Project Manager: D.D Hedricksen

Project Location: Peebles Elementary School

Rotometer Number: 101359

Rotometer Cal. Date: 5/7/12

Microscope Number: 100229

Sampler Name: Jonathan Hand + D.D.

Analyst Name: Jonathan Hand AAR# 9027 / 8845

Sample Date 2/15/13 Analysis Date: 2/15/13

Reviewed By:

Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time | | Sample Duration Minutes | Pump Number | Flow Rate (LPM) | | | Total Volume Liters | Fiber Count Fibers/fields | Concentration | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | On | Off | | | Pre | Post | Ave | | | Fibers/mm² | Fibers/cc |
| 215DD-FB | Field Blank | | | | | | | | | | 0/100 | <7 | |
| 215DD-SB | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 0/100 | <7 | |
| 215DD-01 | VESTIBULE | 3 | 1645 | 1808 | 83 | — | 15 | 15 | 15 | 1245 | 5/100 | 6.37 | <0.002 |
| 215DD-02 | VESTIBULE | 3 | 1645 | 1808 | 83 | — | 15 | 15 | 15 | 1245 | 6/100 | 7.64 | 0.00236 |
| 215DD-03 | VESTIBULE | 3 | 1645 | 1809 | 84 | — | 15 | 15 | 15 | 1260 | 4/100 | 5.10 | <0.002 |
| 215DD-04 | VESTIBULE | 3 | 1645 | 1810 | 85 | — | 15 | 15 | 15 | 1275 | 5/100 | 6.37 | <0.002 |
| 215DD-05 | VESTIBULE | 3 | 1645 | 1810 | 85 | — | 15 | 15 | 15 | 1275 | 4/100 | 5.10 | <0.002 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| -03 | Duplicate Count | | | | | | | | | | 5/100 | <7 | <.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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peebles Elementary School
Project Number: 20121141.A3E
Project Manager: Dustin Diedrichsen
Project Location: Throughout

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/18/13 Analysis Date:
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2185H-01 | Field Blank | | | | | | | | | | 0/100 | <7 | |
| -02 | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 0/100 | <7 | |
| -03 | Radiator By Main Door | 3 | 0819 | 0939 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.0022 |
| -04 | ↓ | ↓ | 0819 | 0939 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.0022 |
| -05 | Copy Room Threshold | ↓ | 0821 | 0941 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.0022 |
| -06 | ↓ | ↓ | 0821 | 0941 | 80 | | 15 | 15 | 15 | 1200 | 2/100 | <7 | <.0022 |
| -07 | Hall o/s Rm 12 | 2 | 0831 | 1101 | 150 | | 8 | 8 | 8 | 1200 | 5/100 | <7 | <.0022 |
| -08 | Hall o/s Rm 9 | ↓ | 0833 | 1103 | 150 | | 8 | 8 | 8 | 1200 | 4/100 | <7 | <.0022 |
| -09 | Exit Doors o/s 13 | 3 | 0946 | 1106 | 80 | | 15 | 15 | 15 | 1200 | 2/100 | <7 | <.0022 |
| -10 | ↓ | ↓ | 0946 | 1106 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.0022 |
| -11 | Bath o/s 10 | ↓ | 0951 | 1111 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.0022 |
| -12 | ↓ | ↓ | 0951 | 1111 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.0022 |
| -04 | Duplicate Count | | | | | | | | | | 3/100 | <7 | <.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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peeble Elementary School
Project Number: 20121141.A3E
Project Manager: Dustin D.
Project Location: Throughout

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/18/13 Analysis Date: →
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 218JH-13 | Field Blank | | | | | | | | | | 0/100 | <7 | |
| -14 | Sealed Blank | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | | 0/100 | <7 | |
| -15 | Annex Hall stairs | 3 | 1026 | 1146 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.0022 |
| -16 | ↓ | ↓ | 1026 | 1146 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.0022 |
| -17 | Hall o/s 12 | 2 | 1101 | 1301 | 150 | | 8 | 8 | 8 | 1200 | 2/100 | <7 | <.0022 |
| -18 | Hall o/s 9 | ↓ | 1103 | 1303 | 150 | | 8 | 8 | 8 | 1200 | 4/100 | <7 | <.0022 |
| -19 | Hall o/s 12 | 2 | 1301 | 1501 | 120 | | 10 | 10 | 10 | 1200 | 5/100 | <7 | <.0022 |
| -20 | Hall o/s 9 | ↓ | 1303 | 1503 | 120 | | 10 | 10 | 10 | 1200 | 3/100 | <7 | <.0022 |
| -21 | Bath o/s 13 | 3 | 1309 | 1429 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.0022 |
| -22 | ↓ | ↓ | 1309 | 1429 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.0022 |
| -23 | Cafe Threshold | 3 | 1405 | 1525 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.0022 |
| -24 | ↓ | ↓ | 1405 | 1525 | 80 | | 15 | 15 | 15 | 1200 | 2/100 | <7 | <.0022 |
| -16 | Duplicate Count | | | | | | | | | | 4/100 | <7 | <.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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peebles Elementary School
Project Number: 2012 114 1 ABE
Project Manager: Duston D.
Project Location: Throughout

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/18/13 Analysis Date:
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time | | Sample Duration Minutes | Pump Number | Flow Rate (LPM) | | | Total Volume Liters | Fiber Count Fibers/fields | Concentration | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | On | Off | | | Pre | Post | Ave | | | Fibers/mm² | Fibers/cc |
| 218JH-25 | Field Blank | | | | | | | | | | 1/100 | <7 | |
| -26 | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 0/100 | <7 | |
| -27 | cafe Threshold | 3 | 1405 | 1525 | 80 | | 15 | 15 | 15 | 1200 | 6/100 | <7 | <.0022 |
| -28 | ↓ | ↓ | 1405 | 1525 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.0022 |
| -29 | ↓ | ↓ | 1405 | 1525 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.0022 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| -28 | Duplicate Count | | | | | | | | | | 4/100 | <7 | <.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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peebles Elementary School
Project Number: 2012 1141.A3E
Project Manager: Duston D.
Project Location: Kitchen & storage near 13

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date _____ Analysis Date: _____
Reviewed By: _____
Reviewer's Title: _____

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 219JH-01 | Field Blank | | | | | | | | | | 1/100 | <7 | |
| -02 | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 0/100 | <7 | |
| -03 | Cafe OCB | 2 | 0741 | 1011 | 150 | | 8 | 8 | 8 | 1200 | 6/100 | <7 | <.002 |
| -04 | Hall o/s 9 | ↓ | 0741 | 1011 | 150 | | 8 | 8 | 8 | 1200 | 8/100 | 8.92 | .0029 |
| -05 | Hall o/s 13 | ↓ | 0743 | 1013 | 150 | | 8 | 8 | 8 | 1200 | 8/100 | 8.92 | .0029 |
| -06 | Kitchen | 3 | 0910 | 1030 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.002 |
| -07 | ↓ | ↓ | 0910 | 1030 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.002 |
| -08 | | | 0910 | 1030 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.002 |
| -09 | | | 0911 | 1030 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.002 |
| -10 | | | 0911 | 1030 | 80 | | 15 | 15 | 15 | 1200 | 2/100 | <7 | <.002 |
| -11 | Hall o/s 9 | 2 | 1011 | 1231 | 150 | | 8 | 8 | 8 | 1200 | 5/100 | <7 | <.002 |
| -12 | ↓ 13 | ↓ | 1013 | 1233 | 150 | | 8 | 8 | 8 | 1200 | 4/100 | <7 | <.002 |
| -04 | Duplicate Count | | | | | | | | | | 5/100 | <7 | <.002 |

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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peebles Elementary + Bowne High school
Project Number: 2012 1141.A3E
Project Manager: Dustin D.
Project Location: Storage near 13 & 17A

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/19/13 Analysis Date:
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2285H -13 | Field Blank | | | | | | | | | | 1/100 | <7 | |
| -14 | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 1/100 | <7 | |
| -15 | Rm 17A & B | 1,2 | 1116 | 1346 | 150 | | 8 | 8 | 8 | 1200 | 6/100 | <7 | <.002 |
| -16 | outside 17A | 1,2 | 1116 | 1346 | 150 | | 8 | 8 | 8 | 1200 | 8/100 | 8.92 | .0029 |
| -17 | Hallway 9 | 1,2 | 1231 | 1351 | 80 | | 15 | 15 | 15 | 1200 | 6/100 | <7 | <.002 |
| -18 | " 13 | 1,2 | 1233 | 1351 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.002 |
| -19 | Rm 17A | 3 | 1331 | 1451 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.002 |
| -20 | ↓ | ↓ | 1337 | 1451 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.002 |
| -21 | | | 1331 | 1451 | 80 | | 15 | 15 | 15 | 1200 | 3/100 | <7 | <.002 |
| -22 | | | 1331 | 1451 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.002 |
| -23 | ↓ | ↓ | 1331 | 1451 | 80 | | 15 | 15 | 15 | 1200 | 4/100 | <7 | <.002 |
| -24 | Storage near 13 | 3 | 1421 | 1541 | 80 | | 15 | 15 | 15 | 1200 | | | |
| -17 | Duplicate Count | | | | | | | | | | 5/100 | <7 | <.002 |

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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Peebles Elementary & Bowmore High
Project Number: 2012114T.A3E
Project Manager: Dustin D.
Project Location: Storage near 13 & Rm 17A

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/19/13 Analysis Date:
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 219JH-25 | Field Blank | | | | | | | | | | 1/100 | <7 | |
| -26 | Sealed Blank | | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | 0/100 | <7 | |
| -27 | Storage near 13 | 3 | 1421 | 1541 | 80 | | 15 | 15 | 15 | 1200 | 6/100 | <7 | <.002 |
| -28 | ↓ | ↓ | 1421 | 1541 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.002 |
| -29 | | | 1421 | 1541 | 80 | | 15 | 15 | 15 | 1200 | 5/100 | <7 | <.002 |
| -30 | | | 1421 | 1541 | 80 | | 15 | 15 | 15 | 1200 | 6/100 | <7 | <.002 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| -28 | Duplicate Count | | | | | | | | | | 6/100 | <7 | <.002 |

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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

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# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Otis Memorial School
Project Number: 2012 1141.A3E
Project Manager: Duston D.
Project Location: Boiler Room + kitchen

Rotometer Number: 101359
Rotometer Cal. Date: 5/7/12
Microscope Number: 100229

Sampler Name: Jonathan Hand
Analyst Name: Jonathan Hand AAR# 9027
Sample Date 2/20/13 Analysis Date:
Reviewed By:
Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time On | Sample Time Off | Sample Duration Minutes | Pump Number | Flow Rate (LPM) Pre | Flow Rate (LPM) Post | Flow Rate (LPM) Ave | Total Volume Liters | Fiber Count Fibers/fields | Concentration Fibers/mm² | Concentration Fibers/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22054-01 | Field Blank | | | | | | | | | | 1/100 | <7 | |
| -02 | Sealed Blank | Submit at least 2 blanks or 10% of the number of samples. | | | | | | | | | 0/100 | <7 | |
| -03 | Boiler Room | 1, 2 | 0836 | 1056 | 150 | | 8 | 8 | 8 | 1200 | 12/100 | 14.01 | .0045 |
| -04 | Gym o/s kitchen | ↓ | 0836 | 1056 | 150 | | 8 | 8 | 8 | 1200 | 6/100 | <7 | <.002 |
| -05 | kitchen | ↓ | 0836 | 1056 | 150 | | 8 | 8 | 8 | 1200 | 4/100 | <7 | <.002 |
| -06 | Gym | ↓ | 0836 | 1056 | 150 | | 8 | 8 | 8 | 1200 | 3/100 | <7 | <.002 |
| -07 | Boiler Room | ↓ | 1056 | 1324 | 150 | | 8 | 8 | 8 | 1200 | 12/100 | 14.01 | .0045 |
| -08 | Gym o/s kitchen | ↓ | 1054 | 1326 | 150 | | 8 | 8 | 8 | 1200 | 6/100 | <7 | <.002 |
| -09 | Gym | ↓ | 1056 | 1326 | 150 | | 8 | 8 | 8 | 1200 | 6/100 | <7 | <.002 |
| -10 | Behind Boiler 1 | 3 | 1123 | 1243 | 80 | | 15 | 15 | 15 | 1200 | 10/100 | 11.46 | .0077 |
| -11 | ↓ | ↓ | 1123 | 1243 | 80 | | 15 | 15 | 15 | 1200 | 13/100 | 15.29 | .0049 |
| -12 | ↓ | ↓ | 1123 | 1243 | 80 | | 15 | 15 | 15 | 1200 | 9/100 | 10.19 | .0033 |
| -04 | Duplicate Count | | | | | | | | | | 5/100 | <7 | <.002 |

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) / (0.00785mm²/field)

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

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| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
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# FUSS & O'NEILL EnviroScience, LLC

# Area Air Monitoring Worksheet For Asbestos Field Analysis

Form 7400-05
Edition 2007
Supersedes previous editions

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

Project Name: Otis Memorial School

Project Number: 20121141.A3E

Project Manager: Duston D.

Project Location: Boiler Room & Kitchen

Rotometer Number: 101359

Rotometer Cal. Date: 5/7/12

Microscope Number: 100229

Sampler Name: Jonathan Hand

Analyst Name: Jonathan Hand AAR# 9027

Sample Date 2/20/13 Analysis Date:

Reviewed By:

Reviewer's Title:

| Sample ID Number | Sample Location | Activity Code/ Comment | Sample Time | | Sample Duration Minutes | Pump Number | Flow Rate (LPM) | | | Total Volume Liters | Fiber Count Fibers/fields | Concentration | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | On | Off | | | Pre | Post | Ave | | | Fibers/mm² | Fibers/cc |
| 220JH-13 | Field Blank | | | | | | | | | | 0/100 | <7 | |
| -14 | Sealed Blank | | | | | | | | | | 0/100 | <7 | |
| -15 | Behind Boiler #1 | 3 | 1124 | 1244 | 80 | | 15 | 15 | 15 | 1200 | 17/100 | 21.66 | .0069 |
| -16 | " | " | 1124 | 1244 | 80 | | 15 | 15 | 15 | 1200 | 12/100 | 15.29 | .0049 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| -16 | Duplicate Count | | | | | | | | | | 17/100 | 16.56 | .0053 |

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) / (0.00785mm²/field)

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

| Range | Intra Lab Sr | Inter Lab Sr |
|---|---|---|
| 1 (5-20 fibers/100 fields) | 0.24 | 0.72 |
| 2 (>20-50 Fibers/100 fields) | 0.30 | 0.46 |
| 3 (>50 Fibers/100 fields) | 0.33 | 0.40 |

Project Activity:

| Code | Type |
|---|---|
| 1 | Background |
| 2 | During |
| 3 | Clearance |
| 4 | Environmental |
| 5 | Personal |
| 6 | Other |

C:\Documents and Settings\jhand\Desktop\Forms\Area Air Mon for Asb Field Analysis 07_2007MA.doc

# Appendix G

## TEM Air Analysis Results

**EMSL Analytical, Inc.**
**7 Constitution Way, Suite 107, Woburn, MA 01801**
Phone/Fax: (781) 933-8411 / (781) 933-8412
bostonlab@emsl.com

| | |
|---|---|
| EMSL Order: | 131300619 |
| CustomerID: | ENVI54 |
| CustomerPO: | |
| ProjectID: | |

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

| | |
|---|---|
| Phone: | (860) 646-2469 |
| Fax: | (888) 838-1160 |
| Received: | 02/18/13 8:30 AM |
| Analysis Date: | 2/18/2013 |
| Collected: | 2/15/2013 |

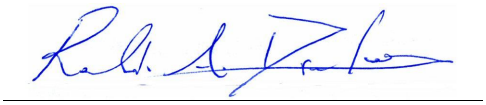
Project: **20121141.A3E / Beebles Elementary School; Gym to Cafe Stairs**

# 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 ≥ 0.5µ < 5µ | # Structures ≥5µ | Analytical Sensitivity (S/cc) | Asbestos Concentration ($S/mm^2$) | Asbestos Concentration (S/cc) |
|---|---|---|---|---|---|---|---|---|---|---|
| 215JH-01<br>*131300619-0001* | Café Landing - TEM | 1216.00 | 0.0650 | 0 | None Detected | | | 0.0049 | **<15.00** | **<0.0049** |
| 215JH-02<br>*131300619-0002* | Lower Stairs - TEM | 1216.00 | 0.0650 | 0 | None Detected | | | 0.0049 | **<15.00** | **<0.0049** |
| 215JH-03<br>*131300619-0003* | Annex Hall Landing - TEM | 1216.00 | 0.0650 | 0 | None Detected | | | 0.0049 | **<15.00** | **<0.0049** |
| 215JH-04<br>*131300619-0004* | Main Office Stairs - TEM | 1216.00 | 0.0650 | 0 | None Detected | | | 0.0049 | **<15.00** | **<0.0049** |
| 215JH-05<br>*131300619-0005* | Lobby Landing - TEM | 1216.00 | 0.0650 | 0 | None Detected | | | 0.0049 | **<15.00** | **<0.0049** |
| 215JH-06<br>*131300619-0006* | Main Office - TEM | 1216.00 | | | Not Analyzed | | | | | |
| 215JH-07<br>*131300619-0007* | Main Office - TEM | 1216.00 | | | Not Analyzed | | | | | |
| 215JH-08<br>*131300619-0008* | Copy Room - TEM | 1216.00 | | | Not Analyzed | | | | | |
| 215JH-09<br>*131300619-0009* | Gym - TEM | 1216.00 | | | Not Analyzed | | | | | |
| 215JH-10<br>*131300619-0010* | Gym - TEM | 1216.00 | | | Not Analyzed | | | | | |

Analyst(s)

*Renaldo Drakes (5)*



Renaldo Drakes, 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. EMSL is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. 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 AL357102

Initial report from 02/18/2013 12:36:16

# FUSS & O'NEILL EnviroScience, LLC

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

## TEM Air Sampling Worksheet

Form 7400-12

131300619

Project Name: Beebles Elementary School
Project Number: 20121141.A3E
Project Manager: Duston Diedricksen
Project Location: Gym to Cafe stairs

Samples Received By:
Date:
Time:
Analyst Name:
Analyst Date:

RECEIVED
FEB 18 2013
By JL 0830
Drop Box

Samples Collected By: Jon Hand Date: 2/15/13 Time: PM
Samples Rec'd/Sent By: / Date: / Time: /
Shipped to: ☒ EMSL (State) MA ☐ Other
Method of Shipment: ☐ Fed Ex. ☐ UPS Overnight ☐ UPS Ground ☒ Other Drop off

| Sample ID Number | Sample Location | I / O | Project Activity | Sample Time On | Sample Time Off | Sample Duration (Min.) | Flow Rate Pre | Flow Rate Post | Flow Rate Average | Total Volume (Liters) | Pump Number | Concentration of Asbestos Structures AS/MM² |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 215JH-01 | Cafe landing | I | Clearance | 1856 | 2104 | 128 | 9.5 | 9.5 | 9.5 | 1216 | | |
| -02 | lower stairs | I | | 1856 | 2104 | 128 | | 9.5 | | 1216 | | |
| -03 | Annex Hall Landing | I | | 1856 | 2104 | 128 | | 9.5 | | 1216 | | |
| -04 | main office stairs | I | | 1857 | 2105 | 128 | | 9.5 | | 1216 | | |
| -05 | Lobby landing | I | | 1857 | 2105 | 128 | | 9.5 | | 1216 | | |
| -06 | main office | O | | 1848 | 2056 | 128 | | 9.5 | | 1216 | | |
| -07 | main office | O | | 1848 | 2056 | 128 | | 9.5 | | 1216 | | |
| -08 | copy room | O | | 1848 | 2056 | 128 | | 9.5 | | 1216 | | |
| -09 | Gym | O | | 1848 | 2056 | 128 | | 9.5 | | 1216 | | |
| -10 | Gym | O | | 1848 | 2056 | 128 | | 9.5 | | 1216 | | |
| -11 | Blank-Open In | I | | | | | | | | | | |
| -12 | Blank-Open Out | O | | | | | | | | | | |
| -13 | Blank-Unopened | --- | | | | | | | | | | |

Analysis Method: TEM AHERA Turnaround Time 6 hr
Fax Results To: Fuss & O'Neill EnviroScience, LLC Laboratory at 860-812-2228

Special Instructions: Call Jon at 401-595-8270 with results
Based on the turnaround time indicated to left, analyses are due to EnviroScience on or before this date:
Please call the EnviroScience laboratory at 860-953-2700 if analyses will be late.



131300619

# Appendix H

## Asbestos Abatement Work Plan (February 15, 2013)

FUSS & O'NEILL
EnviroScience, LLC

February 15, 2013

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

**Re: Asbestos Abatement Work Plan**
**Bourne Public Schools**
**Bourne, Massachusetts**
Fuss & O'Neill EnviroScience, LLC. No. 20121141.A3E

Dear Mr. Donoghue:

Attached please find the "Work Plan" to perform removal of damaged asbestos-containing materials at Peebles Elementary School, Bourne High School, and Otis Memorial Elementary School.

The Asbestos Abatement Contractor shall file a notification and provide the submittals to the Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) and to the Commonwealth of Massachusetts Department of Labor Standards (DLS), formerly known as the Department of Occupational Safety (DOS).

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

Sincerely,

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

www.fando.com

Connecticut
Massachusetts
Rhode Island
South Carolina

Dustin A. Diedricksen
Project Manager/Scientist

DAD:ftc

Attachments

FUSS & O'NEILL
EnviroScience, LLC

**WORK PLAN**
**FOR REMOVAL AND DISPOSAL**
**OF ASBESTOS-CONTAINING MATERIALS FOR**
**BOURNE PUBLIC SCHOOLS**
**BOURNE, MASSACHUSETTS**

## BACKGROUND

A. Asbestos abatement activities shall include repair and/or removal of damaged asbestos-containing materials found at Peebles Elementary School, Bourne High School, and Otis memorial Elementary School.

B. Abatement activities shall occur during winter recess (February 15 – 24), and have been awarded to New England Surface Maintenance (Weymouth, Massachusetts), a licensed Asbestos Abatement Contractor within the Commonwealth of Massachusetts.

C. Asbestos abatement shall be limited to damaged asbestos-containing building materials (ACBM) described herein as revisions made to "Short-Term Asbestos Abatement Plan" (Appendix B) provided in the Six-Month AHERA Asbestos Periodic Surveillance report completed by Fuss & O'Neill EnviroScience, LLC, dated January 9, 2013.

## DESCRIPTION OF WORK

A. The scope of abatement work shall include removal and/or repair of the following (damaged) ACBM: vinyl floor tile; thermal system insulation (TSI); plaster ceiling; interior caulking. Asbestos abatement activities are being carried out as response action to recommendations provided from current AHERA Management Plan for Bourne Public Schools. Asbestos abatement shall occur at Peebles Elementary School, Bourne High School, and Otis Memorial Elementary School. Quantities and locations of work shall be as required in order to maintain AHERA protocol.

B. Work shall be performed by a licensed Asbestos Abatement Contractor with certified Asbestos Workers and Supervisor(s) (the "Contractor"). Training shall be in accordance with the Commonwealth of Massachusetts Department of Labor Standards (DLS) Regulation 453 CMR 6.00.

C. The Owner shall retain the services of Fuss & O'Neill EnviroScience, LLC (EnviroScience), or other consulting firm at their discretion, who will be responsible for conducting project monitoring, final visual inspection, and final air clearance sampling. Clearance samples shall be conducted using Polarized Light Microscopy (PLM) or Transmission Electron Microscopy (TEM) as required.

D. Interior abatement of asbestos shall be performed (as appropriate) under full containment as established herein.

E. The following tables summarize the locations of work with estimated material quantities.

| Asbestos Containing Material | Location | Quantity Damaged | Recommended Repair/Removal Method |
|---|---|---|---|
| **Peebles Elementary School** | | | |
| Ceiling Plaster (Skim Coat) | Storage Room across from Classroom 13 | 75 SF (100 LF) | Asbestos Abatement Contractor shall remove damaged asbestos-containing skim-coat ceiling plaster (on both sides of cracking) until skim-coat layer is intact. New skim-coat layer shall be applied, and ceiling shall be painted (with air sprayer) within full containment. |
| Thermal System Pipe Insulation | Storage Room across from Classroom 13 | 1 SF | Asbestos Abatement Contractor shall wrap exposed ends of pipe insulation with wet wrap |
| 9x9 Floor Tile | Stairway (Gym to Cafeteria) & Landings/Hallways | 260 SF @ Stairway (Gym to Cafeteria) & Landings/Hallways | Asbestos Abatement Contractor shall remove approx. 260 SF of floor tile within full containment<br><br>Containment to include damaged floor tile outside Gymnasium at lobby, Stairway from Gymnasium to Cafeteria, Stair Landing to Double Doors at Annex Hallway, and x3 whole-tile distance from bottom of stair (at Cafeteria). |
| 9x9 Floor Tile | Stairway at Annex Hallway | 6 SF | Asbestos Abatement Contractor shall remove damaged floor tile within (3) mini-enclosure containments |

| Asbestos Containing Material | Location | Quantity Damaged | Recommended Repair/Removal Method |
|---|---|---|---|
| 9x9 Floor Tile | Basement Main Hallway from Classroom 13 to Cafeteria | 2 SF @ Stairway Doors<br><br>8 SF @ Cafeteria Threshold<br><br>6 SF @ Storage Threshold<br><br>8 SF @ Exit Doors o/s Classroom 13<br><br>3 SF @ Double Doors<br><br>4 SF @ Small Girls Bathroom o/s Classroom 10<br><br>9 SF @ Small Girls bathroom o/s Classroom 13 | Asbestos Abatement Contractor shall remove damaged floor tile within (7) mini-enclosure containments |
| 9x9 Floor Tile | Main Hallway from Main Office to Sp. Ed. Office | 4 SF @ Threshold o/s Copy Room<br><br>5 SF @ Radiator by Main Door<br><br>8 SF @ Vestibule | Asbestos Abatement Contractor shall remove damaged floor tile within (2) mini-enclosure containments.<br><br>Full containment shall be established to remove all floor tile within vestibule (190 SF) in order to refinish entire floor within vestibule per request of Bourne Public Schools |
| **Bourne High School** | | | |
| 9 x 9 Floor Tile | Classroom 17A | 130 SF @ Window Bank & Desk | Asbestos Abatement Contractor shall remove damaged floor tile within full containment |
| **Otis Memorial Elementary School** | | | |
| Boiler Insulation | Boiler Room | 1 SF @ Front<br><br>5 SF @ Breeching | Asbestos Abatement Contractor shall repair damaged insulation with wet wrap |
| Boiler Breeching Insulation | Boiler Room | 3 SF behind Boiler | Asbestos Abatement Contractor shall repair damaged insulation with wet wrap, and clean visible debris within mini-enclosure containment |

| Asbestos Containing Material | Location | Quantity Damaged | Recommended Repair/Removal Method |
|---|---|---|---|
| Hot Water Tank Insulation | Boiler Room | 1 SF behind Hot Water Tank | Asbestos Abatement Contractor shall repair damaged insulation with wet wrap |
| Mudded Insulation on Pipe Fittings | Boiler Room | 1 EA behind Breeching<br><br>1 EA @ Pipe Tunnel Entrance | Asbestos Abatement Contractor shall remove damaged mudded insulation on pipe fittings within glovebag containment |
| Mudded Insulation on Pipe Fittings | Boiler Room (behind Boiler #1) | 1 EA behind Boiler | Asbestos Abatement Contractor shall remove damaged mudded insulation on pipe fittings within glovebag containment |
| Mudded Insulation on Pipe Fittings | Kitchen | 2 EA (Fittings) & 2 LF (All Pipe Insulation) @ Desk | Asbestos Abatement Contractor shall remove damaged mudded insulation on pipe fittings within glovebag containment |

LF = Linear Feet, SF = Square Feet

**WORK PROCEDURES**

A. The Asbestos Abatement Contractor shall file a notification to the Commonwealth of Massachusetts DEP Bureau of Waste Prevention (BWP) on standard form BWP AQ 06 "Notification Prior to Construction or Demolition" and asbestos work start notifications to the MassDEP and Commonwealth of Massachusetts Department of Labor Standards (DLS) on Asbestos Notification Form ANF-001.

B. A licensed Asbestos Abatement Contractor shall be retained to perform asbestos removal activities.

C. 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 OSHA regulation 29 CFR 1926.1101 and DLS regulation 453 CMR 6.00.

D. The Contractor shall perform personal monitoring of workers as required by OSHA regulation 29 CFR 1926.1101. Personal air monitoring, at a minimum, shall include monitoring for twenty five percent (25%) of the work personnel or a minimum of 2 workers per work shift.

E. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. During the work, vents within the work area shall be "sealed" with duct tape and polyethylene sheeting.

F. The Asbestos Abatement Contractor shall be responsible for removing furniture within the work area. The Asbestos Abatement Contractor shall pre-clean moveable objects within the proposed work area using HEPA vacuum equipment and/or wet-cleaning methods as appropriate, and remove such objects from work area to a temporary location.

G. Seal off all openings, including but not limited to, windows, doors, ventilation openings, drains, grilles, diffuser grates, and any other penetration of the work areas, with polyethylene sheeting (minimum six (6) mils thick) sealed 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.

H. Create pressure differential within the work areas by the use of acceptable negative air pressure equipment.

I. Pre-clean fixed objects within the work areas, using HEPA vacuum equipment and/or wet-cleaning methods as appropriate, and enclose with a minimum six (6) mil plastic sheeting sealed with duct tape.

J. Clean the proposed work areas using HEPA vacuum equipment or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

K. Post warning signs in accordance with 29 CFR 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 asbestos.

**DECONTAMINATION SYSTEM**

A. The Contractor shall establish contiguous to the work area, a decontamination enclosure consisting of equipment room, shower room, and clean room in series. The only access between contaminated and uncontaminated areas shall be through this decontamination enclosure. If it is not feasible to set-up a contiguous decontamination unit, the Contractor shall establish a remote decontamination unit.

B. Access between rooms in the decontamination system shall be through double flap curtain openings.

C. Construct the decontamination system with wood or metal framing, 3/8" sheathing and cover both sides with a double layer of six (6) mil polyethylene sheeting, spray glued or taped at the joints. Caulk joints watertight at floor, walls, and ceiling.

D. A single-chamber change room should be contiguous with each mini-enclosure containment, and the Contractor shall establish a remote decontamination unit.

## ASBESTOS REMOVAL PROCEDURE - FLOORING AND MASTIC

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. Dispose of all non-asbestos materials, and materials that are not contaminated with asbestos, as construction debris.

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. Pick up whole tiles, stack, place in boxes or wrap in felt, and place in labeled disposal bags. At the Subcontractor's option, tiles may be placed directly into durable leak-tight containers.
   2. Shovel broken tiles and debris into nylon reinforced grain bags that are placed in a disposal bag, or place directly in steel or poly leak-tight drums.
   3. Place bagged waste in a second disposal bag during decontamination and dispose of as asbestos waste.

D. After completion of floor tile removal, the Contractor shall perform gross removal of non-asbestos containing mastic adhesive as adequate for floor tile replacement.

E. After completion of all resilient flooring removal work, and prior to the removal of critical barriers and decontamination units, the Contractor shall conduct final cleaning.

## ASBESTOS REPAIR PROCEDURE – PLASTER CEILING SKIM COAT

A. Window banks shall be HEPA vacuumed and wet wiped prior to being sealed with critical barriers consisting of 2 layers of 6-mil polyethylene sheeting.

B. Moveable objects (i.e. tables, desks, chairs, etc.) shall be HEPA vacuumed and wet wiped during pre-cleaning process, and removed from containment area prior to removal of ceiling surface.

C. Scrape and remove damaged asbestos-containing skim-coat ceiling plaster (on both sides of cracking) until skim-coat layer is intact as determined by on-site Asbestos Project Monitor.

D. Abatement shall include removal of rough-coat ceiling plaster as necessary for repair. Note that rough coat ceiling plaster is identified as friable material that contains asbestos fibers, and must be handled as asbestos-containing material as described herein to address worker safety and protection issues regulated by OSHA. Rough-coat ceiling plaster throughout Peebles Elementary School is prohibited from being handled and disposed of at a solid waste handling or disposal facility or incinerator in the Commonwealth of Massachusetts. Exception to statements above may only apply to identifiable ceiling areas (i.e. drop ceiling, window surrounds, newer construction, etc.) characterized as non-asbestos from additional bulk sampling and written approval from MassDEP.

E. Prepare surface area for application of new skim-coat layer, which will be wet sanded (i.e. use of wet sanding-sponge and/or continuous misting) even with ceiling surface.

F. Negative air shall remain continuous within containment during drying period for new skim-coat application.

G. Once ceiling surface has been wet sanded, HEPA vacuum and apply approved painting product with airless sprayer to entire ceiling area within containment. Containment area shall be cleared with PCM analysis.

**ASBESTOS REMOVAL PROCEDURE – THERMAL SYSTEM INSULATION (GLOVEBAG)**

A. Moveable objects (i.e. tables, desks, chairs, etc.) shall be HEPA vacuumed and wet wiped during pre-cleaning process, and removed from containment area prior to removal.

B. Remove damaged pipe insulation and associated mudded fittings utilizing glovebag containments; wet removal methods shall apply.

C. Clean bare, metal pipe with wire brush within glovebag and continuously wet. HEPA vacuum and wet-wipe areas underneath pipe insulation before and after use of appropriate glovebag containment, which includes additional barrier controls and single change-out unit.

**ASBESTOS REPAIR PROCEDURE – THERMAL SYSTEM INSULATION (MINI-ENCLOSURE)**

A. Moveable objects (i.e. tables, desks, chairs, etc.) shall be HEPA vacuumed and wet wiped during pre-cleaning process, and removed from containment area prior to removal.

B. Repair damaged thermal system insulation, and clean all debris, within mini-enclosure containment. Each mini-enclosure containment shall have a contiguous single-chamber change room, and the Contractor shall establish a remote decontamination unit.

C. Damaged area of TSI covering shall be repaired by application of wet wrap in a manner that shall prohibit or minimize disturbance to underlying friable TSI. The existing TSI covering shall be wetted prior to application of wet wrap.

D. Wet wrap may be placed on existing TSI-covering utilizing only 6-mil polyethylene sheeting as drop cloth if no disturbance will be made to underlying friable TSI (i.e. TSI remains covered) as approved by on-site Asbestos Project Monitor. Continuous wet misting shall occur for all surface repairs.

E. Each mini-enclosure containment shall be cleared by PCM air analysis.

## ASBESTOS REMOVAL PROCEDURE – INTERIOR CAULKING (FULL CONTAINMENT)

A. Cafeteria serving counter shall be HEPA vacuumed and wet wiped prior to being sealed with critical barriers consisting of 2 layers of 6-mil polyethylene sheeting.

B. Moveable objects (i.e. tables, chairs, etc.) shall be HEPA vacuumed and wet wiped during pre-cleaning process, and removed from containment area prior to removal of ceiling surface.

C. Scrape and remove asbestos-containing caulking, located at joint between metal ductwork and plaster soffit, within full containment. Continuously spray caulking with amended water to reduce the release of fibers during removal operation. Negative air shall remain continuous within containment until final air-clearance is completed.

D. After completion of caulking removal, all surfaces from which asbestos has been removed shall be wet brushed (using a nylon brush), wet wiped, and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet. Note that plaster soffit has been determined as non-asbestos.

E. Double bag all asbestos waste and apply proper labels before moving to Holding Area.

F. Containment area shall be cleared with PCM analysis.

## DISPOSAL OF WASTE

A. The disposal of asbestos-containing and/or asbestos-contaminated material, supplies, rags, disposable clothing, respirator cartridges, etc., shall be in compliance with requirements of and authorized by the Commonwealth of Massachusetts DEP and USEPA.

B. Disposal approvals shall be obtained prior to commencing asbestos removal.

C. A copy of approved disposal authorization shall be provided to the Owner and Owner's Authorized Representative.

D. Copies of all landfill receipts shall be retained by the Owner's Authorized Representative as part of the project file. The receipts shall be signed by the landfill operator upon receipt, and the quantity of asbestos debris leaving the work site and arriving at the landfill acknowledged.

E. All wash water and shower water shall be collected and filtered through a five micron filter to remove any asbestos debris.

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 Procedure Prepared By:



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

**Project Designer: Dustin Diedricksen**
**Designer License No. AD000037**

# Appendix I

## Sign-In Logs

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

(617) 282-4685 Fax (617) 282-8253

# WORKER SIGN-IN LOG

Project Name: Preble Elementary School Date: 2/15/13

Project No. 2012-1141-A3E Work Area: Throughout

| Worker's Name (Nombre del Trabajador) | Signature (Firma) | License # (Licencia #) |
|---|---|---|
| 1. KEN FURTNEY | | AS40208 |
| 2. JOHN VOLLERTSEN | | AS60773 |
| 3. JACK BUTTS | | AS40209 |
| 4. JOSE VILLAFUERTE | | AS |
| 5. FERNANDO PINEDA | | AN |
| 6. ELMER PINEDA | | AS 01291 |
| 7. DAN GORDON | | AS060895 |
| 8. | | |
| 9. | | |
| 10. | | |
| 11. | | |
| 12. | | |
| 13. | | |
| 14. | | |
| 15. | | |
| 16. | | |
| 17. | | |
| 18. | | |
| 19. | | |
| 20. Jon Hand (JH) | | AM041946 AAC-0798 |

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

(617) 282-4685 Fax (617) 282-8253

# WORKER SIGN-IN LOG

Project Name: Preble Elementary School Date: 2/18/13

Project No. 2012.1141.A3E Work Area: Throughout

| Worker's Name (Nombre del Trabajador) | Signature (Firma) | License # (Licencia #) |
|---|---|---|
| 1. KEN FURTNEY | | AS40208 |
| 2. JOHN VALICENTE | | AS60773 |
| 3. JACK BUSTS | | AS40209 |
| 4. JOSE VICENTE | | AS061825 |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |
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| 15. | | |
| 16. | | |
| 17. | | |
| 18. | | |
| 19. | | |
| 20. Jon Hand (FH) | | AM041946 AAC-0798 |

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

(617) 282-4685 Fax (617) 282-8253

# WORKER SIGN-IN LOG

Project Name: Peebles Elementary + High School Date: 2/19/13

Project No. 2012 1141.A3E Work Area: Storage near 3, Kitchen + Rm 17A

| Worker's Name (Nombre del Trabajador) | Signature (Firma) | License # (Licencia #) |
|---|---|---|
| 1. KEN FUSCO | | AS402085 |
| 2. JOHN VALLIGAROTO | | AS60773 |
| 3. JOSE VALLATO | | AS061825 |
| 4. | | |
| 5. | | |
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| 18. | | |
| 19. | | |
| 20. Jon Hand (EH) | | AM041946 AAC-0798 |

FUSS & O'NEILL
EnviroScience, LLC

www.fando.com

50 Redfield Street, Suite 100, Boston, MA 02122

(617) 282-4685 Fax (617) 282-8253

# WORKER SIGN-IN LOG

Project Name: Otis Memorial School Date: 2/20/13

Project No. 2012-1141.A3E Work Area: Boiler Room + kitchen

| Worker's Name (Nombre del Trabajador) | Signature (Firma) | License # (Licencia #) |
|---|---|---|
| 1. Julio Vallejo | | AS607723 |
| 2. Jose Villalta | Jose Villalta | AS-0041825 |
| 3. | | |
| 4. | | |
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| 16. | | |
| 17. | | |
| 18. | | |
| 19. | | |
| 20. Jon Hand (JH) | Jon Hand | AM041946 AAC-0798 |