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APR 11 2014

April 11, 2014

Mr. Brian Bordeaux
Massachusetts Department of Environmental Protection (DEP)
Bureau of Waste Prevention
Western Region
436 Dwight Street
Springfield, MA 01103

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RE: Asbestos Removal Work Plan
Demolition and Disposal of Chestnut Street School
Springfield, Massachusetts

Dear Mr. Bordeaux:

On behalf of the City of Springfield, Cardno ATC is submitting for MassDEP's review and approval of the following Alternate Work Plan ("AWP") for demolition and disposal of the former Chestnut Street School located in Springfield, Massachusetts. The following proposed AWP incorporates alternative work practices and engineering controls to be implemented during the work.

The Chestnut Street School was originally constructed in 1901 (Building A) with an Annex (Building B) added in 1907. The building has been vacant and unheated for several years and included three (3) floors plus a basement totaling 184,965 square feet. On September 3, 2013, a fire caused extensive damage to Building A. Immediately following the fire, the City of Springfield implemented an emergency demolition of the burned and compromised structures to make the site safe until such time full demolition and clean-up of the site can be completed.

Previously completed asbestos reports for Building A and Building B indicated the following asbestos-containing materials to present:

- Floor Tiles and Mastic
- Rosin Paper under Hardwood Floors
- Transite Panels
- Window Glazing and Caulking
- Pipe Insulation
- Boiler Refractory Materials (Gaskets, Fire Brick, etc.)
- Boiler Breeching
- Art Room Kiln Refractory and Fire Brick
- Fire Doors
- Electrical Wiring
- Roofing Materials

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Building A was "pushed" into a pile in order to make the site safe, which resulted in identified asbestos-containing materials to become comingled with other building debris. Conventional asbestos removal and demolition is not feasible. Therefore, the Intent is to remove the existing debris pile and associated structures and dispose of all material as co-mingled asbestos containing/contaminated waste. Note that Building B is structurally sound and all identified ACM will be abated under conventional asbestos removal procedures.

In order to demolish the Building A structure without first removing the asbestos, we are requesting an exemption from regulations 310 CMR 7.15 (1), (c) 1, removal of asbestos before demolition and 310 CMR 7.15 (1) (c) 3. (d) Air cleaning and sealed work area, 310 CMR 7.15 (1) (e) leak tight container and 310 CMR 7.15 (1)(a) for bulk loading.

The following parties will be responsible for the work performed at the site. Note that the project will be subject to public bid and therefore the Contract has not been awarded at this time.

Owner:

City of Springfield
Office of Housing
1600 East Columbus Avenue
Springfield, MA 01103
Att: Tina Quagliato
(413) 787-6500

Demolition Contractor:

Associated Building Wreckers
352 Albany Street
Springfield, MA 01105
Att: Andrew Mirkin
(800) 448-2822

Asbestos Consultant:

Cardno ATC
73 William Franks Drive
West Springfield MA
Att: Derrick Wissman
(413) 664-6687

Asbestos Contractor:

Baystate Contracting Services
352 Albany Street
Springfield, MA 01105
Att: James Beaudry
(413) 781-0820

Under this proposed work plan, the following provisions shall be adhered to when performing the work:

1. **Notifications**

   a. The demolition contractor shall submit a completed BWP AQ-06, with the appropriate fee, to the MassDEP for all demolition operations associated with this project.
   b. The demolition contractor and asbestos abatement contractor shall submit a completed Asbestos Notification Form (ANF-001) with the appropriate fee, if any, to MassDEP for the asbestos handling operation associated with this project.
   c. All asbestos notifications shall comply with all parts of MassDEP regulation 310 CMR 7.15 and a copy of each notification shall be kept at the Site by each asbestos contractor or sub-contractor at all times.
   d. All demo notifications shall comply with all parts of MassDEP regulation 310 CMR 7.09 and a copy of the notification shall be kept at the Site by the demolition contractor or sub-contractor at all times.

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2. Training/Licensing

a. Each and every contractor and sub-contractor working at the site shall be properly trained and have only properly trained personnel at the Site.
b. Each and every contractor and sub-contractor and their workers shall hold current licenses as either; Asbestos Contractors, Asbestos Supervisors or Asbestos Workers, as appropriate.
c. All of the required licenses shall have been issued by the Commonwealth of Massachusetts' Division of Labor Standards, in accordance with 453 CMR 6.00.

3. Asbestos Project Monitor

a. An Asbestos Project Monitor ("APM") who has been properly trained in accordance with 453 CMR 6.00 and who holds a current and valid license issued by the MADLS shall be on-site at all time during the asbestos removal and demolition operations.
b. The Asbestos Project Monitor ("APM") shall review each notification to verify that it is completed and contains all of the requisite information.
c. No work, pursuant to this AWP, shall commence until this review has been performed and the results of said review recorded in the APM's Site logbook.
d. The APM shall be properly trained and hold a current license as an Asbestos Project Monitor issued by the Commonwealth of Massachusetts' Division of Labor Standards, in accordance with 453 CMR 6.00.

4. Pre-Construction Meeting (AWP)

a. The APM shall provide copies of this AWP to and review all aspects of this AWP with the Owner, Demolition Contractor, Asbestos Contractor, Subcontractors and Consultant prior to commencing any work pursuant to this AWP.
b. A written record of each entity attending the review shall be kept by the APM and submitted to MassDEP prior to the start of the work.
c. The property owner or their representative shall distribute copies of this work plan to each entity involved with the project.
d. A copy of this work plan shall be kept at the Site in a central location, for review by all local, state and federal agency personnel, for the duration of the project.

5. Work Procedures – Scope of Work

The following procedures shall be applicable for demolition and disposal of the structure as asbestos-containing material:

a. The demolition and loading operations shall take place within a regulated asbestos work area consisting of orange snow fencing, asbestos barrier tape and asbestos warning signs.
b. A remote decontamination unit shall be established adjacent to the Regulated Area for workers to decontaminate upon exiting the regulated area. The remote decontamination unit ("decon") shall be kept under negative pressure by a HEPA filtered negative air filtration unit ("NAFU") with an operational alarm, at all times when it not sealed. If the decon is not in use, all asbestos waste shall be removed, it shall have been cleaned and sealed and the NAFU

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shall likewise be sealed to prevent reverse air flow through the filter. Prior to tearing down the decon it shall have met the MADLS criteria for a final clearance air test.

c. All workers performing asbestos removal work will utilize disposable clothing and 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. All work shall be performed utilizing wet methods such that there are no visible emissions. Large capacity water hoses, misters or other wetting equipment providing suitable water volume and pressure shall be used during all phases of the work. Such wetting equipment shall be capable of supplying amended water or shall be capable of mixing a surfactant with the water to meet the manufacturers' recommended proportions.

e. During the implementation of the work, if metal components, large wood beams or large sections of concrete are to be recycled, all such components shall be washed for decontamination purposes. The cleaning will occur on-site within a bermed area constructed of hay bales or other berm material and 2 layers of 10-mil reinforced poly sheeting. This area will be constructed within the Regulated Area, and will be built to slope to a collection "sump" from which accumulated wastewater will be pumped and filtered through a 5-micron filter. To prevent damage to the liner, steel components or large wood beams that are cleaned in the wash pad area will be suspended above the wash pad by project equipment located outside the wash pad berm. Water that is generated by the decontamination process will be filtered through a 5-micron filter prior to discharge. Each component that has been decontaminated shall be inspected by a licensed Asbestos Project Monitor prior to its disposal or recycling, as appropriate and record of inspections shall be maintained in Licensed Project Monitor log book or on a final visual inspection form.

f. All of the remaining demolition debris (including polyethylene sheeting) shall be loaded for disposal as asbestos ("commingled waste"). This material shall be wetted with amended water during demolition and loading to prevent dust generation, but no freestanding water will be allowed to accumulate. The commingled waste shall not be compacted.

g. Any standing (intact) brick and CMU walls, concrete foundations and/or concrete slabs shall be decontaminated in-place by washing and proper collection and filtration of the waste water through a 5-micron filter. Each component that has been decontaminated shall be inspected by a licensed Asbestos Project Monitor prior to its disposal or recycling, as appropriate and record of inspections shall be maintained in Licensed Project Monitor log book or on a final visual inspection form.

h. Any waste that has been placed into a container that will remain on-site overnight shall be properly covered and secured at completion of the work shift.

i. All demolished material shall be loaded into roll-offs or other approved containers for proper transport and disposal. All roll-offs or other approved containers shall be in good condition with no holes or rusted out areas and with tailgates, which close tightly and are lockable. The roll-offs of other approved containers shall also be lined with two (2) ten-mil (0.010 inch thick) preformed polyethylene liners. The liners shall be of sufficient size so that they can be sealed across the top of the load when full.

j. If the sharp edges of the panels tear the liner during the loading or transport operations, the asbestos contractor shall place plywood sheets at least three sixteenths inch (3/16") nominal thickness on the floor and walls of the roll off, between the inner liner and the demolition material to prevent tears. These plywood sheets shall then be disposed of as asbestos waste at the landfill along with the load.

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k. Following the completion of the asbestos demolition, bulk loading and clean-up operations, a visual inspection shall be performed jointly by the asbestos site supervisor and the APM, to ensure that no remnant asbestos, asbestos waste or asbestos contaminated water remains on the within the lot line, building slab/foundation or loading areas.
l. The consultant who performs these inspections shall be properly trained and licensed as an APM. A record of these visual inspections shall be maintained in the individual's site log books.
m. All regulated work areas shall remain regulated work areas until inspected by the APM. At the conclusion of the project a visual inspection of the entire asbestos removal work area shall be performed jointly by the asbestos site supervisor and APM. The APM and site supervisor shall sign a "Certificate of Visual Inspection" specifying the work area, containerization and waste storage area and demolition equipment have met acceptable inspection criteria and reveal no visible or suspect asbestos or other remnant debris and wastes generated during the asbestos removal operation.

6. Equipment Decontamination

a. All equipment and personnel associated with the asbestos abatement operation shall be fully decontaminated on a daily basis and before being released to other service.
b. Trucks entering the site and accessing the Regulated Area for loading of asbestos debris shall also be properly decontaminated as follows:

- An area located proximal to the demolition work shall be designated for siting the truck wash station. The station shall be positioned to allow "clean" incoming roll-off trucks enter the work area unimpeded. All exiting truck traffic shall be required to decontaminate the truck wheels and roll-off container ground touch points in the wash station.
- The wash station shall be comprised of a single layer of 10' X 100' X .040" EPDM rubber membrane laid upon a level graded section of ground immediately adjacent to the work area. All four perimeter edges of the membrane shall have a single 2" X 4" stud rolled once underneath the membrane and stapled into place to create a bermed edge. The bermed edge shall prevent excess water from running out of the wash station prior to collection and filtering.
- Carboys shall be used to contain a stockpile of clean water to start each work shift. A submersible pump connected to garden hose and a spray nozzle shall be used to wash the wheels of the trucks and the roll-off container ground touch points as the vehicles leave the work site. The wash water run-off shall be routed to the collection area within the wash station with squeegees.
- A sump pump shall collect the excess water from the truck washing activities and pump the water through a two stage water filtration unit equipped with 50 micron and 5 micron cartridge filters. The filtered waste water may be collected and used for additional wetting of the containerized ACM debris. Waste water shall be discharged to the Sanitary Sewer System or containerized for off-site disposal at a facility that accepts such waste. Under no condition shall filtered waste water be poured directly onto the ground as a means of disposal.
- Prior to decontaminating the excavation equipment with tracks, sheets of plywood shall be laid on the EPDM rubber to prevent puncture of the membrane. Machine tracks shall be cleaned one at a time by using the excavator arm to lift each side of

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the machine off the ground and then manually washing the tracks with brushes, shovel blades and spray wash water.

- At the conclusion of the truck washing activities, the rubber membrane shall be dismantled and disposed of as asbestos-contaminated waste.

7. Perimeter Air Monitoring – Asbestos Project Monitor

a. The APM shall perform perimeter air monitoring of the ambient air around the circumference of the work area.
b. This perimeter air monitoring shall be performed on a continuous basis during the asbestos demolition, bulk loading and clean-up operations.
c. Attention shall be paid to the downwind sector as well as to all adjacent properties, streets and walkways to ensure that the circumferential monitoring points coincide with these sensitive receptors.
d. The APM shall have a minimum of four (4) air monitoring stations, however more stations may be required to accomplish adequate monitoring between the Site and all of the sensitive receptors
e. All perimeter air samples shall be collected in the general breathing zone, which for the purpose of this AWP, is located at a minimum of forty-eight inches (48") and a maximum of seventy-two inches (72") above the ground level.
f. All samples shall be collected utilizing high flow pumps and shall be collected at a flow rate between eight and twelve (8-12) LPM, with a minimum volume of 1100 liters per sample.
g. Analyses of the air samples shall be performed immediately upon collection and results reported to the APM, asbestos supervisor and demolition site supervisor within one (1) hour of collection, so that corrections in the work practices can be made immediately.
h. If the air monitoring results exceed the MADLS's clean air criteria of one - one hundredth fiber per cubic centimeter (0.010 f/cc) of air, then all work shall stop. The work methods shall be evaluated by the APM, the Asbestos Site Supervisor and the demolition site supervisor prior to continuing any further work.
i. MassDEP shall be notified by telephone by close of business (5:00 p.m.) on that same day of the air monitoring exceedance and the updated emission control procedures.
j. If the airborne fiber concentrations reach or exceed fifteen thousandths fibers per cubic centimeter (0.015 f/cc) of air, then work shall stop and MassDEP shall be notified of the exceedance by telephone within two (2) hours.

8. Personal Air Sampling – Contractors

a. Each of the contractors performing asbestos handling and loading operations at the site shall perform employee monitoring. This is not to be confused with OSHA personal monitoring requirements.
b. Employee air monitoring shall be performed by each contractor and subcontractor performing asbestos related work at the site.
c. At least one in four workers, for each assigned job duty, shall wear a personal air monitor.
d. The employee air monitoring shall be performed on a continuous basis during all phase of the work.

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e. All employee air monitoring samples shall be collected in the worker's breathing zone, which for the purpose of this AWP, is located at a maximum of twelve inches (12") from the nose and mouth of each individual.
f. Each sampling pump shall be calibrated to operate at a flow rate of two and one-half (2.5) liters of air per minute.
g. Each air filter cassette shall have the start and stop time and associated start and stop flow rates recorded in each contractor's Site logbook for review by MassDEP
h. All employee air sampling analysis results shall be reported, in writing, to the APM and property owner, on the morning following the date they were collected and before any work shall be allowed to commence on every day except the first day.
i. If the air monitoring results exceed the MADLS clean air criterion of one - one hundredth fiber per cubic centimeter (0.010 f/cc) of air, then work shall not commence that day and MassDEP shall be notified by telephone within two (2) hours to evaluate any changes in the work procedures.

9. Air Sampling Procedures (Perimeter & Personals)

a. The device used to measure the flow rates for the perimeter and personal air monitoring samples shall have been calibrated by a primary calibration device within six (6) months of utilization at the Site.
b. A record of the calibration record for each of the measurement devices used at the Site shall be kept at the Site for the duration of the project and a copy of each calibration record shall be submitted to MassDEP prior to commencing any work pursuant to this AWP.
c. Analyses of the perimeter air samples and employee air samples shall be performed daily by consultants who are properly trained, are successful participants in the American Industrial Hygiene Association's Asbestos Analytical Registry (AIHA's AAR), are considered proficient with the most recent "PAT" rounds, or alternatively, who are employees of a laboratory, which is licensed by the Commonwealth to perform such analysis and which is accredited with either the AIHA or National Voluntary Laboratory Accreditation Program (NVLAP).

10. General Conditions of Agreement

a. No work pursuant to this AWP shall commence unless the APM is at the Site and all air monitoring stations, both perimeter and employee monitoring, are in full operation.
b. This AWP applies specifically to the demolition and disposal of the former Chestnut Street School located in Springfield, Massachusetts. This AWP does not apply to any past or future asbestos handling at the site. All other MassDEP regulations are in force for the balance of this asbestos abatement operation.
c. This work plan does not negate the responsibility of the property owner, the contractor, subcontractors and consultants from complying with all other applicable federal, state and local regulations.

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11. Timeframe of Approval

a. This AWP is valid for ninety (90) days after date of acceptance by MassDEP and shall be deemed expired at the end of the ninetieth (90th) day.
b. If activities are to continue past the 90-day expiration date then the MassDEP shall be notified (shall have received) in writing at least ten (10) days in advance, specifically, on or before the eightieth (80th) day.
c. Continuance of the work under the provisions of the AWP shall be the sole determination of MassDEP.

12. Changes in Conditions/Scope of Work

a. Any variance from the proposed conditions listed above shall be evaluated by MassDEP prior to commencement of any such activities.
b. All requests for changes to or amendments of this AWP shall be made to the MassDEP in writing.

13. Recording Keeping

a. All documentation regarding air monitoring collection procedures and analysis results, visual inspections and waste disposal shall be kept on site for inspection by MassDEP personnel for the duration of the removal operation.
b. Copies of the documentation are to be supplied to MassDEP upon request and within thirty (30) days of completion of the work.

I appreciate your attention regarding this matter and look forward to hearing your response. If you have any questions, please do not hesitate to contact me at (413) 664-6687.

Sincerely,

Cardno ATC

Derrick Wissman
MA #AD072630

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CERTIFICATION

I hereby certify that I have read the preceding procedures outlined under this Alternate Work Practice (AWP) Request for demolition and disposal of the Former Chestnut Street School located in Springfield, Massachusetts. I further certify that the firm or entity I represent will abide by all conditions listed herein, all work practice requirements provided for this project as well as all applicable asbestos handling regulations, and that I am authorized to sign this certification.

All parties shall please print their name, address and telephone number and the signatory name.

For the City of Springfield:

Firm/Entity Name: City of Springfield
Address: 36 Court Street, Spfd, MA 01103
Telephone#: 413-787-6500
Name: Tina-Marie Quagliato
Signature:

For Demolition Contractor:

Firm/Entity Name: Associated Building Wreckers
Address: 352 Albany ST SPFID, Ma. 01105
Telephone#: 413 732 3179
Name: Andrew Mirkin
Signature:

For Asbestos Removal Contractor:

Firm/Entity Name: Baystate Contracting Services
Address: 352 Albany ST SPFID, Ma. 01105
Telephone#: 413 781-0820
Name: Andrew Mirkin
Signature:

For Asbestos Monitoring Firm:

Firm/Entity Name: Cardno ATC
Address: 73 William Franks Drive, W Springfield, MA 01089
Telephone#: 413-781-0076
Name: Derrick Wissman
Signature: