UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

APR 3 0 2012

Donald A. Robinson, Director
Environmental Health and Safety
Draper Hall
University of Massachusetts
40 Campus Center Way
Amherst, Massachusetts 01003-9244

Re: PCB Decontamination and Disposal Approval under 40 CFR § 761.61(c) and § 761.79(h)
Orchard Hill Complex/ Grayson House and Field House
University of Massachusetts, Amherst, Massachusetts

Dear Mr. Robinson:

This is in response to the University of Massachusetts (UMass) Notification[1] for approval of a proposed plan to address PCB contamination at the Grayson House and Field House student dormitories (the Sites) located within the Orchard Hill Residential area on the UMass Campus, at 141 Orchard Hill Drive in Amherst, Massachusetts. The Sites contain PCB-contaminated materials that exceed the allowable PCB levels under 40 CFR § 761.20(a) and § 761.62. Specifically, PCBs with greater than or equal to (≥) 50 parts per million (ppm) has been identified in certain caulk and glazing at the Sites.

UMass has requested an approval under 40 CFR § 761.61(c) and § 761.79(h) that includes the following activities:

- Remove PCB caulk and glazing with greater than or equal to (≥) 50 parts per million (ppm) and dispose in a TSCA approved or hazardous waste landfill;

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[1] The notification was prepared by Woodard & Curran on behalf of the UMass to satisfy the requirements under 40 CFR § 761.61(c) and § 761.79(h). Information was submitted dated January 2012 (PCB Remediation Plan); January 30, 2012 (Remediation Plan Modification); February 6, 2012 (Response to Comments); April 24, 2012 (clarification on stairwell verification sampling); and April 27, 2012 (Woodard & Curran telephone discussion with EPA on encapsulation and Webster House verification sampling data). These submittals shall be referred to as the "Notification".

- Remove *non-porous surfaces* (e.g., metal window and door frames) in direct contact with PCB caulk and/or PCB glazing, and certain *porous surfaces* (i.e., stucco overhang ceiling) to a minimum distance of 5 inches from the PCB caulk, and dispose as a ≥ 50 ppm PCB waste in a TSCA approved or hazardous waste landfill;

- Remove *PCB remediation waste* with greater than (>) 1 ppm but less than (<) 50 ppm PCBs (e.g., metal frame components not in direct contact with PCB caulk or PCB glazing) and dispose of in a state permitted landfill under § 761.61(a)(5)(i)(B)(*2*)(*ii*); and,

- Encapsulate PCB-contaminated *porous surfaces* (i.e., concrete, brick, CMU, and slate) with two coats of liquid coating (epoxy and/or acrylic-based) and sheet metal cladding (in certain select areas).

In an April 27, 2012 telephone call with EPA, Woodard and Curran clarified that the proposed encapsulation of materials (e.g., brick, concrete, CMU, slate) formerly in direct contact with the PCB caulk and to the distances specified in the Notification, would be implemented without regard to the verification sample results due to the overall project schedule. However, bulk samples collected at the encapsulation distances would only be analyzed if the samples in direct contact with the PCB caulk were > 1 ppm.

In consideration of the data collected at the Site, EPA's review of the Webster House verification sampling data, and the above proposed encapsulation, EPA has determined that the proposed verification sampling frequencies following removal of the PCB caulk, but prior to encapsulation, are reasonable to confirm the PCB concentrations in the building substrates, with exception of the expansion joints and the brick located adjacent to the Stairwell Type J windows. EPA is requiring a higher verification sampling frequency for these substrates (see Attachment 1, Condition 12). EPA has determined that the alternative verification sampling frequency will not present an unreasonable risk to public health or the environment and may approve the sampling under § 761.61(c).

UMass has determined that certain glazing sealants and caulk, which have PCB concentrations at less than (<) 50 ppm are *Excluded PCB Products* as defined under § 761.3. Under the PCB regulations, *Excluded PCB Products* are authorized for use and thus there is no requirement for removal of these building materials or for decontamination of surfaces that are in contact with these building materials. However, as indicated in the Notification, these materials have been determined to be asbestos containing materials (ACM) and as such, they will be removed and disposed of as an ACM/PCB waste.

Based on the EPA's review, the information provided in the Notification meets the requirements under § 761.62(a) and § 761.79(h) for abatement of PCB caulk and glazing, and § 761.61(c) for encapsulation of the *porous surfaces*. EPA finds that the proposed encapsulation of PCB contaminated *porous surfaces* should effectively prevent direct exposure of these PCB contaminated *porous surfaces* to building users provided the physical barriers are maintained. As such, EPA may approve the encapsulation under § 761.61(c).

UMass may proceed with its project in accordance with 40 CFR § 761.61(c); § 761.62(a); § 761.79(h); its Notification; and, this Approval, subject to the conditions of Attachment 1. Under this Approval, EPA is reserving its rights to require additional investigation or mitigation measures should EPA determine that the encapsulation is not effective in eliminating exposure to PCBs.

Please note that UMass will be required to record a notation on the deed as required under § 761.61(a)(8) since PCBs at greater than (>) 1 ppm will remain on the Site.

This Approval does not provide for cleanup and disposal of PCB-contaminated soils since sampling is necessary to determine if PCBs are > 1 ppm in soils. Upon completion of the investigation of soils at the Sites, UMass may request a modification to this Approval to incorporate cleanup of PCB-contaminated soils or UMass may submit a separate cleanup and disposal notification under 40 CFR § 761.61 (see Attachment 1, Condition 1).

Questions and correspondence regarding this Approval should be directed to:

Kimberly N. Tisa, PCB Coordinator (OSRR07-2)
United States Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912
Telephone: (617) 918-1527
Facsimile: (617) 918-0527

EPA shall not consider this project complete until it has received all submittals required under this Approval. Please be aware that upon EPA receipt and review of the submittals, EPA may request any additional information necessary to establish that the work has been completed in accordance with 40 CFR Part 761, the Notification, and this Approval.

Sincerely,

Nancy Barmak for

James T. Owens III, Director
Office of Site Remediation & Restoration

cc Jeffrey Hamel, Woodard & Curran
MassDEP – Western Region
File

Attachment 1 – PCB Approval Conditions

ATTACHMENT 1:

PCB DECONTAMINATION AND DISPOSAL APPROVAL CONDITIONS
GRAYSON & FIELD HOUSES (the Sites)
UNIVERSITY OF MASSACHUSETTS
141 ORCHARD HILL DRIVE
AMHERST, MASSACHUSETTS

GENERAL CONDITIONS

1. This Approval is granted under the authority of Section 6(e) of the Toxic Substances Control Act (TSCA), 15 U.S.C. § 2605(e), and the PCB regulations at 40 CFR Part 761, and applies solely to the *PCB bulk product waste* and the *PCB remediation waste* located at the Sites and identified in the Notification.

   a. This Approval does not address the cleanup of PCB-contaminated soils as the nature and extent of the contamination have not been defined. Upon completion of the investigation, the University of Massachusetts (UMass) may request a modification to this Approval to incorporate cleanup of the soils under this Approval (see Condition 19) or UMass may submit a separate cleanup plan in accordance with 40 CFR § 761.61.

2. UMass shall conduct on-site activities in accordance with the conditions of this Approval and with the Notification.

3. In the event that the cleanup plan described in the Notification differs from the conditions specified in this Approval, the conditions of this Approval shall govern.

4. The terms and abbreviations used herein shall have the meanings as defined in 40 CFR § 761.3 unless otherwise defined within this Approval.

5. UMass must comply with all applicable federal, state and local regulations in the storage, handling, and disposal of all PCB wastes, including PCBs, PCB Items and decontamination wastes generated under this Approval. In the event of a new spill during response actions, UMass shall contact EPA within 24 hours for direction on PCB cleanup and sampling requirements.

6. UMass is responsible for the actions of all officers, employees, agents, contractors, subcontractors, and others who are involved in activities conducted under this Approval. If at any time UMass has or receives information indicating that UMass or any other person has failed, or may have failed, to comply with any provision of this Approval, it must report the information to EPA in writing within 24 hours of having or receiving the information.

7. This Approval does not constitute a determination by EPA that the transporters or disposal facilities selected by UMass are authorized to conduct the activities set forth in the Notification. UMass is responsible for ensuring that its selected transporters and disposal facilities are authorized to conduct these activities in accordance with all applicable federal, state and local statutes and regulations.

8. This Approval does not: 1) waive or compromise EPA's enforcement and regulatory authority; 2) release UMass from compliance with any applicable requirements of federal, state or local law; or 3) release UMass from liability for, or otherwise resolve any violations of federal, state or local law.

NOTIFICATION AND CERTIFICATION CONDITIONS

9. This Approval may be revoked if the EPA does not receive written notification from UMass of its acceptance of the conditions of this Approval within 10 business days of receipt.

10. UMass shall submit the following information for EPA review and/or approval:

    a. a certification signed by its selected abatement/demolition contractor, stating that the contractor(s) has read and understands the Notification, and agrees to abide by the conditions specified in this Approval;

    b. a contractor work plan, prepared and submitted by the selected demolition or abatement contractor(s) describing the containment and air monitoring that will be employed during abatement activities. This work plan should also include information on how and where wastes will be stored and disposed of, and on how field equipment will be decontaminated; and,

    c. a certification signed by the selected analytical laboratory, stating that the laboratory has read and understands the extraction and analytical method requirements and quality assurance requirements specified in the Notification and in this Approval.

DECONTAMINATION AND DISPOSAL CONDITIONS

11. To the maximum extent practical, engineering controls, such as barriers, and removal techniques, such as the use of HEPA ventilated tools, shall be utilized during removal processes. In addition, to the maximum extent possible, disposable equipment and materials, including PPE, will be used to reduce the amount of decontamination necessary.

12. The decontamination standard for *porous surfaces* (e.g., concrete, brick, stucco) shall be less than or equal to (≤) 1 part per million (ppm) PCBs.

    a. All post-cleanup verification sampling for *porous surfaces* shall be performed on a bulk basis (i.e., mg/kg) and reported on a dry weight analysis. Verification sampling for *porous surfaces* shall be conducted in accordance with the EPA Region 1 *Standard Operating Procedure For Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs) Revision 4, May 5, 2011*, at a maximum depth interval of 0.5 inches, and in accordance with the frequency specified in the Notification, except as follows:

        i) Stairwell J-Type Windows: A minimum of 2 brick samples shall be collected from each stairwell (minimum total of 6 samples).

        ii) Expansion Joints North and South Walls: A minimum of 1 concrete sample shall be collected from each building side where PCB caulk is removed (minimum total of 4 samples).

    b. Chemical extraction for PCBs shall be conducted using Methods 3500B/3540C of SW-846; and, chemical analysis for PCBs shall be conducted using Method 8082 of SW-846, unless another extraction/analytical method(s) is validated according to Subpart Q.

13. Following encapsulation of PCB-contaminated *porous surfaces.* post-encapsulation sampling shall be conducted to determine the effectiveness of the encapsulation.

    a. Wipe sampling of encapsulated surfaces shall be performed on a surface area basis by the standard wipe test as specified in 40 CFR § 761.123 (i.e. µg/100 cm^2). Chemical extraction for PCBs shall be conducted using Method 3500B/3540C of SW-846; and, chemical analysis for PCBs shall be conducted using Method 8082 of SW-846, unless another extraction or analytical method(s) is validated according to Subpart Q.

    b. In the event that any wipe sample PCB concentration is greater than (>) 1 µg/100 cm^2, UMass shall contact EPA for further discussion and direction on alternatives.

    c. UMass will be required to include the encapsulated areas in the deed restriction and in the long-term monitoring and maintenance implementation plan (MMIP) (Conditions 16 and 17, respectively).

14. Initial post-abatement indoor air sampling for PCBs shall be conducted in the elevator lobbies to determine the impact of the abatement activities.

    a. Indoor air sampling shall be conducted in accordance with EPA Method TO-4A or TO-10A. Sufficient sample volumes shall be collected to provide a minimum laboratory reporting limit of less than (<) 0.05 $\mu g/m^3$. At a minimum, PCB analysis shall include PCB homologues and/or PCB congeners.

    b. In the event that PCB concentrations in the air samples are > 0.30 $\mu g/m^3$, UMass shall contact EPA for further discussion and direction on alternatives, which may include additional indoor cleaning and/or development of a site-specific risk exposure assessment.

15. PCB waste (at any concentration) generated as a result of the activities described in the Notification, excluding any decontaminated materials, shall be marked in accordance with CFR 40 CFR § 761.40; stored in a manner consistent with 40 CFR § 761.65; and, disposed of in accordance with 40 CFR § 761.61 or § 761.62, unless otherwise specified below.

    a. Decontamination wastes and residues shall be disposed of in accordance with 40 CFR § 761.79(g)(6).

    b. Moveable equipment, tools, and sampling equipment shall be decontaminated in accordance with either 40 CFR § 761.79(b)(3)(i)(A), § 761.79(b)(3)(ii)(A), or § 761.79(c)(2).

    c. PCB-contaminated water generated during decontamination shall be decontaminated in accordance with 40 CFR § 761.79(b)(1) or disposed of under § 761.60.

DEED RESTRICTION AND USE CONDITIONS

16. Within sixty (60) days of completing the activities described in the Notification and in the Approval, UMass shall submit for EPA review and approval, a draft deed restriction for the Site. The deed restriction shall include: a description of the extent and levels of contamination at the Site following abatement; a description of the actions taken at the Site; a description of the use restrictions for the Site; and the long-term monitoring and maintenance requirements on the Site. Within seven (7) days of receipt of EPA's approval of the draft deed restriction, UMass shall record the deed restriction. A copy of this Approval shall be attached to the deed restriction.

INSPECTION, MODIFICATION AND REVOCATION CONDITIONS

17. Within forty-five (45) days of completion of the work authorized under this Approval, UMass shall submit for EPA's review and approval, a detailed monitoring and maintenance implementation plan (MMIP) for the surface barriers and for indoor air. UMass shall incorporate any changes to the MMIP required by EPA.

    a. The MMIP shall include: a description of the activities that will be conducted, including inspection criteria, frequency, and routine maintenance activities; sampling protocols, sampling frequency, and analytical criteria; and, reporting requirements, as applicable.

    b. The MMIP shall include a communications component which details how the maintenance and monitoring results will be communicated to the Site users, including teachers, parents, students, other on-site workers, and interested stakeholders.

    c. The MMIP also shall include a worker training component for maintenance workers or for any person that will be conducting work that could impact the barriers encapsulating the PCB-contaminated surfaces.

    d. UMass shall submit the results of these long-term monitoring and maintenance activities to EPA. Based on its review of the results, EPA may determine that modification to the MMIP is necessary in order to monitor and/or evaluate the long-term effectiveness of the barriers.

    e. Activities required under the MMIP shall be conducted until such time that EPA determines, in writing, that such activities are no longer necessary.

18. UMass shall allow any authorized representative of the Administrator of the EPA to inspect the Site and to inspect records and take samples as may be necessary to determine compliance with the PCB regulations and this Approval. Any refusal by UMass to allow such an inspection (as authorized by Section 11 of TSCA) shall be grounds for revocation of this Approval.

19. Any modification(s) in the plan, specifications, or information submitted by UMass, contained in the Notification, and forming the basis upon which this Approval has been issued, must receive prior written approval from the EPA. UMass shall inform the EPA of any modification, in writing, at least ten (10) days prior to such change. No action may be taken to implement any such modification unless the EPA has approved of the modification, in writing. The EPA may request additional information in order to determine whether to approve the modification.

If such modification involves a change in the use of the Site which results in exposures not considered in the Notification, the EPA may revoke, suspend, and/or modify this Approval upon finding that this risk-based disposal action may pose an unreasonable risk of injury to health or the environment due to the change in use. EPA may take similar action if the EPA does not receive requested information needed from UMass to make a determination regarding potential risk.

20. Approval for these activities may be revoked, modified or otherwise altered: if EPA finds a violation of the conditions of this Approval or of 40 CFR Part 761, including EPA's PCB Spill Cleanup Policy, or other applicable rules and regulations; if EPA finds that these activities present an unreasonable risk to public health or the environment; if EPA finds that there is migration of PCBs from the Site; or if EPA finds that changes are necessary to comply with new rules, standards, or guidance for such approvals. UMass may apply for appropriate modifications in the event new rules, standards, or guidance come into effect.

21. Any misrepresentation or omission of any material fact in the Notification or in any records or reports may result in the EPA's revocation, suspension and/or modification of the Approval, in addition to any other legal or equitable relief or remedy the EPA may choose to pursue.

RECORDKEEPING AND REPORTING CONDITIONS

22. UMass shall prepare and maintain all records and documents required by 40 CFR Part 761, including but not limited to the records required under Subparts J and K. A written record of the decontamination and disposal and the analytical sampling shall be established and maintained by UMass in one centralized location, until such time as EPA approves in writing a request for an alternative disposition of such records. All records shall be made available for inspection to authorized representatives of EPA.

23. As required under Condition 17 of this Approval, UMass shall submit the results of the long-term monitoring and maintenance activities to EPA as specified in the final MMIP to be approved by EPA.

24. UMass shall submit a final report to the EPA within 120 days of completion of the activities authorized under this Approval. At a minimum, this final report shall include: a short narrative of the project activities; characterization and confirmation sampling analytical results; copies of the accompanying analytical chains of custody; field and laboratory quality control/quality assurance checks; an estimate of the quantity of PCB waste disposed of and the size of the PCB cleanup area(s); copies of manifests and bills of lading; and copies of certificates of disposal or similar certifications issued by the disposer. The Report shall also include a copy of the recorded deed restriction and a certification signed by a UMass official verifying that the authorized activities have been implemented in accordance with this Approval and the Notification.

25. Required submittals shall be mailed to:

Kimberly N. Tisa, PCB Coordinator
United States Environmental Protection Agency
5 Post Office Square, Suite 100 – (OSRR07-2)
Boston, Massachusetts 02109-3912
Telephone: (617) 918-1527
Facsimile: (617) 918-0527

26. No record, report or communication required under this Approval shall qualify as a self-audit or voluntary disclosure under EPA audit, self-disclosure or penalty policies.

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END OF ATTACHMENT 1