



(Civil Engineer or Responsible Party)

I, **Deborah H. Gevalt**, declare to USGBC that this project is developed on a site documented as contaminated (by means of an ASTM E1903-97 Phase II Environmental Site Assessment) or on a site classified as a brownfield by a local, state, or federal government agency.

I have provided one of the following supplementary documentation to support the declaration:

- a copy of pertinent sections of the Phase II Environmental Site Assessment documenting the site contamination, or
- a letter from a local, state or federal regulatory agency confirming that the site is classified as a brownfield by that agency, or
- a narrative and supporting documentation describing real or perceived site contamination that has been remediated prior to development.

In addition, I confirm that the following remedial measures have been or will be taken prior to construction to protect the environment:

List of Measures Implemented	Describe how local code meets or exceeds EPA 832/R-92-005	Remedial Measures Taken
Site Assessment	NA	Soil and groundwater chemical analysis
Soil Treatment	NA	Lead Stabilization
Removal of contaminant source	NA	Excavation of soils
Erosion Protection	NA	Cover soil stockpiles with polyethylene
Construction Dewatering	NA	Chemical analysis of dewatering effluent
Wheel Wash	NA	Construction of wheel wash station
Perimeter Dust Monitoring	NA	Water application/crushed stone

Project Name: HARVARD 5 COWPERTHWAIT ST.

Credit: SS Credit 3: Brownfield Redevelopment

Points Documented: **1**

READY TO SAVE THIS TEMPLATE TO LEED-ONLINE? Please enter your first name, last name and today's date below, followed by your LEED-Online Username and Password Associated with the Project listed above to confirm submission of this template.

Deborah	Gevalt	2006-08-02	dgevalt@haleyaldrich.com	
First Name	Last Name	Date	Username (Email Address)	Password

SAVE TEMPLATE TO LEED-ONLINE

PRINT TEMPLATE



24 July 2006
File No. 12333-331

Harvard Real Estate Services
Holyoke Center
1350 Massachusetts Avenue
Cambridge, Massachusetts 02138

Attention: Steven Nason
Senior Real Estate Development Manager

Subject: LEED SS Credit 3: Brownfield Redevelopment
Riverside Student Housing
Banks/Cowperthwaite/Grant Streets
Harvard University
Cambridge, Massachusetts

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California

Santa Barbara
California

Tucson
Arizona

Washington
District of Columbia

Ladies and Gentlemen:

The Riverside Student Housing project located at Banks, Cowperthwaite and Grant Streets in Cambridge, Massachusetts is pursuing certification from the LEED (Leadership in Energy and Environmental Design) Green Building Rating System. The purpose of this letter is to provide documentation in support of LEED Brownfield Redevelopment Credit (SS Credit 3) describing the site contamination that has been remediated as part of site redevelopment.

LEED Brownfield Redevelopment Credit Intent

The intent of the LEED Brownfield Redevelopment Credit is to rehabilitate damaged sites where development is complicated by environmental contamination ("brownfields"), thereby reducing pressure on undeveloped land. The LEED Reference Guide refers to the EPA definition of "brownfield" as a "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

The subject site meets the definition of a brownfield due to the presence of Reportable Concentrations of petroleum and hazardous materials in soil, as described below. The Riverside Student Housing redevelopment project meets the intent of the Brownfield Redevelopment credit since the project was complicated by the additional cost and required regulatory compliance work necessitated by the site contamination, as described in further detail below.

Identification of Contamination

Based on the urban nature and historic use of the site (records indicate the property had been developed prior to 1888), Harvard Real Estate Services (HRES) had reason to suspect that the site soils might be contaminated. Therefore, Haley & Aldrich, Inc. conducted soil precharacterization programs which consisted of 24 test borings, five hand augers, four geoprobes, and the collection and chemical analysis of 124 soil samples and one groundwater sample. The purpose of the program was to identify the nature and extent of potential contamination at the site in a similar manner to an ASTM Phase II Site Assessment and to characterize the material for off-site disposition during construction of the proposed buildings.

The explorations indicated that an approximately 6 to 10 ft thick layer of miscellaneous fill material exists at the site. Ash, cinders, and slag were observed across the majority of the site. The chemical data indicated that the site fill contained concentrations of polycyclic aromatic hydrocarbons (PAHs), petroleum, and lead at levels exceeding Reportable Concentrations specified in the Massachusetts Contingency Plan (MCP). The contamination is attributed to the general nature of the fill that had been historically placed at the site.

The findings of the exploration programs were provided in Haley & Aldrich's "Report on Soil Precharacterization Report" dated 26 May 2005, and a memorandum entitled "Supplemental Soil Characterization Results for North and South Parcel," dated 5 June 2006.

Required Regulatory Compliance

As required by the MCP, notification of the soil contamination was provided to the Massachusetts Department of Environmental Protection (DEP). DEP subsequently assigned Release Tracking Number (RTN) 3-25062 to the site, and issued a Notice of Responsibility (NOR) to HRES on 22 August 2005. A copy of the Notice of Responsibility is provided as Attachment A. The NOR indicates that DEP considers the property a Disposal Site¹.

Given the presence of contamination at the site, HRES was required by the MCP to prepare a number of regulatory compliance documents and to retain a Licensed Site Professional (LSP) to oversee the remediation work.

HRES employed Deborah H. Gevalt of Haley & Aldrich, Inc. as the site Licensed Site Professional (LSP). Haley & Aldrich prepared a Release Abatement Measure (RAM) Plan on behalf of HRES and submitted the document to DEP in August 2005. The RAM Plan outlined plans for remediation and management of contaminated soils to be excavated as part of the site redevelopment.

Other required regulatory compliance documentation included RAM Status Report No. 1, dated December 2005, and RAM Status Report No. 2, dated 9 June 2006, documenting

¹ "Disposal Site" is defined in the Massachusetts Contingency Plan at 310 CMR 40.0006 as "any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil and/or hazardous material.

activities conducted at the site through the end of May 2006. Future regulatory compliance documents will include additional RAM Status Reports, a Tier Classification, and a Response Action Outcome (RAO) Statement.

Site Remediation

Remediation activities began in August 2005 and are ongoing. Soil remediation activities completed to date include the following:

- Onsite stabilization of soils exhibiting the TCLP-lead characteristic for RCRA Hazardous Waste. The onsite treatment was conducted by Boston Environmental & Trucking and consisted of mixing a powdered stabilizing agent (FESI-Bond) with water and mixing the solution with affected soils (approximately 2,200 tons). The stabilizing agents react with the lead in the soil to create a non-leachable lead compound. Post-treatment data indicated that the lead had been successfully stabilized and that the soil was no longer classified as a Hazardous Waste.
- Off-site reuse of soil as landfill daily cover. Approximately 10,400 tons of Remediation Waste (soils with levels of compounds exceeding applicable Reportable Concentrations, as defined in the Massachusetts Contingency Plan) were excavated and transported to Greenwood Street Landfill for reuse as daily cover.

Remediation Waste transported offsite is being tracked using Bills-of-Lading. Perimeter dust monitoring and a dust control plan were implemented during soil excavation to mitigate potential neighborhood exposure to airborne dust.

Premium Cost to Redevelop the Brownfield

To develop the Riverside Student Housing site, an additional approximately 1,300 tons of Remediation Waste will need to be excavated and removed from the site. Approximately 91,400 tons of non-Remediation Waste has also been removed from the site. If all of the excavated soil were "clean", the estimated cost for off-site disposition would be approximately \$1.11 million (at \$12/ton).

However, approximately 11,700 tons of excavated soil will consist of Remediation Waste, as discussed above. As a result, the project will incur an additional cost of approximately \$202,500 to treat, reuse, and dispose of the Remediation Waste (at \$18/ton for onsite stabilization, \$20/ton for off-site soil reuse at a lined landfill, and \$11.80/ton for offsite soil reuse at an unlined landfill).

Redevelopment of the contaminated site will also incur approximately \$75,000 in Licensed Site Professional and soil management services required by the MCP and about \$60,000 in soil quality analytical costs.

Closure

Based on the information provided above, it is our opinion that the Riverside Student Housing project meets the intent of the LEED Brownfield Redevelopment Credit (SS Credit 3). If you have any questions or require additional information, please do not hesitate to call.

Sincerely yours,
HALEY & ALDRICH, INC.



Michael J. Cronan
Senior Scientist



Deborah H. Gevalt, P.G., LSP
Senior Vice President

Attachments

Attachment A: Copy of DEP Notice of Responsibility

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Attachment A

Copy of DEP Notice of Responsibility



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

STEPHEN R. PRITCHARD
Secretary

KERRY HEALEY
Lieutenant Governor

ROBERT W. COLLEDGE, Jr
Commissioner

August 22, 2005

President & Fellows of Harvard College
c/o Harvard Real Estate Services
1350 Massachusetts Ave, Rm 1033
Cambridge, MA 02138

RE: Cambridge
Banks/Cowperthwaite
Grant Street
RTN 3-25062

Attention: Mr. Steven Nason

**NOTICE OF RESPONSIBILITY PER M.G.L. c.21E & 310 CMR 40.0000,
the MCP**

THIS IS AN IMPORTANT NOTICE. FAILURE TO TAKE ADEQUATE ACTION IN
RESPONSE TO THIS NOTICE COULD RESULT IN SERIOUS LEGAL
CONSEQUENCES.

Dear Mr. Nason:

Information contained in a Release Notification Form (RNF) submitted to the Department of Environmental Protection (the Department or DEP) on August 15, 2005 and submitted by President & Fellows of Harvard College c/o Harvard Real Estate Services indicates that there is or has been a release of oil and/or hazardous material at the above-referenced property which exceeds a "120 day" reporting threshold (310 CMR 40.0315) and which requires one or more response actions.

Based on this information, the Department has reason to believe that the subject property or portion(s) thereof is a disposal site as defined in the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L. c. 21E, and the Massachusetts Contingency Plan, 310 CMR 40.0000 (the MCP). M.G.L. c. 21E and the MCP govern the assessment and cleanup of disposal sites.

The purpose of this notice is to inform you of your legal responsibilities under state law for assessing and/or remediation of the subject release. For purposes of this notice, the terms and phrases used herein shall have the meaning ascribed to them by the MCP unless the text clearly indicates otherwise.

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STATUTORY LIABILITIES

The Department has reason to believe that you (as used in this letter, "you" refers to President & Fellows of Harvard College c/o Harvard Real Estate Services) are a Potentially Responsible Party (a PRP) with liability under M.G.L. c. 21E, § 5, for response action costs. Section 5 makes the following parties liable to the Commonwealth of Massachusetts: current owners or operators of a site from or at which there is or has been a release/threat of release of oil or hazardous material; any person who owned or operated a site at the time hazardous material was stored or disposed of; any person who arranged for the transport, disposal, storage or treatment of hazardous material to or at a site; any person who transported hazardous material to a transport, disposal, storage or treatment site from which there is or has been a release/threat of release of such material; and any person who otherwise caused or is legally responsible for a release/threat of release of oil or hazardous material at a site.

This liability is "strict", meaning it is not based on fault, but solely on your status as an owner, operator, generator, transporter or disposer. It is also joint and several, meaning that you may be liable for all response action costs incurred at the site, regardless of the existence of any other liable parties.

The MCP requires responsible parties to take necessary response actions at properties where there is or has been a release or threat of release of oil and/or hazardous material. If you do not take the necessary response actions, or fail to perform them in an appropriate and timely manner, the Department is authorized by M.G.L. c. 21E to have the work performed by its contractors. By taking such actions, you can avoid liability for response action costs incurred by the Department and its contractors in performing these actions, and sanctions, which may be imposed for failure to perform response actions under the MCP.

You may be liable for up to three (3) times all response action costs incurred by the Department. Response action costs include, without limitation, the cost of direct hours spent by Department employees arranging for response actions or overseeing work performed by persons other than the Department or their contractors, expenses incurred by the Department in support of those direct hours, and payments to the Department's contractors. (For more detail on cost liability, see 310 CMR 40.1200.)

The Department may also assess interest on costs incurred at the rate of twelve percent (12%), compounded annually. To secure payment of this debt, the Commonwealth may place liens on all of your property in the Commonwealth. To recover the debt, the Commonwealth may foreclose on these liens or the Attorney General may bring legal action against you.

In addition to your liability for up to three (3) times all response action costs incurred by the Department, you may also be liable to the Commonwealth for damages to natural resources caused by the release. Civil and criminal liability may also be imposed under M.G.L. c. 21E, § 11, and civil administrative penalties may be imposed under M.G.L. c. 21A, § 16 for each violation of M.G.L. c. 21E, the MCP, or any order, permit or

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approval issued thereunder.

NECESSARY RESPONSE ACTIONS

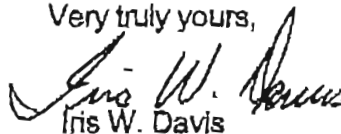
The subject site shall not be deemed to have all the necessary and required response actions taken unless and until all substantial hazards presented by the site have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP. In addition, the MCP requires persons undertaking response actions at disposal sites to perform Immediate Response Actions (IRAs) in response to "sudden releases", Imminent Hazards and Substantial Release Migration. Such persons must continue to evaluate the need for IRAs and notify the Department immediately if such a need exists.

It is important to note that you must dispose of any Remediation Waste generated at the subject location in accordance with 310 CMR 40.0030 including, without limitation, contaminated soil and/or debris. Any Bill of Lading accompanying such waste must bear the seal and signature of an LSP or, if the response action is performed under the direct supervision of the Department, the signature of an authorized representative of the Department.

The Department encourages parties with liabilities under M.G.L. c. 21E to take prompt action in response to releases and threats of release of oil and/or hazardous material. By taking prompt action, you may significantly lower your assessment and cleanup costs and avoid the imposition of, or reduce the amount of, certain permit and annual compliance fees for response actions payable under 310 CMR 4.00.

If you have any questions relative to this notice, you should contact Iris Davis at the letterhead address or (617) 654-6542. All future communications regarding this release must reference the Release Tracking Number (RTN) 25062 contained in the subject block of this letter.

Very truly yours,



Iris W. Davis

Risk Reduction Chief
Bureau of Waste Site Cleanup

cc: Board of Health, Town of Cambridge, Mr. Sam Lipson, "via electronic submittal",
slipson@challiance.org

DEP database NOR/file