DUCHARME & WHEELER, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
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Mr. Rene Lafleur
LeMack Realty Trust
2005 Massachusetts Avenue
Lunenburg, MA 01462

RE: **Recommended Strategy to Address Imminent Hazard Conditions**
Former Esquire Cleaners Property
211 West Main Street, Ayer, Massachusetts

Dear Mr. Lafleur:

This letter presents a recommended scope of services prepared by Ducharme & Wheeler, Inc. (Ducharme & Wheeler) to address the imminent hazard condition at the Former Esquire Cleaners, 211 West Main Street, Ayer, Massachusetts. The recommended approach includes the installation of a soil vapor extraction system in and around the 211 West Main Street property aimed at controlling the migration of vapors into the building. The proposal also addresses the necessary activities required for compliance with the Massachusetts Contingency Plan (MCP 310 CMR 40.0000) which includes the preparation of all necessary reports and supporting documentation required for compliance. The technical approach and details of the recommended program are discussed below.

Background

On June 7, 1993, the Emergency Response Branch assigned case number C93-0281 to the disposal of tetrachloroethylene (PCE) on the ground behind the dry cleaners. According to the information at the Massachusetts Department of Environmental Protection (MA DEP), the case was closed on August 23, 1993. No other information regarding this release was available at the MA DEP.

On May 3, 2002, the MA DEP received a downgradient property status submittal (DPS) from Shell Oil Products Company (Shell). The DPS stated that PCE and trichloroethylene (TCE) detected in groundwater at the former Shell gasoline station located at 215 West Main Street originated from the former Esquire Cleaners at 211 West Main Street (the site). As a result of the DPS, the MA DEP sent a Notice of Responsibility (NOR), dated November 12, 2002, to LeMack Realty Trust assigning release tracking number (RTN) 2-14537 to the release. According to the NOR, November 8, 2002 is considered the date of release notification.

On October 13, 2003, a groundwater sample was collected from MW-7 and analyzed for VOC by EPA Method 8260. Naphthalene in the groundwater sample exceeded the applicable Method 1 Reportable Concentration for groundwater category RCGW-1. A Release Notification and Notification Retraction Form (BWSC-103) was submitted to the MA DEP on November 3, 2003, for the presence of naphthalene.

On January 21, 2004, a Phase I Initial Site Investigation Report was submitted to the MA DEP. As part of the regulatory review process, the MA DEP requested that the air in the building located at the 211 West Main Street property be tested for the presence of Volatile Organic Compounds (VOC). On March 8, 2004, Richard Cushing of Ducharme & Wheeler notified the MA DEP of the presence of an imminent hazard in the building related to the presence of tetrachloroethylene in building air. On March 9, 2004, the MA DEP ordered the evacuation of the building until the imminent hazard was abated.

Technical Strategy

Ducharme & Wheeler has supervised the installation of a barrier system in the basement of the 211 West Main Street building and the venting of the basement using high volume exhaust blowers. According to our calculations, concentrations of PCE in the first floor air would have to be reduced from approximately 700 micrograms per cubic meter (ug/m3) to less than 30 ug/m3 in order to abate the imminent hazard. The temporary system has reduced concentrations to approximately 110 ug/m3. While the temporary installation may be reconfigured to operate more efficiently, we believe that it will not consistently maintain conditions at levels needed to allow the reoccupation of the building. In addition, in our conversations with the MA DEP, they have repeatedly emphasized their expectation that a permanently installed, reliable system should be installed before the authorization to reoccupy the building would be granted.

Rather than reconfigure the temporary installation, Ducharme & Wheeler recommends the installation of a permanently installed soil vapor extraction system to control the migration of vapors into the building.

Implementation of a soil vapor extraction system would be broken into several tasks which include: submitting an Immediate Response Action (IRA) Plan to the MA DEP, conducting the pilot test, perform expedited system design/installation, and system operation. Each is discussed below.

IRA Plan

A written IRA Plan will be submitted to the MA DEP within one day of your authorization to proceed. The plan will include a brief description of the recommended program including the details of proposed field activities, a description of how remediation waste will be handled, a description of procedures used for environmental monitoring during field activities, and a listing of permits required to conduct the IRA. As part of the IRA Plan, the Ayer Board of Health and the Board of Selectmen will be notified prior to implementation.

Pilot Test

Because of the size of the building and the construction details of the foundation, Ducharme & Wheeler believes that conducting a pilot test using large scale extraction equipment is necessary to obtain site-specific design data for use in selecting the number, spacing and location of extraction wells and the sizing and configuration of extraction and treatment equipment.

Ducharme & Wheeler will utilize an extraction blower pilot test skid using a number of variously sized blowers to obtain design data. Ducharme & Wheeler will provide an electrical generator to

operate the pilot equipment as well as the equipment needed to contain residuals generated during the test.

Three new horizontal test wells will be installed in the floor of the basement and will be utilized to characterize the conditions in the interior and exterior of the building. The pilot equipment will be used to characterize the radius of influence of the extraction wells at various levels of vacuum extraction. Based on equipment availability, the pilot test would be conducted on March 25 or 26.

The pilot unit would be expected to operate for 1 day. Extracted air will be treated using granular activated carbon (GAC) and exhausted to atmosphere. At the conclusion of the pilot test, the area where the test was conducted will be restored to conditions prior to the test. Spent carbon will be incorporated into the off-gas treatment for the permanent system.

Expedited System Design/Installation

Based on an evaluation of the pilot test data, Ducharme & Wheeler will select equipment for the permanent system. Based on our relationship with a number of new and used remedial equipment vendors, Ducharme & Wheeler will prepare an abbreviated specification and solicit competitive bids. Ducharme & Wheeler will also meet with your representative to discuss the test results and discuss design considerations of the permanent system.

While final details of the system design would not be available until the completion of the pilot test, Ducharme & Wheeler expects that the system will include the following components:

- An extraction blower connected to a number of wells through a header system enabling individual control of each well;
- Air treatment, which would include multiple beds of granular activated carbon; and
- System electrical supply will be provided independent of the power supply for the existing building.

It is assumed that the system will be located in the basement of the 211 West Main Street building with the off-gas treatment located at the exterior of the building. This alternative eliminates the need for a separate heated enclosure to contain the remedial equipment. The system will be designed to operate without continuous operator supervision. The design will incorporate a fail-safe equipment capable of shutting down system operations in the event of system failure. The equipment will be located to minimize noise potential on the first floor of the building.

The estimated cost assumes that no additional extraction wells will be required at the exterior of the building and that all the required extraction can be achieved using wells located within the basement. Testing during the pilot test will verify this assumption. At the conclusion of the pilot test you will be notified if any of the pricing assumptions have changed.

In addition, Ducharme & Wheeler will prepare a written pilot test design report documenting the outcome of the pilot test for submittal to MA DEP. The report will provide a description of the

test, a discussion of the results, and a description of the equipment specified for the permanent system.

The pilot test report will also include a discussion of potential health and safety issues to be addressed during construction and operation, contingency planning for environmental releases, security procedures and environmental permitting required for the implementation of the design.

The pilot test report will also include a discussion of operation, maintenance and monitoring plans which will specify how the system will be operated and what information will be collected to ensure that the system is operating as designed. The pilot test report will also include a schedule of the construction, start up and operation of the system.

All piping leading to the equipment installation will be below grade. Following completion of the system construction, all grades will be reestablished and any damaged asphalt will be repaired.

Based on the delivery of the specified equipment, Ducharme & Wheler will provide you with a schedule for the construction and installation of the permanent system. Following completion of construction activities, Ducharme & Wheeler will initiate operations by verifying operation of all fail-safe devices. After the completion of start up activities, Ducharine & Wheeler will prepare a Final Inspection Report documenting conditions at start up.

System Operation

Following initial start up activities, Ducharme & Wheeler personnel will periodically monitor system operation and conduct sampling and analysis of the conditions inside the 211 West Main Street building to determine progress controlling the vapor migration.

After the initial system start-up, it is anticipated that the remedial system will be serviced approximately twice per month. Vapor phase GAC will be replaced based on screening of the off-gas with a PID such that the air emissions requirements of 310 CMR 40.0049 are met. PID screening will be conducted approximately every two weeks. Operating life of the system could range from 6 months to 1½ years. Due to the unknown duration of the system operation, these costs cannot be estimated at this time.

Ducharme & Wheeler will prepare and submit all DEP required status reports required for the IRA Plan.

Cost

The estimated cost for the services described above is $30,500. Work would be performed on a time and material basis. A breakdown by task is included below.

Estimated Cost Breakdown		
Task 1	IRA Plan Preparation	$ 1,500
Task 2	Pilot Test	$ 6,000
Task 3	Expedited System Design/Installation	$ 23,000
	Total	$ 30,500

Project Schedule
The portion of the program through System Design/Installation will require approximately 2-4 weeks to complete. Reports documenting the operation of the system will be completed one month after completion of the treatment program.

Ducharme & Wheeler appreciates the opportunity to submit this recommended scope of services, if you need more detailed information than that provided or if you have any additional questions, please don't hesitate to call either of the undersigned at (978) 779- 6091.

Sincerely,

DUCHARME & WHEELER, INC

Philip J. Wheeler, P. E.
Principal

Richard J. Cushing, L.S.P.
Senior Project Manager

Cc: Attorney Ned Bartlett, Bowditch & Dewey, Framingham MA