

Town of Lexington, Massachusetts

**Preliminary Evaluation of a Source Separated
Organics Facility at the Hartwell Avenue Landfill
Site**

March 2011

Final Report



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April 4, 2011

Mr. John Livsey, P.E.
Town Engineer
Samuel Hadley Public Services Building
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Lexington, Massachusetts 02420

Subject: FINAL Report on Preliminary Evaluation of Source Separated Organics
Facility at Hartwell Avenue Landfill Site

Dear Mr. Livsey:

Camp Dresser & McKee Inc. (CDM) is pleased to provide three copies of the attached Final Report that summarizes the work completed over the past few months as a preliminary evaluation of the implementation of source-separated organics facility by a private company at the Hartwell Avenue Landfill Site. The attached version incorporates the comments received from the Town on the draft version circulated in February 2011.

During this evaluation, CDM and the Town met with representative vendors and had conversations with several others; met with the Massachusetts Department of Environmental Protection (MassDEP) to discuss the permitting strategies; discussed the project with the Town's Design Review Team (DRT) to determine local requirements; and made an informational presentation to the Board of Health on the project. CDM also worked closely with Town staff to review the existing operations at the Hartwell Avenue site and assess the impacts of a new facility on them. Our conclusions and recommendations are outlined in the Executive Summary portion of the attached report.

Please advise us if you need additional copies or an electronic version. We look forward to continuing to work with the Town on this project. If you have any questions or require anything further, please do not hesitate to contact me at (617) 452-6541 or (617) 875-3693.

Very truly yours,

A handwritten signature in black ink that reads "Bruce W. Haskell".

Bruce W. Haskell, P.E.
Camp Dresser & McKee Inc.

cc: William Hadley, Lexington
Robert Beaudoin, Lexington
Tony LoRe, CDM

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Executive Summary

The Town of Lexington (Town) currently operates a successful leaf and yard waste composting facility at the closed Harwell Avenue Landfill Site. Because of the success of this facility as well as changing regulations that propose to ban source separated organics such as food and vegetative waste and tax incentives for energy generation, the Town retained Camp Dresser & McKee Inc. (CDM) to evaluate the potential to site a facility that accepts source separated organics at the Landfill Site. This report summarizes the findings of CDM's evaluation including discussions with potential vendors, a meeting with representatives of the Massachusetts Department of Environmental Protection (MassDEP), meetings with local officials including the Board of Health, and a detailed review of the regulatory requirements for this type of facility at the closed landfill.

In summary, the proposal to evaluate a source-separated organics facility at the Hartwell Avenue Landfill Site merits further investigation. This would include issuing the appropriate procurement documents to allow private vendors to provide the Town with proposals to permit, construct and operate the facility at the Landfill Site. The following is a summary of CDM's conclusions and recommendations.

Conclusions

CDM offers the following preliminary conclusions based on our initial evaluation of locating a source separated organic waste processing facility at the Hartwell Avenue Landfill Site:

- There are a number of private firms actively interested in developing a source separated organic waste processing facility in eastern Massachusetts, motivated by the MassDEP's stated goal of diverting food waste from disposal facilities and state and federal incentives to develop renewable energy supplies;
- The Hartwell Avenue Landfill Site offers several advantages for a source separated organic waste processing facility including a compatible existing use, sufficient land area, adequate transportation access, good separation from residential property, nearby access to water and sewer utilities, and nearby access to the utility grid and natural gas transmission line for exporting electricity or pipeline quality gas;
- The most appropriate technology for a facility of this type is anaerobic digestion for food waste combined with covered aerated static pile composting for the digestate (i.e., digester residue) and yard waste;
- To be cost effective, the facility will need to accept approximately 40,000-50,000 tons per year (tpy) of food waste plus another 44,000 to 55,000 tpy of yard waste based on preliminary input from two potential vendors. This compares with approximately 10,000 tpy of yard waste that is presently handled at the Hartwell Avenue Landfill Site;

- Approximately 10 to 12 acres of land would be needed to support a 40,000 to 50,000 tpy anaerobic digestion facility and a 55,000 to 65,000 tpy covered aerated static pile composting operation which is approximately the same area currently used to windrow compost 10,000 tpy of yard waste. The areas of the Landfill Site that are currently used for yard waste composting operations, also appear to be the most practical places to locate the new operations;
- If the Town wanted to pursue a source separated organic waste processing facility of this size, the responsibility for yard waste composting could be assigned to the source separated organic waste processing facility vendor due to the limited useable space available at the Hartwell Avenue Landfill Site. Covered aerated static pile composting would be significantly more efficient than the current open windrow composting process which would allow more material to be composted on significantly less area. The Town could retain a portion of the existing composting operation on-site.
- Due to the uniqueness of this project, there is some uncertainty to the process and time frame for securing local and state permit approval. The Town is participating in a Task Force committee established by MassDEP and other state agencies to review and potentially streamline the permitting process;
- While anaerobic digestion of food waste is well demonstrated in Europe and anaerobic digestion of sewage sludge is common in the U.S., this would be a first of its kind project in Massachusetts which presents some project risk;
- This type of project offers the Town an opportunity to advance its stated goal of encouraging the development of renewable energy while maximizing the potential revenues from the Hartwell Avenue Landfill Site. Current net revenues from composting operations at this site amount to approximately \$90,000 per year;
- Formal proposals would need to be sought to quantify the potential revenues and other in-kind services that could be available to the Town in exchange for leasing a portion of the Hartwell Avenue Landfill Site ; and
- The term of any lease would likely need to be 15 years or more to allow the vendor to recover its capital cost to develop and construct the facility.

Recommendations

CDM offers the following recommendations for the Town's consideration should they decide to continue to pursue development of this project:

- The permitting process with MassDEP needs to be finalized. Specifically, clarification is needed as whether (i) source separated organics are to be considered a recyclable material for purposes of the regulations, (ii) the existing site assignment for the Hartwell Avenue Landfill can be used for the new facility and (ii) an Environmental Impact Report (EIR) needs to be filed for the project under the Massachusetts Environmental Policy Act. MassDEP is currently reviewing the

regulatory framework for this type of facility and these requirements will have to be established prior to the issuance of an RFP/RFQ.

- The proposed facility can be constructed within the limitations of the landfill closure under the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). Modifications to the existing documents including the Activity and Use Limitation (AUL) would be required to accommodate the new facilities but these changes are within the limitations of the current site closure documents. These modifications are best obtained by the selected project developer with oversight by the Town's Licensed Site Professional (LSP).
- There are other permits that will be potentially required for the proposed facility including a post-closure use permit from MassDEP under the solid waste regulations, an air quality permit if the project includes on site electricity generation and approvals from the local Conservation Commission. Because of their significant role in the Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00), the Lexington Board of Health will also need to be included in any discussions for the project. These permits are best obtained by the selected project developer as they require detailed design information for the proposed facility.
- The Town should solicit formal proposals from qualified vendors through a combined Request for Qualifications/Request for Proposal (RFQ/RFP) process. This document should include specific information on the site and the required permit approvals as well as detailed minimum qualifications on the proposed technology and the financial viability of the proposer. The RFQ/RFP should also include a draft land lease agreement that contain specific requirements and conditions that the Town desires.
- The Town would need to decide how much source separated organic waste they would allow a vendor to accept, how much land they are willing to lease, the specific location(s) on the Hartwell Avenue Landfill Site that the vendor could use and whether the Town wanted to continue to operate a windrow composting operation at this site.
- Potential limitations on building height due to the proximity of the Hanscom Airfield should be confirmed.
- Certain design criteria and performance standards should be established as part of any lease arrangement to mitigate any potential impacts, particularly with respect to odor control, stormwater and aesthetics.

Section 1

Project Overview

The Town of Lexington, Massachusetts (Town) owns a 67-acre parcel situated between Hartwell Avenue and Route 128/95 as shown on Assessor Maps 72, 73, 79 and 80. Approximately one-third of this property previously served as the Town's landfill. A large portion of the remaining site area is wetlands. The landfill has been closed since 1980 and the Town has used the site for various activities since that time including leaf and yard waste composting, material storage for Department of Public Works (DPW) operations and a regional household hazardous waste collection facility. The site is commonly referred to as either the Hartwell Avenue Landfill or the Lexington Compost Facility (hereafter referred to in this report as the Hartwell Avenue Landfill Site or Landfill Site).

The Town is interested in exploring the possibility of leasing a portion of the Hartwell Avenue Landfill Site to a private developer for the construction and operation of a source separated organic waste processing facility that would generate a renewable biofuel. Source separated organic waste includes food and yard waste that was collected separately from other solid waste materials. The private developer would be responsible for the design, construction, financing, ownership and operation of the facility and would pay the Town certain revenues and/or provide in-kind services in exchange for use of a designated portion of the property.

The Town's primary objectives for this project are to:

- encourage the development of a renewable energy facility consistent with the Commonwealth of Massachusetts policies;
- provide for an alternative disposal site for source separated organic waste which reduces greenhouse gas emissions; and
- increasing revenues and benefits to the Town.

The Town engaged Camp Dresser & McKee (CDM) to undertake various tasks related to the preliminary development of this project. These tasks included assessing the suitability of the Landfill Site for the intended purpose, gathering information from potential developers that would be used to help define the project specifics, reviewing local and state Massachusetts Department of Environmental Protection (MassDEP) regulations to determine the permitting requirements and reviewing alternative approaches for competitively procuring a project developer. This report includes the findings of CDM's preliminary investigations.

Section 2

Hartwell Avenue Landfill Site

2.1 Landfill Operating History

The Town of Lexington Board of Health (BOH) granted a site assignment for the Hartwell Avenue Landfill at a Special Meeting on March 12, 1962. This action is contained in the meeting minutes of the March 12, 1962 Special Meeting that were subsequently approved at the March 22, 1962 BOH meeting. The specific parcels that were assigned include two parcels divided by a Boston and Maine Railroad (currently the Minuteman Bike Path). The parcels were as shown on the Order of Taking dated January 23, 1962 and included the approximately 67 acres that the Landfill Site currently is on and another approximately 25 acres located on the opposite side of the Bike Path. These properties are shown on Map 79 as Lots 49 and 50. The site assignment for the Hartwell Avenue Landfill specifically permitted the use of this site as a “dumping ground for rubbish and other refuse for the Town of Lexington.” The BOH did not establish any other specific conditions for the site assignment. A copy of the Site Assignment and Order of Taking for the Landfill Site is included in Appendix A to this report.

The Department of Public Health (DPH), a predecessor to the Department of Environmental Quality Engineering (DEQE), which later became MassDEP, approved the site as a landfill in a letter dated October 29, 1963. The DPH specified conditions of approval including requirements that a 25-foot buffer be maintained from wetlands during waste disposal and that waste not be dumped into groundwater. Prior to accepting municipal waste for disposal, the landfill site existed as a relatively flat wetland area. The Town backfilled the site with soil to an elevation above the groundwater table before placing the waste. Reports indicate that landfilling activities began at the site in 1964.

Between 1972 and 1975, the DEQE cited the Town on several occasions for improper operations related to waste placement into wetland areas, inadequate daily cover and open-burning of brush and wood wastes. During that period, the Town filed a request for a lateral expansion of the landfill. The DEQE issued a letter dated June 4, 1977, denying the request citing increasing concerns with landfill operations and potential leachate discharges to Kiln Brook.

According to an August 1978 report prepared by Whitman & Howard, Inc. (W&H), the DEQE believed the leachate from the landfill was polluting Kiln Brook which is a major tributary to the Shawsheen River. DEQE also believed there was a potential for impacts to water supplies along the Shawsheen River for the communities of Bedford and Burlington.

During its final years of operation, the Town made several improvements to operations and in 1977 W&H submitted closure plans for the landfill to DEQE for approval. DEQE never formally approved the plans. In 1979, W&H submitted

separate plans for phasing out landfill operations with eventual closure in April 1979. DEQE never issued written approval of the plans. There is evidence that the Town implemented the proposed closure with the installation of a two-foot thick final cover over the landfill. Records indicate that the landfill continued to accept solid waste from the town until 1980. At the time when the landfill ceased operating, the Town established a group of groundwater monitoring wells around the site. These monitoring locations were sampled periodically over several years.

Following the cessation of landfilling of solid waste, the Town commenced the operations that are currently ongoing at the site. During this time, the Town accepted miscellaneous soil materials from Department of Public Works (DPW) operations and placed them on top of the “capped” landfill. As a result of these activities, the landfill has been completely regraded and filled with additional soil to an elevation of 10 to 15 feet above the landfilled refuse. The Town continues to operate the site for various DPW related operations described in detail Appendix C.

In a report dated January 1990, SEA Consultants, Inc. (SEA) evaluated the feasibility of constructing a solid waste transfer station at the landfill site.¹ The intent of the study was to determine if a portion of the landfill site could be utilized either as a solid waste transfer station for the Town of Lexington alone or as a regional facility for several surrounding communities. The SEA study included a test pit and boring program to characterize subsurface conditions within the landfill to determine which area might be structurally preferable for construction of a large structure. Based on this program, SEA concluded that “the data from these investigations indicates that the entire landfill property was filled with refuse for a minimum depth of 15-feet with the exception of the extreme westerly corner of the site. This area is underlain by sand fill and potentially a layer of peat.” A transfer station was never constructed at the site. This geotechnical information will be utilized to provide background information on the site for potential development of a source separated organic waste processing facility.

2.2 Landfill Closure Status

In the late 1990’s, the MassDEP approached the Town to confirm that the landfill was capped in accordance with the Solid Waste Management Regulations (310 CMR 19.000, the Regulations). These Regulations require that landfills such as the Hartwell Avenue Landfill that operated after April 1971 are capped in accordance with the current standards unless they can demonstrate that the landfill was previously capped in compliance with a prior set of regulations. The Town retained CDM to complete the required closure process.

The initial steps taken at the landfill were the filing of an Initial Site Assessment (ISA) under the Regulations and commencing the closure of the landfill site. As part of this process, a limited field investigation program was undertaken to determine if the

¹ “Solid Waste Transfer Station Feasibility Study, Lexington, Massachusetts,” S E A Consultants, Inc., January 1990.

landfill was capped with the two-foot cover specified in the W&H plans submitted to DEQE in the late 1970's. This program was unable to demonstrate the two-foot thick cover throughout the landfilled areas.

CDM and the Town also conducted a review of available water quality data at the site as part of the ISA and concluded that the landfill was not significantly impacting human health, safety or the environment. The Town then approached the MassDEP with an alternative approach to completing closure of the landfill under the Massachusetts Contingency Plan Regulations (310 CMR 40.0000, the MCP). Under this approach, the Town would conduct supplemental assessments to fully characterize site conditions and develop a remediation plan that addressed specific site issues. This remediation plan would not presume that a final cap in accordance with the solid waste regulations would be installed.

After significant discussion with MassDEP, it was determined that the Town could pursue the closure of the Hartwell Avenue Landfill as a pilot project under the MCP. Under this designation, the MassDEP provided comments on proposed scopes of work for field investigations and final reports. While MassDEP ongoing approval is generally not required for sites being remediated under the MCP, the additional review would provide input to insure that the landfill was closed in accordance with MassDEP requirements.

In May 2004, CDM completed the Phase II environmental assessment of the landfill site², had it stamped by a Licensed Site Professional (LSP) and submitted it to MassDEP. This report concluded that:

- Two locations had elevated concentrations of contaminants and were considered "hot spots." One of the hot spots was the active police firing range and the other was found as part of the subsurface program to characterize the existing landfilled waste. The status of the active police firing range is discussed further below.
- Based on the data available from the intensive field program, the landfill did not pose a significant risk to human health, safety or the environment. Therefore, there was no restriction on the continued uses of the site for various DPW operations and for future similar industrial or commercial uses assuming that appropriate building construction design and construction methods are implemented.
- Based on the large volume of landfilled materials and the potential for combustible landfill gas to be present, CDM recommended that the site not be used in the future for either uncontrolled uses or residential uses. Therefore, an Activity and Use Limitation (AUL) under the MCP was required to be placed at the Registry of Deeds for the site to document the current uses of the site and provide information on methods required if different site uses are proposed.

² "Revised Phase II Comprehensive Site Assessment, Hartwell Avenue Site, Hartwell Avenue and Maguire Road Intersection, Lexington, Massachusetts, Release Tracking Number (RTN) 3-21522," Camp Dresser & McKee Inc. , May 2004.

Subsequent to the submission of the Phase II report, the Town undertook a removal action for one of the hot spots. The hot spot remediation work was completed in accordance with a June 2002 Release Abatement Measures (RAM) Plan and the RAM was closed out in June 2005. Because it is an ongoing use, the hot spot associated with lead at the police firing range was allowed to remain on-site. However, relocation of the firing range from its current location may require the Town to remediate this hot spot in the future.

The AUL for the site is recorded at the registry of deeds and a copy is included in Appendix B. The AUL outlines the history of the site remediation under the MCP with reference to the appropriate MassDEP files and CDM reports and specifies the types of uses that are allowed to continue at the site (including all the current uses as well as regular site maintenance). The AUL also outlines the procedures that the Town will need to implement if a new site use is proposed. These procedures include a requirement that the Town retain a LSP who will determine if the proposed use is protective of human health, safety and the environment based on site conditions and evaluate further controls that may be required to mitigate potential impacts from the proposed new use. An example of further controls could include specific procedures to handle any soil or waste encountered during the installation of building foundations and the installation of a vapor barrier to prevent the migration of landfill gas into a new structure.

As MassDEP provided their final comments on the various MCP submittals prepared by CDM, there was significant discussion with the solid waste staff at MassDEP regarding any requirements of the solid waste regulations that are required even though the site closure being conducted under the MCP. It was determined that there were two areas where the solid waste regulations might still apply. The first is the requirement contained in 310 CMR 19.142 to conduct maintenance and ongoing environmental monitoring of a landfill site for a 30-year period following completion of site closure. CDM is currently conducting an ongoing environmental monitoring and site inspection program with submittals being made to the MassDEP solid waste group in accordance with this requirement.

The second solid waste requirement is outlined in section 19.143 – Post-Closure Use of Landfills. Under this requirement and in accordance with state law, no landfill site can be used for any post-closure use without obtaining MassDEP approval. To date, MassDEP has agreed that the existing DPW uses do not require a post-closure use permit application to be filed because of the work completed under the MCP. However, MassDEP has stated on several occasions that any change in use not already in-place or outlined in the AUL will require that the Town obtain a post-closure use permit from MassDEP. This issue was discussed with MassDEP solid waste staff at a meeting in their Northeast Regional Office (NERO) on December 17, 2010. At the meeting, MassDEP stated that further discussion was needed to determine the specific needs for a post-closure use permit for a proposed organic waste facility or if the approval process could be handled under the MCP.

The Town currently utilizes the Landfill Site for a variety of Town-related uses that are discussed in Appendix C of this report.

2.3 Local Permitting Requirements

2.3.1 Zoning

The Hartwell Avenue Landfill Site is zoned as Commercial Manufacturing (CM) as is all of the surrounding property. Pursuant to the Town's zoning bylaws, "CM Manufacturing is intended to be a district with a low intensity of development for the manufacture, assembly, processing or handling of materials, subject to certain performance standards, which are incompatible with and need to be well separated from residential, institutional or certain business uses." The nearest residential district is located approximately 700 feet to the east, across Route 128/I-95. This district is zoned RS One-Family Dwelling. The landfill site is also bordered to the north by the Minuteman Commuter Bikeway.

A source separated organic waste processing facility is not identified as an expressly permitted use under Part B (Commercial Uses) of Table 1 (Permitted Uses and Development Standards) of the Town's Zoning Bylaw. Therefore the local permitting pathway needs to be clarified including whether onsite power generation would be allowed. If this use would be permitted, it would appear from the general requirements for commercial uses in Table 1 that a special permit with site plan review would be required since the facility would have greater than 10,000 square feet of gross floor area and some equipment and products (e.g., finished compost) would be stored outdoors during non-operating hours.

Table 2 (Schedule of Dimensional Controls) of the Town's Zoning Bylaws allows for a maximum building height of 65 feet in a CM district. Two of the vendors that CDM and the town met with as part of this report indicated that the height of their equipment/facilities would be approximately 50-60 feet, which is slightly below the maximum zoning height. If a building height greater than 65 feet were needed, a special permit would need to be obtained pursuant to Table 2 of the zoning regulations. As noted in Section 4, the maximum building height may need to be further restricted for air traffic purposes.

During the process of evaluating this facility, CDM and the Town met with the staff members of several town boards to determine the local permitting process for a source separated organics waste facility at the Landfill Site. Concurrent with the meeting, a request was made to Town Counsel regarding the zoning requirements and whether the proposed facility serving multiple communities and constructed and operated by a private firm would be considered a "municipal use" and therefore exempt from local zoning. Based on this review, Town Counsel's preliminary recommendation is to clarify the existing Zoning Bylaw that the proposed project is allowable as of right or rezoning the Landfill Site to allow this type of development. Both of these actions require further legal review and approval of Town Meeting.

2.3.2 Transportation Management District

The Hartwell Avenue Landfill Site falls within a Transportation Management District, which is a designated zoning overlay district. This may require additional traffic management controls and/or a transportation mitigation fee for any new uses at the site. As discussed further in Section 3, preliminary discussions with several vendors indicate that a source separated organic waste processing facility may need to accept approximately 50,000 tpy of food waste and 55,000 tpy of yard waste for project feasibility. Provided below in Table 2-1 is an estimate of the total truck traffic that could be generated by a facility of this size assuming that food waste and yard waste deliveries occur six days per week and that approximately 40,000 tpy of compost were shipped off site. Since a facility of this size would replace the existing composting operation, the actual net increase in truck traffic would be less.

**Table 2-1
Estimated Total Truck Trips**

	Food Waste	Yard Waste	Compost	Total
Annual Tonnage	50,000	55,000	40,000	145,000
Average Daily Tonnage ⁽¹⁾	160	176	128	464
Round Trip Trucks Per Day ⁽²⁾	20	22	6	48

1) Based on a 6 day per week delivery schedule

2) Based on 8 ton average payloads for food waste and yard waste and 20 ton average payloads for finished compost

2.3.3 Conservation Commission

The Landfill Site is surrounded by wetland resource areas on three sides. These wetland resource areas are subject to regulation under the Massachusetts Wetlands Protection Act (310 CMR 10.00) and the Town’s Wetland Protection Code (Chapter 130) and its associated rules. These regulations are overseen locally by the Lexington Conservation Commission. Because of the proximity of wetland resource areas to the Landfill Site, the proposed facility will most likely have to file a Notice of Intent (NOI) permit application with the Commission.

To meet the requirements of the wetlands-related regulations, the proposed facility will have to be located outside of the resource areas to the greatest extent possible. If any resource areas are impacted, a mitigation plan will have to be prepared and approved by the Conservation Commission. Since the filing of the NOI requires specific information on the design and layout of the proposed facility, the wetland related permits are best obtained by the selected vendor.

Under the Wetlands Protection Act, the Commission is also responsible for implementing the state’s stormwater management standards through their local permitting process. Since the proposed facility will require additional impervious areas such as buildings and paved surfaces, it will also need to incorporate

appropriate stormwater management systems in accordance with the several specific design requirements. CDM notes that this process may include improved stormwater controls for the remaining DPW operations on-site.

2.3.4 Board of Health

The Lexington Board of Health will have a significant role in the final permitting of the proposed organics waste facility. This role is primarily through the Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.000). The Site Assignment Regulations require the Board of Health to assign a proposed site for solid waste disposal purposes after review of an application and a public hearing process.

As discussed above, the Landfill Site has already been site assigned by the Board of Health for “a dumping ground for rubbish and other refuse for the Town of Lexington” on March 12, 1962. Based on a meeting with MassDEP and the review of the regulations provided in Section 4.2, the existing site assignment may not be usable for the proposed organic waste facility. The Site Assignment regulations do not currently contain a specific approach that could be utilized to allow the proposed organic waste facility at the Landfill Site. To address this concern, MassDEP has convened a Task Force with other state agencies to review the current regulations and define a regulatory pathway.

CDM and town officials met with the Board of Health on March 9, 2011 to discuss the project as well as Board’s role in the Site Assignment. A copy of the presentation provided to the Board of Health is included in Appendix D to this report. While the pathway for Board approval is not clearly defined at this time, the Board specifically requested that they be kept aware of the progress of the development of the organic waste facility at the Landfill Site as well as any changes in the required permitting requirements.

2.4 Available Site Utilities and Infrastructure

The proposed organic waste facility will require connections to a water source and a sewer for wastewater disposal as well as a method to connect into either the electrical grid or a natural gas transmission system to allow the biogas generated from the digestion process to be effectively utilized. The Landfill Site has the following utilities available for connection to the proposed organic waste facility:

- An electrical substation near the entrance to the site that would provide convenient access to the electrical grid for facilities that produced electricity from the biofuel;
- A large natural gas transmission line near the entrance to the site that would provide convenient access for facilities that produced a pipeline quality biogas;
- Water service to the Landfill Site is available off Hartwell Avenue; and

- Sewer service to the site could be available off Hartwell Avenue or to the sewer line that runs adjacent to the Minuteman Commuter Bikeway towards Route 128.

The final selection of connections to each of these utilities will be based on the needs of the specific organic waste facility technology selected by the Town. It should also consider the requirements such as settlement and subsidence and the lateral migration of landfill gas through pipe trenches in determining the required approach to on-site infrastructure connections.

2.5 Summary of Site Considerations

The Hartwell Avenue Landfill Site offers several advantages which make it an ideal candidate for a source separated organic waste processing facility. These advantages include:

- The proposed use is compatible with the current uses of the site. The site is large enough to accommodate a reasonable sized organic waste processing facility although a portion of the existing yard waste composting areas would be need to be utilized;
- The closure of the site under the provisions of the MCP can be accommodated the proposed facility. Additional engineering controls will have to be incorporated into the design to reflect that the facility is constructed on top of an old landfill and the AUL for the Landfill Site will have to be modified;
- The site is easily accessible by truck from Route 128/I-95 although the requirements of the Town's Transportation Management District zoning overlay for Hartwell Avenue will have to be addressed;
- The surrounding area is all commercially zoned with the nearest residential district located approximately 700 feet away. Based on a preliminary review by Town Counsel, the development of the proposed organic waste facility will require an action by Town Meeting to either modify the site zoning or define the proposed facility as a "municipal use";
- The Landfill Site is surrounded on three sides by wetland resource areas that will likely require a permit approval from the local Conservation Commission. This approval will include the proposed stormwater management plans for the proposed facility;
- While the specific pathway for the Site Assignment for the proposed facility is not clearly defined, the involvement of the Board of Health for any proposed facility at the Landfill Site will be necessary; and
- There are readily available utilities near the Landfill Site including an electrical substation, a large natural gas transmission line, water supply and sewer.

Section 3

Potential Processing Technologies/Vendors

3.1 Targeted Waste Materials

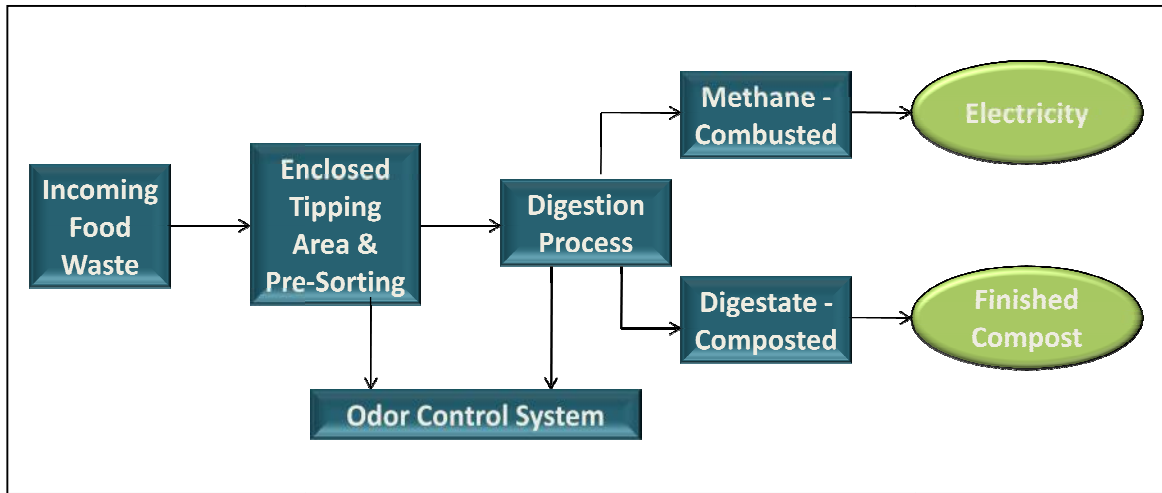
The targeted waste materials for this project will include only organic waste that is separated at the point of generation (source separated) and not mixed with other waste materials. Depending on the processing technology employed, source separated organic waste could include one or more of the following items: food material, yard waste, agricultural waste and vegetative material. Other source separated materials that may be appropriate for this type of facility depending on the type of technology used include fats, oils and greases (so called FOG material). The MassDEP definitions for the various organic waste materials are provided below:

- **Food Material** – Source separated material produced from human food preparation and consumption activities at homes, restaurants, cafeterias, or dining halls which consists of fruits, vegetables and grains, fish and animal by-products, and soiled paper unsuitable for recycling.
- **Yard Waste** – Deciduous and coniferous seasonal deposition (e.g., leaves), grass clippings, weeds, hedge trimmings, garden materials and brush.
- **Agricultural Waste** – Discarded organic materials produced from the raising of plants and animals as part of agronomic, horticultural or silvicultural operations, including but not limited to, animal manure, bedding materials, plant stalks, leaves, other vegetative matter and discarded by-products from the on-farm processing of fruits and vegetables.
- **Vegetative Material** – Discarded source separated material which consists solely of vegetative waste such as fruits, vegetables and grains, that is produced from food preparation activities at, but not limited to, grocery stores, fruit or vegetable canning, freezing or preserving operations, and food or beverage processing establishments.

3.2 Potential Processing Technologies

A schematic diagram showing the general process that will be utilized to accept these source-separated organic waste streams and process them into a biogas that can either be imported directly into a natural gas distribution system or converted into electricity is shown on Figure 3-1.

Figure 3-1
Schematic Flow Chart of Anaerobic Digestion Facility with Electrical Generation



In addition to the processing facilities that will either actively augment windrow composting or digest the organic waste stream, the Town could pursue the acceptance of organic wastes into the existing leaf and yard waste composting operations. This approach would either have to be implemented within MassDEP's current limits of 50,000 cubic yards or 10,000 tons of materials on-site at any time or the Town will need to obtain a permit to allow the addition of a limited quantity of food waste type materials into the existing permit. The Town of Needham has obtained a similar approval from MassDEP to allow them to incorporate a limited quantity of food waste into their composting operation.

Table 3-1 includes a summary of the vendors with various technologies that CDM investigated as part of this study. A more detailed discussion of each vendor follows. In addition, there are numerous other vendors with similar approaches that may respond to a Request for Proposals (RFP) if issued by the Town.

Table 3-1
Summary of Vendor Approaches for Treating Source Separated Organic Waste
Hartwell Avenue Landfill Site, Lexington, Massachusetts

Technology	Description	Incoming Waste Stream	Final Products and Residuals¹	Generate Electricity By Combustion of Biogas	Representative Vendor and Website
Pre-Processing with Aerated Static Compost Piles	Pre-processing of incoming materials including grinding, separation of contaminants, placement in covered aerated windrows to produce final product	Source Separated Food Waste, Yard Waste and Wood	Finished compost suitable for public use	No	Peninsula Compost Group peninsulacompostcompany.com
Anaerobic Digestion Facility & Covered Aerated Static Compost Piles	Multi-stage anaerobic digestion creating biogas and composting of digestate with leaf and yard waste in covered aerated piles	Source separated food waste, cardboard containers, and yard waste	Electricity & Heat Finished compost suitable for public use.	Yes. Biogas could also be sold as CNG (not currently cost-effective)	Harvest Power harvestpower.com
Anaerobic Digestion producing a biogas	Anaerobic digestion of source separated organic wastes to produce a biogas that is used to generate electricity	Source separated food waste including packaged food ² items, cardboard, liquids, fats oil & grease, meats, etc.	Electricity & Heat Digestate residual to be incorporated into existing leaf & yard waste composting operation	Yes	NEO Energy Neoenergyusa.com
Pyrolysis of organics to create a biogas used to generate electricity	Pyrolysis (gasification) of incoming organic materials to generate a biogas used to generate electricity	Food waste and associated paper and cardboard; leaf and yard waste and clean C&D wood	Electricity & Heat Ash Residual	Yes	Hummingbird Energy Corp. Hummingbirdenergy.us

¹ All processes generate a leachate from the operations that will need to be collected and discharged into a public sewer collection system in accordance with local ordinances.

² Can accept up to 10% (by weight) non-organic materials such as plastics, metals and glass that are separated during the process and removed for disposal as a residual.

3.2.1 Wet Anaerobic Digestion with Composting/NEO Energy Corporation

Representatives of the Town and CDM met with NEO Energy Corporation (NEO) on December 3, 2010. NEO had approached the Town back in March 2010 and expressed an interest in constructing a source separated organic waste processing facility at the Hartwell Avenue Landfill Site. NEO is headquartered in Portsmouth, NH and is a wholly owned subsidiary of BayCorp Holdings.

Based on discussions with NEO, they would be interested in proposing a facility that uses a wet anaerobic digestion process to convert the food waste to a biogas that could then be combusted in on-site engine generators to produce electricity. The digestion process would occur inside an airtight tank or digester similar to those used at wastewater plants to digest sewage sludge. The process would also produce a digestate that would be mixed with yard waste to produce compost. NEO proposes using wet anaerobic digestion technology developed by Entec Biogas, an Austrian company that specializes in the design of biogas plants.

From a preliminary project feasibility standpoint, NEO would be looking to accept 55,000 tons per year (tpy) of food waste. This would equate to approximately 175 tons per day (tpd) on a six day per week receiving schedule. The biogas from the anaerobic digestion process would generate approximately 2.8 megawatts (MW) of electricity. Approximately 21,000 wet tpy of digestate would be produced and mixed with 70,000 cubic yards of yard waste to produce 43,000 tpy of compost. NEO did not indicate whether the composting would occur in open windrows or whether a covered aerated static pile composting process would be used. NEO indicated that a minimum of 4 acres would be needed for the processing facility plus additional space for the composting operation. The facility would also require an estimated 3,500 gallons per day (gpd) of potable water and would discharge 21,000 gpd of wastewater.

3.2.2 Dry-Wet Anaerobic Digestion with Composting/Harvest Power Inc.

Representatives of the Town and CDM met with Harvest Power Inc. (Harvest) on December 3, 2010. Harvest had approached the Town back in March 2010 and expressed an interest in constructing a source separated organic waste processing facility at the Hartwell Avenue Landfill Site. Harvest is headquartered in Waltham, MA and their business focuses on the development of facilities that process organic waste and generate renewable energy and compost. One of Harvest's investors is Waste Management.

Based on discussions with Harvest, they would be interested in proposing a facility that uses a wet-dry anaerobic digestion process to convert food waste to a biogas that could then be combusted in engine generators to produce electricity. Harvest proposes using a batch anaerobic digestion technology developed by the German technology company GICON Bioenergie GmbH. The GICON technology uses a two-stage, dry/wet anaerobic digestion process with the decomposition occurring first in hydrolysis percolators (stage 1 - dry) and then in methane digesters (stage 2 - wet). The process would also produce a digestate that would be mixed with yard waste to

produce compost. Composting of the digestate and yard waste would occur in a covered aerated static pile. The covered aerated static pile compost process allows for increased throughput on a smaller footprint compared to windrow composting with better odor control.

From a preliminary project feasibility standpoint, Harvest indicated that the minimum capacity for the anaerobic digestion facility would be approximately 40,000 tpy. This would equate to approximately 125 tpd on a six day per week receiving schedule. The anaerobic digestion capacity would be coupled with a 56,000 tpy covered aerated static pile composting operation that would handle approximately 12,000 tpy of digestate from the anaerobic digester plus 44,000 tpy of yard waste. Harvest indicated that a minimum of 3-4 acres would be needed for the anaerobic digestion processing facility plus another 7-8 acres for composting and product storage for a total of 10-12 acres. The facility would also require access to potable water and a sanitary sewer.

3.2.3 Covered Aerated Static Pile Composting/Peninsula Compost Group

CDM contacted Peninsula Compost Group (Peninsula), which is located in Greenwich, Rhode Island, to discuss their interest in developing a source separated organic waste processing facility at the Hartwell Avenue Landfill Site. Peninsula develops and operates large scale food waste composting facilities employing a covered aerated static pile technology. Organic waste including food waste is mixed and placed in windrows which are then covered with a fabric membrane. Air is blown up through the bottom of the windrow piles to accelerate the decomposition process. This process does not generate any recoverable biogas. An aerial photograph of Peninsula's facility in Wilmington, Delaware is provided in Figure 3-2.

Figure 3-2
Existing Wilmington Delaware Organic Composting Center (WORC) –
Source – Peninsula Composting Group



Source: Peninsula Composting Group Web Page

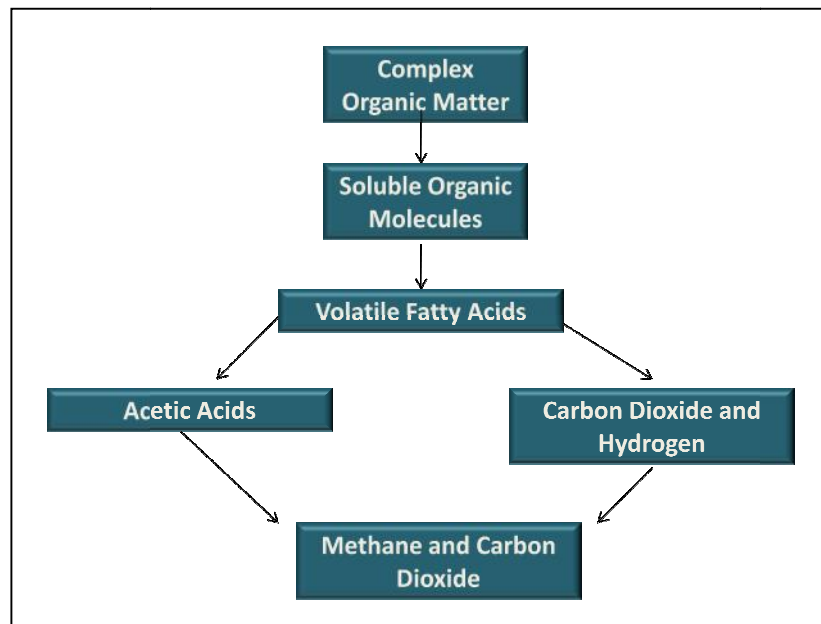
3.2.4 Pyrolysis/Hummingbird Energy Corporation

The Town received an email inquiry in early October 2010 from Hummingbird Energy LLC (Hummingbird). Hummingbird is located in Phoenix, Arizona and indicated that they were interested in locating a source separated organic waste processing facility in Lexington. Hummingbird develops and operates facilities that convert source separated organic waste into a fuel. Unlike the other processes discussed that decompose the waste using microorganisms, Hummingbird employs a pyrolysis process where the waste is heated in the absence of air which converts most of the waste into a synthesis gas consisting primarily of carbon monoxide and hydrogen. The syngas is then combusted to generate electricity. The ash that remains after the pyrolysis process is processed into a fertilizer. Hummingbird's email inquiry indicated that they would need approximately 5 acres of land for a 200 ton per day facility (approximately 65,000 tons per year).

3.3 Recommended Processing Technologies

Static pile (windrow) composting, aerated static pile composting and anaerobic digestion technologies are widely used processes for managing organic wastes. Static pile and aerated static pile composting are the simplest of the processes but only produce a compost end product. While more complex, anaerobic digestion produces both compost and renewable energy as end products. A generalized schematic of the anaerobic digestion process and how it breaks down complex organic materials is provided on Figure 3-3. Pyrolysis is a less proven technology for organic wastes and is treated from a permitting standpoint similar to traditional combustion projects in Massachusetts.

Figure 3-3
Schematic Flow Chart of Anaerobic Digestion Facility Process to Generate Biogas from Organic Materials



The MassDEP has indicated that pyrolysis processes would be difficult to permit since this technology appears to conflict with the MassDEP's moratorium on municipal waste combustion. MassDEP recommended that the Town not pursue a project based on pyrolysis technology even if the proposed waste stream is source separated. A pyrolysis process is also likely to attract more public opposition than the static pile composting, aerated static pile composting and anaerobic digestion technologies. Based on the input provided by MassDEP on pyrolysis technologies and considering the Town's interest in encouraging the development of a renewable energy facility, CDM recommends that the Town limit the proposed technology to wet and/or dry anaerobic digestion with covered aerated static pile composting for managing the digestate byproduct. This combination of technologies will allow the facility to accept both food waste and yard waste.

3.4 Utilization of Site Utilities

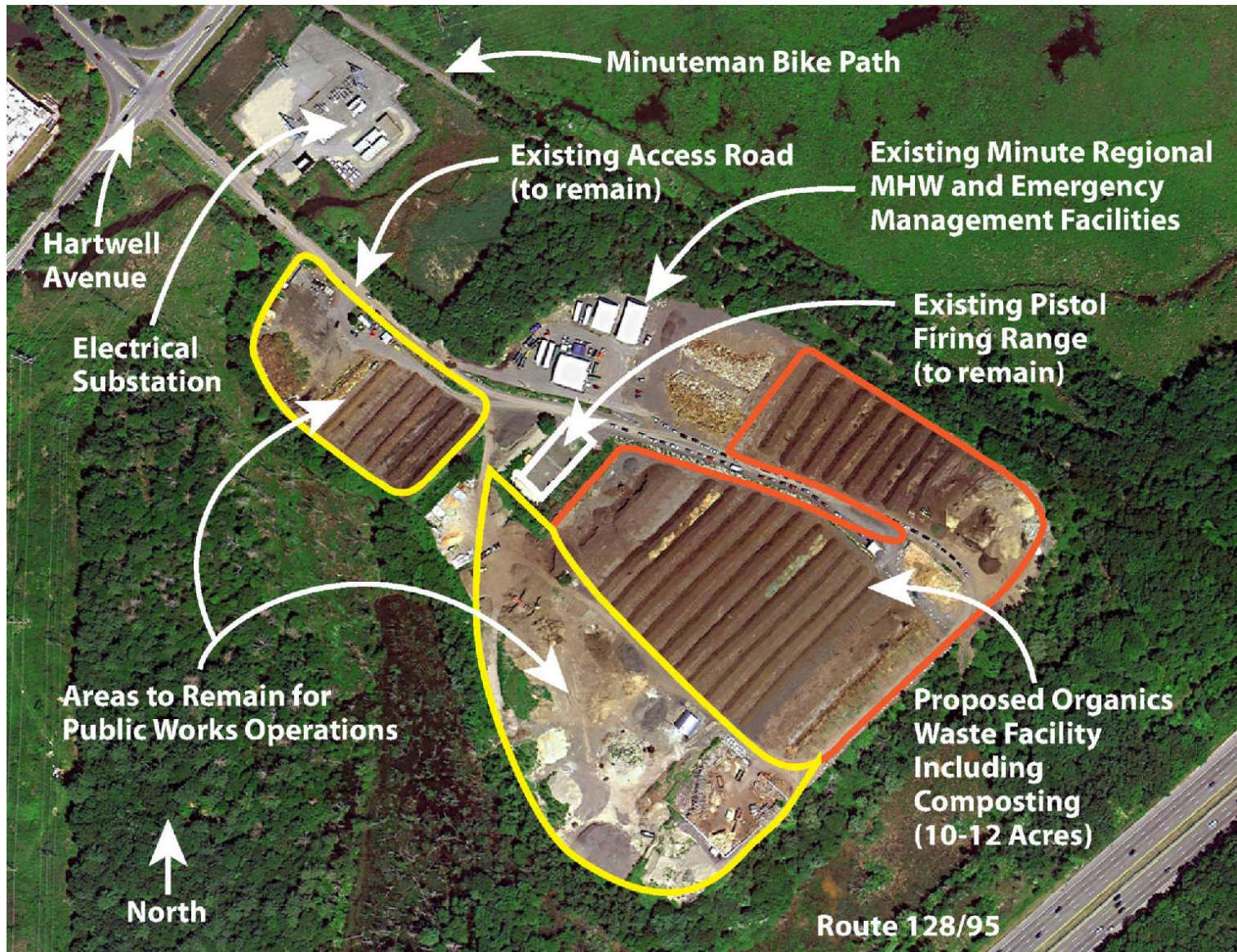
Development of a source separated organic waste processing facility using anaerobic digestion with covered aerated static pile composting will require access to various utilities. The primary utilities needed to operate the facility are expected to be electrical power, natural gas, potable water and wastewater disposal. All of these utilities are currently available on Hartwell Avenue.

Facilities generating electrical power for sale will also require convenient access to the utility grid. NStar Electric owns and operates a large electrical substation just off of Hartwell Avenue and adjacent to the Landfill Site access road that would provide a convenient electrical tie in point. There is also a Tennessee Gas natural gas transmission line easement that crosses the Landfill Site entrance road that would provide a convenient tie-in point if the facility were to generate a pipeline quality gas instead of electricity.

3.5 Potential Facility Locations

Based on preliminary input from NEO Energy and Harvest, as much as 10 to 12 acres of land area would be needed to support a facility handling approximately 50,000 tpy of food waste, 55,000 tpy of yard waste and 15,000 tpy of digestate from the anaerobic digester. If the Town were to pursue a project of this size, the most appropriate location for the source separated organic waste processing facility without having to make major modifications to the existing site operations and roadway layouts would be the eastern portion of the Landfill Site. This area, is currently used for curbside yard waste drop off and for compost screening/contractor yard waste drop off. These potential locations and revised site access are schematically shown in Figure 3-4.

Figure 3-4
Schematic Site Plan of Landfill Site with Proposed Organic Work Facility



Section 4

Overview of Massachusetts Regulations and Policy

Since the technologies for a proposed source separated organic waste facility are proprietary, the Town will have to issue a Request for Proposals (RFP) for private vendors to develop a facility at the Hartwell Avenue Landfill Site. The development of any organic waste facility will require a significant permitting process with various state and local agencies. Many of these permits will require detailed technical information on the facility and can only be prepared by the selected vendor. However, some other permits and approvals may be better obtained by the Town prior to the issuance of a RFP to provide greater certainty to proposers and an improved understanding of the project requirements. This improved understanding will likely lead to more responsive proposals.

During our preliminary investigations for this project, CDM found that many of the specific state requirements for permitting a source separated organic waste processing facility are unclear. This section will provide a summary of the current regulations as well as discussions with MassDEP at a meeting on December 17, 2010 in their Northeast Regional Office. Based on these discussions, CDM notes that the specific regulatory requirements for this type of facility are in flux because the current solid waste related regulations do not anticipate this type of operation. At the same time, MassDEP has been actively developing new polices to allow certain organic waste facilities as part of its efforts to divert more waste from disposal in landfills and waste-to-energy facilities. To assist in this effort, the state has recently implemented a Task Force for "Building Organics Capacity in Massachusetts." The status of this Task Force is discussed in Section 4.9 below. CDM notes that one of the goals of this Task Force is to revise the current regulations to specifically define organic waste facilities and provide a pathway for proposed facility developers to obtain the necessary approvals from state agencies and the local Boards of Health.

The following review of existing regulations is based on the potential facilities discussed by vendors during CDM's investigations. This assumes a facility that would accept approximately 200 to 250 tons per day (based on a five day delivery week) of source-separated organic materials at the landfill site. This equates to between 52,000 and 65,000 tons per year (tpy) of organic materials, not including the leaf and yard waste composting operation that will remain on-site.

4.1 Massachusetts Environmental Policy Act and Regulations (301 CMR 11.00, MEPA)

The MEPA regulations are pertinent to proposed projects that exceed certain prescribed thresholds that could potentially impact human health, safety and the environment. The thresholds cover numerous topics including impacts to wetlands, capacity of solid waste facilities, air quality emissions, amount of impervious area,

endangered species, conservation land, water and wastewater systems, transportation and traffic, energy generation, and historic and archaeological resources.

For projects that exceed one or more of the thresholds, the MEPA regulations require the project proponent to study the impacts and propose mitigation measures. These evaluations are typically completed as part of an Environmental Notification Form (ENF) submitted to the MEPA office. The ENF is publically advertised and distributed to various state and local agencies for review and comment. The MEPA office then makes a determination if the project requires further review as part of an Environmental Impact Report (EIR) or if no further action is needed. Projects that exceed another set of thresholds are automatically mandated to submit an EIR. For projects required to submit an EIR, several draft submittals may be required prior to the MEPA office issuing a certificate that no further action is required.

No state agency can issue any permits for a project until the MEPA office has completed their process. For projects that require an EIR, the process can take a year or more to complete and entail significant costs. The requirement of an EIR for the proposed facility would be a burden to the proposers and would likely significantly decrease the value of the project to the Town.

Of the current MEPA thresholds, the most likely to impact the proposed source separated organic waste processing facility is contained in 301 CMR 11.03(9) and reads as follows:

“(9) Solid and Hazardous Waste.

(a) ENF and Mandatory EIR. New Capacity or Expansion in Capacity of 150 or more tpd for storage, treatment, processing, combustion or disposal of solid waste, unless the Project is a transfer station, is an Expansion of an existing facility within a validly site assigned area for the proposed use, or is exempt from site assignment requirements.

(b) ENF and Other MEPA Review if the Secretary So Requires.

1. New Capacity or Expansion in Capacity for combustion or disposal of any quantity of solid waste, or storage, treatment or processing of 50 or more tpd of solid waste, unless the Project is exempt from site assignment requirements...”

Based on this language, the proposed facility would require a mandatory EIR unless the source separated organic materials are not considered “solid waste” or the proposed use is exempt from the site assignment requirements. The evaluation of the impact of both of the definition of solid waste and the site assignment regulations is provided below.

In addition to the solid waste thresholds, there are other criteria that might impact the proposed facility. Based on the projects proposed by the vendors and our knowledge of the landfill site, we do not believe that any of the other thresholds will require filing with MEPA. However, there are specific air emission thresholds that will need to be evaluated during the proposal process. MEPA has also established a greenhouse gas policy to evaluate emissions from new facilities that may have an impact on the requirements for the organic waste processing facility. As this policy is new, it is not possible at this time to gauge the potential impacts on the proposed operation at this time.

4.2 Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00)

The MassDEP's site assignment regulations outline the process for deciding whether a specific parcel of land is suitable to be used for a solid waste management facility. Site assignments are required for landfills, waste-to-energy facilities, transfer stations and processing facilities. The regulations have exemptions for certain recycling, public works, and composting operations. The regulations include a set of specific siting criteria including prohibitions of siting facilities in wetlands or on conservation land; setbacks from sensitive receptors such as residences and schools; and requirements to evaluate impacts such as traffic, odors and noise. They also outline a specific process for obtaining a new site assignment that includes an intensive public hearing process by the local Board of Health.

A version of the site assignment regulations have been in place since 1955. As noted in Section 2.1, the Town of Lexington Board of Health (BOH) granted a site assignment for the Hartwell Avenue Landfill on March 12, 1962. The existence of a valid site assignment is important since it may minimize the effort required to obtain a new or modified one. This value would be based on a provision contained in 310 CMR 16.21 (Alternative Uses of Assigned Site) that allows the Town to either obtain a modified site assignment or to potentially utilize the original version.

Based on CDM's review of the current site assignment regulations, there are several questions about the need for the Town to either obtain a new or modified site assignment. In our December 17, 2010 meeting, the MassDEP responded to these specific questions about the regulations by stating that they were currently working through a policy document to allow organic waste processing facilities to be constructed without unnecessary permits and process. It is likely that the Town will have to continue to coordinate with MassDEP to address issues in the site assignment regulations such as:

- While there are exemptions for recycling facilities obtaining a site assignment, the definition of "Recyclable" specifically states that it "...does not mean to recover energy from the combustion of a material." The proposed digestion process will likely include the generation of electricity from the resulting digester gas.

- The site assignment regulations currently do allow a request of a “Determination of Need” under section 310 CMR 16.05(6) for recycling operations not exempted elsewhere and handling only pre-sorted recyclable materials. This is the process that New England Organics utilized at a proposed facility developed by AGreen Energy, LLC for a organics waste processing facility at a farm site in Rutland, Massachusetts. The MassDEP approval dated October 20, 2010 stated that the proposed 30,000 ton per year (source separated organics and manure) did not require a site assignment. A copy of the MassDEP approval is provided in Appendix E. This facility was allowed to accept dairy manure generated at the farm and compostable source separated organics generated by commercial supermarkets or wholesale production facilities that produce liquid or solid food or beverages for human consumption. CDM understands that this facility is currently under construction and will begin start-up operations during the spring of 2011.

CDM notes that if the facility does not require a site assignment after completing the Determination of Need process, it also may not require any solid waste facility permits under the Solid Waste Management Regulations (310 CMR 19.000).

It is likely that the work of the Organics Waste Task Force discussed below will have a significant impact on the requirements for a site assignment for the proposed facility.

Based on our meeting and discussions with MassDEP and understanding of the site assignment regulations, the determination whether the proposed facility either needs a new or modified site assignment; can utilize the existing site assignment; or MassDEP modifies their regulations to specifically exempt source-separated organic facilities, will be a significant issue that needs to be specifically addressed as part of any RFP process.

4.3 Solid Waste Management Regulations (310 CMR 19.000)

The solid waste regulations were promulgated to protect public health, safety and the environment from facilities that handle, process and dispose of solid waste. Solid waste is defined as:

“Solid Waste or Waste means useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, mining, agricultural, municipal or household activities that is abandoned by being disposed or incinerated or is stored, treated or transferred pending such disposal, incineration or other treatment, but does not include.....;

(i) compostable or recyclable materials when composted or recycled in an operation not required to be assigned pursuant to 310 CMR 16.05(2) through (5).

The definition of “recycle” in the solid waste regulations is the same as contained in the site assignment regulations and includes the exclusion on use for the generation of electricity.

The exclusion of recyclable materials from the definition also would exclude the need for a source separated organics facility receiving the Authorization to Construct (ATC) permit that is typically required for facilities such as transfer stations and co-composting facilities. The ATC permit requires the submission of detailed information to MassDEP on site design and operations procedures. MassDEP will review the information in detail and issue the permit with conditions. The ATC permit application can be made subject to public comment if issued initially as a draft and the final permit can be appealed. Once the facility is constructed, the operator would submit an Authorization to Operate permit application to MassDEP.

For similar reasons as the site assignment regulations, CDM recommends that the Town have a clear understanding of the permitting pathway under the solid waste regulations for incorporation into any RFP. This will require a detailed review of the existing site assignment and further discussions with MassDEP to determine an appropriate pathway for completing the solid waste permitting process. It is also likely that the work of the ongoing Organics Waste Task Force discussed in below will have a significant impact on the applicability and requirements of the Solid Waste Management Regulations.

4.4 Solid Waste Master Plan

Since 1990, the MassDEP has issued periodically a series of Solid Waste Master Plans that outline the priorities of the Commonwealth as they relate to the handling, recycling and disposal of solid waste. The most recent Master Plan was issued in draft form in July 2010¹ and included the following existing and new policy statements that are pertinent to the development of the proposed facility in Lexington:

- Dramatically increase recycling and re-use of solid waste.
- Maintain moratorium on additional municipal solid waste combustion capacity. As discussed during our meeting with MassDEP, the pyrolysis process offered by one vendor investigated by CDM would be considered waste combustion by MassDEP.
- “Modify MassDEP’s siting regulations to eliminate barriers to siting facilities that support increased recycling and composting, as well as other facilities such as anaerobic digestion facilities that generate energy from source separated organic materials. Maintain strict facility oversight to ensure a high level of environmental performance.”

¹ “Draft 2010-2020 Massachusetts Solid Waste Master Plan, Pathway to Zero Waste,” MassDEP, July 1, 2010.

- The solid waste regulations include a variety of wastes that are banned from disposal in waste-to-energy plants and landfills. MassDEP has developed protocols for both facilities that handle waste such as transfer stations and disposal facilities to conduct regular inspections of the incoming waste stream and reject loads that have a high percentage of any banned materials. Some of the banned materials in-place currently include paper, glass, tires, leaf and yard waste, white goods and plastics. In the Master Plan, MassDEP proposes to increase the enforcement of “waste bans” at landfills and in the commercial waste stream including adding organics to the list of banned materials and working to develop alternative markets and facilities. The addition of organics is proposed by 2014 assuming adequate market capacity exists to handle the diverted materials.

The MassDEP received comments on the draft Master Plan during the summer and fall of 2010 and is proposing to finalize the latest version of the Master Plan in 2011. However, the goals are directly in-line with the development of a facility that accepts source-separated organic materials. CDM does not anticipate any significant change to this portion of the Master Plan.

4.5 Other Permitting Considerations

In addition to the solid waste related permits outlined above, the proposed facility may be required to obtain a Non-Major Comprehensive Plan Approval under the MassDEP’s Air Quality Regulations (310 CMR 7.000) if the facility includes a point-source stack emission. The digestion processes that include generating electricity will be required to obtain a permit under these regulations. Because the filing of this permit requires specific information on the emissions and engineering controls of the specific technology, this permit is best obtained by the selected vendor.

As discussed in Section 2, the proposed project is also subject to the MassDEP’s Wetlands Protection Regulations and the Lexington wetlands bylaw.

4.6 Massachusetts Contingency Plan (310 CMR 40.0000, MCP)

The status of the landfill site closure under the MCP is detailed in Section 2. In summary, the proposed facility will be required to retain a Licensed Site Professional (LSP) to evaluate its impacts on human health, safety and the environment and recommend appropriate mitigation measures. The new facility including these measures will then be incorporated into the existing Activity and Use Limitation (AUL) on-file at the Registry of Deeds and the facility can be constructed. There will be periodic inspections of the operations required under the MCP to confirm that the conditions of the AUL are still being implemented.

Based on CDM’s knowledge of site conditions, perspective vendors will be able to comply with the requirements of the MCP regulations. However, construction on an old landfill will be more costly due to both environmental controls and structural foundation issues. Any RFP issued by the Town needs to provide adequate

background information on subsurface conditions so that proposers can incorporate these additional costs into their proposals. Additional consideration may also need to be given to conducting soil borings in the specific areas proposed for the facility. Incorporating this information into the RFP would allow proposers to submit more definitive proposals.

4.7 Massachusetts Renewable Portfolio Standard (RPS)

The Commonwealth has established a Renewable Energy Portfolio Standard (RPS) that requires that suppliers to obtain a percentage of electricity from qualifying facilities for their retail customers. Suppliers meet their annual RPS obligations by acquiring a sufficient quantity of RPS-qualified renewable energy certificates (RECs). RECs are purchased from qualified generator at a premium based on an alternative penalty rate that is established by the Massachusetts Department of Energy Resources (DOER). The RPS regulations are intended to provide a financial incentive for developers to build renewable energy facilities.

Facilities that generate electricity using anaerobic digestion gas qualify toward the RPS. The source separated organic waste processing facility envisioned by the Town would therefore appear to qualify for financial incentives under the RPS if the facility used an anaerobic digestion process and the resulting digester gas was used to generate electricity. Additional financial incentives may also be available from the federal government depending on the type of renewable energy project being proposed and the in-service date.

4.8 Meeting with MassDEP Northeast Regional Office

Representatives of the Town, CDM and MassDEP met on December 17, 2010 to discuss the Town's interest in hosting a source separated organic waste processing facility. MassDEP confirmed that they would like projects of this type to move forward but the current regulations do not specifically address these facilities as discussed previously. As a result, the permitting pathway is not clear. MassDEP stated that this issue was recently discussed among the upper management at MassDEP and other state agencies and that the consensus was the best fix would be to modify the regulations. MassDEP has established an Organics Waste Task Force as described below to review proposed regulatory changes.

At the meeting, MassDEP stated that the Town had three permitting choices at this point. They could pursue a modification of the current Site Assignment from the Town's Board of Health to allow this use, they could submit a Determination of Need (DON) for a Site Assignment to the MassDEP or they could wait for the MassDEP to revise the regulations to specifically accommodate these facilities.

MassDEP also indicated at the meeting that pyrolysis or gasification processes would be difficult to permit since these technologies appear to conflict with the MassDEP's moratorium on municipal waste combustion. Therefore, MassDEP recommended that the Town not pursue a project based on pyrolysis or gasification technology even if

the proposed waste stream is source separated. MassDEP further indicated that use of a biogas produced from anaerobic digestion technology in an engine generator to produce electricity would not be subject to the municipal waste combustion moratorium.

4.9 FAA Determination

The Hartwell Avenue Landfill site appears to be within the flight path of one of the runways at the nearby Hansom Airfield. A determination will need to be obtained from the Federal Aviation Administration as to whether a structure with a maximum height of approximately 60 feet could potentially interfere with aircraft takeoffs and landings and, if so, whether a lower height restriction would be imposed and/or whether certain lighting and/or building markings would be required.

4.10 Task Force on Building Organics Capacity in Massachusetts

To address many of the issues identified above, The MassDEP working with the several agencies within the state Executive Office of Energy and Environmental Affairs including the Department of Agriculture Resources, the Department of Energy Resources and the Massachusetts Clean Energy Center have established a public Task Force on Building Organics Capacity in Massachusetts. This Task Force held its first meeting on March 5, 2011 in Boston. This initial meeting was attended by both CDM and a representative of the town.

At the initial meeting, there was an extensive discussion of the needs to allow these types of facilities to move ahead within the existing regulatory framework and proposed revisions. To fulfill the requirements of the Draft Solid Waste Master Plan discussed above and other energy policy documents, MassDEP needs to develop an approach to permit organic waste digestion, composting and recycling facilities that allows them to be developed while still maintaining local oversight and permitting authority and protecting human health, safety and the environment.

The Town should continue to monitor the progression of this Task Force as they work through a series of subcommittees to determine the appropriate approach for the permitting of various organic waste facilities. It is likely that this effort will have a significant impact on both the role of MassDEP and the local Board of Health in permitting this facility. Based on the initial meeting of the Task Force, the plan is to issue draft revised regulations for public review and comment by the Summer of 2011. While this schedule is aggressive, the Town should monitor these draft regulations and provide written comments to insure that the Landfill Site and the proposed facilities remain viable.

Section 5

Procurement Approaches

Two basic approaches are available for the Town to competitively procure a lease agreement for purposes of constructing and operating a source separate organic waste processing facility at the Hartwell Avenue Landfill Site. A brief discussion of each standard approach is provided below.

In addition to the standard Massachusetts procurement approaches discussed below, the Town may explore procurement under MGL Ch. 25A that covers energy generating facilities with an energy service company (ESCO). Because this law is new, its applicability and benefits to the proposed organics facility is not clear

5.1 Separate Request for Qualifications and Request for Proposals

Under this approach, the Town would prepare and issue two separate requests. The first request would be a Request for Qualifications (RFQ) which would contain minimum technical and financial criteria that would be used to prequalify a short list of respondents that the Town determines would be most advantageous to the Town. Only the prequalified respondents would receive the second request which would include a formal Request for Proposals (RFP). The RFP would include all technical, permitting and financing requirements; performance standards (e.g., odor control); proposal submittal requirements including drawings and renderings; and a draft property lease agreement. The primary advantage of this approach is that only a small number of qualified firms are selected to receive the RFP thereby ensuring that only serious proposals are received. This approach also reduces the cost and effort on the part of the Town to review proposals and select a preferred respondent. The primary disadvantage of this approach is that it lengthens the project schedule since two separate documents need to be prepared, issued and reviewed. For this project the estimated additional time is two months.

5.2 Combined Request for Qualifications (RFQ) and Request for Proposals (RFP)

Under this approach, only one request would be prepared and issued. The combined request would include both minimum technical and financial criteria as well as a formal request for proposals. Like the first approach, the RFP portion would include all technical, permitting and financing requirements; performance standards; proposal submittal requirements including drawings and renderings; and a draft property lease agreement. The primary advantage of this approach is that it shortens the project schedule by combining the two steps. For this project the estimated time savings is two months. The primary disadvantage is that a greater number of proposals would likely be received including ones that may or may not be compliant with the minimum qualifications. The time and effort to review a larger number of

proposals would offset some of the time savings that this approach is designed to achieve.

5.3 Project Implementation Schedule

Provided below in Figures 5-1 and 5-2 are estimated project implementation schedules for the two above approaches. The RFQ/RFP process is expected to take approximately 10-12 month with permitting and construction activities estimated at 12 months duration each. The total project implementation scheduled is therefore projected to be 34-36 months.

**Figure 5-1
Estimated Implementation Schedule Based on Separate RFQ and RFP Process**

Activity	Month																																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Prepare and Issue RFQ	█	█																																				
Respond to RFQ			█																																			
Evaluate Qualifications Statements				█																																		
Prepare and Issue RFP			█	█	█																																	
Respond to RFP						█	█	█																														
Evaluate Proposals									█	█																												
Negotiate with Preferred Respondent											█	█																										
Permitting and Facility Design													█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Facility Construction and Startup																																						

**Figure 5-2
Estimated Implementation Schedule Based on Combined RFQ and RFP Process**

Activity	Month																																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36			
Prepare and Issue RFQ/RFP	█	█	█																																				
Respond to RFQ/RFP				█	█	█																																	
Evaluate Proposals							█	█																															
Negotiate with Preferred Respondent											█	█																											
Permitting and Facility Design													█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Facility Construction and Startup																																							

Appendix A
Site Assignment for Hartwell Avenue Landfill Site

case reported to this office was approved by the Board. Mr. PATIENT
Lurvey explained he talked with Dr. Pyle on this case and as
this was Dr. Pyle's patient he said he was of the opinion this
was an arrested case of tuberculosis. This patient was examined
Middlesex County Sanatorium and was advised by the Sanatorium
to be admitted for further study. The patient refused and that
was why Dr. Pyle was contacted. Dr. Pyle also reported he had
sent this patient to a specialist, Dr. Stiener, who also feels
this patient is not a threat to the public. Miss Morrison was
notified of this case and also told that the patient was under
the strict supervision of Dr. Pyle and Dr. Stiener and there-
fore the usual follow-up program done by the L. V. N. A. was
not necessary in this case.

The letter to Dr. Pyle explaining the proposed plan for DIPHTHERIA
innoculation of school children and pre-school children & TETANUS
was approved by the Board. It is Mr. Lurvey's plan that a CLINIC
clinic be held annually for all pre-school children, 5th grade
pupils and sophomores in High School for inoculation against
Tetanus, Diphtheria and possible Poliomyelities. This plan is
for Booster doses only. This plan is not accepted yet and is
still under advisement.

The following appointments were made by the Board for the APPOINT-
coming year. MENTS

Slaughtering Inspector.....Mark D. Lurvey
Animal Inspector.....Carl R. Benton, Vet
Asst. Animal Inspector.....Mark D. Lurvey

These appointments must be approved by the State Department.
State applications for these appointments were signed by the
Board, and the clerk instructed to forward them to the proper
Department.

The Whitman & Howard, Inc., bill was approved for payment.

The next regular meeting of the Board of Health will be held
Thursday, March 22, 1962.

Meeting was adjourned at 8:45 P.M.

SPECIAL MEETING
BOARD OF HEALTH
MARCH 12, 1962

A special meeting of the Board of Health was held Monday
evening, March 12, 1962, in the Board of Health Office. Mem-
bers present were: Chairman, R.L. McQuillan, Mr. James M. West
and Health Officer, Mark D. Lurvey.

The following motion regarding the new land site for a TOWN DUMPING
municipal dump was made and passed by the Board. SITE

MOTION:

"The Board of Health of Lexington, Massachusetts, assigns the parcels of land situated southerly of Hartwell Avenue, Lexington, Massachusetts, as shown on map of plan of land of Lexington, of May 26, 1961, John J. Carroll, Engineer, to be used as a dumping ground for rubbish and other refuse for the Town of Lexington."

GARBAGE
COMPLAINTS

The letter to the Board of Selectmen stating the number of garbage complaints received by the Health Department was read and noted by the Board.

Meeting was adjourned at 8:15 P.M. The next regular meeting of the Board of Health will be held March 22, 1962.

BOARD OF HEALTH MEETING
MARCH 22, 1962

The regular meeting of the Board of Health was held Thursday, March 22, 1962, at 7:30 P.M. in the Health Office. Members present were: Chairman, R.L. McQuillan, Mr. James M. West and Health Officer, Mark D. Lurvey.

Minutes of the February 20, 1962, meeting and also the minutes of the Special Meeting, March 12, 1962, were read and approved.

67 WARD ST.

Mr. Lurvey explained that Mrs. William Lee, 67 Ward St., was waiting to come before the Board in regard to the problem of the complaint received by the Health Department of an open privy in the rear of her home at 67 Ward Street.

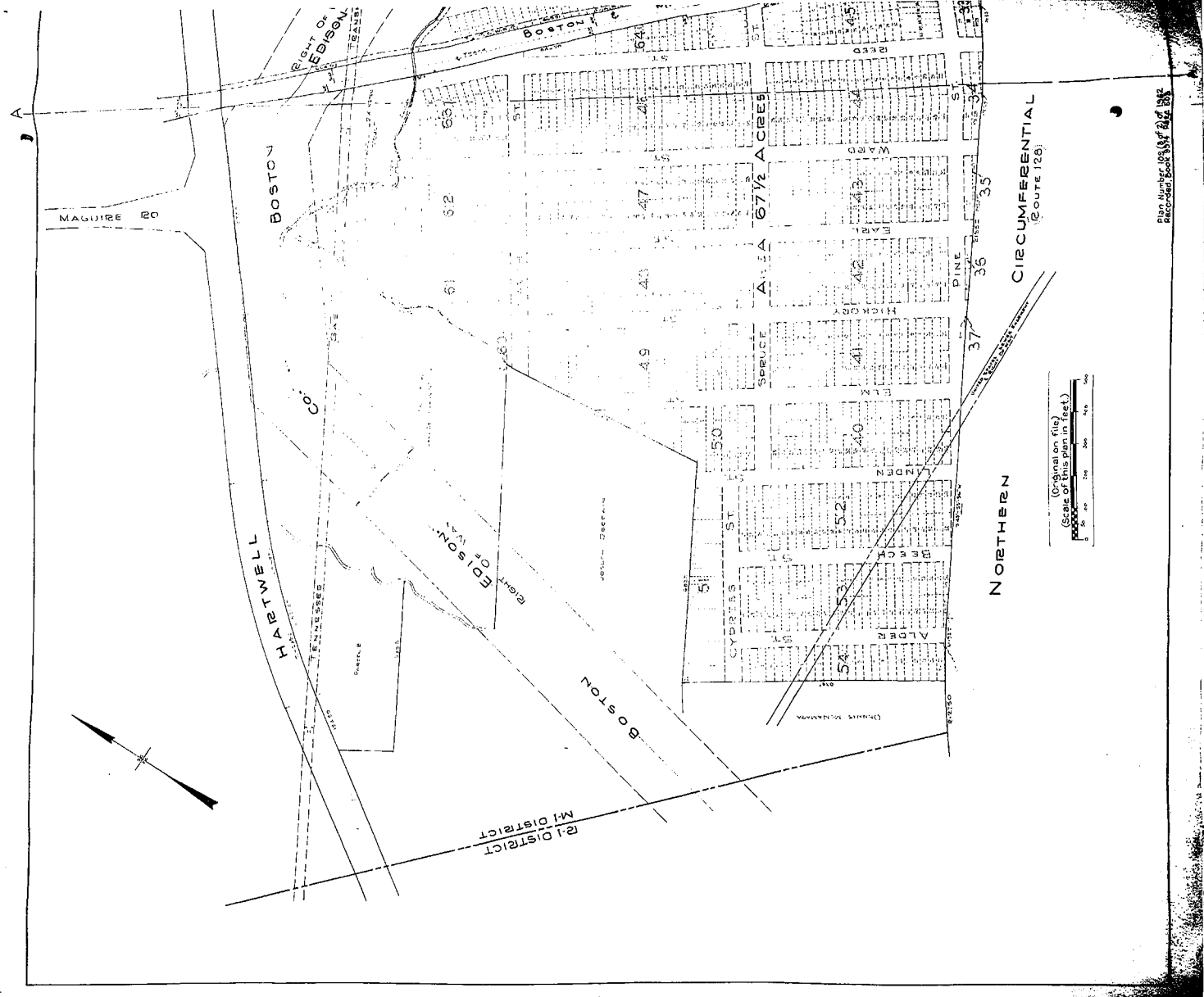
Mr. McQuillan explained that after one of the recent meetings Mr. Leonard Jellis, 115 Reed Street, called him and complained about this privy at Mrs. Lee's home.

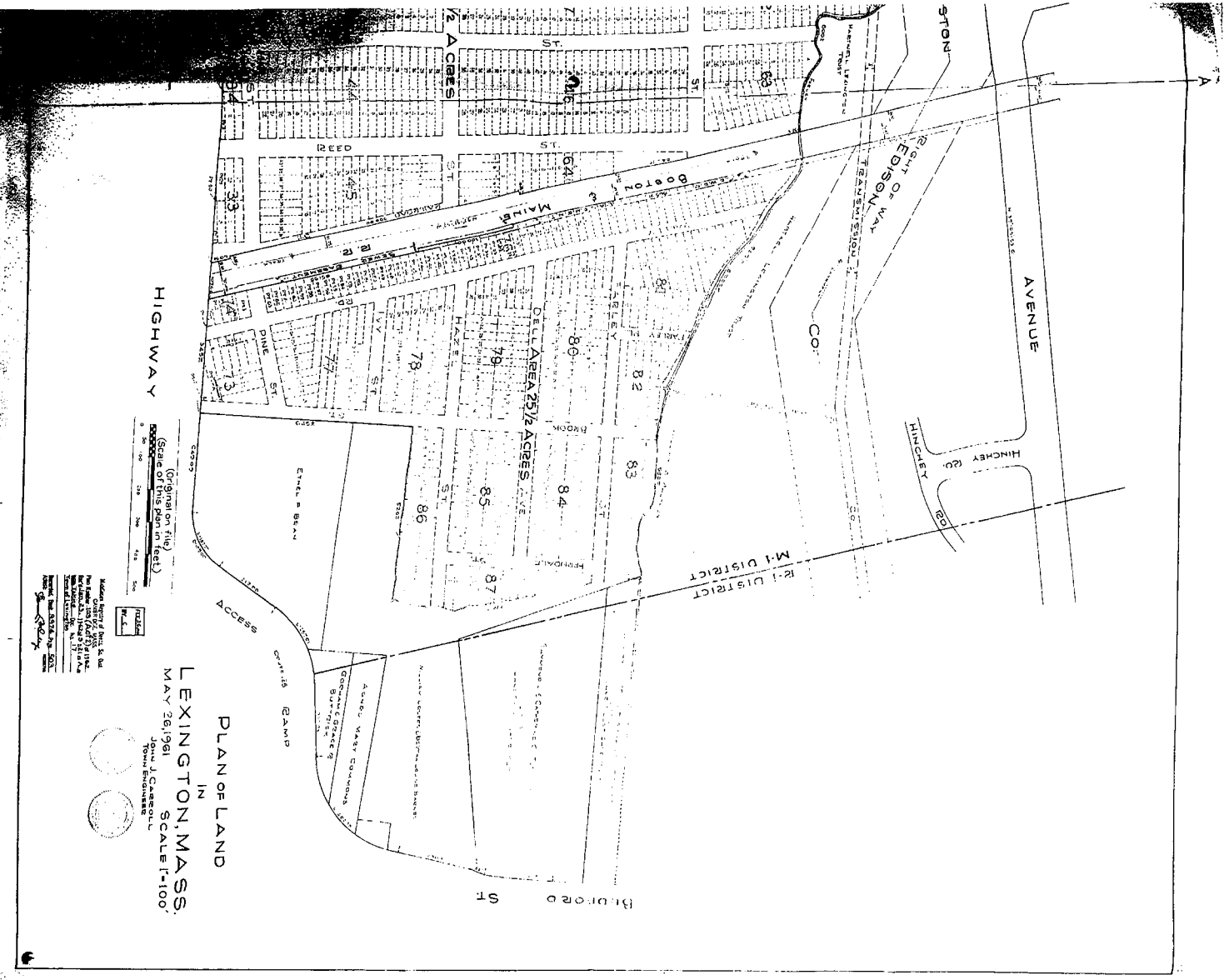
Mr. West reported that he had the same complaint issued at a recent precinct meeting.

Mr. McQuillan and Mr. Lurvey investigated this complaint and found the outside privy at 67 Ward Street. A letter was written to Mr. Lee, 67 Ward Street, requesting his cooperation in abating this nuisance.

Mr. Lurvey reported that the privy had been taken down and Mrs. Lee made arrangements to have a bathroom installed. When the plumbers went to install the bathroom and realized public sewer was available they did not want to go to work until they had checked with Mr. Lurvey. Mrs. Lee has requested that permission be granted by the Board for them to use the existing cesspool until such time they can afford to connect to the public sewer.

The Board had a short discussion regarding this request and then asked Mrs. Lee to come in.





HIGHWAY

(Original on file)
 Scale of this plan in feet
 0 50 100 150 200 250 300

MASS. REGISTERED PROFESSIONAL ENGINEER
 JOHN J. CARROLL
 No. 10000
 State of Massachusetts
 License No. 10000
 State of Massachusetts
 License No. 10000



PLAN OF LAND
 IN
 LEXINGTON, MASS.
 MAY 26, 1961 SCALE 1"=100'
 JOHN J. CARROLL
 Town Engineer

Taking for Hortwell Ave. Landfill

C 20.72

JAN 23-62 AM 09:21 017RE**22.70

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, SS.

At a meeting of the Board of Selectmen of the Town of Lexington held this 22nd day of January 1962 it is,

ORDERED: Whereas, by vote duly adopted by a Special Town Meeting duly called, warned and held on June 19, 1961, the Selectmen were authorized on behalf of the Town of Lexington to take by eminent domain, purchase or otherwise acquire for refuse disposal sites and other public purposes the land hereinafter described and an appropriation of money was made therefor.

NOW, THEREFORE, we, the undersigned, being a majority of the Board of Selectmen of the said Town of Lexington, duly elected, qualified and acting as such, do hereby, pursuant to said vote and under and by virtue of the provisions of Chapter 79 of the General Laws, Chapter 504 of the Acts of 1897, and Chapter 263 of the Acts of 1926, and all acts in amendment thereof and in addition thereto, and of any and every other power and authority us hereto in any way enabling, take in fee simple in the name and on behalf of the Town of Lexington for refuse disposal sites and for sewer, water, drain and street purposes two parcels of land situated in Lexington and bounded and described as follows:

Parcel 1 Bounded:

Map 79 Lot 50

- SOUTHEASTERLY by the northwesterly side line of the Northern Circumferential Highway (Route 128) by two distances measuring respectively, twenty-one hundred fifty-five (2155) feet, more or less, and one hundred ninety-two (192) feet, more or less;
- SOUTHWESTERLY by land now or formerly of Dennis McNamara, eight hundred thirty-four (834) feet, more or less;
- NORTHWESTERLY by land now or formerly of Joseph Goodwin, six hundred eighty-two (682) feet, more or less;
- WESTERLY by said land of Goodwin, by two distances measuring respectively six hundred forty-seven (647) feet, more or less, and twenty (20) feet, more or less;
- NORTHWESTERLY AGAIN by land now or formerly of Itek Corporation, thirty (30) feet, more or less;

109
SEE PLAN IN RECORD BOOK 9974 - PAGE 503

ENTER FILE

26552

WESTERLY
AGAIN by said land of Itek Corporation, being the middle line of a brook by three distances measuring respectively, five hundred sixty (560) feet, more or less; one hundred thirty and 86/100 (130.86) feet, and one hundred forty and 89/100 (140.89) feet;

NORTHEASTERLY AND
NORTHERLY by land now or formerly of Hartwell Lexington Trust being the middle line of a brook, eight hundred (800) feet, more or less;

NORTHEASTERLY by land now or formerly of the Boston and Maine Railroad by two lines measuring respectively, thirty-two (32) feet, more or less, and eight hundred forty-three and 70/100 (843.70) feet;

SOUTHEASTERLY
AGAIN by said land of the Boston and Maine Railroad, eight and 25/100 (8.25) feet;

NORTHEASTERLY
AGAIN by said land of the Boston and Maine Railroad, nine hundred and 00/100 (900.00) feet;

NORTHWESTERLY
AGAIN by said land of the Boston and Maine Railroad, eight and 25/100 (8.25) feet; and

NORTHEASTERLY
AGAIN by said land of the Boston and Maine Railroad, sixty and 52/100 (60.52) feet; and

containing, according to plan hereinafter mentioned, 67½ acres, more or less.

Parcel 2 Bounded:

Map 79, Lot 49

SOUTHEASTERLY by the northwesterly line of the Northern Circumferential Highway (Route 128) three hundred forty-five (345) feet, more or less;

SOUTHWESTERLY by land now or formerly of the Boston and Maine Railroad, six hundred fifty-one and 55/100 (651.55) feet;

SOUTHEASTERLY
AGAIN by said land of the Boston and Maine Railroad, ten and 00/100 (10.00) feet;

SOUTHWESTERLY
AGAIN by said land of the Boston and Maine Railroad, three hundred and 00/100 (300.00) feet;

SOUTHEASTERLY
AGAIN by said land of the Boston and Maine Railroad, ten and 50/100 (10.50) feet;

SOUTHWESTERLY
AGAIN by said land of the Boston and Maine Railroad, eight hundred sixty-five and 91/100 (865.91) feet;

NORTHERLY by land now or formerly of Hartwell Lexington Trust, being the middle line of a brook, eight hundred thirty (830) feet, more or less, and by land now or formerly of William E. Maloney, being the middle line of a brook, five hundred eighty (580) feet, more or less;

- NORTHEASTERLY by land now or formerly of William Lester Barnes and Bertha Louise Barnes, being the middle line of a brook, seven hundred seventy (770) feet, more or less;
- SOUTHEASTERLY by said land of Barnes, being the middle line of a brook, five hundred twenty (520) feet, more or less; and
- AGAIN
- NORTHEASTERLY by said land of Barnes and by land now or
- AGAIN formerly of Ethel F. Bean, six hundred forty-five (645) feet, more or less; and

containing according to said plan, 25½ acres, more or less; all as shown on plan entitled "Plan Of Land In Lexington, Mass.", dated May 26, 1961, John J. Carroll, Town Engineer, to be recorded herewith.

A portion of said Parcel 2 is registered land represented by Certificate of Title No. 34202 registered in Middlesex South Land Registry District, Registration Book 229, Page 45. Such portion consists of lots A and B on plan 12159A, a copy of which is on file with said Certificate, excepting from said lot A the land taken by the Commonwealth of Massachusetts for a state highway by order dated August 30, 1960, registered in said Land Registry District as document 360478 and noted on said Certificate of Title.

Said Parcel 1 is taken subject to the following rights and easements, so far as now in force and applicable:

- a. Transmission line easements taken by the Boston Edison Company by instrument dated March 16, 1948 and recorded in Middlesex South District Registry of Deeds, Book 7243, Page 390;
- b. Pipe line easements taken by the Northeastern Gas Transmission Company by order adopted July 13, 1951 and recorded in said Deeds, Book 7772, Page 162; and
- c. Sewer easements and right-of-way taken by the United States of America by declaration of taking recorded in said Deeds, Book 8102, Page 156.

Said Parcel 2 is taken subject to the sewer easements taken by the Town of Lexington by order dated November 30, 1959 and recorded in said Deeds, Book 9511, Page 283.

All trees upon the land and structures affixed thereto are included in the taking, excepting, however, structures affixed to the land included within the rights and easements to which this taking is subject as hereinabove set forth.

LETTER FILE

25552

We award the damages sustained by persons in their property by reason of the taking hereby made as follows:

Parcel 1

<u>Owner</u>	<u>UNREGISTERED LAND</u>		<u>Damages Awarded</u>
	<u>Lots as Shown on Aforesaid Plan</u>		
	<u>Block No.</u>	<u>Lot No.</u>	
Isabella Taylor Ravenell	33	1 and 2	\$1.00
Alice G. Ford	33	Part 30	1.00
William E. Maloney	37	Part 1	1.00
William E. Maloney	43	5 to 14, inclusive	1.00
William E. Maloney	46	3 and 4	1.00
William E. Maloney	47	10 to 26, inclusive	1.00
William E. Maloney	62	1 to 5, inclusive	1.00
Mary E. Buhler	42	32 to 36, inclusive	1.00
Augustus W. Buhler	42	41 to 44, inclusive	1.00
James O. Holway	43	23, 24, 42 and 43	1.00
Ellen Harrington	44	11	1.00
Thomas Edward Howard	44	16 and 17	1.00
Frank Canisius	44	18, 19, 20, 39 and 40	1.00
Mary Feltrup	45	28, 29 and 30	1.00
Constantine Lecoures	46	5, 6 and 7	1.00
Willis H. Webber	46	24	1.00
Henry J. Travis and Hazel E. Travis, husband and wife	46	50 to 56, inclusive	1.00
Steve Primpas	49	27	1.00
William B. Simmons and Barbara G. Simmons, husband and wife	52	6 to 10, inclusive	1.00
Joseph Bullock	52	48 to 52, inclusive	1.00
Mamie Woldman	54	1	1.00
David P. Kuhn	61	28 and 29	1.00
Norah Coleman	62	24	1.00

William J. Coleman	62	25	1.00
Margaret H. McLaughlin	64	2	1.00
Owners Unknown	Parcels A and B and Streets		1.00
Town of Lexington	All lots not enumerated above		1.00

Parcel 2

REGISTERED LAND

<u>Owner</u>	<u>Lot No.</u>	<u>Certificate of Title No.</u>	<u>Book</u>	<u>Page</u>	<u>Damages Awarded</u>
Andrew Hansen	B and part of A	34202	229	45	1.00

UNREGISTERED LAND

<u>Owner</u>	<u>Lots As Shown on Aforesaid Plan</u>		<u>Damages Awarded</u>
	<u>Block No.</u>	<u>Lot No.</u>	
Linzey M. Coleman	73	2	1.00
Patrick McCaffrey	73	Part 12	1.00
William E. Maloney	76	28 to 31, inclusive, Part 35 and Part 36	1.00
William E. Maloney	78	1, 2, 3 and 15	1.00
William E. Maloney	79	14 and 15	1.00
William E. Maloney	85	12 to 15, inclusive, 16, 17, 18 and 27 to 30, inclusive	1.00
William E. Maloney	86	15 to 21, inclusive	1.00
Mary L. Coleman	76	Part 56 and Part 57	1.00
William L. Barnes and Bertha L. Barnes, husband and wife	77	9 to 12, inclusive	1.00
Frank T. Neal	77	21	1.00
Alfred W. Jackson	77	23	1.00
Dennis J. McSweeney	78	4, 5 and 6	1.00
William J. Coleman	78	26	1.00
Roy J. Prohaska	80	32 and 33	1.00
Globe Newspaper Company	86	11 to 14, inclusive	1.00
William H. Lyon and Effie S. Lyon, husband and wife	87	1 to 13, inclusive	1.00

LETTER FILE

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Owners Unknown	Parcel C and Streets	1.00
Town of Lexington	All lots not enumerated above	1.00

In so awarding damages we have awarded them to the supposed owners of record of the land hereby taken as of the date hereof, but if the name of the owner of any of said land or of any interest therein is not stated or is not correctly stated, then it is to be understood that such land or interest is owned by an owner or owners unknown to us and in such case our award is made to the lawful owner or owners thereof.

No betterments are now to be assessed for the improvements for which this taking is made.

WITNESS our hands and seals in said Lexington, the day and year first above written.

TOWN OF LEXINGTON

By Ruth Morey
Lincoln P. Cole
Alan G. Adams
Norman J. Richards
Gardner C. Ferguson
 Being a Majority of the Board of Selectmen

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

January 22, 1962

Ruth Morey,

Then personally appeared the above named/Alan G. Adams, Lincoln P. Cole, Jr., Gardner C. Ferguson and Norman J. Richards, known to me to be a majority of the duly elected, qualified and acting Selectmen of the Town of Lexington, and acknowledged the foregoing instrument to be their free act and deed, before me,

Harold E. Stevens
 Notary Public

My commission expires: August 31, 1968

LETTER FILE

2552

Appendix B
Activity and Use Limitation (AUL) for Landfill Site



One Cambridge Place, 50 Hampshire Street
Cambridge, Massachusetts 02139
tel: 617 452-6000
fax: 617 452-8000

September 8, 2009

MassDEP Northeast Region
Bureau of Waste Site Cleanup
205B Lowell Street
Wilmington, Massachusetts 01887

Subject: Town of Lexington
Hartwell Avenue Landfill (RTN 3-21522)
Hartwell Avenue, Lexington, Massachusetts
Notice of an Activity and Use Limitation

To Whom it May Concern:

On behalf of the Town of Lexington, Camp Dresser & McKee Inc. (CDM) is forwarding the enclosed Certified Registry copy of the Activity and Use Limitation (AUL) for the above referenced site. In accordance with the requirements of 310 CMR 40.1403(7), we have also enclosed copies of the notification letters sent to local officials, as well as a copy of the certified legal notice published in the Lexington Minuteman.

Please contact me at (617) 452-6303 if you have any questions or comments regarding this submittal.

Very truly yours,

Jay McMullen
Project Manager
Camp Dresser & McKee Inc.

Enclosure

cc: William Hadley (w/o enclosure)
Stephen Johnson, MassDEP



Notice of Activity and Use Limitation

**Hartwell Avenue Landfill
Lexington, Massachusetts
Release Tracking Number (RTN) 3-21522**

September 2009

Prepared for:

*Town of Lexington
201 Bedford Street
Lexington, Massachusetts 02420*

Prepared by:

*Camp Dresser & McKee Inc.
One Cambridge Place
50 Hampshire Street
Cambridge, Massachusetts 02139*



NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Hartwell Avenue Landfill Site
MassDEP Release Tracking No.: 3-21522

This Notice of Activity and Use Limitation ("Notice") is made as of this 27th day of August, 2009 by the Town of Lexington, 1625 Massachusetts Avenue, Lexington, Massachusetts 02420, together with its successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, the Town of Lexington, is the owner in fee simple of those certain parcels of land located in Lexington, Middlesex County, Massachusetts with the improvements thereon, pursuant to a deed recorded with the Middlesex County Registry of Deeds in Book 9974, Pages 500, 501 and 502.

WHEREAS, said parcels of land, which are more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Middlesex County Registry of Deeds in Plan Book 2009, Page 198;

WHEREAS, the Property comprises all of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater and/or (b) the restriction of certain activities occurring in, on, through, over or under the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated August 3, 2009 (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Permitted Activities and Uses Set Forth in the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:
 - (i) Development and use of passive and active recreation areas, provided measures are implemented to prevent exposure to landfilled materials including methane gas;

Jay McMullen
50 Hampshire St
Cambridge, MA 02139

- (ii) Maintenance and operation of the current composting facilities including the acceptance of food waste, household hazardous waste accumulation area and firing range;
 - (iii) Utility maintenance and repair work;
 - (iv) Commercial and/or industrial uses including construction or placement of buildings, utilities, roadways, parking lots or other structures provided that the construction activities which are likely to disturb waste materials located approximately eight feet or more below the ground surface are conducted in accordance with a Soil Management Plan and Health and Safety Plan prepared and implemented in accordance with obligations (i) and (ii) in Paragraph [3] of this AUL opinion;
 - (v) Activities and uses which are not identified in this AUL as being inconsistent with maintaining a condition of No Significant Risk;
 - (vi) Such other activities or uses which, in the opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the risk presented by the activities and uses set forth in this Paragraph; and
 - (vii) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with this AUL.
2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of the Notice of Activity and Use Limitation, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or are as follows:
- (i) Development of the property for unrestricted residential use;
 - (ii) Use of the site for growing produce for human consumption; and
 - (iii) Excavation activities likely to disturb waste materials located approximately eight feet or more below the ground surface without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with obligations (i) and (ii) in Paragraph [3] of this AUL Opinion; and
 - (iv) Construction of any building or structure at the site without measures implemented to address the potential for intrusion of landfill gases into the building or structure and subsequent indoor air sampling to confirm the effectiveness of the measure.
3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk as set forth in this AUL Opinion shall include the following:
- (i) Prior to the performance of any non-emergency intrusive subsurface activities within the designated AUL area including, but not limited to, excavation which may remove the overlying cover soils, a written Health and Safety Plan and a written Soil Management Plan must be implemented in accordance with the following guidelines:

- (a) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The level of personal protection and engineering controls, dust mitigation measures and perimeter monitoring needed to prevent exposures to the landfilled materials and byproducts at depths beneath the cover soil layer must be specified.
 - (b) The Soil Management Plan should be prepared by an LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated material via dermal contact.
 - (c) On-site workers must be informed of the presence of landfilled material located approximately eight feet or more beneath the cover soil layer and also informed of the requirements of the Health and Safety Plan and the Soil Management Plan. Copies of both plans must be available on-site during the course of any work which may disturb the landfilled waste material in the designated AUL area; and
 - (d) Following the completion of invasive subsurface activities, the cover soil layer must be repaired and/or replaced with a similar barrier layer to prevent exposures to underlying landfilled materials.
- (ii) The landfilled material and byproducts must remain beneath the cover soil layer in the designated AUL area to prevent exposures via dermal contact, ingestion, and/or inhalation.
 - (iii) The Town of Lexington is the Owner of the Property with jurisdiction over its use and operation. The Town of Lexington or any subsequent Owner of the Property will be solely responsible for compliance with this Notice of Activity and Use Limitation and the restrictions imposed herein.
4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.
5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Portion of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry (ies) of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 13 day of August, 2009.

Owner: Town of Lexington

By: William Hadley

THE COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss

On this 13th day of August, 2009, before me, the undersigned notary public, personally appeared William Hadley, proved to me through satisfactory evidence of identification, which was _____ photographic identification with signature issued by a federal or state government agency, _____ oath or affirmation of a credible witness, personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached documents(s) in my presence.

Donna M Hooper (official seal)

(type or print name)

Notary Public

My commission expires:

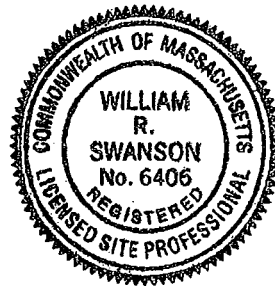
DONNA M. HOOPER, Notary Public
My Commission Expires August 20, 2010

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

08/03/2009
Date

William R. Swanson
LSP

(LSP Seal)



THE COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss

On this 3rd day of August, 2009, before me, the undersigned notary public, personally appeared William Swanson, proved to me through satisfactory evidence of identification, which was ___ photographic identification with signature issued by a federal or state government agency, ___ oath or affirmation of a credible witness, personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached documents(s) in my presence.

(official seal)

Janet M. Cotugno

(type or print name) Notary Public

JANET M. COTUGNO

My commission expires:

JUNE 22, 2012

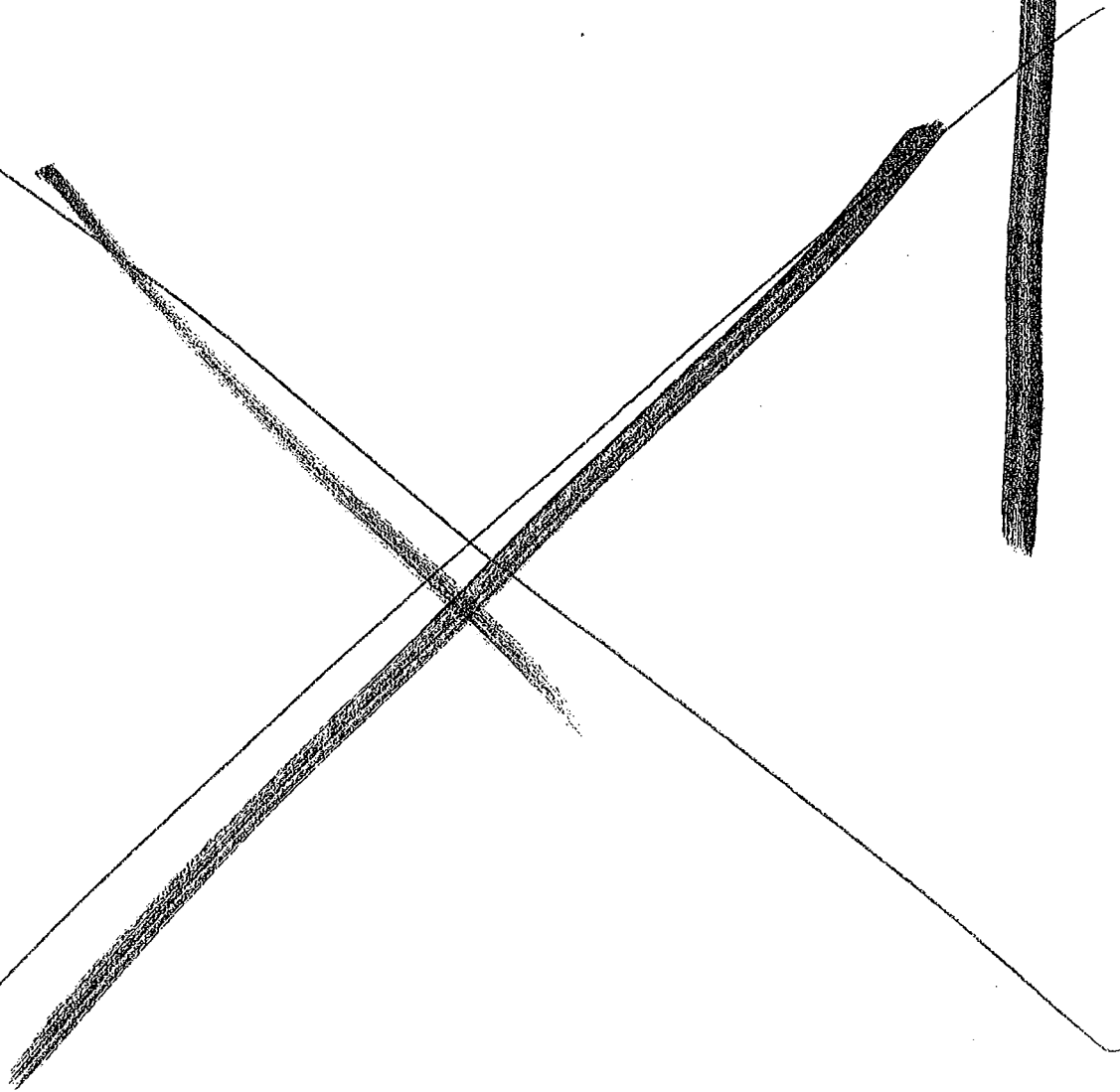
Upon recording, return to:

Town of Lexington

201 Bedford Street

Lexington, Massachusetts 02420

Attention: William Hadley



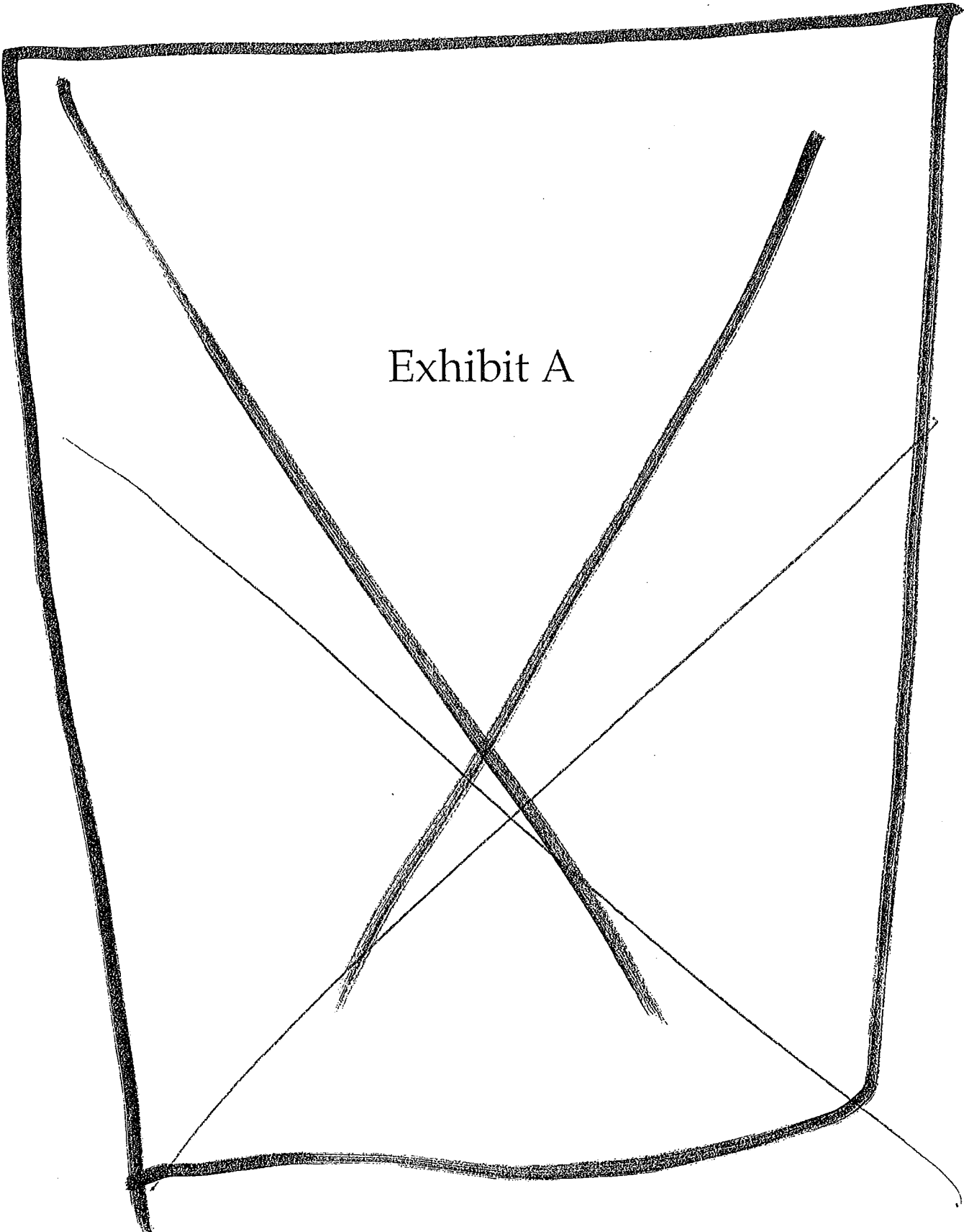


Exhibit A

Exhibit A

Legal Description of Area Subject to AUL

Town of Lexington, Massachusetts
Hartwell Avenue Landfill Site
Lexington, Massachusetts

MassDEP Release Tracking No. 3-21522

The area of land subject to the Activity and Use Limitation (AUL) is shown on a plan entitled "Plan of Land, Map 79 Lot 50, Landfill" prepared by Liard J. Walsh Jr., dated February 24, 2009, which is recorded in the Middlesex County Registry of Deeds in Plan Book 2009, Page 198. The Hartwell Avenue Landfill is located at the intersection of Hartwell Avenue and Maguire Road in the northwestern portion of Lexington, Massachusetts. The landfill is located to the west of state highway Route 128 and is bounded to the north by the former Boston and Maine Railroad, on the east and south by Tophet Swamp and to the west by Kiln Brook. The subject area is more particularly described as follows:

A certain parcel of land situated in the Town of Lexington, Middlesex County, Commonwealth of Massachusetts, more commonly known as Map 79 Lot 50 and being more particularly described as follows:

BEGINNING at a Stone Bound on the sideline of the west side of Route 128 (Interstate Route 95) in Lexington.

A Curve to the right with radius of 2650.00 feet and a length of 191.34,

THENCE N38°55'19"W, 807.74 feet to a Iron rod;

THENCE N47°57'50"E, 594.00 feet to a Iron rod;

THENCE N17°02'10"W, 660.00 feet to a Iron pipe;

THENCE N48°57'50"E, 18.85 feet to a point;

THENCE N14°01'32"W, 508.83 feet to a point;

THENCE N10°17'27"W, 130.86 feet to a point;

THENCE N14°49'37"W, 140.86 feet to the center line of Farley Brook;

THENCE South-easterly along center line of Farley Brook; 245 feet more or less to a point;

THENCE North-easterly along center line of Farley Brook; 400 feet more or less to a point at the Minuteman Commuter Bikeway;

THENCE S57°52'57" E, 875.70 feet to a point;

THENCE S32°07'03" W, 8.25 feet to a point;

THENCE S57°52'57" E, 900.00 feet to a point;

THENCE N32°07'03" E, 8.25 feet to a point;

THENCE S57°52'57" E, 60.52 feet to a point on the sideline of Route 128 (Interstate Route 95) in Lexington;

THENCE S48°55'56" W, 2155.00 feet along the sideline of Route 128 (Interstate Route 95) in Lexington to the POINT OF BEGINNING

containing, according to the plan hereinafter mentioned, 66.8 acres, more or less.

Said parcel 1 is taken subject to the following rights and easements, so far as now in force and applicable:

- a. Transmission line easements taken by the Boston Edison Company by instrument dated March 16, 1948 and recorded in Middlesex South District Registry of Deeds, Book 7243, Page 390;
- b. Pipe line easements taken by the Northeastern Gas Transmission Company by order adopted July 13, 1951 and recorded in said Deeds, Book 7772, Page 162; and
- c. Sewer easements and right-of-way taken by the United States of America by declaration of taking recorded in said Deeds, Book 8102, Page 156.

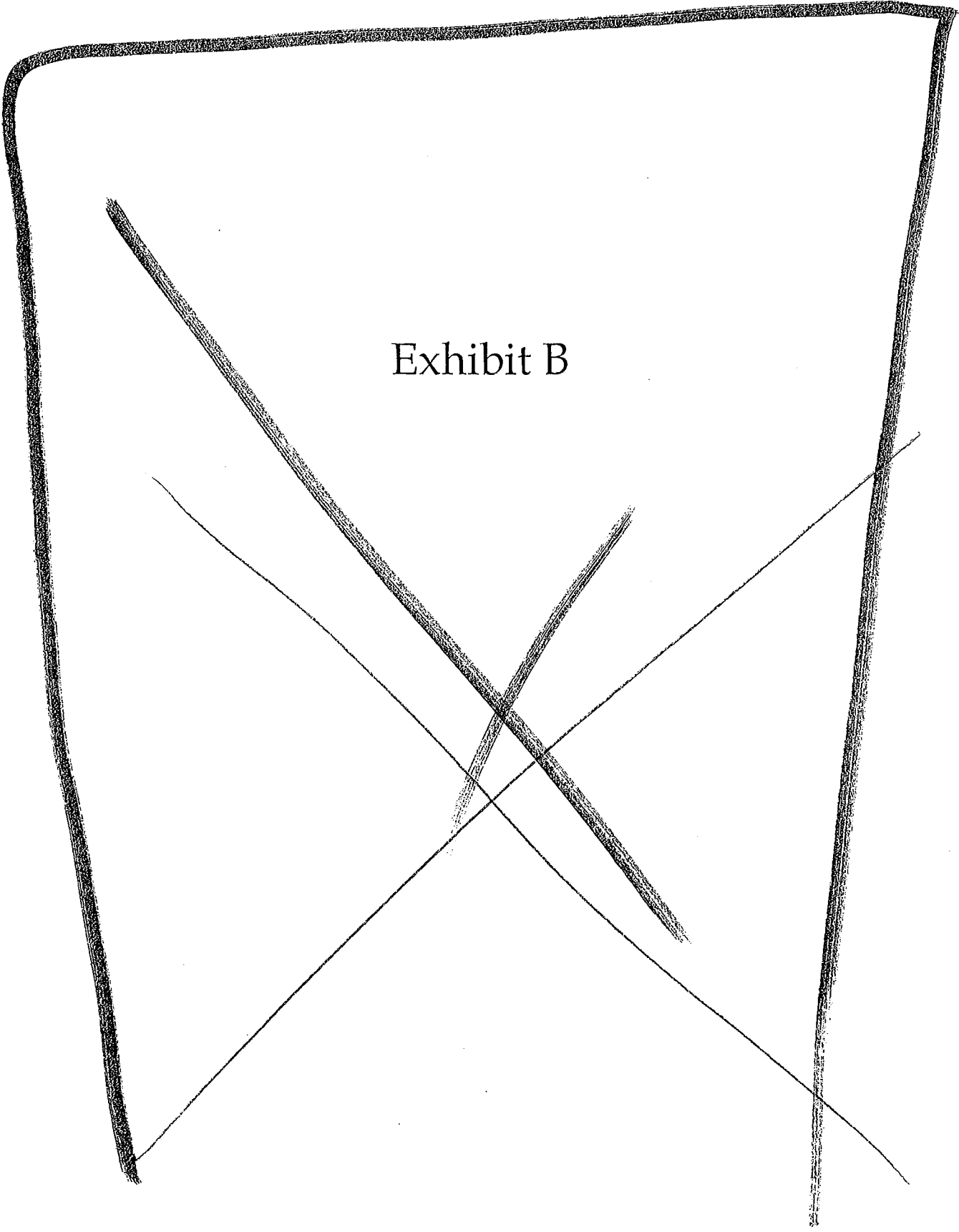
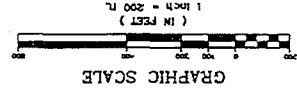


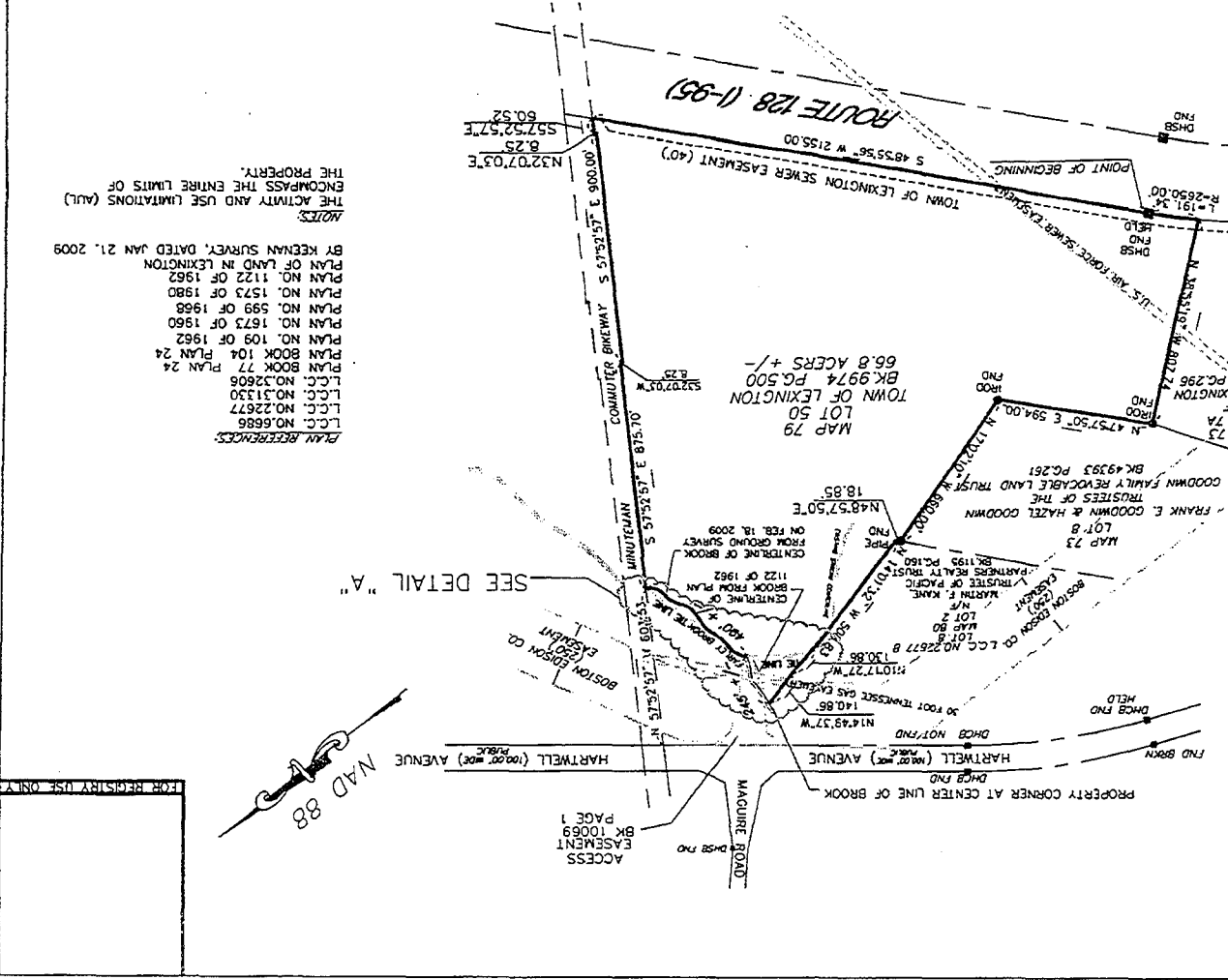
Exhibit B

1. CERTIFY THAT THIS PLAN:
 1. HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTRARS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.
 2. SHOWS THE PROPERTY LINES THAT ARE THE LINES OF EXISTING OWNERSHIPS AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW LINES FOR PORTION OF EXISTING OWNERSHIPS OR FOR NEW WAYS ARE SHOWN.

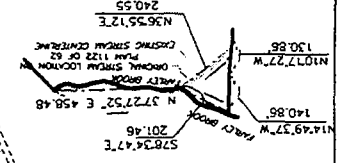
LARD J. WALSH JR. PLS 36128
 4/10/09



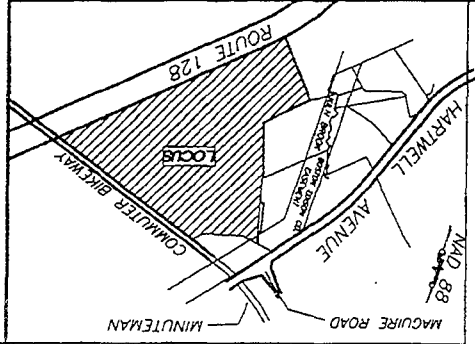
TOWN OF LEXINGTON
 MAP 79 LOT 50
 PLAN OF LAND
 LANDFILL
 GCG ASSOCIATES, INC.
 WILMINGTON
 MASSACHUSETTS
 SCALE: 1"=200' DATE: MARCH 30, 2009
 JOB NO./FILE NAME: 0868-LANDFILL
 DESIGNED BY: LJM
 DRAWN BY: LJM
 CHECKED BY: LJM
 PLAN NO. 1 OF 1



DETAIL "A"

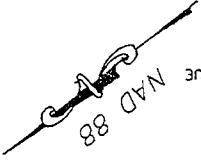


LOCUS MAP
 NOT TO SCALE



PLAN REFERENCES:
 L.C.C. NO. 6686
 L.C.C. NO. 22677
 L.C.C. NO. 31330
 L.C.C. NO. 32606
 PLAN BOOK 77 PLAN 24
 PLAN BOOK 104 PLAN 24
 PLAN NO. 109 OF 1982
 PLAN NO. 1673 OF 1980
 PLAN NO. 599 OF 1988
 PLAN NO. 1573 OF 1980
 PLAN NO. 1122 OF 1982
 PLAN OF LAND IN LEXINGTON
 BY KEENAN SURVEY, DATED JAN 21, 2009
 THE ACTIVITY AND USE LIMITS OF THE PROPERTY.
 ENCOMPASS THE ENTIRE LIMITS OF THE PROPERTY.

SEE DETAIL "A"



FOR REGISTRY USE ONLY
 BK 10069
 PAGE 1

Exhibit C

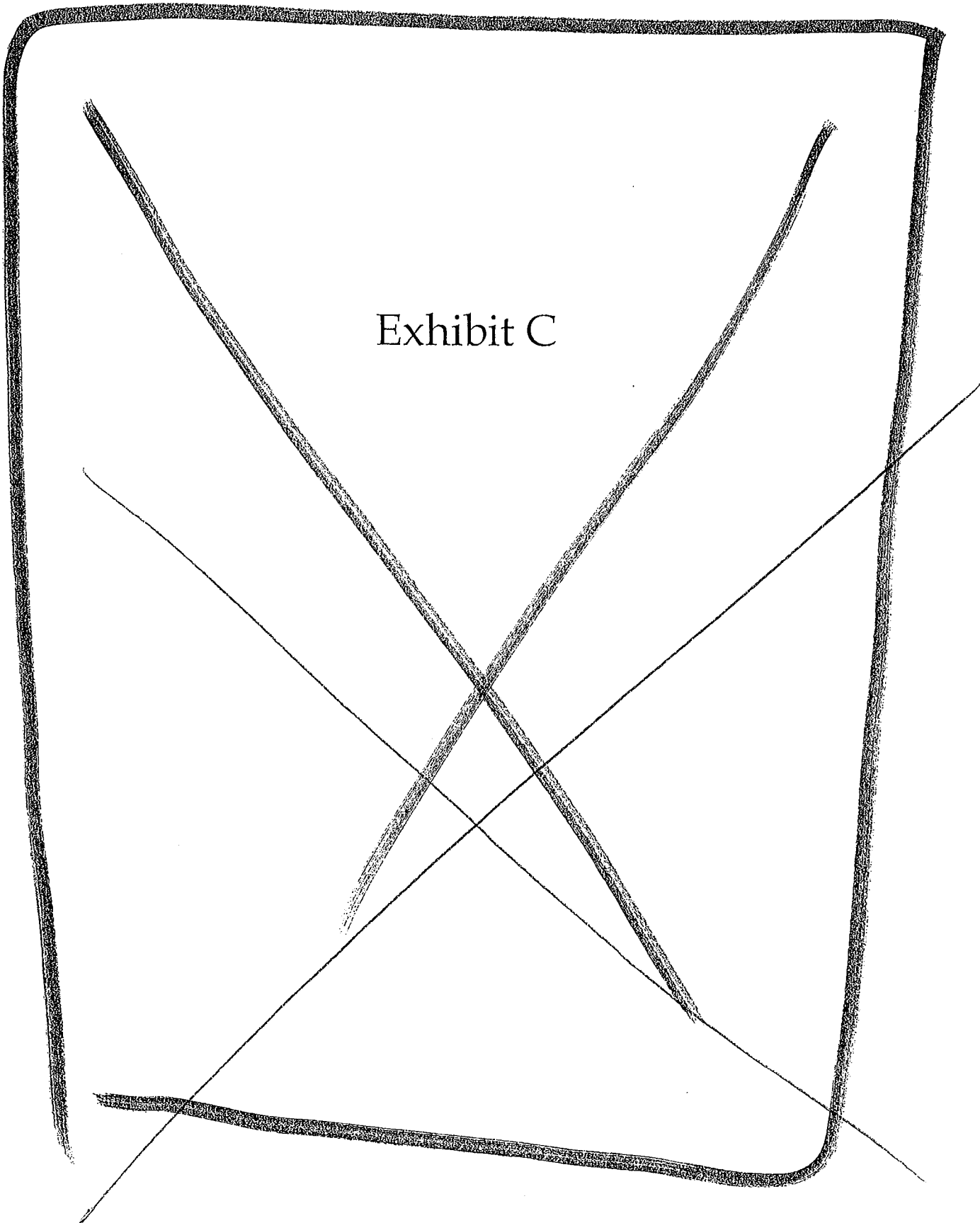


Exhibit C

Activity and Use Limitation Opinion

In accordance with the requirements of 310 CMR 40.1074, this Licensed Site Professional Opinion has been prepared to support a Notice of Activity and Use Limitation (AUL) for the Hartwell Avenue Landfill property located at the intersection of Hartwell Avenue and Maguire Road in Lexington, Massachusetts.

The landfill, which has been closed to waste disposal since the early 1980's, is located to the west of state highway Route 128 and is bounded to the north by the Boston and Maine Railroad, on the east and south by Tophet Swamp and to the west by Kiln Brook. The coordinates for the center of the landfill are 722,314 E and 2,995,828 N.

Generally the parcels abutting the landfill are undeveloped. Tophet Swamp borders much of the landfill area to the south and southeast. To the northeast the landfill is bounded by an abandoned railroad line currently used as a recreational bike path. Route 128 is located immediately to the southeast of the landfill.

The site is situated near and shares drainage pathways with Route 128 and the Pine Meadows Country Club. Kiln Brook and its tributaries skirt the south western perimeter of the landfill and eventually flow under Hartwell Avenue and into the Shawsheen River. Beaver dams in Kiln Brook currently influence the level of surface water at the toe of the landfill slope adjacent to the landfill and impact Tophet Swamp water levels. The watershed area up-gradient of the landfill is approximately 1,000 acres.

A site plan is provided in **Exhibit B**.

Site History

The 67-acre parcel is owned by the Town of Lexington. The site is overseen by the Lexington Department of Public Works (DPW). The current landfill area occupies approximately 25 acres. The landfill accepted municipal, commercial and industrial wastes generated by the Town between 1964 and 1980. In the early 1980's, the landfill was covered with two feet of soil placed over the refuse material, in accordance with a closure plan prepared by Whitman & Howard (W&H). However, this closure plan was never formally approved by the MassDEP. Following the placement of the cover soils, the Town accepted miscellaneous DPW materials and placed them on top of the "capped" landfill. As a result of these activities, the landfill has been completely regraded and filled with soil to an elevation of 10 to 15 feet above the refuse.

During MCP driven site investigations, contaminant concentrations were discovered in site soils above MCP Reportable Concentrations (RC) such that a 120-day reporting condition was identified at the site. The Town submitted a Release Notification Form (RNF) to MassDEP on February 26, 2002, which resulted in the issuance of a Release Tracking Number (RTN) 3-21522. Analysis of data gathered during the initial Phase II Comprehensive Site Assessment (CSA) activities (September 2002), identified two "hot spots" located in the fill area. One total lead "hot spot" was located in the

receiving end of the firing range, and a second polycyclic aromatic hydrocarbon (PAH) "hot spot" was located in the fill area located in the landfill's northeastern section.

Shortly after the completion of the Phase II CSA, CDM completed a Numerical Ranking System Scoresheet for the site that resulted in Tier IC classification per 310 CMR 40.1511. CDM subsequently requested a Tier IC Permit in October 2002, and MassDEP issued a Tier I permit (W029889) on February 13, 2003. The permit was extended in December of 2007 with a new expiration date of February 11, 2010.

In May 2004, the Phase II CSA was revised to present additional groundwater data collected at the site based on MassDEP recommendations to investigate environmental conditions on the down-gradient side of the landfilled mass. The Revised Phase II Report summarized all data collected to date; identified sensitive receptors and exposure pathways; and provided a qualitative risk assessment. The Phase II Report concluded that in order to achieve a condition of no significant risk at the site, the PAH "hot spot" would need to be removed under a Release Abatement Measure (RAM) to reduce levels of PAH in soils to acceptable concentrations as established by the MassDEP. The report also concluded that an Activity and Use Limitation would be required to restrict the site's future use.

The excavation and offsite disposal of approximately 20 cubic yards of PAH contaminated soil located within the PAH "hot spot" was completed in the spring of 2005. The details of the RAM were described in a RAM Completion Report, which was submitted to the MassDEP in June 2005. The municipal firing range is still active therefore removal of lead contaminated soil in the firing range target area will not be implemented until active use of the site is terminated.

In 2007, MassDEP recommended that additional characterization be conducted to further supplement the previous investigations in regards to radial groundwater flow, ambient air monitoring, and further testing of surface water and sediment for ecological risk assessment. The results of this work was summarized and submitted to MassDEP on March 6, 2008 and the results confirm the conclusions of the May 2004 Phase II Report. On November 25, 2008, MassDEP approved the final closure of the Hartwell Avenue landfill.

Reason for Activity and Use Limitation

As part of site characterization activities, the Town of Lexington completed a Method 1 Human Health Risk Characterization. During the Phase II CSA the risk characterization was revised to include an Environmental Risk Characterization and Method 3 Risk Characterization (April 2004). For the Method 3 assessment, risk estimates were generated for a current/future child trespasser scenario evaluating direct contact with surface water and sediment and a future residential scenario evaluating direct contact with soil and the ingestion of homegrown produce. The risk assessment concluded that a condition of no significant risk to human health exists for current and future child trespassers exposed to site surface water and sediments. A condition of no significant risk was also determined for future residents associated with direct contact with site soils. The risk assessment did determine a human health risk above MCP standards associated with the ingestion of home grown produce by future residents. The Environmental Risk Characterization concluded that significant levels of risk at the population and community level are not likely to exist at the site based on observations and surface water, sediment and soil analytical data comparison to local conditions and/or established benchmarks. An AUL is proposed to restrict site activities, including

future development of the property for residential use, and address the homegrown produce risk as well as risks inherent with the presence of buried waste materials at this former landfill site.

The Response Action Outcome (RAO) for the site anticipates that lead contaminated soil associated with the shooting range currently operating on-site will be remediated following a future closure of the range.

The AUL restriction on future residential use, homegrown produce, soil excavation and building activities was selected because it provided a reasonable combination of reducing site risks, implementability and cost. The AUL is attached to the entire site property because buried waste materials or their byproducts may extend to the property boundaries and/or the remaining property areas include wetland or surface water not suitable for residential development. This alternative has been implemented as a Permanent Solution at the Site through a Class A-3 Response Action Outcome.

1. Permitted Activities and Uses Set Forth in the AUL Opinion

The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

- (i) Development and use of passive and active recreation areas, provided measures are implemented to prevent exposure to landfilled materials including methane gas;
- (ii) Maintenance and operation of the current composting facilities including acceptance of food waste, household hazardous waste accumulation area and firing range;
- (iii) Utility maintenance and repair work;
- (iv) Commercial and/or industrial uses including construction or placement of buildings, utilities, roadways, parking lots or other structures provided that the construction activities which are likely to disturb waste materials located approximately eight feet or more below the ground surface are conducted in accordance with a Soil Management Plan and Health and Safety Plan prepared and implemented in accordance with obligations (i) and (ii) in paragraph [3] of this AUL opinion;
- (v) Activities and uses which are not identified in this AUL as being inconsistent with maintaining a condition of No Significant Risk;
- (vi) Such other activities or uses which, in the opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the risk presented by the activities and uses set forth in this Paragraph; and
- (vii) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with this AUL.

2. Activities and Uses Inconsistent with the AUL Opinion

Activities and uses which are inconsistent with the objectives of the Notice of Activity and Use Limitation, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment are as follows:

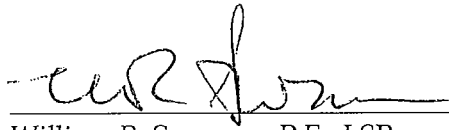
- (i) Development of the property for unrestricted residential use;
- (ii) Use of the site for growing produce for human consumption; and
- (iii) Excavation activities likely to disturb waste materials located approximately eight feet or more below the ground surface without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with obligations (i) and (ii) in Paragraph [3] of this AUL Opinion; and
- (iv) Construction of any building or structure at the site without measures implemented to address the potential for intrusion of landfill gases into the building or structure and subsequent indoor air sampling to confirm the effectiveness of the measure.

3. Obligations and Conditions Set Forth in the AUL Opinion

If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk as set forth in this AUL Opinion shall include the following:

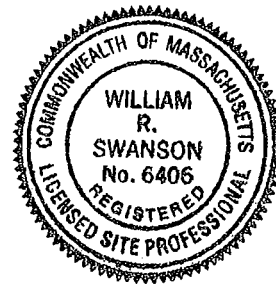
- (i) Prior to the performance of any non-emergency intrusive subsurface activities within the designated AUL area including, but not limited to, excavation which may remove the overlying cover soils, a written Health and Safety Plan and a written Soil Management Plan must be implemented in accordance with the following guidelines:
 - (a) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The level of personal protection and engineering controls, dust mitigation measures and perimeter monitoring needed to prevent exposures to the landfilled materials and byproducts at depths beneath the cover soil layer must be specified.
 - (b) The Soil Management Plan should be prepared by an LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated material via dermal contact.
 - (c) On-site workers must be informed of the presence of landfilled material located approximately eight feet or more beneath the cover soil layer and also informed of the requirements of the Health and Safety Plan and the Soil Management Plan. Copies of both plans must be available on-site during the course of any work which may disturb the landfilled waste material in the designated AUL area; and

- (d) Following the completion of invasive subsurface activities, the cover soil layer must be repaired and/or replaced with a similar barrier layer to prevent exposures to underlying landfilled materials.
- (ii) The landfilled material and byproducts must remain beneath the cover soil layer in the designated AUL area to prevent exposures via dermal contact, ingestion, and/or inhalation.
- (iii) The Town of Lexington is the Owner of the Property with jurisdiction over its use and operation. The Town of Lexington or any subsequent Owner of the Property will be solely responsible for compliance with this Notice of Activity and Use Limitation and the restrictions imposed herein.



William R. Swanson, P.E., LSP

08/03/2009
Date





ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3 - 21522

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: Hartwell Avenue Landfill Site

2. Street Address: Hartwell Avenue

3. City/Town: Lexington

4. ZIP Code: 02420-0000

B. THIS FORM IS BEING USED TO: (check one)

- 1. Provide the LSP Opinion for a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.
- 2. Provide the LSP Opinion for an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement**, pursuant to 310 CMR 40.1080. Include BWSC113A as an attachment to BWSC113. Section A and C do not need to be completed.
- 3. Provide the LSP Opinion for an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081(4).
- 4. Provide the LSP Opinion for a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).
- 5. Provide the LSP Opinion for a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1)(d).
- 6. Provide the LSP Opinion for a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.
- 7. Provide the LSP Opinion for an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).
- 8. Provide the LSP Opinion for a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).
- 9. Provide the LSP Opinion for a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(c).
- 10. Provide the LSP Opinion for a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).

(Unless otherwise noted above, all sections of this form (BWSC113A) must be completely filled out, printed, stamped, signed with black ink and attached as an exhibit to the AUL Document to be recorded and/or registered with the Registry of Deeds and/or Land Registration Office.)

C. AUL INFORMATION:

1. Is the address of the property subject to AUL different from the disposal site address listed above?

- a. No b. Yes If yes, then fill out address section below.

2. Street Address: _____

3. City/Town: _____

4. ZIP Code: _____



ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3 - 21522

D. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Notice of Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1074;

> if Section B indicates that an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** is being submitted, this evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080;

> if Section B indicates that an **Amended Notice of Activity and Use Limitation or Amendment to a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 40.1081;

> if Section B indicates that a **Termination or a Partial Termination of a Notice of Activity and Use Limitation, or a Release or Partial Release of a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083;

> if Section B indicates that a **Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1071;

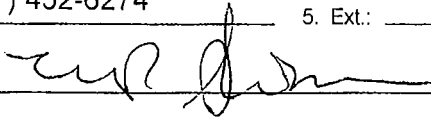
> if Section B indicates that a **Confirmatory Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1085(4);

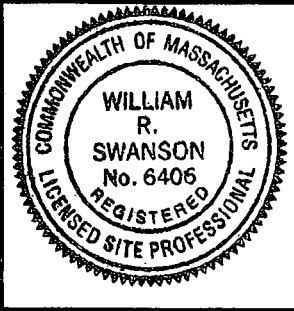
I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 6406

2. First Name: William 3. Last Name: Swanson

4. Telephone: (617) 452-6274 5. Ext.: _____ 6. FAX: (617) 452-8274

7. Signature:  8. Date: 08/03/2009
mm/dd/yyyy

9. LSP Stamp: 

AUG 27 2009

COMMONWEALTH OF MASSACHUSETTS,
MIDDLESEX S. S. _____
SOUTH DIST. REGISTRY OF DEEDS
CAMBRIDGE, MA

I HEREBY CERTIFY THE FOREGOING
IS A TRUE COPY OF A PAPER
RECORDED IN BOOK 53452

PAGE 532

Eugene C. Brune
REGISTER



One Cambridge Place, 50 Hampshire Street
Cambridge, Massachusetts 02139
tel: +1 617 452-6000
fax: +1 617 452-8000

August 28, 2009

Ms. Kathy Fox
Health Agent
Town of Lexington
1625 Massachusetts Avenue
Lexington, Massachusetts 02420

Subject: Hartwell Avenue Landfill
Lexington, Massachusetts
MassDEP Release Tracking Number (RTN) 3-21522
Notice of an Activity and Use Limitation

Dear Ms. Fox:

On behalf of the Town of Lexington, Camp Dresser & McKee Inc. (CDM) is forwarding the enclosed certified copy of an Activity and Use Limitation (AUL) for Hartwell Avenue landfill located on Hartwell Avenue in Lexington, Massachusetts. The subject AUL was recorded at the Middlesex County Registry of Deeds on August 27, 2009. This AUL is being provided to you in compliance with specific requirements under the Massachusetts Contingency Plan (MCP) that govern public involvement activities at MCP sites listed by the Massachusetts Department of Environmental Protection (MassDEP). Specifically, under 310 CMR 40.1403(7)(a), the Chief Municipal Officer, and the Board of Health must be provided a copy of an AUL within thirty days after recording the document at the Registry of Deeds.

If you have questions or concerns regarding this matter, please contact me at (617) 452-6303.

Very truly yours,

Jay McMullen
Project Manager
Camp Dresser & McKee Inc.

Enclosure

cc: William Hadley, Lexington





One Cambridge Place, 50 Hampshire Street
Cambridge, Massachusetts 02139
tel: +1 617 452-6000
fax: +1 617 452-8000

August 28, 2009

Mr. Carl F. Valente
Town Manager
Town of Lexington
1625 Massachusetts Avenue
Lexington, Massachusetts 02420

Subject: Hartwell Avenue Landfill
Lexington, Massachusetts
MassDEP Release Tracking Number (RTN) 3-21522
Notice of an Activity and Use Limitation

Dear Mr. Valente:

On behalf of the Town of Lexington, Camp Dresser & McKee Inc. (CDM) is forwarding the enclosed certified copy of an Activity and Use Limitation (AUL) for Hartwell Avenue landfill located on Hartwell Avenue in Lexington, Massachusetts. The subject AUL was recorded at the Middlesex County Registry of Deeds on August 27, 2009. This AUL is being provided to you in compliance with specific requirements under the Massachusetts Contingency Plan (MCP) that govern public involvement activities at MCP sites listed by the Massachusetts Department of Environmental Protection (MassDEP). Specifically, under 310 CMR 40.1403(7)(a), the Chief Municipal Officer, and the Board of Health must be provided a copy of an AUL within thirty days after recording the document at the Registry of Deeds.

If you have questions or concerns regarding this matter, please contact me at (617) 452-6303.

Very truly yours,

Jay McMullen
Project Manager
Camp Dresser & McKee Inc.

Enclosure

cc: William Hadley, Lexington





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Title:	Lexington Minuteman	Class:	Legals
Start date:	9/3/2009	Stop date:	9/3/2009
Insertions:	1	#Lines:	62 ag
Price:	\$102.12		

HARTWELL AVENUE LANDFILL

**LEGAL NOTICE
NOTICE OF AN ACTIVITY AND USE LIMITATION**

**Town of Lexington
Hartwell Avenue Landfill
Hartwell Avenue, Lexington, Massachusetts
RTN 3-21522**

Pursuant to the Massachusetts Contingency Plan (310 CMR 40.1074), a Notice of Activity and Use Limitation on the above disposal site has been recorded with the Middlesex County Registry of Deeds. The Notice of Activity and Use Limitation will limit site activities and uses on the above property to the following:

- (i) Development of passive and active recreation areas, provided measures are implemented to prevent exposure to landfilled materials including methane gas;
- (ii) Maintenance and operation of the current composting facilities, including acceptance of food waste, household hazardous waste accumulation area and firing range;
- (iii) Utility maintenance and repair work;
- (iv) Commercial and/or industrial uses including construction or placement of buildings, utilities, roadways, parking lots or other structures provided construction activities which are likely to disturb waste materials located approximately eight feet or more below the ground

surface are conducted in accordance with a Soil Management Plan and Health and Safety Plan;
and

(v) Activities and uses which are not identified by the AUL as being inconsistent with
maintaining a condition of No Significant Risk.

Any person interested in obtaining additional information or reviewing the Notice of Activity and
Use Limitation may contact William Hadley, Director of Public Works, Town of Lexington, 201
Bedford Street, Lexington, Massachusetts 02420 at (781) 274-8300.

AD#12046571
Lexington Minuteman 9-3-09

Payment Information

Receipt#
Pmt. Type:
CC. Number: CC. Exp.:
Invoice Total: \$102.12

Appendix C
Current Uses of Landfill Site

Appendix C

Current Uses of Hartwell Avenue Landfill Site

C.1 Current Operations

A number of activities currently take place at the 26-acre Hartwell Avenue Landfill Site. A listing of the different operations and the land area that they occupy is provided in Table C-1. Operations related to the acceptance and composting of yard waste from both curbside collection programs and private contractors occupy nearly half of the total site area. Since there is less than one acre of open area available, construction of a source separated organic waste processing facility would require using land area that is currently occupied, most likely a portion of the area now used for yard waste composting since the two activities would be compatible.

Table C-1
Current Operations at the Hartwell Avenue Landfill Site

Area	Activity	Acres	% Total Site
A	Residential Yard Waste Drop Off	1.62	6.2
B	Minuteman Household Hazardous Waste Facility	1.43	5.5
C	Curbside Yard Waste Collection Drop Off	4.87	18.7
D	Wood Chip Drop Off	0.25	1.0
E	Compost Screening Area/Contractor Yard Waste Drop Off	5.39	20.6
F	Wood Processing Area	0.77	2.9
G	DPW Aggregate Processing and Storage	2.76	10.6
H	Unscreened Loam Storage and Processing	0.81	3.1
H1	Finished Loam and Compost Storage	0.71	2.7
H2	DPW Finished Product	0.31	1.2
I	Lexington Police Department Firing Range	0.68	2.6
J	Open Area	0.90	3.4
	Residential Recycling and Brush Drop Off	1.22	4.7
	Roadways	4.39	16.8
	Total Site	26.11	100.0

Most of the operations at the Hartwell Avenue Landfill Site are directly run by the Town. Several private contractors also perform certain services for the Town at the site in exchange for use of a designated area for their own purposes and a share in some of the materials. One of the contractors (James McLaughlin Inc.) provides equipment and personnel to maintain the compost windrows and to screen finished compost. Another contractor (Waverly Landscape Associates) processes wood waste including materials collected by the DPW. The third contractor (Cannizzo Brothers Inc.) provides various services including blending and inventorying incoming soil materials and excavate from DPW operations and screening finished loam. No

written contracts currently exist for these contractors which have operated to date based on informal agreements. The value of the in-kind services varies on an annual basis with the amount of materials screened and processed. The total area used by the three companies is approximately 3 acres.

C.2 Current Yard Waste Sources and Revenues

Information on the ongoing operations at the site was taken from a report prepared by the DPW¹. Yard waste is accepted from several sources including curbside collected materials from the Town and the Town of Arlington. The Town has accepted yard waste from the Town of Arlington since 2004 and the current 3-year contract expires at the end of June 2012. Yard waste is also accepted for drop off from Town residents and private contractors. Table 2-2 includes a list of the sources and approximate annual quantities of yard waste accepted at the Hartwell Avenue Landfill Site. Private contractors deliver approximately 40 percent of the total yard waste followed by the Town of Arlington which delivers approximately 12,000 to 15,000 cubic yards of yard waste annually. Approximately 12,000 to 15,000 cubic yards per year of finished compost and loam are currently being produced each year at the Landfill Site.

**Table C-2
Sources and Quantities of Yard Waste Accepted at
Hartwell Avenue Landfill Site**

Source of Yard Waste	Approximate Cubic Yards/Year	Approximate Tons/Year*
Town of Lexington Curbside	5,000	1,000
Town of Lexington Drop Off	10,000	2,000
Town of Arlington Curbside	15,000	3,000
Private Contractor Drop Off	20,000	4,000
Total	50,000	10,000

*Based on 5 CY/Ton

The Hartwell Avenue Landfill Site also accepts brush up to 4 inches in diameter from residents and contractors. Approximately 4,000 - 6,000 cubic yards of brush are accepted each year. The incoming brush is ground into wood chips and provided to Lexington residents, used as a bulking agent in the compost process or sold to wood chip brokers.

The Town currently receives revenues from four main sources at the Hartwell Avenue Landfill Site. These sources are shown in Table 2-3 along with the fiscal year (FY) 2009 and FY2010 revenues and expenses. Compost and related product sales generate the most revenues. These revenues over the past two fiscal years have amounted to approximately \$17,000 per acre, based on the 12 acres of the site that is occupied by

¹ "Lexington Composting Facility at Hartwell Avenue," Lexington Department of Public Works, April 2010.

compost related activities. Revenues are deposited into a Compost Product Revolving Account and used to fund operational and personnel expenses. The value of the in-kind services provided by the three private contractors currently operating on the site is not known and would be in addition to the revenue listed in Table C-3.

**Table C-3
Summary of Revenues and Expenses for FY09 and FY10**

<i>Source of Revenue</i>	<i>FY09 Revenue</i>	<i>FY10 Revenue</i>
Contractor Yard Waste Permits	\$73,800	\$79,075
Contractor Brush and Yard Waste Punch Cards	\$22,255	\$24,269
Town of Arlington Yard Waste Disposal Fees	\$46,500	\$70,000
Compost, Loam and Gravel Product Sales	\$188,393	\$229,024
Total Revenues	\$330,948	\$402,368
Total Expenses	\$255,396	\$311,907
Net Revenues	\$75,552	\$90,462

C.3 Minuteman Household Hazardous Product Regional Facility and Related Uses

In addition to the yard waste composting operations at the Landfill Site, the Town has several other operations including the Minuteman Household Hazardous Product Regional Facility. Based on information supplied by the Town, this facility has operated since 1998 and is run by a consortium of eight municipalities. Since it started operating, nearly 40,000 households in the region have utilized the facility to safely dispose of household hazardous products. It is anticipated that this facility will remain in operation once the organic waste facility is constructed.

The DPW also utilizes the site for a collection areas for specific waste streams such as cathode ray tube and electronic wastes, mercury-bearing items and scrap metal that are banned from disposal in landfills and waste-to-energy plants by MassDEP regulations. It is also anticipated that these uses that occupy a minimal site area will continue into the future.



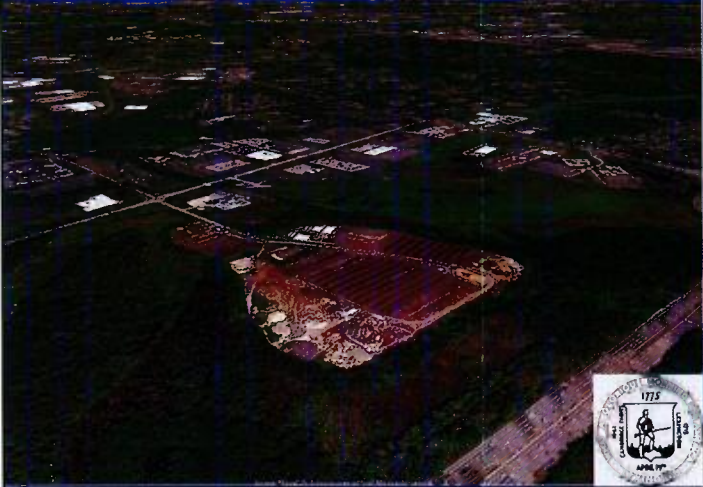
Appendix D
Presentation to Board of Health

Town of Lexington
Proposed Organic Waste Facility

Bruce Haskell,
CDM


Robert Beaudoin,
Supt of Environmental
Services

March 9, 2011



Presentation Agenda

- Proposed organic waste digestion facility
 - Location at Hartwell Avenue Landfill
- Description of organic waste digestion
- Why is town considering this type of facility?
- Role of Board of Health
 - Site Assignment
 - Potential Regulation Changes
 - MassDEP Task Force
- Next Steps



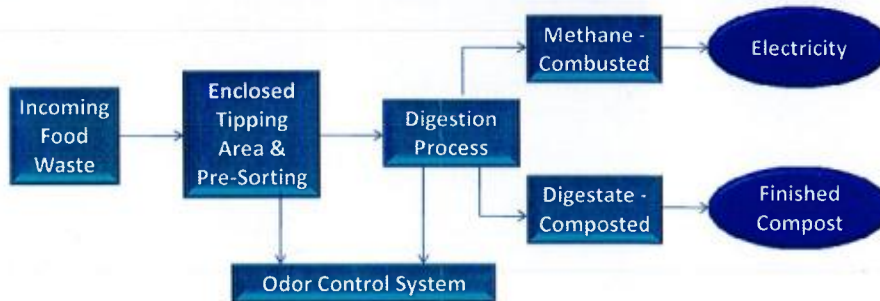
Proposed Digestion Facility

- Located at the Hartwell Avenue Landfill site
- Accept 40-50,000 tons per year of source separated food waste (200-250 tons per day)
- Continued area for adding digestate yard waste compost
- Project will be developed on land leased to private entity – proprietary technology
- Maintain other site uses



CDM

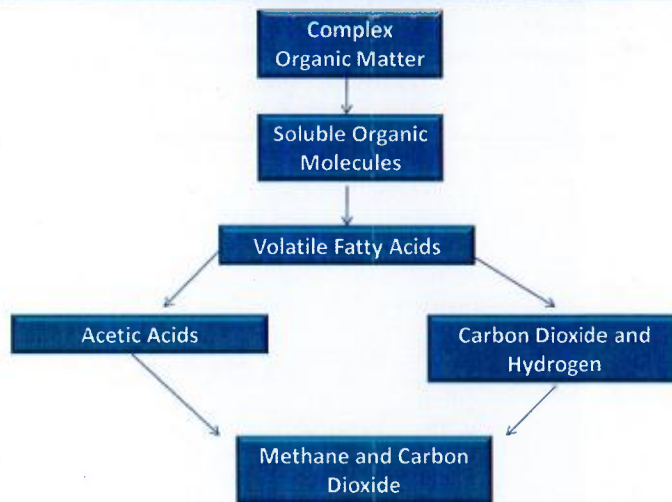
How does facility work?



Note that there are numerous different technologies that vary from this flow chart or include additional processes

CDM

What is the Digestion Process?



CDM

Why is Town considering this type of facility?

- Sustainable - increases recycling
- Potentially increase amount of leaf and yard waste composted
- Renewable energy generation
- Significant interest from private developers
 - Tax and energy generation credits make private development attractive now
 - MassDEP looking to ban source separated organic wastes from landfills and waste-to-energy

CDM

Why is Town considering this type of facility? (continued)

- Hartwell Avenue site –
 - Direct access from Route 128
 - Proximity to waste sources
 - Builds on success of existing composting operation
 - Has been closed under the Massachusetts Contingency Plan (MCP)
- Potential revenues from leasing of land



CDM

What is role of Board of Health?

- Site Assignment Regulations (310 CMR 16.000)
 - Determine that the proposed site and facility
 - Meet specific siting criteria
 - Protective of human health, safety and the environment
 - July 2010 changes in statute remove MassDEP from site assignment process
- Hartwell Avenue site may be “grandfathered”
 - BOH granted Site Assignment as “dumping ground for rubbish and other refuse for the *Town of Lexington*” (March 12, 1962)

CDM

Existing MassDEP regulations do not anticipate this type of facility

- MassDEP has established a task force to work through regulatory definitions to facilitate development of this type of facility
 - Definition of “recyclable material”
 - Expansion of exemptions for composting operations
 - Maintain local review process – Board of Health
 - Anticipate draft regulations by June

MassDEP wants to eliminate barriers to development of this type of facility while still being protective of human health, safety and the environment

CDM

Possibly utilize “Determination of Need” process for organic waste digestion facilities

- Allows certain types of recycling and composting operations to move forward without a Site Assignment
- Already used at farm sites under existing exemption
- Need revision to the regulations to be utilized for this facility at Hartwell Avenue site
- Requires BOH comment and input – primarily a MassDEP approval process

CDM

Next Steps

- Continued Town participation in MassDEP Task Force to monitor changes in regulations
- Finalize CDM report
- Revise local zoning regulations to allow this type of facility



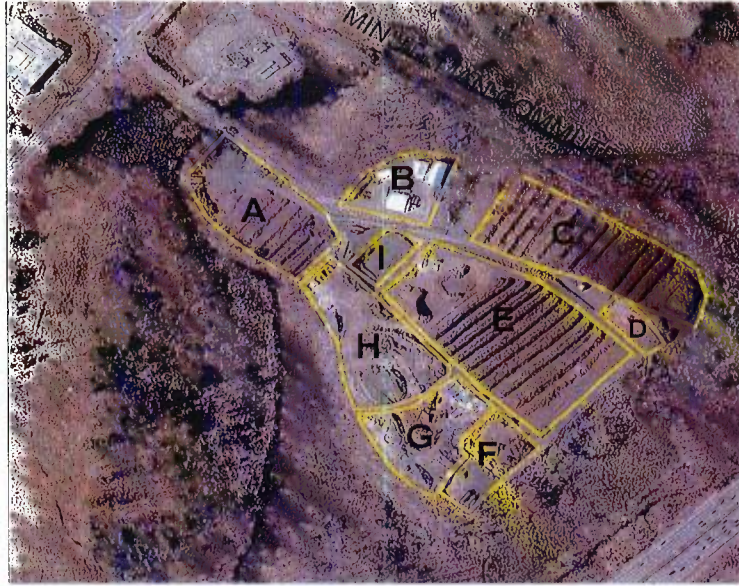
Source: Peninsula Compost Group – Wilmington Organic Recycling Center (WORC)

CDM

Next Steps, continued

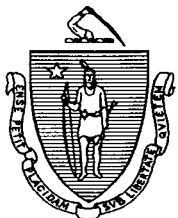
- Solicit proposals to lease portion of landfill property through RFP
 - Include any specific concerns from BOH
 - Determine specific proprietary technology
 - Outline operational and design requirements
 - Provide for financial assurance
 - Outline permit to be obtained by vendor
 - Process to start - summer 2011

CDM



CDM

Appendix E
Determination of Need Approval for
AGreen Energy LLC Facility



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTERSTREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

Sam Snellings
AGreen Energy, LLC
580 Harrison Ave., Suite 404
Boston, MA 02118

Re: SWM - Rutland, Transmittal No. X231310
Application for BWP SW 17 – Determination of Need for Site assignment, Small Operations
Determination of Technical Completeness and Issuance of Final Permit

Dear Mr. Snellings:

The Massachusetts Department of Environmental Protection (“MassDEP”) has completed the technical review of the permit application listed above and has determined the application is technically complete. MassDEP hereby issues this Final Permit for Determination of Need for Site Assignment (see attached).

A Draft Determination of Need for Site Assignment for this operation was issued by the Department on September 27, 2010. Pursuant to the provisions of 310 CMR 16.05(7)(e), the Department accepted written comments on this draft permit for twenty-one (21) days from the date of issuance. The only comment received was from you, Sam Snellings, AGreen Energy, LLC. As a result of your comments, conditions numbered 9, 10 and 12 in Section V. Other Specific Permit Conditions were revised in the Final DON. However, the Department did not revise condition number 8 in section V, as you requested, and that language remains the same as the language in the Draft DON. Therefore, the type of compostable materials the Facility may take initially remains limited to: “...dairy manure generated at Jordan Dairy Farms and compostable SSO that is generated by (1) commercial supermarkets or (2) wholesale production facilities that produce liquid or solid food or beverages for human consumption.” After review of the SSO QA/QC plan to be submitted by AGreen, MassDEP may approve future request by AGreen to modify the Final Determination of Need to authorize receipt of additional categories of SSO.

If you have any further questions or comments regarding this matter, please contact Paul Emond at (617) 292-5974.

Sincerely,

Date _____

Steven A. DeGabriele
Director
Business Compliance Division
Bureau of Waste Prevention

Enclosure

cc:

Rutland Board of Health, Rutland, MA 01543
Lynne Welsh, CERO Acting SW Section Chief



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

DEVAL L. PATRICK
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LAURIE BURT
Commissioner

AGreen Energy, LLC
Anaerobic Digestion of Source Separated Organics and Manure at
Jordan Dairy Farms, Rutland, MA
BWP SW 17 - DETERMINATION OF NEED, SMALL

Draft Permit Issuance Date: September 27, 2010
Final Permit Issuance Date: October 20, 2010

Applicant Name: AGreen Energy, LLC ("Applicant")
Mailing Address: 580 Harrison Ave., Suite 404
Boston, MA 02118
Contact: Sam Snellings

Name of Facility: **AGreen Energy Anaerobic Digestion System**
Facility Address: Jordan Dairy Farms
51 Muschopaugue Rd.
Rutland, MA 01543

DEP Region: Department of Environmental Protection ("MassDEP")
One Winter Street
Boston, MA 02188

Permit No: Transmittal # X231310

I. FACILITY DESCRIPTION

- A. Facility and Location** AGreen Energy Anaerobic Digestion System ("Facility")
Jordan Dairy Farms
51 Muschopaugue Rd.
Rutland, MA 01543
1. Owner: AGreen Energy, LLC ("Applicant")
580 Harrison Ave., Suite 404

Boston, MA 02118
Contact: Sam Snellings

2. Operator: AGreen Energy, LLC
580 Harrison Ave., Suite 404
Boston, MA 02118
Contact: Sam Snellings
3. Description of Applicant's Proposal: The Application for Determination of Need, Small Operation ("Application") requests MassDEP's approval for operation of an agricultural anaerobic digestion system at the Facility without a site assignment. The anaerobic digestion system is intended to convert, in the absence of oxygen, organic material into a liquid fertilizer and methane gas through the biological process of mesophilic fermentation (anaerobic digestion) in which bacteria consume a mixture of manure and source separated organics ("SSO") from certain food processing and preparation operations. The liquid fertilizer, once it receives a commercial fertilizer license from the Massachusetts Department of Agricultural Resources ("MDAR"), is intended to be used to improve the soil for the growing of food crops and animal feed. The methane produced is intended to power an on-site heat and power unit that will generate electricity for use by Jordan Dairy Farms with any excess to be supplied to the electrical utility grid. The process may also produce solid material that is intended to be used as a soil amendment and/or animal bedding once it receives a Beneficial Use Determination permit from MassDEP.

**B. Permit Application Information for
BWP SW 17, Determination of Need, Small**

1. Applicant Name: AGreen Energy, LLC
2. Transmittal Number/Permit Number: X231310
3. Date of Application: March 29, 2010
4. Application Prepared by:
Sam Snellings
AGreen Energy, LLC ("Applicant")
580 Harrison Ave., Suite 404
Boston, MA 02118
5. Title of Submittal(s):
"Application for Determination of Need, Small Operation"

AGreen Energy, LLC”
Submitted by: Sam Snellings
580 Harrison Ave., Suite 404
Boston, MA 02118

6. Received by MassDEP-Boston: April 1, 2010.
7. Date of Fee Receipt: April 2, 2010

II. DETERMINATION OF NEED (DON) APPLICATION REVIEW AND APPROVAL

The Application for Determination of Need for site assignment complies with the requirements set forth in 310 CMR 16.05(7), “Determination Process.” MassDEP has reviewed the Application in accordance with 310 CMR 16.05(6), “Determination of Need for Site Assignment,” and 310 CMR 16.05(7), “Determination Process” and it has determined that the proposed Facility shall not be required to obtain site assignment as a solid waste management facility provided that it is operated in the manner described by the Application noted in section I. B. above and in accordance with the terms and conditions of this approval. MassDEP hereby approves the Applicant’s request for a Determination of Need based on the information provided in the Application and as subject to the conditions listed below.

This document is a Permit, issued pursuant to M.G.L. c. 111, Section 150A, and 310 CMR 16.00, “Site Assignment Regulations for Solid Waste Facilities,” and it is subject to the conditions set forth below.

III. GENERAL PERMIT CONDITIONS

1. The operation of this Facility shall at all times be conducted in a manner that does not adversely affect the public health, safety or the environment.
2. The operation, maintenance and closure of this Facility shall be performed in compliance with other applicable local, state and federal laws and regulations. It is the Applicant's responsibility to comply with all other applicable local, state or federal laws and regulations as a pre-requisite to the operation of the Facility.
3. MassDEP reserves the right to rescind, suspend or modify this Permit by the imposition of additional conditions based upon a determination that a violation of permit conditions or of regulations has occurred or upon a determination of actual, or the threat of, adverse impacts from the construction, operation, maintenance or closure of the Facility.

4. The Applicant shall provide MassDEP, within two (2) weeks or other reasonable time period as mutually agreed to by the parties, any information which MassDEP may request and which is deemed by MassDEP to be relevant in determining whether a cause exists to modify, revoke, or suspend this Permit, or to determine whether the Applicant is complying with the terms and conditions of the Permit.
5. Failure to comply with the provisions of any of the following shall be grounds for permit suspension and revocation: this Determination of Need; any other MassDEP authorization, determination, or approval; or a commercial fertilizer license issued by MDAR for the liquid effluent generated by the agricultural anaerobic digester system. Please be advised that if this Determination is rescinded or suspended, this Facility shall be regulated under all applicable sections of Massachusetts General Laws (MGL), Chapter 111, Section 150A, and the regulations promulgated hereunder at 310 CMR 16.00 "Site Assignment Regulations for Solid Waste Facilities", and 310 CMR 19.000 "Solid Waste Management Facility Regulations". Failure to comply with these requirements may lead to legal action including but not limited to, criminal prosecution, court imposed civil penalties, or civil administrative penalties assessed by MassDEP.

IV. SPECIFIC PERMIT CONDITIONS REQUIRED PRIOR TO OPERATION

1. Receipt of SSO and operation of this Facility shall not commence until the Applicant has received a commercial fertilizer license issued by MDAR for the liquid effluent to be generated by the agricultural anaerobic digestion system.
2. Receipt of SSO and the operation of this Facility shall not commence until the Applicant receives written approval from MassDEP for an SSO feedstock education and training plan. At least forty-five (45) days before the Facility plans to receive SSO and commence operation, the Applicant shall submit to MassDEP for review and approval a SSO feedstock education and training plan that specifies the methods that SSO feedstock providers must use to collect the SSO, screen the SSO for contaminants, and prepare the SSO for input into the Facility's anaerobic digestion process. The Applicant shall have a pre-application meeting with MassDEP before developing this plan and submitting it for MassDEP's approval. Within forty-five (45) days of receipt of the plan, unless an extension is mutually agreed upon in writing, MassDEP will issue one of the following decisions on the submitted plan: an approval; a denial; or a deficiency letter requesting more information.
3. Receipt of SSO and operation of this Facility shall not commence until the Applicant receives written approval from MassDEP for an SSO quality assurance/quality control plan ("SSO QA/QC Plan"). At least forty-five (45) days before the Facility plans to receive SSO and commence operation, the Applicant shall submit to MassDEP for review and approval an SSO QA/QC Plan. This plan shall address, at a minimum, the following: the process that the Applicant shall use to determine that each SSO feedstock shipment is suitable for inclusion into the anaerobic digestion process; the process for rejecting unsuitable SSO feedstock;

identification and discussion of the criteria and procedures that the Applicant shall use to ensure the consistency and quality of the feedstock despite variation from shipment to shipment; identification and discussion of the criteria and procedures that the Applicant shall use to prevent the presence of contaminants in the feedstock, including but not limited to toxic and/or non-biodegradable materials; and identification and discussion of any and all additives or chemicals that the Applicant or its feedstock supplier might use in the processing or preparation of SSO feedstock that may end up in the material transported to the Facility and introduced into the anaerobic digestion process. The Facility must maintain records of each SSO feedstock shipment rejected and the reason for such rejection. Within forty-five (45) days of receipt of the plan, unless an extension is mutually agreed upon in writing, MassDEP will issue one of the following decisions on the submitted plan: an approval; a denial; or a deficiency letter requesting more information.

4. Receipt of SSO and operation of this Facility shall not commence until the Applicant receives written approval from MassDEP for a contingency plan to address an unexpected breakdown of operations at the Facility. At least forty-five (45) days before the Facility plans to receive SSO and commence operation, the Applicant shall submit to MassDEP for review and approval a contingency plan that shall include, but not be limited to, the following: identification and discussion of procedures that the Applicant shall use for stopping scheduled SSO deliveries and notifying SSO sources to redirect their SSO to other approved facilities as necessary; identification and discussion of procedures that the Applicant shall use for handling on-site materials (excluding unprocessed manure), whether in process or awaiting processing, to prevent nuisance conditions or other adverse impacts; and identification and discussion of procedures that the Applicant shall use for spill prevention and clean-up. Within forty-five (45) days of receipt of the plan, unless an extension is mutually agreed upon in writing, MassDEP will issue one of the following decisions on the submitted plan: an approval; a denial; or a deficiency letter requesting more information.
5. Receipt of SSO and operation of this Facility shall not commence until the Applicant receives written approval from MassDEP for a Financial Assurance Mechanism (“FAM”) for the Facility that meets the requirements for FAMs as specified in 310 CMR 19.051. At least forty-five (45) days before the Facility plans to receive SSO and commence operation, the Applicant shall submit to MassDEP for review and approval the FAM as described above and information supporting the FAM which shall include, but not be limited to, the following: a description and an estimate of the maximum volume of all materials that could be present at the Facility; the estimated cost of removing and disposing of such materials (excluding any processed liquid fertilizer, any BUD-approved solid material and any unprocessed manure); a description and estimate of the cost to decontaminate the Facility and all equipment; and a description of the intended post-closure use of the Facility. Within forty-five (45) days of receipt of the FAM, unless an extension is mutually agreed upon in writing, MassDEP will issue one of the following decisions on the submitted FAM: an approval; a denial; or a deficiency letter requesting more information.

V. OTHER SPECIFIC PERMIT CONDITIONS

1. The Facility may accept an average combined total of 54 tons per day of dairy manure and Source Separated Organics (SSO) with an average mix ratio of 25 tons of dairy manure to every 29 tons of SSO. The average combined total and mix ratio shall be maintained over a rolling 90 day period.
2. The Facility may accept a maximum of 210 tons per day of SSO.
3. The amount of SSO received or stored at the Facility shall not exceed the combined storage capacity of the 10,000 gallon Receiving Tank and the 50,000 gallon Feedstock Buffering Tank.
4. The Facility shall not accept more than 10,585 tons of SSO per calendar year.
5. The combined maximum tonnage of dairy manure and SSO accepted at the Facility shall not exceed 19,710 tons per calendar year.
6. The Facility may operate 365 days per year, 24 hours per day.
7. The operating hours for receipt of SSO at the Facility shall be limited to: Monday through Friday 7:00 am to 5:00 pm; and Saturday and Sunday 7:00 am to 12:00 pm.
8. This approval is limited to the use of dairy manure generated at Jordan Dairy Farms and compostable SSO that is generated by (1) commercial supermarkets or (2) wholesale production facilities that produce liquid or solid food or beverages for human consumption. All compostable SSO shall meet the definition of compostable material as that term is defined in 310 CMR 16.02. All SSO shall be presorted and prepared into a pumpable condition before delivery to the Facility. The Facility shall obtain written approval from MassDEP prior to receipt of compostable SSO from sources other than commercial supermarkets or wholesale production facilities that produce liquid or solid food or beverages for human consumption. Within forty-five (45) days of receipt of a request to approve other sources of compostable SSO, unless an extension is mutually agreed upon in writing, MassDEP will issue one of the following decisions on the submitted plan: an approval; a denial; or a deficiency letter requesting more information.
9. The Applicant shall ensure that all SSO is delivered in water tight and tightly closed containers, such as tanker trucks, and shall ensure that all SSO accepted by the Facility is fed directly, by pumping, into the SSO receiving tank using a totally enclosed transfer system. SSO transport containers are not required to be literally airtight, but must be designed to prevent nuisance odors.

10. The Facility shall not be operated if the fraction of material in process originating from SSO exceeds 65%. The determination will be made based on the volume of manure and SSO entering the Feedstock Buffering Tank over the previous 35 days.
11. The quantity of material stored or in process at the Facility at any one time shall be limited to the volumes specified below.

Equipment	Size
SSO Receiving Tank	10,000 gal.
Feedstock Buffering Tank	50,000 gal.
Digestion Tank	500,000 gal.
Recycled Fertilizer Storage Tank	1.1million gal.

12. All solid matter removed from the anaerobic digestion process shall be managed as solid waste in accordance with M.G.L. c. 111, § 150A and the regulations promulgated thereunder unless and until the Applicant requests, and MassDEP issues, a Beneficial Use Determination (“BUD”) for such solid matter.
13. The quantity of waste material stored at the Facility shall not exceed (8) tons at any time. Waste material includes material that does not qualify as “compostable,” as that term is defined in 310 CMR 16.02, as well as any and all material that is not approved for reuse. MDAR-approved liquid fertilizer and solid materials for which a BUD has been issued by MassDEP do not constitute waste materials provided that they are used in a manner consistent with the terms and conditions of this Permit and any other required approvals or authorizations. Waste materials shall be stored in a manner, such as in a water-tight dumpster, that will not create a nuisance and shall be removed from the site within twenty-four (24) hours of the storage vessel being filled or within two (2) weeks, or less, of generation, whichever occurs first. The Facility must maintain records of the dates of generation of each batch of waste material to ensure that waste materials are removed in a timely manner as required by this Permit.
14. The Department reserves the right to require the Applicant to perform analytical testing of all materials received for anaerobic digestion as well as all materials and/or wastes resulting from the process. The parameters for testing and the frequency of testing shall be at the Department’s discretion, after consultation with the Applicant.

15. The Applicant agrees that the Facility shall be subject to inspections by MassDEP without prior notice, and that MassDEP personnel may periodically enter upon and inspect the Facility and relevant operating records to determine compliance with applicable laws, regulations and the terms and conditions of this Permit.
16. The Applicant shall maintain at the Facility a daily log of all materials received, processed and shipped. A summary of this information shall be reported annually to MassDEP by February 15 of each year.
17. The Applicant shall provide the Department an as-built plan of the Facility within thirty (30) days of the Facility commencing operation.
18. The MassDEP, Central Regional Office, Solid Waste Section Chief shall be notified within twenty-four (24) hours of any incidents which occur at the Facility that create nuisance conditions, such as odor or noise, or could affect the public health, safety, environment or the operation of the Facility.
19. Any change in the Facility's capacity, technology, types of feedstocks, or types of feedstock sources shall require prior notice and written approval of MassDEP.
20. The Applicant shall prevent the occurrence at the Facility of dust, noise, or odor conditions, which cause or contribute to a condition of air pollution as defined in Regulations 310 CMR 7.01 and 7.09.
21. All vehicles entering, waiting and leaving the Facility shall comply with the requirements set forth at 310 CMR 7.11 for exhaust and sound emissions, including avoiding unnecessary idling.
22. The Applicant shall submit a Non Major Comprehensive Plan Approval application to MassDEP's Air Quality section and receive approval prior to the start of construction or operation of the Facility.
23. This Permit shall expire ten (10) years after the date on which it takes effect unless MassDEP issues a renewal of this Permit before such expiration date. The Applicant shall submit a request for renewal at least forty-five (45) days prior to the expiration date of this Permit.

VI. RIGHT OF APPEAL

A. Right to Appeal

Any person aggrieved by the issuance or denial of this Final Determination of Need may file an appeal for judicial review of said decision in accordance with the provisions of M.G.L. c. 111, § 150A and M.G.L. c. 30A not later than thirty (30) days after receipt of notice of the Final Determination of Need. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the Final Determination of Need by a court of competent jurisdiction, it shall remain effective at the conclusion of the 30 day period.

B. Notice of Appeal

Any aggrieved person intending to appeal the issuance of the Final Determination of Need to the Superior Court shall first provide notice of intention to commence such action. Said notice of intention shall include the file number (Transmittal No. X231310) and shall identify with particularity the issues and reason why it is believed the decision was not proper. Such notice shall be provided to the Office of General Counsel of MassDEP and the Regional Director for the regional office which processed the Determination of Need application at least five (5) days prior to the filing of an appeal.

Office of General Counsel
Department of Environmental Protection
One Winter Street
Boston, MA 02108

Steven A. DeGabriele
Bureau of Waste Prevention
Department of Environmental Protection
One Winter Street
Boston, MA 02108

No allegation shall be made in any judicial appeal of the Final Determination of Need unless the matter complained of was raised at the appropriate point in the applicable administrative review procedures, provided that a matter may be raised upon a showing that it is material and that it was not reasonably possible with due diligence to have been raised during such procedures or that matter sought to be raised is of critical importance to the environmental impact of the permitted activity.

If you have any questions regarding this matter, please contact Paul Emond of the Bureau of Waste Prevention at (617) 292-5974.

AGreen Energy, LLC/Jordan Dairy Farms
BWP SW 17 - DETERMINATION OF NEED, SMALL
Transmittal # X231310
Page 10 of 10

Sincerely,

Date _____

Steven A. DeGabriele
Director
Business Compliance Division
Bureau of Waste Prevention

cc:

Rutland Board of Health, Rutland, MA 01543
Sam Snellings, AGreen Energy LLC, Boston, MA 02118
Lynne Welsh, CERO Acting SW Section Chief

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS



Department of Agricultural Resources

251 Causeway Street, Suite 500, Boston, MA 02114
617-626-1700 fax: 617-626-1850 www.mass.gov/agr



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

SCOTT J. SOARES
Commissioner

January 8, 2010

Bill Jorgenson
AGreen Energy, LLC
8 Faneuil Hall Marketplace, 3rd Floor
Boston, MA 02109

Re: Commercial Fertilizer Designation

Dear Mr. Jorgenson:

This shall serve to confirm that the Massachusetts Department of Agricultural Resources ("MDAR") shall accept an application for a Commercial Fertilizer designation for the effluent discharged from the anaerobic digesters to be constructed and operated by SJH and Company, Inc. ("SJH") and AGreen Energy, LLC ("AGreen"). The Commercial Fertilizer License issued to AGreen shall be conditioned upon compliance with 330 CMR 15.00 and the guidelines established by AAPFCO.

In order to obtain a Commercial Fertilizer License, you must comply with the following:

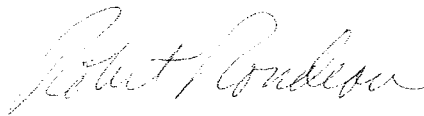
1. Complete the license application and submit the applicable fee to MDAR.
2. Provide the following information as required by the license attachment:
 - a. Description of the fertilizer or soil amendment being manufactured and/or distributed, including but not limited to, all ingredients and/or inputs that will be used and applied, analysis or projected analysis of the nutrient value of the effluent, the nutrient (N-P-K) or other limiting factors that will determine the amount of effluent that can be applied, and analysis for the metals listed in AAPFCO #25 (Arsenic, Cadmium, Cobalt, Lead, Mercury, Molybdenum, Nickel, Selenium and Zinc);

- b. Provide information regarding any protection classification of the effluent and/or input as determined by the US Environmental Protection Agency and/or the Massachusetts Department of Environmental Protection;
 - c. Provide directions for use of the effluent, including but not limited to, the recommended application rate of the effluent, a United States Department of Agriculture generated nutrient management plan, and any precautionary statements applicable to said use; and
 - d. Provide the estimated tonnage to be distributed and/or applied.
3. Provide MDAR with all applicable tonnage fees as set forth in 330 CMR 15.00.

As previously discussed and agreed upon, you must also provide detailed monthly sampling analysis reports of both the inputs to, and the effluents from, the digesters to MDAR and comply with the reporting program established as a condition to your Commercial Fertilizer License. This program will be developed in conjunction with the routine testing performed by SJH and AGreen and will be reviewed on a yearly basis. Random sampling and testing by MDAR shall also be permitted.

If you have any questions regarding your Commercial Fertilizer License and/or the application process, please feel free to contact me.

Respectfully,



Robert Rondeau
Fertilizer Control Official



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

DEVAL L. PATRICK
Governor

IAN A. BOWLES
Secretary

TIMOTHY P. MURRAY
Lieutenant Governor

LAURIE BURT
Commissioner

January 13, 2010

Jonathan Kilbourn
Director of Business Development
New England Organics
AGreen Energy LLC
135 Presumpscot Street, Unit 1
Portland, Maine 04103

RE: Permitting Pathway for AGreen Energy LLC Proposed Project Development in Massachusetts

Dear Mr. Kilbourn:

At your request, I am writing to summarize the position of the Massachusetts Department of Environmental Protection (MassDEP) relative to the permitting pathway and sequence for the AGreen manure and Source Separated Organics (SSO) renewable energy and fertilizer project, as described to us by you and your development team.

The project, as MassDEP understands it, is for AGreen to develop five Anaerobic Digesters (AD) with Combined Heat and Power (CHP) generators to be located on each of five dairy farms in the Commonwealth. Each digester will process raw manure generated at the farm and will also accept a specification feedstock comprised of clean SSO processed at a remote recycling location and delivered by tanker truck. The incoming SSO will consist of pre- and post-consumer food waste collected from food processors, commercial establishments (supermarkets, restaurants, etc.) and ultimately, perhaps residences. In order to assure minimal contamination from plastics and other inert contaminants, the SSO will be directed through an Organics Recycling Facility (ORF) that will receive, clean up, pulp and transload the SSO into tanker trucks for delivery to the AD systems at each farm. The co-products of each AD system are: 1. methane gas which will be used to generate electrical energy for use on the farms and sales to the grid, 2. heat to be used at the farms in farming activities, 3. liquid effluent to be licensed and distributed as a commercial fertilizer, and 4. if a dewatering process is employed, solid effluent that may be used as animal bedding and/or soil amendment.

The development of this project is supported by public policy and may be developed and operated within existing MassDEP regulations, provided that AGreen completes all of the

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 1-866-539-7622 or 1-617-574-6868.

MassDEP on the World Wide Web: <http://www.mass.gov/dep>

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necessary development steps in the proper sequence, including applying for and obtaining authorizations from MassDEP and other agencies with jurisdiction such as the Department of Agricultural Resources (DAR). Based upon the proponents' description of the project (summarized above), an assessment of the existing regulations and policies, and communications with DAR and the Natural Resources Conservation Service (NRCS), and others, the Department will require the following permitting and approval pathway for those aspects of the proposed project that fall under MassDEP jurisdiction:

1. Organics Recycling Facility. The ORF will be reviewed and permitted under the Determination of Need (DON) process contained in 310 CMR 16.00, the Site Assignment Regulations. The DON process allows MassDEP to exempt recycling and composting operations from the Site Assignment process.
2. Anaerobic Digesters. Each of the on-farm AD systems will also require a Determination of Need (DON) as a facility engaged in a recycling activity. Because of the CHP units in each of the AD systems, and because of the need for a back-up flare for biogas generated in the process, a comprehensive air plan approval will be required under the Air Quality Regulations, 310 CMR 7.00.
3. Animal Bedding/Soil Amendment. Depending upon AGreen's decision on whether the digestate solids will be dewatered and how the material may be used, MassDEP may require a Beneficial Use Determination (BUD) for these alternative uses of the solid fiber.

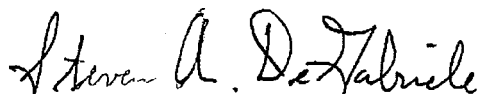
The MassDEP permits and approvals are interrelated and are contingent upon action by DAR beforehand to license the liquid digestate as a legitimate commercial fertilizer. It is MassDEP's understanding that DAR will require classification of the liquid co-product as a commercial agricultural fertilizer. This license decision is required, in MassDEP's view, to enable MassDEP to suggest the above-described permitting pathway because it verifies that the liquid co-product has a viable and legitimate commercial use.

No special permits from MassDEP will be required for vehicles to be used to collect materials described above, although MassDEP expects that all vehicles used in this project will be operated in conformity with the law.

Contingent upon receipt of satisfactory permit applications and supporting information, and the project meeting established permit approval criteria, MassDEP will issue permits as described above. Conditions will typically be attached to approvals to ensure against nuisance conditions and to protect the environment and public health.

MassDEP encourages efforts to increase recycling, renewable energy and environmental sustainability while ensuring protection of public health, safety and the environment. Please feel free to contact us for further information.

Sincerely,



Steven A. DeGabriele
Director, Business Compliance Division
Bureau of Waste Prevention