Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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Lieutenant Governor

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September 26, 2012

John Murray, Assistant Town Manager
Town Hall
472 Main Street
Acton, MA 01720

and

John Bamman
Ameresco, Inc
111 Speen Street, Ste. 410
Framingham, MA 01710

RE: Approval with Conditions
Application for: BWP SW 36 Post-Closure Use - Major
Solar Photovoltaic Array
Transmittal #: X251838

AT: Acton Landfill
14 Forest Road
Acton, Massachusetts
Facility ID#: 131288, Regulated Object#: 172265

Dear Mr. Murray and Mr. Bamman:

The Massachusetts Department of Environmental Protection, Solid Waste Management Section ("MassDEP"), has completed its review of the referenced Post-Closure Use permit application (Application) for the Acton landfill ("Landfill"). The Application was prepared and submitted on behalf of the Town of Acton and Ameresco, Inc. ("Applicants") by AMEC Environment & Infrastructure, Inc., ("AMEC" or "Engineer") of Westford, Massachusetts.

MassDEP has determined that the Application is administratively and technically complete and hereby approves the Post-Closure Use of the Landfill for a 1.59 Megawatt (MW) solar photovoltaic (PV) array subject to the conditions specified herein.

I. SUBMITTALS

MassDEP has reviewed the Application pursuant to 310 CMR 19.000: *Solid Waste Regulations*, 310 CMR 19.143: *Post-Closure Use of Landfills* and MassDEP's *Landfill Technical Guidance Manual, May 1997* (Manual). The Application consists of the following:

A. The permit transmittal, application forms for Post-Closure Use - Major (BWP SW 36), narrative describing the proposed use, engineering calculations, twelve (24" x 36") engineering drawings and documents received by MassDEP on June 15, 2012.

B. Supplemental Application information prepared by the Engineer, consisting of response to MassDEP's July 6, 2012, comments, dated August 14, 2012, and received via e-mail by MassDEP on August 14, 2012.

The Application is signed and stamped by Robert J. Bukowski, Massachusetts Professional Civil Engineer No. 41492.

II. SITE DESCRIPTION

The Acton Landfill is an unlined landfill located at 14 Forest Road on a Town owned parcel of land encompassing approximately 35 acres in Acton (the "Site"). The Landfill final cover system encompasses approximately 17.5 acres. The Landfill operated as a burn dump from approximately 1927 until the mid 1960's and as a sanitary landfill until 1985, for the disposal of mostly sanitary solid waste and some industrial waste. Current Site operations include an active refuse transfer station, recycling center, and a Department of Public Works garage.

The Site is bordered on the north by large residential properties, to the west by woods, to the east by residential properties, and to the south by Route 2 and commercial properties.

Existing Final Cover System Design: The Town submitted a Landfill Closure Plan and report to MassDEP on July 15, 1985, which was approved by MassDEP.

The final cover system for the Landfill consisted of:

- 6 inches of daily cover soil; overlain by
- 12 inches of low permeability soil; overlain by
- 6 inches of vegetative support material

The condition of the final cover system was investigated at 28 locations on the Landfill. The topsoil thickness was observed to range from 5 inches to 12 inches.

Proposed Regrading: Construction of the PV array will require regrading of the Landfill surface to reduce the slopes for the ballast systems, particularly along the south slope. Based on a geotechnical evaluation, the maximum acceptable slope for the panels and ballasts is 14 percent (8 degrees). In general, 6 inches to 2 feet of fill will be placed on the north slope ("crest") with a localized area receiving as much as 2 to 4 feet. The south slopes will require up to 7½ feet of fill in some areas to bring the slopes to within the maximum acceptable grade limit of 14 percent. The existing loam will be stripped from the Landfill surface where fill and the PV array panels are planned, and will be replaced with granular fill or on-site stockpiled material.

A 10 to 12-foot high stockpile of clay material is currently located on the eastern portion of the Landfill crest. The stockpiled material encompasses an area of approximately 400 feet x 100 feet.

The stockpiled material will be used as general fill across the crest. The recommended maximum placement thickness for the clay is 12 inches. Final grading will be completed by placement of granular material above the clay fill.

October 3, 2005 Post-Closure Use Permit Application Approval: On October 3, 2005 MassDEP approved a post-closure use permit application (W067113) to use the Landfill for: "a multi-recreational field containing a baseball/softball diamond, soccer field and a golf driving range with a DPW stockpiling and storage area as well as the presently constructed transfer station and an improved recycling facility." The recreational components were never constructed.

Post-Closure Environmental Monitoring: Post-closure environmental monitoring (groundwater and surface water monitoring) is currently conducted by the Town. The Landfill final cover system does not include a landfill gas venting system. The Site does not have a landfill soil-gas monitoring network.

In response to MassDEP comments on the Application, the Applicants have proposed the following tasks:

- Task 1- Determine depth of unsaturated zone adjacent to the Landfill;
- Task 2- Identify sensitive receptors to soil-gas migration;
- Task 3- Develop a scope of work for landfill soil-gas migration monitoring;
- Task 4- Install landfill gas monitoring wells and perform one round of gas monitoring.

The purpose of these tasks is to determine if landfill soil-gas is currently or has the potential to migrate into existing/proposed on-site structures/subsurface utilities and/or migrate beyond the Site (**refer to condition #9)**.

III. POST-CLOSURE USE PROPOSAL SUMMARY:

Ameresco, Inc. (“Ameresco” or “Developer”), through an agreement with the Town of Acton (“Town”) proposes to develop 1.59 MW solar photovoltaic installation on 2.51 acres the Landfill. Hereinafter, the Town of Acton, Ameresco and all construction and maintenance personnel associated with the Town's Landfill shall be referred to as the "Applicants' Contractors". Ameresco in conjunction with the Town is proposing to construct and maintain a PV array on the capped Landfill, consisting of the following components:

- Approximately 972 precast concrete footings (8 feet-5 inches x 4 feet x 18 inches thick) will be placed within the topsoil support layer of the final cover system;
- Approximately 243 PV panel support racks (Solar Flex Rack) installed on the concrete ballasts;
- Approximately 6,804 PV modules (LG Solar LG250S1C) will be placed on the PV panel support racks;
- Three electrical equipment concrete pads & (approximately 19 feet-6 inches long by 8 feet wide by 12 inches thick) will be installed on the final cover system. Each electrical equipment concrete pad will support the one inverter/transformer assembly (Advanced Energy Solar 500), and ancillary equipment;

- The photovoltaic panel support racks will be interconnected and connected to the inverter/transformer using above-ground cables;
- Five new utility poles will be installed outside the limits of the final cover system on the Site.

The existing elevation and grade of the Landfill will be modified slightly to accommodate the arrays maximum allowable slopes. A 10 to 12 foot high stockpile of clay material is currently located on the eastern portion of the Landfill. This clay will be used up to a maximum thickness of 1 foot for regrading. Additional off-site fill material will be required for the southern slope. Once the stockpile has been removed, test pits will be dug at the outer limits and within the former stockpile area to determine the top of the impermeable (clay) cover. The depth of the clay layer beneath the topsoil will be measured to assess any cap depression. If necessary, the topsoil will be stripped and clay will be replaced to provide positive drainage (**refer to condition #4**).

The Applicant's have determined that temporary access roads will not be required for this project. The ballast blocks and conduit support blocks will be precast concrete. The three inverter/transformer pads will be cast-in-place but are located on, or adjacent to, the existing gravel drive such that no additional access roads are proposed. The Town has used this gravel access drive for storage of large equipment and materials over the years and no modifications to the road are deemed necessary. Low ground pressure equipment will be used to place the ballast blocks and conduit support blocks that are beyond the limits of the existing gravel drive.

The modules will be placed on the northern flatter area of the Landfill and the southern slope. The maximum slope of the Landfill in the area of the PV array will be 14 percent (8 degrees). The PV array will utilize PV modules (39 inches by 64 inches) mounted on framed racks attached to the precast concrete ballast. The racking system will hold the panels at a fixed tilt of 25 degrees from horizontal. The PV array will use monocrystalline PV modules mounted on racks consisting of 28 modules in a multi row (panel layout 4 x 7) with four ballasts per rack. Each panel is approximately 37.9 ft long and 13.4 ft wide.

Each panel support rack or assembly will utilize a fully ballasted mounting system with no penetrations of the low permeability layer of the final cover systems. The modules and the associated racking will be approximately 2 feet high in the front (south edge) and 7.5 feet high in the rear. The rows of PV panels will be oriented east-west and the typical spacing between each row will be approximately 6 feet - 6 inches or 16 feet – 8 inches (north-south measurement), depending on the localized slope of the Landfill. The Landfill contours are not aligned with the east-west axis of the PV racks, therefore the rows will be at a slight cross-slope angle.

The footings will be placed at varying slopes as necessary due to the topography of the Landfill. The overall topography will not be altered significantly; however fill will be placed in order to maintain allowable slopes for module installation. Once this is accomplished, the vegetation and topsoil surrounding each ballast will be restored (**refer to condition #12**).

The proposed design will impact limited portions of the topsoil layer of the final cover system. The impacts result from the installation of rack ballasts, installation of the inverter/transformer concrete pads, and installation of above grade electrical wiring.

Low voltage cable conduits will be mounted on the rack assemblies of each array. As the conduits run between arrays and traverse the Landfill to the inverters, the conduits will be installed above grade, mounted to the back of the array ballasts and on concrete and unistrut supports

Preliminary Specifications for electrical equipment include three 500 kilowatt (kW) inverters and three 500 kVA transformers and ancillary equipment. Three 500 kilowatt (kW) inverters and three 500 kVA transformers will be installed on three concrete pads. There are no subsurface penetrations at the inverters/transformers concrete pads. Conduits will not enter the concrete pads from beneath the pad. Conduits will be mounted on aboveground supports and conduits will run into the side of the inverters/transformers and other equipment with the use of flexible gas tight connections (**refer to condition #2 and #15**).

Geotechnical Evaluation: The Application included a geotechnical evaluation for the installation of the PV array and supporting structures on the final cover systems.

The Application included an analysis of the foundations for the PV array that will bear on the final cover system and has considered the dead load, snow load and wind loading. The results of the geotechnical evaluation are as follows:

- The modules, panel support racks, and ballasts do not exceed the loading criteria for the Landfill.
- The electrical equipment concrete pads (inverters/transformers) do not exceed the recommended loading criteria for the Landfill.
- The PV array will not cause adverse Landfill settlement.

The anticipated maximum loading scenario (ballasts, racking system, and modules) on the Landfill surface will result in a bearing pressure of approximately 355 pounds per square foot (psf) (<3 pounds per square inch (psi)).

The estimated long term settlement resulting from the static load increase of the PV array ballasts was ½ inch to 2-3/4 inches dependent upon the location on the Landfill. The Engineer has stated the final cover systems can undergo this distortion without impacting the integrity of the cover. The long term settlement due to the landfill regrading activities ranged between 2-1/2 inches and 9 inches dependent upon location. The Engineer determined that ballasts should have the means to shim over time due to the potential for differential settlement. MassDEP is requiring that the amount of settlement be monitored and that areas of settlement be corrected to prevent stormwater ponding (**refer to condition #4**).

The stability of the South Slope under the fill material and solar array loading was evaluated using the Spencer method. Both shallow failure surfaces in the fill and deeper failure surfaces in the waste were considered. The minimum computed safety factor was 1.9 and occurred along the 3 Horizontal (H) to 1 vertical (V) portion of the slope. A calculated safety factor of 2.8 was calculated for the interface between the clay and fill material. These safety factors exceed the Engineer's recommended minimum safety factor of 1.5.

The stability of the interface between the precast concrete ballasts and the granular fill surface was evaluated for sliding along the steepest design slope of 14 percent. Using infinite slope methods, the minimum safety factor for sliding of the ballast was calculated as 2.6, which is greater than the Engineer's recommended minimum acceptable safety factor of 1.5.

Storm Water: Stormwater control features include drainage structures within the existing recycling area northwest of the proposed array and a stormwater basin to the north of the proposed array. The Engineer performed calculations using Hydro CAD modeling software (TR-20) analysis for the 24-hour, 25 year storm and the 24-hour, 100 year storm. The PV array will modify run off characteristics of a limited portion of the Landfill by changing some of the landfill grass cover to impervious surfaces increasing stormwater runoff. The additional impervious surfaces (i.e. ballasts and electrical equipment concrete pads) represent approximately 7 percent of the closed Landfill surface that is to be covered by the PV array.

There are areas of the Site that are currently used as vehicle and equipment storage areas and have dense graded gravel as a surface cover. With the exception of the ballast blocks and inverter/transformer pads, all disturbed areas will be planted with vegetated ground cover. As a result, areas that were previously covered in gravel will be vegetated thereby reducing the resulting runoff volume.

As a result of the stormwater analysis, the Engineer concluded that the peak flow rates and runoff volume for the 25 year and the 100 year storm events will not increase and no changes to the existing stormwater drainage systems are required.

Post Closure and Post-Closure Use Operations and Maintenance: The Town currently engages a third party consulting engineer to perform annual landfill cap inspections. In accordance with an agreement between the Town and Ameresco, the Town will be responsible for mowing the ground cover at the Landfill, outside the "Lease Area" and for maintaining (including snow removal) all access roads, driveways, and customary paths, now maintained by the Town. All areas disturbed during construction will be loamed, seeded and mulched, as soon as practical. It will be the Ameresco's responsibility to maintain the vegetative cover and prevent erosion within the Lease Area.

On August 14, 2012 MassDEP received a document titled "PV Projects Operational and Maintenance Service Procedures" from the Applicants. The Operations and Maintenance plan for the area used for the PV array includes provisions for site inspections/maintenance. The Applicants proposes to conduct periodic inspections to check the landfill final cover system for erosion and changes in vegetative growth. MassDEP is requiring that these inspections be performed monthly for the first year after construction of the PV array (**refer to condition #16**).

The Application did not include a health and safety plan for the construction or operation phases of the proposed PV array (**refer to condition #8**).

Site Security: Site security will include a continuous chain link fence. At any locations where the chain link fence is within the limits of the Landfill final cover system, the installation of the fence posts will be ballasted to prevent puncturing of the clay cap. Locked access gates will be

placed as necessary to provide access/egress for Landfill and PV array inspection and maintenance. Final layout and equipment specifications will be made as part of the final design, prior to the start of site construction (**refer to conditions #2**).

Decommissioning Plan: In accordance with an agreement between the Town and Ameresco, upon expiration or termination of the Agreement Ameresco will remove all of the tangible property comprising the PV solar array system, including but not limited to all structures built by Ameresco, any fencing and/or barriers mounting and other support structures, not later than 180 days after such expiration or termination and shall return the Site to the condition required by the Major Post-Closure Use Permit. Ameresco will repair any damage caused in connection with such removal not related to ordinary use and wear (**refer to Condition #19**).

IV. PERMIT DECISION

MassDEP, having determined the information in the Application is satisfactory and in accordance with its authority granted pursuant to M.G.L. c.111, s. 150A, and 310 CMR 19.000, hereby **APPROVES** the Post-Closure Use of the Acton Landfill for a Solar Photovoltaic Array subject to the conditions identified herein.

V. GENERAL PERMIT CONDITIONS:

1. Permit Limitations: The issuance of this approval is limited to the proposed Solar Photovoltaic Array at the Acton Landfill as detailed in the Application and does not relieve the Applicants' Contractors from the responsibility to comply with all other regulatory or permitting requirements. Post-Closure Use construction shall proceed in complete compliance with the approved plans, MassDEP's regulations and requirements, the Manual or as required by this Approval. This approval does not relieve the Town, as the owner of the Landfill, from its responsibility to comply with all post closure monitoring and maintenance requirements for the entire Landfill. There shall be no deviation from this Approval without prior consent from MassDEP. MassDEP shall be consulted prior to any deviation from the approved design. MassDEP may require a permit modification application for significant design modifications. Construction shall incorporate all the recommendations of the design engineers, including but not limited to the recommended material type and compaction requirement for fill material.

2. Preconstruction Requirements: Final layout and equipment specifications made as part of the final design shall be submitted to MassDEP for review, prior to the start of site construction. MassDEP reserves the right to request additional information and require design modifications based on submitted information. At a minimum, submitted information shall include:
    1) Manufacturer's catalog cuts for all final equipment;
    2) Revised geotechnical calculations if changes in equipment selection change the design assumptions in the previously submitted design calculations;
    3) Fence support details;
    4) Electrical Design Plans;
    5) Health and Safety Plan for Construction.

3. Regulatory Compliance: The Applicants, Engineers and Applicants' Contractors shall fully comply with all applicable local, state and federal laws, regulations and policies, by-laws, ordinances and agreements. This includes but is not limited to, 310 CMR 19.142: *Post-Closure Requirements*, 310 CMR 19.143: *Post-Closure Use of Landfills*, and 310 CMR 19.043: *Standard Conditions*. Applicable federal regulations include, but are not limited to, 29 CFR Part 1910, OSHA standards governing employee health and safety in the workplace and all applicable local, state and federal electrical codes and permits, including National Electrical Code (NEC), 2011 Edition, Article 690-"Solar Photovoltaic (PV) Systems".

4. Inspection and Repair of Settlement Areas: Prior to construction of the PV array, any suspect settlement areas on the Landfill project area shall be surveyed to determine the lowest spot. The surrounding area should be then surveyed to find the "relief point" defined as the lowest surrounding area where ponded water would flow off the cap. The elevation difference is defined as the "pond value". Minor settlement shall be defined as less than a 12 inch pond value. Any Landfill project area that has undergone minor settlement shall be corrected by the placement of additional vegetative support soil to promote runoff and the area shall be reseeded. Any area repaired should be surveyed and the location marked on a plan with the pond value. Any future settlement should be recorded cumulatively. If/when the total settlement reaches 12-inches, the area will be considered to have suffered major settlement and appropriate repairs to eliminate ponding shall be performed.

   Major settlement is defined as a pond value of 12 inches or more. When this occurs, the final cover system must be repaired to prevent water from ponding above the low permeability layer. The Applicants may either:

   1. Strip off the final cover soils above the low permeability layer, inspect and repair the low permeability layer if/as necessary, place low permeability soil as necessary to promote runoff, replace final cover soils; or

   2. Expose the low permeability soil or geomembrane in a trench around the perimeter of the settled area. Fill the area with soil to form slopes promoting runoff. Cap the area with a new low permeability membrane, geosynthetic clay liner (GCL), or low permeability soil layer that ties into the existing low permeability layer at the identified perimeter. Place new drainage sand and vegetative support material over the new cap area.

   Any proposal to repair minor settlement may be done as routine maintenance, provided that the Applicants report the settlement to MassDEP and state their intent to perform repairs and provides MassDEP with final survey results and a summary write up.

   Any proposal to do major settlement repair must be submitted within a Corrective Action Design (BWP SW 25) permit application since disruption of the final cover system will take place and repair details must be submitted and approved.

5. Notification of Construction: The Applicants shall notify MassDEP in writing (e-mail is acceptable) when the post-closure use construction commences and is completed.

6. Certification Report: Within ninety (90) days of completing the installation of solar photovoltaic array, MassDEP shall be provided with a certification report. All construction work shall be completed under the supervision of a Massachusetts Registered Professional Engineer who shall have sufficient staff on-site to provide quality assurance/quality control (QA/QC) oversight for all construction work at the Landfill. The report shall be signed and stamped by a Massachusetts Registered Professional Engineer and include, at a minimum, written certification from the supervising engineer that the project was performed in accordance with MassDEP regulations, requirements and the approved Post-Closure Use permit application. At a minimum, the report shall include as built drawings depicting all pertinent site features, equipment used, etc.

7. Preconstruction Work: Prior to commencement of construction activities all landfill gas passive vents, soil-gas monitoring wells, groundwater monitoring wells and other existing above ground structures on the Landfill cap and appurtenances shall be flagged for visibility, and protective barriers shall be placed around such structures as needed to prevent damage by vehicles accessing the area.

8. Health and Safety: The Applicants, Engineers and Applicants' Contractors are responsible to ensure all necessary precautions are taken to protect the health and safety of workers and the general public during both the construction phase and during the operation and maintenance phase of the post-closure use.

   A copy of the site specific health and safety plan for the post-closure use CONSTRUCTION shall be submitted to MassDEP (for its files) prior to the beginning of any construction work. The health and safety plan shall include as a minimum:

   - protocols for monitoring of landfill gas (i.e. methane, hydrogen sulfide, etc.) as needed; and
   - protocols for modifying work practices if landfill gas is detected at levels deemed unsuitable.

9. Soil-Gas Monitoring Assessment: Prior to construction of the PV array, the Applicants shall submit a scope of work for MassDEP review for the installation of a soil-gas monitoring network and monitoring of structures/subsurface utilities.

   After installation and monitoring of the soil-gas monitoring network and structures/subsurface utilities, the Applicants shall submit a report for MassDEP review which includes, but is not limited to the following:

   a) the results of the soil-gas monitoring;
   b) a statement regarding whether or not the landfill gas monitoring results indicate that **existing Site conditions** currently necessitate additional assessment and/or corrective actions to protect public health and safety;
   c) a statement regarding whether or not the landfill gas monitoring results necessitate **modifications to the PV array Post-closure use permit**;

10. Personnel Training: The Applicants, Engineers and Applicant's Contractors shall instruct all personnel regarding the potential hazards associated with landfill gas and shall give on-the-job training involving in any activity authorized by this permit. Such instruction and on-the-job training shall teach personnel how to comply with the conditions of the permit to carry out the authorized activity in a manner that is not hazardous to public health, safety, welfare or the environment.

11. Landfill Gas Notification Requirements:

    a. As specified in solid waste management regulations at 310 CMR 19.132 (4) (g),

    "When, at any time, the concentration of explosive gases exceeds 10% of the lower explosive limit (LEL) in any building, structure, or underground utility conduits, excluding gas control, gas recovery and leachate collection system components, the owner/operator shall:

    1. *Take immediate action to protect human health and safety;*
    2. *Notify the Department within two hours of the findings; and*
    3. *Undertake the actions specified under 310 CMR 19.150, Landfill Assessment and 310 CMR 19.151: Corrective Action, as required by the Department."*

    b. If at any time monitoring detects the presence of any combustible gases at or in excess of 10% of the lower explosive limit at any location within a building or within any utility conduits on site or off-site, the Town shall notify MassDEP's Bureau of Waste Site Cleanup-Emergency Response Section (1-888-304-1133) within two (2) hours of the exceedance as per 310 CMR 40.0321(1) (a) of the regulations.

12. Vehicles Operating on the Landfill Final Cover System: Vehicles operating on the Landfill final cover system shall only operate on the existing gravel access drive, except for low-pressure construction equipment (with ground pressures of **7 psi** or less) in accordance with the remaining conditions of this permit. Low-pressure construction equipment operating off the existing gravel access drive shall limit turning on the vegetative support layer as much as possible. If MassDEP determines the use of excavation equipment is creating the potential for damage to the FML, the usage of such equipment shall immediately cease upon notification by MassDEP. All operators of the vehicles entering the final cover system area shall be clearly instructed by the on-site engineer and/or the contractor of the requirements of this permit prior to arrival, to avoid damage to the Landfill final cover system components. A list of low ground pressure equipment used and the pressure rating of each vehicle shall be indicated in the certification report required in Condition #6.

    Low ground pressure equipment shall not access the final cover system where the transition will result in excessive pressure and wear on the Landfill vegetative service. The on-site engineer may construct ramps as necessary.

13. Integrity of the Final Cover System: All disturbances of the Landfill shall be limited to the proposed excavations and installations as depicted and described within the Application and approved plans. No excavations shall penetrate the low permeability soil layer without written approval by MassDEP. The Engineer and Applicant's Contractors shall ensure that vehicles operating on the Landfill surface do not compromise the integrity of the Landfill final cover system.

14. Construction Precautions: All necessary precautions shall be taken to protect the Landfill storm water control system and environmental monitoring network. All operators of vehicles entering the area should be clearly instructed by the on-site engineer and/or the Applicants' Contractor of the permit requirements to avoid damage to the Landfill components. The on-site engineer shall observe the extent of each excavation performed on the Landfill cover system. If any damage occurs to the any Landfill components, the Engineer shall notify MassDEP within 24 hours and provide a written plan with a schedule for repairs.

15. Proposed Inverter/Transformer Pad and Interconnection Equipment: If the Applicants or Applicants' Contractors propose to change the electrical equipment a copy of the final design for the inverter/transformer pad and any other electrical pads and protective switchgear (interconnection equipment) proposed on-site shall be submitted to MassDEP for review and approval. The Applicant, Engineers and Applicants' Contractors are responsible to ensure that utilities/structures will not accumulate landfill gas during construction and operation. There shall be no penetrations (utility, conduits or other) at the base of any concrete pads or foundations. There shall be no penetration of any kind of the low permeability soil layer of the final cover system.

16. Post-closure Use Operation and Maintenance Plan: During the first year after completion of construction of the PV array, inspections of the Landfill final cover system shall be performed on a monthly basis. Monthly inspection reports shall be submitted to MassDEP within **fourteen (14) days** of completion. Following the first year of operation of the PV array, and if no problems have been documented, inspections of the Landfill shall be performed on a quarterly basis and shall be submitted to MassDEP within **fourteen (14) days** of completion. Pursuant to 310 CMR 19.142(6) inspections shall be conducted by a third-party consulting Massachusetts Registered Professional Engineer, or other qualified solid waste professional. The Applicants, Engineers and Applicants' Contractors shall monitor the effectiveness of the storm water management system which should include; swales, structures and any and all conveyance systems. MassDEP shall be consulted prior to any deviation from the approved storm water design. MassDEP may require a permit modification application for significant design modifications. Any erosion, settlement, security problems or other issues observed at the Landfill shall be reported to MassDEP and repaired immediately.

17. Site Security: The Applicants and Applicants' Contractors must continually monitor and evaluate the potential for unauthorized access and institute all appropriate measures to prevent unauthorized access during construction and operation of the Solar Photovoltaic Array.

18. Electrical Design Plans: The Applicants shall submit electrical design plans stamped by Registered Massachusetts Electrical Engineer prior to commencing construction activities.

The electrical design, including the grounding design, shall meet applicable NEC and local electrical code requirements. If any grounding rods are installed as part of the grounding system, the rods shall not be driven through the landfill final cover system.

19. Decommissioning Plan: If the proposed project is abandoned, during or after completion of construction, the Applicants shall submit a detailed decommissioning and site restoration plan, which includes, at a minimum; dismantling and removal of all panels and supporting equipment, transformers, overhead cables, foundations and buildings and restoration of the roads to restore the site to substantially the same physical condition that existed prior to post-closure use construction.

20. Entries and Inspections: In accordance with *310 CMR 19.043: Standard Conditions*, MassDEP and its agents and employees shall have the right to inspect the Landfill and any equipment, structure or land located thereon, take samples, recover materials or discharges, have access to and photocopy records, to perform tests and to otherwise monitor compliance with this permit and all environmental laws and regulations.

21. Reservation of Rights: MassDEP reserves the right to require additional assessment or action, as deemed necessary to protect and maintain an environment free from objectionable nuisance conditions, dangers or threats to public health, safety and the environment. MassDEP reserves all rights to suspend, modify or rescind this permit if it determines the solar array compromises the integrity of the final cover system and/or results in a threat to public health, safety or the environment.

    This approval pertains only to the Solid Waste Management aspects of the proposal does not negate the responsibility of the owners or operators to comply with any other local, state or federal laws, statutes and regulations or enforcement actions, including orders issued by another agency now or in the future. Nor does this approval limit the liability of the owners or otherwise legally responsible parties from any other applicable laws, statutes or regulations now or in the future.

RIGHT OF APPEAL

Right to Appeal – This approval has been issued pursuant to M.G.L. Chapter 111, Section 150A, and 310 CMR 19.037: Review Procedures for Permit Modifications, Permit Renewals and other Approvals, of the "Solid Waste Management Regulations". Pursuant to 310 CMR 19.037(5), any person aggrieved by the issuance of this determination 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 following receipt of the final permit. The standing of a person to file an appeal and the procedures for filing such an appeal shall be governed by the provisions of M.G.L. c. 30A. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the permit by a court of competent jurisdiction, the permit decision shall remain effective or become effective at the conclusion of the thirty (30) day period.

Notice of Appeal - Any aggrieved person intending to appeal a grant of a permit to the Superior Court shall first provide notice of intention to commence such action. Said notice of intention shall include the Department transmittal number X251838 and shall identify with particularity the issues and reason why it is believed the permit decision was not proper. Such notice shall be provided to the Office of General Counsel of the Department and the Regional Director for the regional office which processed the permit application at least five days prior to the filing of an appeal.

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

Philip Weinberg, Regional Director
Department of Environmental Protection
20 Riverside Drive
Lakeville, MA 02347

No allegation shall be made in any judicial appeal of a permit decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in 310 CMR 19.000, 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.

Please direct any questions regarding this matter to me at (508) 946-2847 or to Dan Connick (508) 946-2884, or write to the letterhead address.

Very truly yours,

Mark Dakers, Acting Chief
Solid Waste Management Section

D/DC/

fc. Town of Acton:
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Board of Health, fax (978) 929-6340
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