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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April 17, 2014

Timothy Carroll
Executive Secretary
Town of Chilmark
40 Middle Road
P.O. Box 119
Chilmark, MA 02535

and

Richard Andre, President
Vineyard Power Solar IV, LLC
P.O. Box 1077
West Tisbury, MA 02575

RE: Approval with Conditions
Application for: BWP SW 36 Post-Closure Use - Major
Solar Photovoltaic Array
Transmittal #: X259361

AT: Town of Chilmark Landfill
Tabor House Road
Chilmark, Massachusetts
Facility ID#: 39168 Regulated Object#: 172420

Dear Mr. Carrol and Mr. Andre:

The Massachusetts Department of Environmental Protection, Solid Waste Management Section (the "MassDEP"), has completed its Administrative and Technical review of the referenced Post-Closure Use permit application (the "Application") for the Chilmark Landfill (the "Landfill"). The Application was prepared and submitted on behalf of the Town of Chilmark (the "Town) and Vineyard Power Solar IV, LLC ("Vineyard Power") by GHD, Inc, Hyannis, MA. ("GHD" or "Engineer").

MassDEP has determined the Application is administratively and technically complete and hereby **Approves** the Post-Closure Use of the Landfill for a 99 kilowatt ("kW") solar photovoltaic ("PV") array subject to conditions as 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* (the "Manual").

The original Application, received by MassDEP on February 27, 2014, consists of a bound document entitled:

Town of Chilmark, MA
Application for Post Closure Use Permit
Town of Chilmark Landfill
Vineyard Power Solar IV, LLC
February 2014

and contains the following:

i. A permit application transmittal form assigned number X259361;
ii. A completed application form for Post-Closure Use - Major (BWP SW 36),
iii. A narrative describing the proposed use;
iv. Geotechnical calculations performed by GHD Inc. ("GHD");
v. Two 11' x 17" electrical drawings prepared by Solar Design Associates, stamped by Christopher O'Neil, Massachusetts Registered Engineer License No. EN 37843, electrical;
vi. Four 11" x 17" solar array drawings prepared by HatiCon Solar, stamped by Arthur W. Johnson, Massachusetts Registered Engineer License No. 30662E 37843, structural;
vii. Structural calculations prepared by kpff Consulting Engineers, stamped by Arthur W. Johnson, Massachusetts Registered Engineer License No. 30662E 37843, structural;
viii. Solar Equipment product data; and
ix. Historical document s regarding the landfill operation closure, and post closure monitoring.

The Application was stamped by William R. Hall, Jr. of GHD, Massachusetts Registered Professional Sanitary Engineer No. 31937.

Supplemental Application information was prepared by GHD, consisting of a response to MassDEP's comments dated March 18, 2014, and received by MassDEP on April 10, 2014 via e-mail (April 14, 2014 USPS).

## II. POST-CLOSURE USE SOLAR ARRAY PROPOSAL SUMMARY:

The Town is the owner of the Landfill and has entered into a lease agreement with Vineyard Power to develop a 99 kW solar photovoltaic installation on a portion of the Landfill. Hereinafter, Vineyard Power and the Town shall be referred to as the "Applicants". Vineyard

Power and all construction and maintenance personnel associated with the Town's Landfill shall be referred to as the "Applicant's Contractors". The Applicants are proposing to construct and maintain a PV array on the capped Type B area of the Landfill (defined below), consisting of the following components:

- Approximately 304 mono-crystalline PV modules (SunPower model E20/327) installed on approximately 19 steel and aluminum support racks (HatiCon) mounted on concrete ballast blocks);
- Approximately 38 concrete support blocks;
- Inverters, wire management, and AC combiners, Mai DAS enclosures and a weather station attached to support racks and mounted on the concrete ballast blocks;
- Above-ground electrical cables for AC wiring secured inside cable trays supported on the concrete ballast blocks;
- A cable tray, mounted on approximately 20 concrete blocks, to carry electrical cables from the PV array to a new utility pole;
- One, pressure treated wooden pedestal, approximately ten feet wide, six feet tall, to mount electrical service panel and other AC enclosures, to be located off the capped landfill, as shown in the revised Site Plan dated 3/31/14.
- Approximately, four new Applicant-owned utility poles, placed along the southeastern portion of the site adjacent to the existing access road; and
- One new utility-owned primary metering pole, with fused cutout point of common coupling, for connection to the NSTAR utility infrastructure.

The ground mounted PV array is to be constructed on areas of the Landfill with a maximum slope of 5 percent. The PV array will use 304 monocrystalline PV modules measuring (61 inches by 41 inches), laid out in panels 2 modules high and 8 modules long (panel layout 2x8) mounted on 19 support racks attached to the precast concrete ballast. Approximately 38 concrete ballast block foundations measuring 2 feet wide by 2 feet high by 11 feet long will be constructed constructing temporary casting forms for the portion of the concrete to be above grade, and pouring the blocks in place). To prepare the Landfill surface for installation of the photovoltaic system, the 9-inch vegetative support (topsoil) layer will be entirely or partially removed from the location of each ballast block. The remaining vegetative support soil, or supplemental sand, will be graded level by hand. There will be no penetrations into, or reduction of the thickness of, the final cover system sand drainage layer. No other modifications to the Landfill cap section are anticipated.

The modules and the associated racking will be approximately 2'-2" in height in the front (south edge) and 7'-4" in the rear, depending on how much of the 9" vegetative support layer is removed at each block. The rows of solar panels will be oriented east-west with approximately 12 feet between each row (north-south measurement).

The racking system will hold the panels at a fixed tilt of 21 degrees from horizontal with the racks placed to avoid interference with access roads, the passive landfill gas collection extraction vents and all storm water control features. The existing elevation and grade of the Landfill will not be altered.

All photovoltaic rack assemblies, inverters and above-ground wiring will be installed at least ten-feet from existing Landfill gas vents.

Medium voltage cable conduits will be installed in accordance with applicable state and national codes including the National Electric Code with all Massachusetts amendments, and electrical permits will be secured from the local building official.

The photovoltaic module electrical wiring will be supported on cable trays (4" H x 6" W) mounted to concrete ballast blocks or auxiliary support blocks approximately ten feet on center. The cable trays will be approximately 20-inches above the existing finish grade. To ensure that the electrical wiring is inaccessible to unauthorized persons and protected from physical damage, vinyl coated wire mesh will be installed along the back of the PV array supports. Cable trays will be covered with the same vinyl coated wire mesh, or a similar material, to prevent unauthorized access. Tools will be required to remove vinyl mesh, or similar material, and access conductors. The April 10, 2014, supplemental submittal included a letter from the Town of Chilmark electrical inspector stating that the design is code compliant and adequately addresses the prevention of access to electrical conductors by the general public.

As depicted on the Solar Design Associates PV Site Plan, electrical grounding for the array will occur off the Landfill at a new Applicant-owned riser pole via a guy wire and rod anchor. Approximately four new Applicant-owned utility poles will be placed along the southeastern portion of the site adjacent to the existing access road at a minimum spacing of 150 feet. These poles will support medium voltage cable and be used for mounting ancillary electrical equipment (including a 100kV transformer, AC combiner, Data Acquisition System equipment). A fifth new pole will be a utility-owned primary metering pole with a fused cutout point of common coupling. This pole will also provide electrical grounding via a guy wire and ground anchor. Overhead medium voltage cable will run from new pole to new pole and to an existing utility owned service pole. The April 10, 2014, supplemental submittal included a confirmation that there will be no grounding within the landfill cap area.

Bearing Capacity, Settlement, and Stability: The Application included a geotechnical evaluation for the installation of the PV array and supporting structures.

The Application included an analysis of the foundations for the PV array that will bear directly 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, ballasts, and footings do not exceed loading criteria for the Landfill.
- The PV array will not cause adverse landfill settlement.

The anticipated maximum loading scenario (ballasts, racking system, modules and wind) on the Landfill surface will result in a maximum bearing pressure of 600 pounds per square foot (psf) (approximately 4.2 psi).

Settlement analysis was also performed for the ballasts bearing on the final cover system. The result of these calculations estimated the settlement as less than one inch.

A sliding stability evaluation was performed for the ballasts and a safety factor of 1.23 was calculated and deemed to be acceptable by the Engineer.

There are no existing access roads on either area of the Landfill. To analyze the impacts of the forklift proposed to be used to moves array components (excluding ballast blocks) on the various cap sections, the pressure from JCB 505 forklift on the geomembrane was calculated by the Engineer.

For the Type "C" Gravel Parking Area proposed to be used for materials staging, the approved design thickness of the Landfill cap section above the geomembrane is 24-inches. Based on weight distribution through the cover soils, the pressure on the geomembrane was calculated to be approximately 3.3 psi. In addition, the reinforcing geotextile located between the drainage layer and the driving surface will further distribute the pressure from the tires resulting in even less pressure on the geomembrane. As a result, the Engineer determined that no additional impacts on the geomembrane are anticipated as a result of the forklift operation on the Type C cap area.

For the Type "B" Landfill Cap proposed to be used for the PV array, the approved design thickness of the Landfill cap section is 21-inches. Based on weight distribution through the cover soils, the pressure on the geomembrane was calculated to be approximately 3.9 psi. Although no reinforcing geotextile is located between the drainage layer and the driving surface to further distribute the pressure from the tires, the Engineer determined that no additional impacts on the geomembrane are anticipated as a result of the forklift operation. Given that the existing conditions at the Landfill may not provide the original design thickness of 21 inches of cover material, 10 pits will be dug to confirm the existing conditions. If the soils thickness is determined to be less than 21 inches, additional soil will be added to areas to be driven on by LGP equipment, and removed at the end of the project.

Storm Water Control: The Engineer used HydroCAD stormwater modeling to evaluate the suitability of the existing storm water management system for the proposed post-closure use for up to the 100 year, 24 hour storm event. Within the supplemental submittal, the Engineer concluded that the increase in impervious area will be approximately 1,000 square feet, less than 1% of the 6 acre Type B cap area and the existing storm water control systems will continue to function as intended and have ample capacity to maintain functionality following installation of the PV array. No modifications to the existing storm water control system were proposed by the Applicant.

Post Closure and Post-Closure Use Operations and Maintenance: There are no proposed changes to the post closure operation and maintenance plan for the area to be maintained by the Town and not used for the PV array defined as any area greater than 20 feet from the edge of the array and cable trays. Vineyard Power will be responsible for maintaining the PV array and ancillary equipment and the Landfill area in the vicinity of the PV array and cable trays.

MassDEP is requiring that a Solar Array Construction Period Health and Safety Plan and a Post Closure Operations and Maintenance Health and Safety Plan be submitted for MassDEP's

records and that personnel training be provided for employees who access the solar array areas of the Landfill (refer to conditions #7 and #8).

Additionally, MassDEP is requiring that during the first year of operation of the PV array inspections of the Landfill final cover system be performed on a monthly basis and thereafter quarterly, at a minimum. MassDEP is also requiring that inspections include the condition of the panel and cable tray security system described below. (refer to condition #17)

Site Security: The Applicants have not proposed to install a fence around the limits of the PV array. Security will be provided by wire mesh on the back of the mounting structure and on all cable trays to protect PV module wiring and AC wiring. Signs will be provided to alert the public of any potential electrical hazards due to the presence of the PV array. The condition of the mesh system and the signage must be included in the required inspections. (refer to condition #17)

Decommissioning Plan: The current lease agreement, between the Town and Vineyard Power includes a Decommissioning Assurance Clause which requires adequate financial assurance to fully cover the cost of decommissioning the system and restoring the premises. Pursuant to a condition of this permit, if the project is abandoned, during or after completion of construction, the Applicants shall submit an updated decommissioning plan. (refer to Condition #19)

## III. SITE DESCRIPTION & INVESTIGATIONS:

The Landfill is located on a Town-owned parcel of land (the "Site") covering approximately 11.2 acres. Approximately 8.3 acres were used for waste disposal. The Landfill is set in a rural location with no private or commercial buildings in the immediate vicinity. There are residential dwellings on abutting parcels, but not within view of the Landfill. The only access to the Landfill is off of Tabor House Road, to the west. Middle Line Road lies to the north of the Landfill and is the next closest right-of-way.

The Landfill began operations in 1953 and operated for the acceptance of municipal solid waste until June 2004. A small transfer station (Local Drop Off ("LDO")) was constructed on the west end of the Landfill pursuant to the Corrective Action Design application approval for the Landfill final cover system issued on February 18, 2004. After completion of construction of the final cover system, MassDEP approved a Landfill- Closure Certification on May 27, 2005.

The landfill cap consists of three separate types including:

Type "A" - a 1-acre area with a paved driving surface. The PV array will not be installed in the Type A cap area, but construction vehicles may drive on the Type A cap, which consists of the following components from top to bottom:

- a 1.5-inch asphalt top course;
- a 2.5-inch asphalt binder course;
- a 6-inch driving surface subgrade;
- a reinforcing geotextile;
- a 12-inch drainage layer;

- a 40-mil geomembrane; and
- a 6-inch gas venting material.

Type "B" – a 6 acre area with a grass surface located on the side slopes, berms, and a portion of the top area of the Landfill. The Type B area will be used for the installation of the PV system and was constructed with the following components from top to bottom:

- a 9 inch loam vegetative support layer;
- a 12 inch sand drainage layer;
- a 40 mil high density polyethylene (HDPE) flexible membrane liner barrier layer; and
- a 6 inch gas venting layer.

Type "C" – a ½ acre area with a crushed stone surface. The PV array will not be installed in the Type C cap area, but construction vehicles may drive on the Type C cap, which consists of the following components from top to bottom:

- a 6-inch crushed stone layer;
- a 9-inch driving surface subgrade;
- a reinforcing geotextile;
- a 9-inch drainage layer;
- a 40-mil geomembrane; and
- a 6-inch gas venting material.

A passive gas venting system was installed during final cover construction consisting of 6-inch PVC pipe designed to extend 7 feet above grade and included provisions to convert the system to an active gas collection system if necessary.

The Applicant stated that the site of the proposed array and ancillary electrical equipment was inspected for visible signs of settling, or ponding and the drainage swales for proper flow of runoff and that all areas appear to be functioning as designed, with no sign of settling or ponding. As a condition of his permit, the Applicants will be required to inspect the Landfill prior to installation and periodically thereafter for settlement and ponding and tae appropriate corrective actions. (refer to Condition #3)

Post-Closure Environmental Monitoring:

A Comprehensive Site Assessment Supplement was prepared by Saunders Associates in 1998. A Comprehensive Site Assessment Supplement was prepared by Stearns & Wheler (predecessor to GHD) in March 2002. Currently, the Town conducts post closure environmental monitoring which consists of the following:

- Semiannual sampling of eight groundwater monitoring wells (four couplets),
- Quarterly monitoring of four gas monitoring wells, and
- Biennial monitoring reports submitted to MassDEP.

The Town's consultant performing environmental monitoring of the Landfill, Wright Pierce, stated in a December 10, 2013, monitoring report that there is a low level of 1,4 dioxane in groundwater which should be continued to be monitored closely but that there does not seem to be a potential for a human public health concern.

The Town's consultant, GHD, stated that a review of the Landfill soil gas data back to 2000 indicated almost no explosive gas being produced by the Landfill and detectable in the soil gas monitoring wells.

## 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 Town of Chilmark 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 Landfill as detailed in the Application and does not relieve the Applicants 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.

2. Regulatory Compliance: The Applicants, Engineers and Applicant's 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: *Landfill Post-closure Requirements*, 310 CMR 19.143: *Post-Closure Use of Landfills*, and 310 CMR 19.043: *Conditions for Permits and Other Approvals*. 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".

3. 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.

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

5. 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. The report shall include as-built drawings depicting all pertinent site features.

6. Preconstruction Work: Prior to commencement of construction activities, all Landfill gas vents, Landfill 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.

7. Health and Safety: The Applicants, Engineers and Applicant's 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 site specific Health and Safety Plan was developed and submitted to MassDEP in the Application (for its file). The Applicants shall ensure that Health and Safety Plan for the PV Array Construction Period includes as a minimum:

   - protocols for monitoring of landfill gas as needed;
   - protocols for modifying work practices if landfill gas is detected at levels deemed unsuitable; and
   - training for all workers including town workers conducting construction activities at the Landfill regarding hazards associated with the landfill gas and the PV array, including electrical hazards.

   A site specific Post Closure Operations and Maintenance Health and Safety Plan for the post-closure use period, shall be developed and submitted to MassDEP (for its files) prior to the beginning of any construction work. The Post Closure Operations and Maintenance Health and Safety Plan shall include as a minimum:

   - protocols for monitoring of landfill gas as needed;
   - protocols for modifying work practices if landfill gas is detected at levels deemed unsuitable; and
   - training for all workers including town workers conducting maintenance activities at the Landfill regarding hazards associated with the landfill gas and the PV array, including electrical hazards.

8. Personnel Training: The Applicants, Engineers and Applicant's Contractors shall instruct all construction and maintenance 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.

9. Landfill Gas Notification Requirements:

   a. As specified in solid waste management regulations at 310 CMR 19.132 (5) (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's Regional Office that that covers the municipality in which the facility is located within two hours of the finding; 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 (508) 946-2714 within two (2) hours of the exceedance as per 310 CMR 40.0321(1) (a) of the regulations.

10. Vehicles Operating on the Landfill Final Cover System: Vehicles operating on the Area B and Area C Landfill final cover system (flexible membrane liner (FML) area) shall only operate on access roads, except for low-pressure construction equipment (with ground pressures of **7 psi** or less) in accordance with the remaining conditions of this permit.

    Construction equipment operating off the access roads shall limit turning on the vegetative support layer as much as possible. If MassDEP determines the use of any equipment is creating the potential for damage to the final cover system, 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 equipment used on the Landfill, the Landfill area accessed by the vehicle, and the pressure rating of each vehicle shall be indicated in the certification report required in Condition #5.

11. Permanent and Temporary Roads: Equipment shall not access the final cover system from permanent and temporary roads, if any, where the transition will result in excessive pressure and wear on the Landfill vegetative service. The on-site engineer may construct ramps as necessary.

12. 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. Excavations shall be limited to the topsoil layer. No excavations shall penetrate the sand drainage 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.

13. Construction Precautions: All excavations and construction shall be supervised by a Massachusetts Registered Professional Engineer. All necessary precautions shall be taken to protect the Landfill storm water control system, environmental monitoring network and the Landfill gas vents and other on site structures. All operators of vehicles entering the area should be clearly instructed by the on-site engineer and/or the Applicant's 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 capping system. If any damage occurs to any Landfill components, the Applicant's Engineer shall notify MassDEP within 24 hours and provide a written plan with a schedule for repairs.

14. Array Setbacks: The Applicants shall maintain a minimum 10 foot radius buffer between the closest edge of the PV array and all landfill gas vents.

15. Electrical Design: The National Electrical Code requires electrical wiring to be inaccessible to unauthorized persons and protected from physical damage. To accomplish this, the Applicants have proposed to install vinyl coated wire mesh along the back of the PV array supports and cover the cable trays with the same vinyl coated wire mesh, or a similar material, to prevent unauthorized access. The Applicants shall install all electrical equipment as per the submitted design and as required to meet all applicable electrical codes.

16. Utility Pole Installation: The Applicants shall take all measures necessary to ensure that all utility poles, grounding mechanisms, and guy wires are located outside the area of the Landfill final cover system. The Applicants shall coordinate the pre-layout, scheduling and installation of the utility poles, grounding, and guy wires with the utility company or any other entity involved in the installation work to ensure installation occurs in the proper location and the integrity of the Landfill final cover system is maintained.

17. Post-closure Use Operation and Maintenance Plan: During the first year of operation 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, 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 inspector in accordance with 310 CMR 19.018. The Applicants, Engineers and Applicant's Contractors shall monitor the condition and effectiveness of the PV array, cable, cable tray enclosures, equipment security system, and the storm water management system which should include; swales, structures and any and all conveyance systems. Any erosion problems, settlement problems, security or other issues observed at the Landfill shall be reported to MassDEP and repaired immediately. 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.

18. Site Security: Pursuant to 310 CMR 19.130(23) the Town is required to provide sufficient fences or other barriers to prevent unauthorized access to the Landfill. The Town must continually monitor and evaluate the potential for unauthorized access and institute all appropriate measures to prevent unauthorized access during the closure and post-closure period.

19. Decommissioning Plan: If the proposed project is abandoned, during or after completion of construction, the Applicants shall submit an updated decommissioning plan. The decommissioning and site restoration plan should include, 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: Conditions for Permits and Other Approvals*, 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.

**REVIEW OF DECISION**

Pursuant to 310 CMR 19.033(4)(b), Applicants aggrieved by the Department's permit decision, within 21 days of the issuance of the Department's permit decision to the Applicants, may file a written request, with the appropriate regional office of the Department, that the permit decision be deemed a provisional decision, and a written statement of the basis on which the Applicants believes they are aggrieved, together with any supporting materials. Upon timely filing of such a request, the permit decision shall be deemed a provisional decision. Such a request shall reopen the administrative record, and the Department shall issue a final permit decision after the end of the comment period. Failure by the Applicants to exercise the right provided in 310 CMR 19.033(4)(b) shall constitute a waiver of the Applicants' right to appeal.

**RIGHT OF APPEAL**

**Right to Appeal** – This approval has been issued pursuant to M.G.L. Chapter 111, Section 150A, and 310 CMR 19.033: Permit Procedure for an Application for a Permit Modification or Other Approval - of the "Solid Waste Management Regulations". Pursuant to 310 CMR 19.033(5)(a), any person aggrieved by the final permit decision, except as provided for under 310 CMR 19.033(4)(b), may file an appeal for judicial review of said permit decision in accordance with the provisions of M.G.L. c. 111, § 150A and M.G.L. c. 30A no later than 30 days following the date of issuance of the final permit decision to the Applicants. 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 final permit decision by a court of competent jurisdiction, the final permit decision shall be effective in accordance with 310 CMR 19.033(3).

**Notice of Appeal** - Any aggrieved person intending to appeal a final permit decision to the Superior Court shall first provide notice of intention to commence such action. Said notices of intention shall include the Department transmittal number X259361 and shall identify with particularity the issues and reason why it is believed the final 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, if applicable, 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 final 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 Dan Connick (508) 946-2884 or write to the letterhead address.

Very truly yours,



Mark Dakers, Chief
Solid Waste Management Section

D/DC/rr
C-D\chilmark solar\Chilmark LF solar PCU 4-2014 (v2) .doc

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