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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X276644

May 16, 2018

Mr. David Kane
Green Street Power Partners, LLC
1360 Garrison Avenue
Bronx NY, 10474

RE: Approval with Conditions
Application for: BWP SW 36 Post-Closure Use - Major
Solar Photovoltaic Array
Transmittal #: X276644

AT: Raynham Municipal Landfill
1555 King Philip Street
Raynham, Massachusetts
Facility ID#: 39656, Regulated Object#: 172868

Dear Mr. Kane:

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 Town of Raynham Municipal Landfill (the "Landfill"). The Application was prepared and submitted on behalf of Green Street Power Partners, LLC, by Tighe & Bond, Inc. ("T&B" or "Engineer") of Westfield, Massachusetts.

MassDEP has determined the Application is administratively and technically complete and hereby **Approves** the Post-Closure Use of the Landfill for a 3.0^{+}/- megawatt ("MW") DC (2.28^{+}/- MW AC) 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 Application consists of the following:

A. The permit transmittal, application forms for Post-Closure Use - Major (BWP SW 36), narrative describing the proposed use and engineering calculations prepared by Tighe & Bond, engineering calculations prepared by GameChange Solar, nine engineering drawings prepared

by Tighe & Bond, two drawings prepared by Blymer Engineers, received by MassDEP on March 6, 2018.

B. Supplemental Application information prepared by Tighe & Bond, consisting of a response to MassDEP's March 30, 2018 comments, received via e-mail by MassDEP on May 7, 2018.

The Application is signed by Scott Kerner, CEO of Green Street Power Partners, LLC. The Application is signed and stamped by Brian S. Huntley, Massachusetts Professional Civil Engineer No. 46273. The GameChange Solar calculations bear the signature and seal of Scott Van Pelt, Massachusetts Professional Civil Engineer No. 53171. The nine engineering drawings are stamped by Brian S. Huntley, Massachusetts Professional Civil Engineer No. 46273 and Francis J. Hoey III, Massachusetts Professional Civil Engineer No. 40111. A panel layout plan and one-line electrical drawing bear the signature and seal of John Kuehn, Massachusetts Professional Electrical Engineer No.53686.

II. POST-CLOSURE USE PROPOSAL SUMMARY:

The Town of Raynham is the owner of the Landfill and prepared correspondence dated February 23, 2018, stating that the Town has agreed in principle to a long term ground lease with Green Street Power Partners, LLC., who will develop, build, own, and operate a solar PV array on the Landfill. Hereinafter, Green Street Power Partners, LLC shall be referred to as the "Applicant". The Applicant and all construction and maintenance personnel associated with the PV array on the Landfill shall be referred to as the "Applicant's Contractors".

The Applicant is proposing to construct and maintain a PV array on the capped Landfill, consisting of the following components:

- Cast-in place concrete foundations (ballast blocks: 52 inches in diameter by 19 to 20.5 inches thick) will be placed directly on the vegetative support layer or shimmed with crushed stone to create a smooth surface at a maximum slope of 3 percent;
- Approximately 8,560 Sun Power Performance Series P17 - 350w PV modules installed on Gamechange Solar support racks placed on precast concrete foundations (i.e. ballast blocks);
- A concrete pad will be installed outside the limits of the final cover system, which will hold electrical equipment, including inverters, transformer, switchboard and switchgear;
- The photovoltaic panel racks will be connected to the electrical equipment pad by aboveground electrical cables, strung on the panel racks and also on ladder-cable trays between the panel racks;
- The Existing access road from the base of the Landfill to and along the crest of the Landfill will be improved for vehicle access for construction and maintenance activities.

The ground mounted PV array is to be constructed on areas of the Landfill with a maximum slope of 15% (approximately 8.6 degrees). The proposed solar array will encompass approximately 11.5 acres of the Landfill. The solar array will utilize PV modules (39" by 81") mounted on framed racks attached to the cast-in-place concrete ballast blocks. The PV array will

use multicrystalline PV modules laid out in panels, 2 modules high and 3 to 7 panels (panel layouts 2 x 3 to 2 x 7), mounted on racks of 6 to 14 modules each.

The rack foundation will consists of four cast-in-place concrete ballast blocks, each with one post to support the rack. Each panel support rack will utilize a fully ballasted mounting system with no penetrations of the low permeability layer of the final cover system. The modules and associated racking will be approximately 9'-3" in height in the rear and 2' - 6" in the front (south end). The rows of solar panels will be oriented east-west with approximately 11 feet 3 inches between each row (north-south measurement).

The racking system will hold the panels at a fixed tilt of 30 degrees from horizontal. The racks will be placed to avoid interference with access roads, the active landfill gas collection extraction wells and all storm water control features. The existing elevation and grade of the Landfill will not be altered. All photovoltaic rack assemblies and above-ground wiring will be kept at least 10 feet from any landfill gas extraction wells (**refer to Condition #3**). The Engineer stated that the 10 foot radius around the gas extraction wells has been adequate for monitoring and maintenance of the landfill gas extraction wells and that this 10 foot radius and the proposed spacing between PV arrays will provide access for a track mounted drill rig to access the wells and the replacement of the wells if necessary. The Engineer further stated that the Applicant has an agreement with the Town that the array will be disassembled to allow the Town to make necessary repairs.

The Applicant proposes to place the ballast blocks on either the existing vegetative surface or on crushed stone as needed to fill in low areas under the ballasts. Where utilized, the crushed stone will be placed directly on the existing grass, on a maximum Landfill slope of 15 percent (8.6 degrees) from horizontal, in a north-south direction. As specified by GameChange in their letter dated April 11, 2018, ballast tubs are to be installed "on a surface within 3% of flat" and that crushed stone will be placed under the tubs as required to meet this tolerance. MassDEP is requiring that the Landfill surface be inspected and that any settled areas be addressed prior to installation of the PV array (**refer to Condition #6**) and that the 3% tolerance be maintained (**refer to Condition #4**).

One concrete electrical pad will be located outside the limits of the Landfill final cover system at the southeast corner of the Landfill adjacent to King Phillip Street. The concrete pad will be raised above existing grade using processed gravel overlain by a Mirafi 160NC Nonwoven geotextile filter fabric, overlain by a 40 mil HDPE membrane, overlain by dense graded crushed stone to support the pad. As a condition of this permit, the Applicant will be required to submit a detail illustrating the electrical conduit in the vicinity of the concrete pad and demonstrating that landfill gas cannot migrate into the electrical equipment. (**refer to condition #2**)

The Applicant has not indicated that there will be any electrical equipment road crossings. The Applicant has not indicated any grounding of the electrical equipment into the Landfill final cover system. The electrical equipment mounted on the concrete pad will be grounded outside the limits of the Landfill final cover system.

The existing access road on the east side of the Landfill side slope will be improved to handle expected construction loads and extended northwesterly to the top of the Landfill and then southerly along the top plateau. The new proposed road design (improvements to existing road and new proposed road) will result in greater than 3 foot separation between the FML to allow use of the access road by all proposed construction vehicles. The new proposed road will be constructed by placing a geotextile fabric on the existing loam vegetative support layer, overlain by 18 inches of processed gravel, overlain by 6 inches of dense graded crushed stone. The existing access road and final cover system will be evaluated to determine the minimum amount of additional soils required for the access road.

Bearing Capacity, Settlement, and Stability: The Applicant stated that the Landfill cap was proof tested through the use of low ground pressure equipment during the construction of the cap and that the increase in ground pressure due to the proposed solar array and ballast foundation blocks is equal or less than the ground pressures experienced during cap construction. The Applicant stated that the pressure on the top of the drainage layer due to the ballast block placed on the vegetative support layer would be approximately 3.45 psi.

The Engineer stated that there will be minimal elastic settlement, on the order of less than ½ inch and that differential settlement between the ballast blocks will also be less than ½ inch, which will not adversely affect the final cover system.

Storm Water: The Engineer concluded that the stormwater drainage patterns will not be significantly altered and impacts to the existing stormwater management system will be minimal as a result of the proposed solar PV facility installation. The proposed access road will intercept existing stormwater flow patterns. The Engineer designed culverts and road swales to convey the redirected stormwater flow. The Engineer used the HydroCAD 9.10 methodology to design the proposed modifications to the existing storm water management system for the proposed post-closure based on the 100 year, 24 hour storm event.

Post Closure and Post-Closure Use Operations and Maintenance: There are no proposed changes to the post closure operation and maintenance plan, with the exception of the PV array maintenance. The Applicant will mow the vegetation over the entire landfill. The Town will maintain responsibility for any repairs. MassDEP is requiring a Health and Safety Plan and personnel training for employees who access the PV array project areas of the Landfill (**refer to conditions #9 and #10**).

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 quarterly basis and thereafter annually, at a minimum (**refer to condition #19**).

Site Security: The Landfill currently includes a fence at the Landfill perimeter. The Engineer stated that no new fencing is proposed as part of the project.

Decommissioning Plan: On February 23, 2018, the Town of Raynham Board of Selectmen issued correspondence to MassDEP stating that the Board has agreed in principle to a long-term lease with Green Seal Power Partners, LLC., who will develop, build, own, and operate the solar

PV array on the Landfill. The Applicant stated that it will enter into a long term lease agreement with the Town and the lease agreement will require that the Applicant decommission and remove the PV array system from the Landfill upon expiration of the lease agreement. As a condition of this permit, MassDEP is requiring submittal of the final Lease agreement for its records. (**refer to condition #2**)

III. SITE DESCRIPTION & INVESTIGATIONS:

The Raynham Municipal Landfill is located on a 153 acre parcel of Town-owned land (the "Site"). The closed Landfill occupies approximately 24.5 acres. According to MassDEP's list of Inactive & Closed landfills & Dumping Grounds, the Landfill operations began in and ceased in 2000.

Existing Final Cover System Design: Fifteen acres of the Landfill adjacent to the Highway Department garages/offices, Landfill Sections I and II, were closed and capped in 1981 and 1990 respectively with 18 to 24 inches of clay and 4-6 inches of topsoil.

On September 27, 2001, MassDEP approved closure plans for the Landfill (Transmittal No. W007652). During final Landfill contouring additional waste materials were placed above the previously capped area. The final proposed final cover system was constructed over the entire 24.5 acre Landfill, including the previously capped area, and incorporated an active gas collection system encompassing the entire area.

The final cover system was installed with a minimum top slope of 5% and side-slopes no greater than 3:1 and constructed of the following components from bottom to top:

- a six-inch (6") minimum gas venting layer with a minimum hydraulic conductivity of 1x10-3 centimeters per second (cm/sec) ,
- a 40-mil HDPE textured flexible membrane liner (FML) barrier,
- a twelve-inch (12") minimum sand drainage layer with a minimum hydraulic conductivity of 3.1x10-3 cm/sec,
- a twelve-inch (12") minimum loam vegetative support layer, and
- hydro seeded vegetation

Nineteen gas extraction wells were constructed, spaced approximately 200 feet on center. The extraction wells were fitted with vertical wellhead assemblies to allow regulation and measurement of the amount and constituents of landfill gas. The wellhead assemblies were connected to an 8-inch diameter SDR-21 HDPE gas extraction header pipe installed above the low permeability barrier layer. The header pipe slopes to a condensate knockout.

The landfill gas system incorporated a gas-venting trench along the top of the landfill side slopes and at the high point of the Landfill. The trench is 2-feet wide by 3-feet deep and filled with crushed stone. A 6-inch diameter perforated HDPE pipe installed within the gas-venting trench provides passive gas collection. Landfill gas is vented to the atmosphere via 4-inch diameter vertical PVC pipes.

Post-Closure Environmental Monitoring: A Comprehensive Site Assessment was submitted by resource Controls of Pawtucket, R.I. on March 27, 1997 and approved by MassDEP on October 5, 1998.

Post-closure environmental monitoring (groundwater and soil-gas monitoring) is currently conducted by the Town in accordance with a plan approval issued on dated June 22, 2009. The Town has not proposed any changes to the post-closure environmental monitoring plan based on the proposed post-closure use.

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 Raynham Landfill for a Solar Photovoltaic Array subject to the conditions identified herein.

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 Applicant 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 of Raynham, 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. Pre-Construction submittals: Prior to construction, the Applicants shall submit the following to MassDEP for its review and approval at least 30 days prior to commencing construction activities, unless otherwise approved by MassDEP:

    a) A copy of the final Lease Agreement executed between the Town and the Applicant;
    b) Final electrical drawing(s), prepared, signed and stamped by a Massachusetts Registered Professional Engineer, depicting the general layout and details of all electrical equipment, all conduit supports, all underground conduit details, and all equipment pads. The equipment pad, and all underground conduits (if any), must be designed to be explosion proof and prevent landfill gas from entering the electrical equipment.
    c) A narrative describing the final electrical design, including manufacturer's catalog cuts of major electrical components: panel, inverters, and transformers.
    d) A statement from the Engineer that the engineering assumptions made in the Application, (or as revised in an accompanying Engineer's submittal) are consistent with the final PV array layout including the equipment weight, reaction forces, and maximum Landfill slope in areas of installation of the PV array, and

e) A copy of the site specific health and safety plan for the post-closure use CONSTRUCTION phase as described in Condition #7 (for MassDEP files, not approval).

3. Array Setbacks: The Applicant shall maintain a minimum 10 foot radius buffer between the closest edge of the PV array modules and all Landfill gas vents and a 10 foot radius buffer between the pad mounted electrical equipment and all Landfill gas vents. The Applicant shall maintain a clear pathway between PV arrays for access to each landfill gas extraction well suitable for necessary equipment to repair or replace each extraction well.

4. Ballast Tubs: As specified by GameChange in their letter dated April 11, 2018, ballast tubs are to be installed "on a surface within 3% of flat". The maximum landfill slope for the PV array shall be 15%.

5. Regulatory Compliance: The Applicant, 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: *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".

6. 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" as defined below 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 Applicant reports the settlement to MassDEP and states 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.

7. Notification of Construction: The Applicant shall notify MassDEP, Southeast Regional Office solid waste section chief, in writing (e-mail is acceptable) when the post-closure use construction commences and again when construction is completed.

8. Preconstruction Work: Prior to commencement of construction activities, all Landfill gas extraction wells, landfill gas collection system operating valves, 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.

9. Health and Safety: The Applicant, 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 copy of the site specific Health and Safety Plan for the Post-Closure use, shall be submitted to MassDEP (for its files) prior to the beginning of any construction work. The Health and Safety Plan shall include at 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.

   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 the Applicants workers conducting maintenance activities at the Landfill regarding hazards associated with the landfill gas and the PV array, including electrical hazards.

10. Personnel Training: The Applicant, 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 (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 conduit, 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 covers the municipality in which the facility is located within two hours of the findings; and*
    3. *undertake the actions specified under 310 CMR 19.150, Landfill Assessment Requirements 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, Waste Management notify MassDEP's Bureau of Waste Site Cleanup-Emergency Response Section (508) 946-2850 within two (2) hours of the exceedance as per 310 CMR 40.0321(1) (a) of the regulations.

12. Enclosures and Combustible Gas Alarms: Any enclosures that that allow human entry shall have a landfill gas monitor that is fully operational at all times. The monitor shall be calibrated to a methane standard; have an audible and a lighted beacon. At a minimum, the alarm shall be set to sound when the concentration of explosive gases exceeds 10% of the Lower Explosive Limit (LEL).

13. Vehicles Operating on the Landfill Final Cover System: Vehicles operating on the Landfill final cover system shall only operate on the designated permanent and temporary 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. Low-pressure construction equipment operating off the access road 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 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 #16.

14. Permanent and Temporary Roads and Low Ground Pressure Equipment: Low ground pressure equipment shall not access the final cover system from permanent and temporary roads where the transition will result in excessive pressure and wear on the Landfill vegetative service. The on-site engineer may construct ramps as necessary.

15. Integrity of the Final Cover System: All disturbances of the Landfill shall be limited to the proposed excavations (i.e. existing access road investigations) 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 or the HDPE flexible membrane 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.

16. 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.

17. Landfill Gas and Inverter/Transformer Pad and Interconnection Equipment: The Applicant, Engineers and Applicant's Contractors are responsible to ensure that utilities/structures will not accumulate landfill gas during construction and operation. All utility trenches shall be designed so they do not act as a conduit for landfill soil-gas migration.

18. Certification Report: Within ninety (90) days of completing the installation of the solar photovoltaic array, MassDEP shall be provided with a certification report for MassDEP's records. 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 a project narrative, as-built drawings depicting all pertinent site features and photographs representative of the construction processes and completed work. 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. Should the Applicant desire a formal review and written approval of the certification report, the Applicants must submit a formal BWP SW 43, Landfill Closure Completion permit application.

19. 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 quarterly basis. Quarterly 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 an annual basis and shall be submitted to MassDEP within fourteen (14) days of completion. The Applicant, Engineers and Applicant's 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 proposed modifications to the approved storm water design. MassDEP may require a permit modification application for significant modifications. Any erosion problems, settlement problems, security or other issues observed at the Landfill shall be reported to MassDEP and repaired immediately.

20. Site Security: The Applicants and Applicant's 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.

21. Decommissioning Plan: If the proposed project is abandoned, during or after completion of construction, the Applicants shall submit a decommissioning plan. The decommissioning and site restoration plan should include, at a minimum; dismantling and removal of all panels and supporting equipment, transformers, conduits, foundations and structures and restoration of the roads to restore the site to substantially the same physical condition that existed prior to Post-Closure use construction.

22. 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.

23. Financial Assurance Mechanism: Pursuant to the provisions of 310 CMR 19.051, the Applicant shall establish a Financial Assurance Mechanism ("FAM") in order that sufficient funds are available to properly decommission the solar PV array system, and all of its appurtenant structures and features, and to properly restore the Landfill to its original condition The FAM shall be based on the MassDEP approved cost estimate and shall be "in-place" at least thirty (30) days prior to the start of construction. MassDEP has determined that the appropriate amount of the required FAM is $90,000 per megawatt AC for landfills that do not have an existing FAM that covers landfill maintenance. Accordingly, the required FAM amount for the 2.28 megawatt AC (3.0 MW DC) array proposed at the Landfill is approximately $205,200. Prior to establishment of the FAM, the Applicants must provide MassDEP with the final PV array capacity in terms of megawatts AC and DC to determine the exact FAM amount.

24. Transfer: No transfer of this permit shall be permitted except in accordance with the requirements of 310 CMR 19.044. The form established by MassDEP for permit transfers is the BWP SW 49 application form. Any time the Applicants for this project do not include a municipal entity, the Applicants shall provide to MassDEP a financial assurance mechanism, in accordance with 310 CMR 19.051, for the costs of decommissioning and site restoration activities.

25. 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 and does not negate the responsibility of the landfill owner or PV array developer 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.

V. REVIEW OF DECISION:

Pursuant to 310 CMR 19.033(4)(b), if the Applicant is aggrieved by MassDEP's decision to issue this decision, the Applicant may, within twenty-one days of the date of issuance, file a written request that the decision be deemed provisional, and a written statement of the basis on which the Applicant believes it is aggrieved, together with any supporting materials. Upon timely filing of such a request, the decision shall be deemed a provisional decision with an effective date twenty-one days after MassDEP's receipt of the request. Such a request shall reopen the administrative record, and MassDEP may rescind, supplement, modify, or reaffirm its decision. If MassDEP reaffirms its decision, the decision shall become final decision on the effective date. Failure by the Applicant to exercise the right provided in 310 CMR 19.033(4)(b) shall constitute waiver of the Applicant's right to appeal.

VI. 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), 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 decision in accordance with the provisions of M.G.L. Chapter 111, Section 150A and M.G.L. Chapter 30A no later than thirty days of issuance of the final permit decision to the applicant. 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 be effective in accordance with the terms of 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 MassDEP Transmittal No. X276644 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 MassDEP and the Regional Director for the regional office which processed the permit application, if applicable at least five days prior to filing of an appeal. The appropriate addresses to send such notices are:

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

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 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
Bureau of Air and Waste
Solid Waste Management Section

D/DC

cc: Raynham Board of Selectmen
558 South Main Street
Raynham, MA 02767

Raynham Health Department
558 South Main Street
Raynham, MA 02767

Raynham Building Department
558 South Main Street

Raynham, MA 02767

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Communication For Non-English Speaking Parties - 310 CMR 1.03(5)(a)

1 English:
This document is important and should be translated immediately. If you need this document translated, please contact MassDEP's Diversity Director at the telephone numbers listed below.

2 Español (Spanish):
Este documento es importante y debe ser traducido inmediatamente. Si necesita este documento traducido, por favor póngase en contacto con el Director de Diversidad MassDEP a los números de teléfono que aparecen más abajo.

3 Português (Portuguese):
Este documento é importante e deve ser traduzida imediatamente. Se você precisa deste documento traduzido, por favor, entre em contato com Diretor de Diversidade da MassDEP para os números de telefone listados abaixo.

4(a) 中國（傳統）(Chinese (Traditional):
本文件非常重要，應立即翻譯。如果您需要翻譯這份文件，請用下面列出的電話號碼與MassDEP的多樣性總監聯繫。

4(b) 中国（简体中文）(Chinese (Simplified):
本文件非常重要，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与MassDEP的多样性总监联系。

5 Ayisyen (franse kreyòl) (Haitian) (French Creole):
Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradui imedyatman. Si ou bezwen dokiman sa a tradui, tanpri kontakte Divèsite Direktè MassDEP a nan nimewo telefòn ki nan lis pi ba a.

6 Việt (Vietnamese):
Tài liệu này là rất quan trọng và cần được dịch ngay lập tức. Nếu bạn cần dịch tài liệu này, xin vui lòng liên hệ với Giám đốc MassDEP đa dạng tại các số điện thoại được liệt kê dưới đây.

7 ប្រទេសកម្ពុជា (Kmer (Cambodian):
ឯកសារនេះគឺមានសារៈសំខាន់និងគួរត្រូវបានបកប្រែភ្លាម។ ប្រសិនបើអ្នកត្រូវបានបកប្រែ
ឯកសារនេះសូមទំនាក់ទំនងឆ្មោតជានាយក MassDEP នៅលេខទូរស័ព្ទដែលបានរាយខាងក្រោម។

8 Kriolu Kabuverdianu (Cape Verdean):
Es documento é importante e deve ser traduzido imidiatamente. Se bo precisa des documento traduzido, por favor contacta Director de Diversidade na MassDEP's pa es numero indicode li d'boche.

9 Русский язык (Russian):
Этот документ должен быть немедленно. Если вам нужна помощь при переводе, свяжитесь пожалуйста с директором по этике и разнообразие в MassDEP по телефону указанному ниже.

Contact Michelle Waters-Ekanem, Diversity Director/Civil Rights: 617-292-5751 TTY# MassRelay Service 1-800-439-2370. http://www.mass.gov/eea/agencies/massdep/service/justice/
(Version 11.13.17)

10 العربية (Arabic):
هذه الوثيقة الهامة وينبغي أن تترجم على الفور. اذا كنت بحاجة الى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في MassDEPعلى أرقام الهواتف المدرجة أدناه.

11 한국어 (Korean):
이 문서는 중요하고 즉시 번역해야합니다. 당신이 번역이 문서가 필요하면 아래의 전화 번호로 MassDEP의 다양성 감독에 문의하시기 바랍니다.

12 հայերեն (Armenian):
Այս փաստաթուղթը շատ կարեւոր է եւ պետք է թարգմանել անմիջապես. Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանվել դիմել MassDEP բազմազանությունը տնօրեն է հեռախոսահամարների թվարկված են ստորեւ.

13 فارسی (Farsi [Persian]):
این سند مهم است و باید فورا ترجمه شده است.
اگر شما نیاز به این سند ترجمه شده، لطفا با ما تماس تنوع مدیر MassDEP در شماره تلفن های ذکر شده در زیر.

14 Français (French):
Ce document est important et devrait être traduit immédiatement. Si vous avez besoin de ce document traduit, s'il vous plaît communiquer avec le directeur de la diversité MassDEP aux numéros de téléphone indiqués ci-dessous.

15 Deutsch (German):
Diese Dokumkent ist wichtig aund sollte sofort übersetzt werden. Wenn Sie die Übersetzung von diesem Dokument benötigen, wenden Sie sich bitte bei der/dem Diversity Director MassDEP an die unten aufgeführte Telefonnummer.

16 Ελληνική (Greek):
Το έγγραφο αυτό είναι σημαντικό και θα πρέπει να μεταφραστούν αμέσως. Αν χρειάζεστε αυτό το έγγραφο μεταφράζεται, παρακαλούμε επικοινωνήστε Diversity Director MassDEP κατά τους αριθμούς τηλεφώνου που αναγράφεται πιο κάτω.

17 Italiano (Italian):
Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, si prega di contattare la diversità Direttore di MassDEP ai numeri di telefono elencati di seguito.

18 Język Polski (Polish):
Dokument ten jest ważny i powinien być natychmiast przetłumaczone. Jeśli potrzebujesz tego dokumentu tłumaczone, prosimy o kontakt z Dyrektorem MassDEP w różnorodności na numery telefonów wymienionych poniżej.

19 हिन्दी (Hindi):
यह दस्तावेज महत्वपूर्ण है और तुरंत अनुवाद किया जाना चाहिए. आप अनुवाद इस दस्तावेज़ की जरूरत है, नीचे सूचीबद्ध फोन नंबरों पर MassDEP की विविधता निदेशक से संपर्क करें.

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