



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 24, 2019

Mr. Paul Curran
Mr. Keith Christensen
Brayton Point Solar, LLC
400 Market Industrial Park, Suite 32
Wappinger Falls, NY 12590

and

Richard Brown, Town Administrator
Town of Somerset
Town Hall, Room #23
140 Wood Street
Somerset, MA 02726

RE: Approval with Conditions
Application for: BWP SW 36 Post-Closure Use - Major
Solar Photovoltaic Array
Transmittal No. X281946
Application No. 18-SW36-000015-APP
Permit Authorization No. 18-SW36-000015

AT: Somerset Landfill
Brayton Point Road
Somerset, Massachusetts
Facility ID No.: 39727 Regulated Object No.: 173932

Dear Mr. Curran, Mr. Christensen and Mr. Brown:

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 Somerset Landfill (the "Landfill"). The Application was prepared and submitted on behalf of Brayton Point Solar, 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 3.316⁺/- megawatt ("MW") DC 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, ten engineering drawings prepared by Tighe & Bond, received by MassDEP via hard copy on December 4, 2018, and filed electronically on December 5, 2018.
- B. Supplemental Application information prepared by Tighe & Bond, consisting of a response to MassDEP's January 4, 2019, comments, received by MassDEP March 28, 2019

The Application was submitted electronically via the Massachusetts Executive Office of Energy and Environmental Affairs ePlace Portal at <https://permitting.state.ma.us/CitizenAccess/> on December 5, 2018.

The Application and Permit may be reviewed on line at:

<https://eeaonline.eea.state.ma.us/EEA/PublicApp/>

using the "Site Name" Somerset Landfill and the "Search" tab. Under "Record Type", select the "Application" file with the 12/05/2018 "Application Date" and the "Authorization" file with the 4/24/2019 "Application Date".

The Application is signed by Paul Curran, Managing Director of Brayton Point Solar, LLC. and by Richard Brown, Somerset Town Administrator. Hereinafter, the Town of Somerset and Brayton Point Solar, LLC will be referred to as the "Applicants". The Applicants and all construction and maintenance personnel associated with the PV array on the Landfill shall be referred to as the "Applicants' Contractors".

The Application is signed and stamped by Brian S. Huntley, Massachusetts Professional Civil Engineer No. 46273. A set of nine GameChange Solar drawings bear the signature and seal of Scott Van Pelt, Massachusetts Professional Civil Engineer No. 53171. The ten engineering drawings prepared by Tighe & Bond are stamped by Brian S. Huntley, Massachusetts Professional Civil Engineer No. 46273 and Francis J. Hoey III, Massachusetts Professional Civil Engineer No. 40111.

II. POST-CLOSURE USE PROPOSAL SUMMARY:

The Somerset landfill is located on two parcels of land off Brayton Point Road in Somerset, Massachusetts covering approximately 37 acres. Parcel A-10-23 is owned by the Town of Somerset and includes approximately 10 acres of the Landfill. Parcel A-11-81 is owned by the

Estate of Myra Sonnenschein Velozo (“Velozo Estate”) and includes approximately 12 acres of the Landfill. Within the application, the Applicants submitted correspondence dated November 9, 2018, prepared by James Velozo on behalf of the Estate of Myra Sonnenschein Velozo, stating no objection to the installation of the solar photovoltaic array on the landfill. The PV array will be constructed, owned and operated by Brayton Point Power LLC., who will lease land from the Town of Somerset and the Velozo Estate. Approximately 1.362 MW DC of the PV array capacity will be installed on Town-owned property and approximately 1.954 MW Dc will be installed on Velozo Estate property.

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

- Approximately 1404 (702 pair) of cast-in place concrete foundations (ballast blocks: 52 inches in diameter by 19.5 to 21 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 8,613 Q-Peak Duo L-G5.2 385 PV modules installed on Gamechange Solar support racks placed on precast concrete foundations (i.e. ballast blocks);
- A concrete pad will be installed on 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.

An Existing access road from the base of the Landfill to and along the crest of the Landfill will be utilized 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 9.07 acres of the Landfill. The solar array will utilize PV modules (39” by 79”) 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, 3 modules high and 1 to 9 panels (panel layouts 3 x 1 to 3 x 9), mounted on racks of 3 to 27 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 8’ - 2” in height in the rear and 3’ - 0” in the front (south end). The rows of solar panels will be oriented east-west with approximately 10 feet between each row (north-south measurement).

The racking system will hold the panels at a fixed tilt of 15 degrees from horizontal. The racks will be placed to avoid interference with access roads, the passive landfill gas wells, and all storm water control features. The existing elevation and grade of the Landfill will not be altered. The Engineer stated that the American Petroleum Institute’s Recommended Practice 5000, for classification of Locations for Electrical installations at petroleum Facilities Classified as Class1,

division 1 and division 2 provides guidance for gas sources that are lighter than air and flammable and that, to comply with this guidance document, the solar design incorporates a 10-foot radius around the existing gas vents that will remain clear of any PV equipment. (**refer to Condition #10**).

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. Ballast tubs are to be installed on a surface within 3% of flat. 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 #5**) and that the 3% tolerance be maintained (**refer to Condition #11**).

Two concrete electrical equipment support pads will be located at the Landfill toe of slope. The final cover system on the Landfill side slopes was designed to consist of a minimum of 10 feet of coal fly ash overlain by 12 inches of vegetative support materials (topsoil). The extent of the final cover system is not clearly depicted on the available plans such that a field investigation will be required prior to construction of the pads. As a condition of this permit, the Applicant will be required to determine the extent of the landfilled waste and final cover system in the area of the proposed equipment pads and submit construction details for the electrical pad and all conduits in the vicinity of the equipment pad. The pad must be designed with a conduit air gap such that landfill gas cannot migrate into the electrical equipment. (**refer to Condition #2**)

To supply concrete for the cast-in-place ballast blocks, concrete trucks will be parked in the adjacent Highway Department storage yard and low ground pressure skid steers will transport concrete to the PV array area.

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 calculated that the pressure on the top of the landfill cap due to the ballast block placed on the vegetative support layer would be approximately 4.02 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.

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 within the leased land area. The Town will maintain responsibility for maintenance outside the leased land area. 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 #7 and #20**).

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 #20**).

Site Security: The Landfill does not currently include a fence at the Landfill perimeter. New chain link fencing, 7 feet 6 inches high, is proposed to be installed around the perimeter of the PV array as part of the project. The fencing will be mounted on concrete support blocks with no penetration of the landfill final cover.

Decommissioning Plan: The Application included long-term lease agreements with the Town of Somerset and the Velozo Estate. The lease agreements require that Brayton Point Solar, LLC. decommission and remove the PV array system from the Landfill upon expiration of the lease agreements. As a condition of this permit, MassDEP is requiring submittal of a detailed decommissioning and site restoration plan upon cessation of operations. The Applicants are required to establish a Financial Assurance Mechanism for the portion of the PV array on the Velozo Estate property 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 on the Velozo Estate property to its original condition. (**refer to Conditions #22 and 24**)

III. SITE DESCRIPTION:

The Somerset Municipal Landfill covers approximately 22 acres of which approximately 9.07 acres will be used for installation of the PV array

Existing Final Cover System Design:

The Landfill consisted of two types of final cover systems.

On the top area of the Landfill, the final cover system consisted of:

- Grading and shaping of intermediate cover consisting of coal fly ash, overlain by
- 20 mil PVC membrane cover, overlain by
- 14-oz non-woven filter fabric, overlain by
- 12” vegetative support layer.

On the side slopes of the Landfill, the final cover system consisted of:

- Grading and shaping of intermediate cover consisting of coal fly ash, overlain by
- 12” vegetative support layer.

The closure system also included the installation of 18 active gas vents, and associated berms and drainage swales.

Stormwater Control System: The final cover system includes a perimeter swale and berm around the top plateau area of the Landfill. Stormwater runoff from the plateau area drains to the swale which leads to a series of catch basins located at the top of the sideslopes. Subsurface 12 inch

corrugated aluminum pipes lead from the sump of the catch basins to the toe of slope where the stormwater discharges to surrounding areas. There are no stormwater basins at the discharge points.

Final Cover Repairs: In 2011, a corrective action was implemented to address erosion concerns. In 2008, illegal operation of all-terrain vehicles (“ATV”) on the Landfill led to a breach in the perimeter swale allowing stormwater to run down the side slope rather than to a catchbasin. The stormwater eroded the 12 inch vegetated support layer and the coal fly ash intermediate cover material and created a 15 foot deep erosion gully. Illegal ATV operation also led to damage to the final cover system in some areas of the landfill top plateau.

Intermediate cover material was removed from wetlands adjacent to the Landfill and relocated to the top of the Landfill. Eroded areas were filled and a final cover system was constructed in 2011 on the side slopes and in the damaged top plateau areas consisting of the following components:

- Compacted fly ash material; overlain by
- Geosynthetic clay liner (GCL); overlain by
- 9” sand drainage layer with a drainage pipe system (side slope only); overlain by
- 8” min. of vegetative support material.

In 2012, a large sinkhole was observed in the area of the catch basin in the northwest corner of the Landfill upper plateau. The subsurface discharge pipe had disconnected and escaping water scoured the intermediate cover ash into the outlet pipe and a sinkhole developed. The Town repaired the discharge pipe and restored the final cover system and submitted a repair summary report on September 20, 2012.

NOTE: The Applicants are advised that the stormwater control system design that failed in 2012, consisting of a top plateau perimeter swale, catch basins, and subsurface outlet pipes, remains in place in the 2012 repaired area and in several other locations on the Landfill. As a condition of this permit, the Applicants are required to locate and field demarcate these locations, inspect the condition of the catch basins and discharge pipes, and advise the Applicants’ Contractors of the past and potential issues with this system. The Town is required to make any necessary repairs. (**refer to Condition #6**) MassDEP recommends that the Landfill areas at the catch basins and above the subsurface outlet pipes be adequately isolated with protective measures to prevent the Applicants’ Contractors from entering these areas. Should any damage to the stormwater outlet pipes or pipe failure be observed, MassDEP recommends the Applicants replace the catch basins and outlet pipes with stone lined downchutes on the Landfill surface.

Post-Closure Maintenance and Environmental Monitoring: Post closure monitoring is required for a thirty-year period after cap construction, pursuant to 310 CMR 19.142. The Town of Somerset, acting through the Board of Selectmen, is responsible for the post-closure maintenance and inspection of the Landfill, including the portion of the Landfill owned by the Velozo Estate. Required post-closure monitoring includes annual site inspections of the Landfill cap/cover, drainage system, gas venting system, gas barrier system, landfill settlements, leachate outbreaks, cap erosion.

Environmental monitoring entails groundwater and soil-gas monitoring and is currently conducted by the Town in accordance with a plan approval issued on dated September 22, 2010. The Town has not proposed any changes to the post-closure environmental monitoring plan based on the proposed post-closure use.

Brayton Point Solar, LLC. will perform site maintenance activities within the array area, including a 10 foot perimeter outside the chain link fence.

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 Somerset 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 (“PV”) 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 of Somerset or the Estate of Myra Sonnenschein Velozo, as the owners of the Landfill, from their 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 60 days prior to commencing construction activities, unless otherwise approved by MassDEP:
 - a) 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 in soils below the equipment pad from entering the electrical equipment. The conduit support details must include specific details for any stormwater swale crossings;
 - b) A narrative describing the final electrical design, including manufacturer’s catalog cuts of major electrical components: panel, inverters, and transformers;
 - c) A revised page 8 of 9 of the Game Change Drawings Revision 4, dated 1-24-2019, indicating that the “Temporary Bracing with Stakes” method of PV array post supports is not acceptable;
 - 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,
- e) A copy of the site specific health and safety plan for the post-closure use Operation Phase as described in Condition #7 (for MassDEP files, not approval); and
 - f) Details of chain link fence ballast blocks.
3. 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".
4. Inspection and Repair of Catch Basin and Outlet Pipe Areas: Prior to construction of the PV array, the Applicants shall locate and field demarcate the locations of all catch basins and outlet pipes on the Landfill, inspect the condition of the catch basins and outlet pipes and advise the Applicants' Contractors of the past and potential safety issues with this stormwater control system. The Town shall make any necessary repairs to catch basins and outlet pipes.
5. 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.

6. Preconstruction Work: Prior to commencement of construction activities, all passive landfill gas 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.

The Applicants shall determine the extent of the landfilled waste and final cover system in the area of the proposed equipment pads prior to installation of the equipment pads and any power poles and any PV array elements that will penetrate the ground surface. The Applicants shall not penetrate or disturb the final cover soils, the intermediate cover soils, or the disposed waste material without submittal of a proposed plan and prior written MassDEP approval of the plan.

7. 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 specific Health and Safety Plan for the Post-Closure use was submitted to MassDEP (for its files) within the Application, revised on March 29, 2019.

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 commencement of PV array operation. 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;
- 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; and
- a description of the subsurface stormwater conveyance system on the Landfill and the related potential safety issues.

8. 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.
9. 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.
10. 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 security fencing and maintain a 10 foot radius buffer between the pad mounted electrical equipment and all Landfill gas vents and security fencing.
11. 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% (8.6 degrees).
12. 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.
13. 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).

14. 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 #18.
15. 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.
16. 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. No grade stakes shall be used on the Landfill final cover system. Page 7 of 8 of the GameChange drawings in Appendix C of the Application indicates two methods for providing temporary bracing for the PV array racking posts. The method of using ballast blocks on the ground surface is acceptable. The method that utilizes stakes placed into the ground surface shall not be used.
17. 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.
18. 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.

19. 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.
20. 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.
21. 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.
22. 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.
23. 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.

24. 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. For this project the required FAM shall be based only upon the capacity of the PV array located on the Velozo Estate property, which the Applicants have identified as being 1.55 MW AC. 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 1.55 megawatt AC (1.954 MW DC) array proposed for the Velozo Estate portion of the Landfill is \$139,500. 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. Any time the Applicants for this project do not include a municipal entity, the Applicants shall provide to MassDEP a revised financial assurance mechanism, in accordance with 310 CMR 19.051, for the costs of decommissioning and site restoration activities for the entire PV array including both the Town owned property and the Velozo Estate property.
25. 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.
26. 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. APPLICATION REVIEW AND DECISION PROCESS:

The Application was submitted and reviewed pursuant to the provisions of 310 CMR 19.029(2): Applicable Permit Procedures and 310 CMR 19.033: Permit Procedure for an Application for a Permit Modification or Other Approval. According to these review procedures, MassDEP’s decision regarding the proposed activities shall be either: a “Provisional Decision” pursuant to

310 CMR 19.033(4)(a); or a non-provisional decision pursuant to 310 CMR 19.033(4)(b). MassDEP has determined that non-provisional decision is appropriate for this Application.

MassDEP reviewed the Application pursuant to 310 CMR 19.000: *Solid Waste Regulations* and MassDEP's *Landfill Technical Guidance Manual, May 1997* (the "Manual").

VI. REVIEW OF DECISION:

Pursuant to 310 CMR 19.033(4)(b), if the Applicants are aggrieved by MassDEP's decision to issue this decision, the Applicants 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 Applicants believe they are 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 Applicants to exercise the right provided in 310 CMR 19.033(4)(b) shall constitute waiver of the Applicants' right to appeal.

VII. 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 Application Number: 18-SW36-000015, 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,

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Mark Dakers, Chief
Bureau of Air and Waste
Solid Waste Management Section

D/DC

W:\BAW\Solid Waste\1 MUNICIPALITIES\Somerset\Town landfill\solar\Somerset LF solar PCU.doc

cc: Somerset Board of Selectmen
Town Hall, Room #23 - 2nd Floor
140 Wood Street
Somerset, MA 02726

Somerset Board of Health
Town Hall, Room #22 - 2nd Floor
140 Wood Street
Somerset, MA 02726

Somerset Building Department
Town Hall, Room #22 - 2nd Floor
140 Wood Street
Somerset, MA 02726

Estate of Myra Velozo Sonnenschein Picard
c/o James Velozo, Personal Representative
285 Brayton Avenue
Somerset, MA 02725

ec: Tighe&Bond
BSHuntley@tigheBond.com

ec: DEP-Boston
ATTN: R. Blanchet
J. Doucett
T. Higgins
E. Fahle

DEP- SERO
S. Pickering
M. Dakers
J. Viveiros



Massachusetts Department of Environmental Protection
One Winter Street, Boston MA 02108 • Phone: 617-292-5751

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，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 đã dạng tại các số điện thoại được liệt kê dưới đây.



7 ប្រទេសកម្ពុជា (Kmer (Cambodian)):

ឯកសារនេះគឺមានសារៈសំខាន់និងគួរត្រូវបានបកប្រែភ្លាមៗ ប្រសិនបើអ្នកត្រូវបានបកប្រែ ឯកសារនេះសូមទំនាក់ទំនងភ្នាក់ងារជាតិ MassDEP នៅលេខទូរស័ព្ទដែលបានរាយនាមក្រោម។



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 разнообразию 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. إذا كنت بحاجة إلى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في MassDEP على أرقام الهواتف المدرجة أدناه.

**11 한국어 (Korean):**

이 문서는 중요하고 즉시 번역해야 합니다. 당신이 번역이 문서가 필요하다면 아래의 전화 번호로 MassDEP의 다양성 감독에 문의하시기 바랍니다.

**12 հայերեն (Armenian):**

Այս փաստաթուղթը շատ կարևոր է եւ պէտք 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 فوراً ترجمه شده است. اگر شما نیاز به این سند ترجمه شده، لطفاً 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 Dokument ist wichtig und 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 दस्तावेज की जरूरत है, नीचे सूचीबद्ध फोन नंबरों पर MassDEP की विविधता निदेशक से संपर्क करें.