



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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SEP 27 2016

Sun Edison, LLC  
179 Lincoln Street, Suite 500  
Boston, MA 02111  
Attention: Emily Mann, East Operations Manager

Office of Economic & Community Development  
City of Amesbury  
62 Friend Street  
Amesbury, MA 01913  
Attention: Thomas Barrasso, Director Energy & Environment

Re: AMESBURY – Solid Waste Management/COR  
Titcomb Pit Landfill  
South Hunt Road and Route 150  
FMF# 314100

BWP SW36 / Post-Closure Use – Solar Power Generating Facility  
Transmittal Number: X269745

### **Approval and Authorization to Construct**

Dear Ms. Mann and Mr. Barrasso:

The Massachusetts Department of Environmental Protection, Northeast Regional Office, Bureau of Air and Waste, Solid Waste Management Section (“MassDEP”) has reviewed your application, category BWP SW36 *Post-Closure Use – Major*, Transmittal Number: X269745 (the “Application”), for the post-closure use of the Titcomb Pit Landfill located on South Hunt Road and State Route 150, in Amesbury, Massachusetts (the “Landfill”). The Application (was prepared and submitted to MassDEP on behalf of the City of Amesbury (the “City”) and Sun Edison, LLC of Boston, Massachusetts (“Sun Edison” or the “Developer”) by TRC Environmental, Inc. of Lowell, Massachusetts (“TRC”). On April 14, 2016, MassDEP requested additional information regarding storm water management calculations and controls presented in the Application. On August 8, 2016, TRC submitted to MassDEP the additional requested information.

The Application proposes the installation of a 2.8 megawatt (MW) solar photovoltaic power generating facility (“PV Facility”) on a 14.4 acre portion of the approximately 14.5 acre Landfill. The Application includes design plans for the solar array and an engineer’s report describing and supporting the design of the facility.

This information is available in alternate format. Call the MassDEP Diversity Office at 617-556-1139. TTY# MassRelay Service 1-800-439-2370  
MassDEP Website: [www.mass.gov/dep](http://www.mass.gov/dep)

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Capping of the Landfill was completed in 2012 and MassDEP issued approval of the closure certification report on July 26, 2013. The cap includes a 40-mil high-density polyethylene flexible membrane liner (FML) as the impervious layer over waste. The design of the landfill cap provides 20 inches of soil cover over the FML (8-inch vegetative support layer and 12-inch stormwater drainage layer), and a 6-inch gas vent layer below the FML.

The City will enter into a lease and energy purchase arrangement with Sun Edison for the installation and operation of the PV Facility.

The proposed PV Facility will consist of approximately 9,864 solar modules. The solar modules will be supported by galvanized steel and aluminum brackets mounted on precast concrete foundation ballasts. The ballast blocks will be utilized to stabilize the brackets and panels from sliding on the Landfill cap and uplift from wind. The system will be connected to the National Grid electric utility grid. A permanent access road will also be installed on top of the Landfill cap to allow vehicle access to the solar arrays for inspection and maintenance services. A construction laydown area with temporary access driveway will be located immediately southeast of the Landfill on City-owned property.

The Developer will be responsible for the mowing and maintenance of the vegetative cover of the Landfill within the fenced area of the PV Facility. Operation and maintenance of the Landfill and environmental monitoring of the site will continue to be performed by Waste Management Disposal Services of Massachusetts, Inc. (“WMDSM”) pursuant to the Landfill’s existing post closure environmental monitoring and maintenance plan (the “PCMMP”), last revised on December 1, 2015, Transmittal Number: X268177. The design and layout of the proposed project will allow for the continued environmental monitoring at the site. In addition, proper maintenance of the Landfill cap includes, but is not limited to, periodic mowing to prevent growth of vegetation with root systems that could be detrimental to the cap, and to prevent erosion of the cap. The PCMMP further discusses Landfill cap vegetation mowing and maintenance.

Additional details on the proposed project can be found in the Application and the Fact Sheet attached hereto as Attachment 1.

### DECISION

MassDEP has determined that the Application is administratively and technically complete and that, subject to the terms and conditions of this decision and permit, the proposed post-closure use complies with the applicable requirements of 310 CMR 19.000, the Massachusetts Solid Waste Regulations (the “Solid Waste Regulations”). The Application demonstrates pursuant to 310 CMR 19.143(3) that the installation and operation of the solar PV facility as proposed and approved by this decision:

- Will not result in a disturbance of the Landfill cap that could cause an adverse impact to public health, safety or the environment;
- Will not impair the integrity or functioning of the final cover, the components of the containment system, the landfill gas control system, and the environmental monitoring systems; and
- Provides for the maintenance of the Landfill cap’s storm water drainage facilities, basins, swales, and other erosion/sedimentation controls.

Therefore, in accordance with M.G.L. Chapter 111, § 150A and 310 CMR 19.143, MassDEP approves the Application and issues this Post-Closure Use Permit subject to the City’s and Developer’s compliance with 310 CMR 19.000 and the following conditions, imposed by MassDEP pursuant to 310

CMR 19.043(1) *Items Subject to Conditions* and 310 CMR 19.142(7) *Additional Measures*. This decision is a Post-Closure Use Permit pursuant to 310 CMR 19.143 *Post-Closure Use of Landfills*. Pursuant to 310 CMR 19.043(5)(a) *Duty to Comply*, this decision does not relieve the City, Developer, or any other person, of the responsibility to comply with all other applicable federal and state laws and regulations including, but not limited to acquiring applicable permits and approvals, including local permits.

### CONDITIONS

1. The City and Developer shall comply with this permit and the requirements of 310 CMR 19.000, including, but not limited to, the requirements established at 310 CMR 19.043(5) *Standard Conditions*.
2. The City and Developer shall assure persons conducting activities<sup>1</sup> at the PV Facility and Landfill are familiar with the applicable provisions of this permit and the approved plans, and that all work performed at the Landfill complies with 310 CMR 19.000 and the applicable requirements of this permit.
3. The City and Developer shall coordinate the solar project layout design with WMDSM and its consultant to accommodate current and reasonably foreseeable future landfill gas remedial efforts. The City and Developer shall maintain a minimum ten (10) foot radius buffer between the closest edge of the Landfill solar arrays and all existing and future Landfill gas venting structures.
4. Not less than seven (7) days prior to commencing construction pursuant to the Application and this permit, the City and Developer shall notify MassDEP in writing of the scheduled date of the commencement of construction at the site. In addition, the notification shall include:
  - a. The projected schedule for completion of the major construction milestones of the PV Facility;
  - b. The name and contact information of an on-site contact for the construction;
  - c. A health and safety plan for MassDEP's files that includes, but is not limited to:
    - i. protocols for monitoring for landfill gas (methane, hydrogen sulfide, etc.) as needed;
    - ii. protocols for modifying work practices if landfill gas is detected at levels of concern (action levels);
    - iii. instruction and training of all personnel working on the site regarding the potential health and safety hazards at the Landfill including, but not limited to those associated with landfill gas;
    - iv. instruction and training of all personnel in compliance with the conditions of this permit and how to perform authorized activities in a manner that is not hazardous to public health, safety, and the environment; and
  - d. The National Pollutant Discharge Elimination System (NPDES) Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP) for the project.

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<sup>1</sup> Activities include, but are not limited to, the construction, installation, operation, and maintenance of the PV Facility and the Landfill.

5. The City and Developer shall not commence construction of the PV Facility until it has provided the plans and notification to MassDEP and the City of Amesbury Board of Health pursuant to Condition 4 above.
6. All construction work shall be completed and conducted under the supervision of an independent Massachusetts Registered Professional Engineer (“Engineer of Record”) who shall have sufficient qualified staff on-site to provide field supervision and quality assurance/quality control for all construction activities.
7. The City and Developer, and the Engineer of Record, are responsible to ensure that all necessary precautions are taken to protect the health and safety of workers and the general public during the construction and operation of the PV Facility and during its decommissioning.
8. Only low ground pressure construction equipment (with ground pressures of less than 7 PSI) may operate on the Landfill cap off of the access road, and only in accordance with the conditions of this decision. Prior to use of any specific equipment off the access road on the cap, the Engineer shall maintain documentation at the Landfill, for review by MassDEP upon request, that the equipment, fully loaded, will have a ground pressure of less than 7 PSI. Vehicles operating on the Landfill cap shall only be operated and parked on designated access roads, except for low-pressure construction equipment, which may operate off the access roads. All operators of vehicles entering the capped area of the Landfill shall, prior to their arrival, be instructed by the Engineer of Record or his/her designee and/or contractor of the requirements of this decision and permit, to avoid damage to the Landfill cap and appurtenances thereto. In no case shall rutting or other disturbance extend more than 6 inches deep into the vegetative support layer. If MassDEP determines the use of equipment is creating the potential for rutting greater than 6 inches in depth, or damage to the sand drainage layer or the impermeable layer, the usage of such equipment shall cease immediately upon notification by MassDEP, and alternative work practices for operation of equipment on the cap shall be proposed in writing to MassDEP for review and approval.
9. All disturbance of the Landfill shall be limited to the proposed excavations and installations as depicted and described in the Application and this permit. The Developer and any other contractors performing work at the Landfill shall without delay notify the Engineer of Record or his/her on-site representative upon encountering or damaging the flexible membrane liner (“FML”) component of the Landfill cap.
10. Electrical grounding system components, security fence posts, and other solar project components shall not penetrate the FML.
11. In the event that damage to the FML occurs or is observed, the City shall notify MassDEP without delay and in no case later than the close of business of the next business day after it becomes aware of any incident or such damage. This notification requirement is in addition to any other notification requirements required by statute or regulation including, but not limited to, 310 CMR 19.000 and 310 CMR 40.0000.
12. Any and all damage to the FML shall be promptly repaired. The FML shall be restored to the conditions as specified within the approved closure/post-closure plans. All work to repair damaged FML shall be completed and conducted under the supervision of the Engineer of Record who shall have sufficient qualified staff on-site to provide field supervision and quality assurance/quality control for all cap repair activities. Any and all cap repairs shall be shown on

the as-built plans and discussed in the construction certification report required by Condition 18 of this decision.

13. Installation of underground conduit shall include properly installed and filled explosion proof seal-off(s) at each location the conduit daylights.
14. Excess topsoil generated by the installation of the PV Facility shall be taken off site for proper disposal or reuse according to applicable regulations or policies.
15. The City and Developer shall maintain copies of this decision and permit, the Application, the health and safety plan, and documentation that site personnel have been trained pursuant to the health and safety plan at the site during construction of the PV Facility.
16. Pursuant to 310 CMR 19.043 *Standard Conditions*, MassDEP and its agents and employees shall have the right to inspect the Landfill, any equipment, structure or land located thereon, to take samples, to perform tests, and have access to and photocopy records, and to otherwise monitor compliance with this permit and all environmental laws and regulations administered by MassDEP.
17. The City shall cause to be recorded with the Registry of Deeds, or if the land is Registered Land, with the registry section of the land court for the district in which it lies, a Record Notice of Landfill Operation complying with M.G.L. Chapter 111, § 150A and 310 CMR 19.141. The Notice shall include the Facility Master File Facility Number as part of identification of the MassDEP file for the Landfill.
18. Prior to commencing operation of the PV Facility, and in no event on or before ninety (90) days after the date of completion of the construction of the PV Facility, the City and Developer shall submit for review and approval by MassDEP a construction certification report, as an application category BWP SW45 *Alternative Review Process*, that includes, but is not limited to:
  - a. As-built plans for the final as constructed PV Facility amended to incorporate all modifications and alterations, if any, made during construction;
  - b. A narrative, prepared by the Engineer of Record that discusses in part, any modifications made to the design of the PV Facility;
  - c. Certifications by the City, Developer, and the Engineer of Record pursuant to 310 CMR 19.011; and
  - d. A copy of the Notice of Landfill Operation, pursuant to 310 CMR 19.141, as recorded in the registry of deeds or in the registry section of the land court for the district wherein the Landfill lies in accordance with M.G.L. c. 111, sec 150A.
19. On or before thirty (30) days after the date the PV Facility ceases operation, the City and Developer shall submit to MassDEP an application pursuant to 310 CMR 4.00 and 310 CMR 19.000 for the decommissioning of the PV Facility and the restoration of the Landfill cap and appurtenances thereto. The application shall include, but not be limited to, a narrative, plans and schedule for the decommissioning of the PV Facility and the restoration of the Landfill's cap and appurtenances.<sup>2</sup>

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<sup>2</sup> Appurtenances include, but are not limited to storm water controls, landfill gas control structures, landfill gas and groundwater monitoring wells.

20. MassDEP reserves the right to amend, modify, suspend or revoke this permit pursuant to 310 CMR 19.036 *Department's Modification, Suspension, or Revocation of a Permit*. This does not limit or restrict MassDEP from implementing any other applicable authority at the Landfill including, but not limited to authority pursuant to 310 CMR 40.0000.
21. This permit is effective on the date signed by MassDEP below, except as provided by the Notice of Appeal Rights below and 310 CMR 19.033(4)(b). This permit shall expire on December 31, 2036, provided that MassDEP may amend the term of the permit in accordance with a modification pursuant to 310 CMR 19.033 or 310 CMR 19.034. The City and Developer shall submit to MassDEP on or before June 30, 2036 either an application to renew the permit or notice of its intent to close the PV Facility. Wherein the City and the Developer elects to close the facility, the City and the Developer shall submit an application for the decommissioning of the PV Facility and the restoration of the Landfill cap and appurtenances thereto pursuant to paragraph 18, above.
22. The City and Developer shall not deviate from this permit and the approved design plans. The City shall notify MassDEP prior to any modification(s) of the design and of any significant changes in the project schedule. MassDEP may, at its sole discretion, require the City to submit an application to MassDEP for review and approval for any modification/alteration to the design. In the event that MassDEP determines that a permit application is required for a modification, the City shall submit such application to the MassDEP in accordance with the schedule specified by MassDEP.
23. No transfer of this permit shall be permitted except in accordance with the requirements of 310 CMR 19.044. If at any time, the permittee for this project does not include a municipal entity, the permittee shall provide to MassDEP a financial assurance mechanism, in accordance with 310 CMR 19.051, for the costs of decommissioning and site restoration activities.
24. The solar project layout design as proposed includes a number of arrays with solar panel drip edges aligned parallel to the side slope. In the event erosion control measures described in the Storm Water Erosion Control Plan included with the Application do not fully control erosion of the Landfill cap vegetative support layer, the Developer shall submit an updated Storm Water Erosion Control Plan to MassDEP for approval.
25. The City shall coordinate with WMDSM and the Developer to submit one combined comprehensive Third-Party Inspection Report for the entire Landfill per the schedule set forth in the Landfill's approved Post Closure Maintenance and Monitoring Plan.
26. The Developer shall submit a written landfill cover inspection report, to include an inspection of the entire landfill cover, to MassDEP for each mowing event during the first two years following completion of construction of the PV Facility. The landfill cover inspection report shall include, without limitation, all location(s) where landfill cover requires repair, the method(s) of repair, and the timeline to implement the repair(s).

**NOTICE OF RIGHT TO APPEAL**

The City of Amesbury (the “City”) and Sun Edison, LLC, hereinafter collectively referred to as the “Applicant,” is hereby notified that it may within twenty-one (21) days of the date of issuance file a request that this decision and permit be deemed a provisional decision under 310 CMR 19.033(4)(b), by submitting 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 (21) days after the MassDEP’s receipt of the request. Such a request shall reopen the administrative record, and the MassDEP may rescind, supplement, modify, or reaffirm its decision. Failure by the Applicant to exercise the right provided in this section shall constitute a waiver of the Applicant’s right to appeal.

**Appeal.** Any person aggrieved by the issuance of this decision may file an appeal for judicial review of said decision in accordance with the provisions of M.G.L. c. 111, s. 150A, and M.G.L. c. 30A, not later than thirty (30) days following the date of issuance of the final decision. The standing of a person to file an appeal and the procedures for filing such 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 decision by a court of competent jurisdiction, the decision shall remain effective.

**Notice of Action.** Any aggrieved person intending to appeal this decision to the Superior Court shall first provide notice to the MassDEP of their intention to commence such action. Said notice of intention shall include the MassDEP’s file number and shall identify with particularity the issues and reasons why it is believed the decision was not proper. Such notice shall be provided to the Office of General Counsel of the MassDEP and the Regional Director for the regional office which processed the application at least five (5) days prior to the filing of an appeal. The appropriate addresses to which to send such notices are:

General Counsel  
Massachusetts Department of Environmental Protection  
One Winter Street – 3<sup>rd</sup> Floor  
Boston, MA 02108

Eric Worrall, Regional Director  
Massachusetts Department of Environmental Protection  
Northeast Regional Office  
205B Lowell Street  
Wilmington, MA 01887

No allegation shall be made in any judicial appeal of this decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in those regulations, 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.

Should you have any questions relative to this approval, please contact Roger Moeller at (978) 694-3306 or Richard Spieler at (978) 694-3317.

Sincerely,

Sincerely,



for

Roger K. Moeller  
Environmental Engineer  
Solid Waste Management

Mark G. Fairbrother  
Section Chief  
Solid Waste Management

MGF/RKM/rkm

Attachment: Application Review Fact Sheet (Attachment 1).

Enclosure: Communication for Non-English Speaking Parties

cc:

Amesbury Board of Health  
City of Amesbury  
9 School Street  
Amesbury, MA 01913

Sun Edison, LLC  
179 Lincoln Street, Suite 500  
Boston, MA 02111

ecc:

Robert Jackson, PE  
TRC Environmental, Inc.  
Email: [RJackson@trcsolutions.com](mailto:RJackson@trcsolutions.com)

Mark Devine  
Waste Management Disposal Services of Massachusetts, Inc.  
Email: [mdevine@wm.com](mailto:mdevine@wm.com)

Susan Ruch, Deputy Regional Director  
MassDEP-NERO, Bureau of Air and Waste

Richard Spieler  
MassDEP-NERO/BAW, Solid Waste Management

# **ATTACHMENT 1**

**Application Review Fact Sheet**

**Transmittal Number: X269745**

**September 26, 2016**

**Fact Sheet**  
**AMESBURY – Titcomb Pit Landfill**  
**BWP SW36/Post-Closure Use, Major**  
**Solar Power Generating Facility**

**Transmittal Number: X269745**

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**Facility Identification**

facility: Titcomb Pit Landfill  
a/k/a Amesbury Landfill  
address: South Hunt Road and State Route 150  
Amesbury, Massachusetts

operator: Waste Management Disposal Services of Massachusetts, Inc.<sup>1</sup>  
address: 4 Liberty Lane West  
Hampton, New Hampshire 03842  
contact: Mark DeVine, Project Manager

property owner: City of Amesbury  
address: City Hall  
62 Friend Street  
Amesbury, Massachusetts 01913  
contact: Joseph Fahey

Facility Number: 314100  
Regulated Object Number: 314101  
SWM ID Number: SL0007.002  
Permit Number: none

type of facility: closed municipal solid waste (MSW) landfill

location:

Latitude/Longitude: 42° 50' 15" north 70° 56' 15" west  
UTM: 4,744,320 mN 341,550 mE Zone 19  
MSPCS: 954,250 mN 245,988 mE NAD83 Mainland Zone

size of site: total area: 17.9 acres  
landfill: 14.5 acres

**Current Application**

type: Post-Closure Use, Major (BWP SW36)  
transmittal number: X269745  
date: March 22, 2016  
supplemental information: August 8, 2016

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<sup>1</sup> Waste Management Disposal Services of Massachusetts, Inc. (WMDSM) acquired the landfill in 1984 from SCA Disposal Services of New England, Inc. (SCA). In 2012, the property on which the landfill is located was acquired by the City of Amesbury. See additional discussion on page 3 of this fact sheet.

**Fact Sheet**  
**AMESBURY – Titcomb Pit Landfill**  
**BWP SW36/Post-Closure Use, Major**  
**Solar Power Generating Facility**

**Transmittal Number: X269745**

**Page 2 of 5**

engineer of record:

TRC Environmental, Inc.  
650 Suffolk Street  
Lowell, Massachusetts 01854  
Robert E. Jackson, P.E.

Prior submissions relevant to this application:

Plan:

Revised Post-Closure Monitoring and Maintenance Plan  
Transmittal Number: X268177  
Titcomb Pit Landfill, Hunt Road  
Amesbury, Massachusetts  
Approved: April 13, 2015  
Revised: December 1, 2015

Report:

Installation of Gas Migration Cut-off Vents  
Transmittal Number: X268177  
Former Titcomb Pit Landfill  
Amesbury, Massachusetts  
November 9, 2015

Report:

Landfill Gas System Evaluation  
Former Titcomb Pit Landfill  
Amesbury, Massachusetts  
July 16, 2015

Report:

Evaluation of Enhanced Anchor Trench  
Former Titcomb Pit Landfill  
Amesbury, Massachusetts  
June 5, 2014

Report:

Construction Quality Assurance (CQA) Final Report  
REV-1  
Revised Corrective Action Design Landfill Closure – Phase II  
Transmittal Number: X254202  
Former Titcomb Pit Landfill  
Amesbury, Massachusetts  
June 2013  
Approved: July 26, 2013

Drawing by Dana F. Perkins, Inc., Tewksbury, Massachusetts:

As-Built Plan of Land  
Titcomb Pit Landfill  
Amesbury, Massachusetts  
January 9, 2013; Revised June 4, 2013

Plan:

Revised Corrective Action Design  
Landfill Closure  
Transmittal Number: X254202  
Titcomb Pit Landfill  
Amesbury, MA  
As-Built Corrective Action Design  
July 2013

## **Discussion**

The Titcomb Pit Landfill site is located at (southwest of) the junction of South Hunt Road (a/k/a Hunt Road) and Pond View Avenue (State Route 150) in Amesbury, Massachusetts. The site is abutted (in part) by South Hunt Road on the north, South Martin Road (a/k/a Martin Road South) on the southwest and Pond View Avenue on the northeast. The site is abutted on the south by an automobile salvage (junk) yard. Residential properties abut the site at the northwesterly and the southerly corners of the site.

The landfill was established in 1971, pursuant to a leasehold interest, by SCA Disposal Services of New England, Inc. (SCA). Prior to 1971 the site was a sand/gravel pit. Waste disposal operations ceased in 1979. In 1984 the landfill, including leasehold interest to the property, was acquired by Waste Management Disposal Services of Massachusetts, Inc. (WMDSM)<sup>2</sup> as part of Waste Management Inc.'s (WM) acquisition of SCA. In 2012, the property on which the landfill is located was acquired by the City of Amesbury from the Yankee Trader Trust.

Phase I of landfill closure activities involved accepting and landfilling grading and shaping material to provide 5 percent slopes east of the landfill peak and 3 percent slopes west of the landfill peak. Phase I of grading and shaping was substantially completed on February 24, 2012.

Phase II landfill closure activities included installation of the landfill cap system that included an enhanced anchor trench just outside the limits of waste located along Martin Road, twenty-eight (28) passive landfill gas vents within the landfill footprint, and a passive landfill gas vent trench in waste. Landfill gas vents located adjacent to the out-of-waste passive trench were designed

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<sup>2</sup> Waste Management Disposal Services of Massachusetts, Inc. (WMDSM) is a wholly owned subsidiary of Waste Management Inc. (WM), collectively and individually known hereinafter as "Waste Management" (WM).

**AMESBURY – Titcomb Pit Landfill  
BWP SW36/Post-Closure Use, Major  
Solar Power Generating Facility**

for active landfill gas extraction in the event the out-of-waste passive trench did not sufficiently control subsurface landfill gas migration along the length of the trench.

Installation of the landfill cap system consisted of, from top to bottom, an eight-inch vegetative support layer, a twelve-inch stormwater drainage layer, 40-mil high density polyethylene (HDPE) membrane barrier, and a six inch landfill gas vent layer. On July 26, 2013, MassDEP approved the landfill closure certification report.

The stormwater drainage layer included installation of one-inch thick by twelve-inch wide drain panels of various lengths that connect to one of two HDPE drainage header pipes that facilitate stormwater flow from the drainage layer to onsite stormwater management structures. An onsite storm water detention basin discharges to an existing swale (on abutting property owned by the City of Amesbury), and then to the existing stormwater drain at the junction of Pond View Avenue and South Hunt Road.

The June 5, 2014 letter report prepared by Geosyntec (Enhanced Anchor Trench Evaluation) concluded the enhanced anchor trench installed along Martin Road has successfully controlled landfill gas migration that was historically detected at gas monitoring wells GMW-1S/1D through GMW-5S/5D, GMW-12S/12D, and GMW-13 through GMW-15.

The November 9, 2015 letter report prepared by Geosyntec (Installation of Gas Migration Cut-off Vents) proposes to install soil gas vents in two phases, with the second phase optional, to address landfill gas migration detected at gas monitoring wells GMW-6 and GMW-7. On November 23 and 24, 2015, phase one was installed that included three soil gas vents to address landfill gas migration detected at gas monitoring well GMW-6. If landfill gas migration is continued to be detected as methane above 25% of the lower explosive limit (LEL) at GMW-6 or GMW-7 during the three consecutive monitoring events in 2016, the phase two gas vents, three in total, will be installed by December 2016.

Intermittent detections of landfill gas migration, with methane concentrations above 25% LEL, have been detected at GMW-9 and GMW-10 in 2016.

On April 13, 2015, MassDEP approved a revised Environmental Monitoring Plan (EMP) for the landfill that was prepared by Geosyntec, on behalf of WM. The revised EMP was updated on December 1, 2015.

**Proposed Project**

The current application proposes the installation of a 2.8 megawatt (MW) solar photovoltaic power generating facility ("PV Facility") on a 14.4-acre portion of the approximately 14.5-acre Landfill. The application includes design plans for the solar array and an engineer's report describing and supporting the design of the facility.

The City will enter into a lease and energy purchase arrangement with Sun Edison, LLC of Boston, MA (the "Developer") for the installation and operation of the PV Facility.

The proposed PV Facility will consist of approximately 9,864 solar modules. The solar modules will be supported by galvanized steel and aluminum brackets mounted on precast concrete foundation ballasts. The ballast will stabilize the brackets and panels from sliding on the landfill cap and uplift from wind. The system will be connected to the National Grid electric utility grid. A permanent access road will also be installed on top of the landfill cap to allow vehicle access to the solar arrays for inspection and maintenance services. A construction laydown area with temporary access driveway will be located immediately southeast of the landfill on City owned property.

The design and layout of the solar modules will allow for the continued environmental monitoring at the site. The plans submitted with the application typically show the set-back between the solar arrays and existing landfill gas vents greater than 10 feet. Routine maintenance of the landfill cap will continue to be needed, including, without limitation, periodic mowing to prevent growth of vegetation with root systems that could be detrimental to the cap, and to prevent erosion of the cap.

The Developer will be responsible for the mowing and maintenance of the vegetative cover of the landfill within the solar project fenced area of the facility following installation of the PV Facility. Pursuant to the existing environmental monitoring plan, last revised on December 1, 2015, WMDSM continues to be responsible for the ongoing maintenance and environmental monitoring of the landfill.