



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

DEVAL L. PATRICK
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July 29, 2014

Richard P. Merson, Director
Town of Needham
Department of Public Works
470 Dedham Avenue
Needham, MA 02492

RE: NEEDHAM – Solid Waste/COR
Needham Landfill
FMF# 39532
Post Closure Use – Solar Power Generating Facility
Approval and Authorization to Construct
Transmittal Number: X259506

Dear Mr. Merson:

The Massachusetts Department of Environmental Protection, Northeast Regional Office, Bureau of Waste Prevention, Solid Waste Management Section (MassDEP) has reviewed the application by the Town of Needham (the “Town”) for the post closure use of the former Needham Sanitary Landfill at 1421 Central Avenue, Needham, Massachusetts (the “sanitary landfill”). The application (BWPSW36, Post Closure Use – Major, Transmittal Number X259506) was prepared on behalf of the Town by Weston & Sampson, Peabody, Massachusetts.

The application proposes the installation of a 3.7 megawatt (MW) solar photovoltaic power generating facility (“solar facility”) on the sanitary landfill. The Town has entered a contract with Needham Solar I, LLC for the installation and operation of the solar facility.

The proposed solar facility will consist of approximately 11,970 solar modules attached to aluminum supports. Two (2) inverters will convert the DC power from the modules to AC power for connection to the NStar electric power grid at Central Avenue.

The solar modules will be supported by a “Solstice” ballasted mounting system consisting of steel trays, placed directly on the ground surface, connected directly to the solar panels. Concrete blocks will

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be placed on the trays to stabilize the panels from sliding and wind uplift. The sanitary landfill surface will be prepared by covering the area with a four (4) to five (5) inch layer of crushed stone.

The electric conduit between the inverters/transformers and the NStar connection will be placed above ground within the limits of the sanitary landfill's cap. Thereafter, the conduit will transition to an underground conduit to near Central Avenue. At Central Avenue the wire will transition to above ground on utility poles for the connection to the NStar grid.

Prior to establishing the sanitary landfill, the Town of Needham operated a "burn dump" landfill (the "burn dump") at the site. The underground portion of the conduit will cross the "burn dump". The solar facility design plans do not include details for construction within the former burn dump.

The application includes a Health and Safety Plan (HASP) for the operation and maintenance of the project. MassDEP observes the HASP does not explicitly pertain to construction of the solar facility, provide for training of non-supervisory staff, or provide protocols for measuring of methane or other hazardous constituents of landfill gas.

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 facility as proposed and approved by this decision:

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

Therefore, except as noted below (see Conditions 4 and 5), 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 Town'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*.

Permit Conditions

1. The Town and Needham Solar I, LLC 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*.

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2. The Town and Needham Solar I, LLC shall assure persons conducting activities¹ at the solar 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. Pursuant to 310 CMR 19.043(5)(a) *Duty to Comply*, this decision does not relieve the Town and Needham Solar I, LLC, or others, from their obligations 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.
4. This approval does not constitute approval to construct the electrical conduit between the edge of the sanitary landfill cap and Central Avenue (i.e. within the former burn dump). Prior to construction of the conduit between the edge of the sanitary landfill cap and Central Avenue the Town shall submit design plans (subject application category BWPSW45, *Any Facility – Alternate Review*) for said work. The plans shall include detailed description of the subsurface conditions (including, but not limited to, limits of waste) and the proposed construction. This approval shall constitute approval to disturb waste in the former burn dump as necessary to conduct necessary investigation of the subsurface conditions.
5. Not less than seven (7) days prior to commencing construction pursuant to the application and this permit, the Town 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 and the solar facility;
 - b. The name and contact information of an on-site contact for the construction;
 - c. A revised 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; and
 - 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.
6. The Town and Needham Solar I, LLC shall not commence construction of the solar facility until it has provided the plans and notification to MassDEP and the Town of Needham Board of Health pursuant to Condition 5 above.
7. 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.

¹ Activities include, but are not limited to, the construction, installation, operation, and maintenance of the solar facility and the landfill.

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8. The Town, Needham Solar I, LLC, and the appertaining 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 solar facility and during its decommissioning.
9. All disturbance of the landfill shall be limited to the proposed excavations and installations as depicted and described in the application and the approved plans and this permit. Needham Solar I, LLC 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 layer (FML) of the landfill cap.
10. If the FML of the cap is damaged the Town 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 the incident. 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.
11. The Town and Needham Solar I, LLC 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 solar facility.
12. 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.
13. Notice of the landfill located on this site, including this approval, shall be recorded in the applicable Registry of Deeds and/or the Registry Section of the Land, as appropriate, pursuant to the requirements of M.G.L. Chapter 111, § 150A and 310 CMR 19.141.
14. Prior to commencing operation of the solar facility, and in no event on or before ninety (90) days after the date of completion of the construction of the solar facility, the Town 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 solar 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 solar facility; and
 - c. Certifications by the Town and the Engineer of Record pursuant to 310 CMR 19.011.
15. On or before thirty (30) days after the date the solar facility ceases operation, the Town shall submit to MassDEP an application pursuant to 310 CMR 4.00 and 310 CMR 19.000 for the decommissioning of the solar facility and the restoration of the sanitary landfill cap and appurtenances thereto. The application shall include, but not be limited to, a narrative, plans and

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schedule for the decommissioning of the solar facility and the restoration of the sanitary landfill's cap and appurtenances²

16. MassDEP reserves the right to amend, modify, suspend or revoke this permit pursuant to 310 CMR 19.040 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.
17. This permit is effective on the date signed by MassDEP below, except as provided by the Notice of Appeal Rights below and 310 CMR 19.037(4)(b).
18. This permit shall expire on December 31, 2034, provided that MassDEP may amend the term of the permit in accordance with a modification pursuant to 310 CMR 19.039 or 310 CMR 19.040. The Town shall submit to MassDEP on or before August 30, 2034 either an application to renew the permit or notice of its intent to close the solar facility. Wherein the Town elects to close the facility, the Town shall submit an application for the decommissioning of the solar facility and the restoration of the sanitary landfill cap and appurtenances thereto pursuant to paragraph 14, above.
19. The Town and Needham Solar I, LLC shall not deviate from this permit and the approved design plans. The Town 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 Town 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 Town shall submit such application to the MassDEP in accordance with the schedule specified by MassDEP.
20. The Town shall continue to perform post-closure activities at the landfill pursuant to 310 CMR 19.142 *Landfill Post-closure Requirements* including, but not limited to, maintenance of the sanitary landfill's cap to prevent growth of vegetation with root systems that could be detrimental to the cap, and to prevent erosion of the cap.

RIGHT OF APPEAL

The Town of Needham (the "Town") is hereby notified that it may within twenty-one (21) days file a request that this decision be deemed a provisional decision under 310 CMR 19.033(4)(b), by submitting a written statement of the basis on which the Town 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 Department's receipt of the request. Such a request shall reopen the administrative record, and the Department may rescind, supplement, modify, or reaffirm its decision. Failure by the Town

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

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to exercise the right provided in this section shall constitute a waiver of the Town's right to appeal.

Appeal. Any person aggrieved by the issuance of this 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. c. 111, s. 150A, and M.G.L. c. 30A, not later than thirty (30) days following the receipt 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 Department of their intention to commence such action. Said notice of intention shall include the Department 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 Department and the Regional Director for the regional office which processed the application. The appropriate addresses to which to send such notices are:

General Counsel
Department of Environmental Protection
One Winter Street - 3rd Floor
Boston, MA 02108

Eric Worrall
Regional Director
Department of Environmental Protection
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.

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Should you have any questions relative to this application, please contact David Adams at phone number 978-694-3295.

Sincerely,

Sincerely,

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.

DCA
David C. Adams
Environmental Engineer
Solid Waste Management

JAC
John A. Carrigan
Section Chief
Solid Waste Management

JAC/DCA/dca

Enclosure: Fact Sheet

Cc:

Needham Board of Health
1471 Highland Avenue
Needham, MA 02492

Michael J. Scipione
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5 Centennial Drive
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