

Inspection Report for North Sturbridge Road Solar Facility

NPDES ID No.: MAR10031G

Inspection Date: 08/23/2021

General Information					
Weather conditions during inspection	72* F, Overcast, Intermittent Showers	Inspection start time	9:15 AM	Inspection end time	9:55 AM
Inspector Name, Title & Contact Information	Jonathan Niro, Environmental Scientist (BETA Group, Inc.) jniro@beta-inc.com (774)-573-9694				
Present Phase of Construction	Phase 1. NOTE: The access road and stabilized construction entrance has been established pursuant to the Phase 1 scope of work. However, the entirety of the Site has been cleared of trees. No grubbing/stumping has occurred other than that required to establish the Site access road.				
Inspection Location	North Sturbridge Road Solar Facility – Entirety of Site (0 North Sturbridge Road, Charlton, MA 01507)				
Inspection Frequency <i>(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply)</i>					
Standard Frequency:					
<input type="checkbox"/> Every 7 days					
<input checked="" type="checkbox"/> Every 14 days and within 24 hours of a 0.25" rain or the occurrence of runoff from snowmelt sufficient to cause a discharge					
Increased Frequency:					
<input type="checkbox"/> Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)					
Reduced Frequency:					
<input type="checkbox"/> Twice during first month, no more than 14 calendar days apart; then once per month after first month; (for stabilized areas)					
<input type="checkbox"/> Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (for stabilized areas on "linear construction sites")					
<input type="checkbox"/> Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)					
<input type="checkbox"/> Once per month (for frozen conditions where earth-disturbing activities are being conducted)					
Was this inspection triggered by a 0.25" storm event? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
If yes, how did you determined whether a 0.25" storm event has occurred?					
<input type="checkbox"/> Rain gauge on site <input checked="" type="checkbox"/> Weather station representative of site. Specify weather station source: Worcester Regional Airport					
Total rainfall amount that triggered the inspection (inches): 0.92"					
Was this inspection triggered by the occurrence of runoff from snowmelt sufficient to cause a discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.1.5? Yes No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location: **N/A**
- Location where conditions were found: **N/A**

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2)

Type/Location of E&S Control	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1. Silt Fence and Straw Wattles	Yes	No	7/22/2021	<p>During the 7/22/2021 inspection, an erosion control breach was observed along the northern erosion control line, at the western corner of Phase 1 (Discharge 1). No sediment was discharged to a Water of the U.S. BETA recommended the maintenance of the siltation fencing as well as the installation of a supplemental 18" compost filter tube. A straw wattle was reinstalled, and the siltation fencing was not properly entrenched for a stretch of approximately 10'.</p> <p>The siltation fence remains improperly installed and requires maintenance to ensure efficacy of the erosion control measure. Evidence of concentrated stormwater runoff leaving the Site under this siltation fencing (i.e. channelization) was observed during this Site inspection. Evidence of leaf litter scour likely associated with this discharge was observed along the boundary of the downgradient Vegetated Wetland.</p>
			8/23/2021	<p>An additional breach was observed along the northerly limits of work during this Site inspection (Discharge 2). Stormwater runoff has undercut an approximately 10-foot-long stretch of siltation fencing. The siltation fencing should be entrenched. If underlying stones prevent this from occurring, then the limit of work at this location should be protected with supplemental erosion controls, which could include installing two (2) rows of compost filters tubes at least 12 inches in diameter.</p>
2. Stabilized Construction Entrance (Site Entrance – Access Road)	Yes	No	8/23/2021	<p>Exposed soils are present at the western side of the stabilized construction entrance and have begun to erode. Exposed soils around the construction entrance should be stabilized. This can be</p>

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<p>3. Stump and Soil Stockpile Area</p>	<p>No</p>	<p>No</p>		<p>completed through application of seed or placement of additional crushed stone to ensure that vehicle access does not cause erosion.</p> <p>Hydroseed was applied to exposed soil in this area and continues to germinate.</p>
<p>4. Dust Controls</p>	<p>N/A</p>	<p>N/A</p>		
<p>5. Jute Mesh (Steep Slopes)</p>	<p>N/A</p>	<p>N/A</p>		
<p>6. Temporary Seeding</p>	<p>Yes</p>	<p>No</p>	<p>7/22/2021</p>	<p>Hydroseed has been applied to the earthen access road and hand-application of seed was performed within the area beyond the limit of work that was subjected to a stormwater discharge. Germination was observed within areas of disturbed soils within the limits of work; however, little to no germination was observed within the disturbed area downgradient of the limit of work. Additional seed should be hand-applied in this area.</p>
<p>7. Topsoil Re-Use</p>	<p>N/A</p>	<p>N/A</p>		
<p>8. Storm Drain Inlets (North Brookfield Road)</p>	<p>N/A</p>	<p>N/A</p>		
<p>9. Temporary Drainage Swales (Throughout Site)</p>	<p>N/A</p>	<p>N/A</p>		
<p>10. Temporary Sediment Basins (Throughout Site)</p>	<p>N/A</p>	<p>N/A</p>		

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3)				
Type/Location of P2 Practices [insert additional rows if applicable]	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1. Equipment Refueling Staging Area	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
2. Hydraulic Lines Staging/Work Areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
3. Equipment Maintenance Staging Area	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
4. Sanitary Toilets Staging Area	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
5. Vehicle Accident Entire Site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
6. Dumpsters Staging Area	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
7. Solar Panel Installation Staging/Work Areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	
8. Concrete Washout	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	[Enter date]	

* **Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. See Part 5 of the permit for more information.

Stabilization of Exposed Soil (CGP Part 2.2.14)

Stabilization Area [insert additional rows if applicable]	Stabilization Method	Have You Initiated Stabilization?	Notes
1. Earthen access road leading to stockpile area	Straw mulch or hydroseed	<input checked="" type="checkbox"/> Yes 7/30/2021 <input type="checkbox"/> No	The stockpile area and associated access road have been hydroseeded. Germination has begun and the area will be monitored for successful establishment.
2. Informal access road along northern portion of the Site	Straw mulch or hydroseed	<input type="checkbox"/> Yes [Enter date] <input checked="" type="checkbox"/> No	The informal access road along the northern portion of the Site requires stabilization if there is a cessation of work at the Site. Erosion channels are beginning to form within upgradient portions of this access road. The contractor indicated that stabilization by smoothing out soils and seeding or spreading mulch would occur on 7/30/2021. Stabilization of this area has not been initiated. This channelization of runoff likely contributed to the additional erosion control breach observed during this Site inspection.
3. Area beyond the limits of work at the former erosion control maintenance area	Hand application of seed	<input checked="" type="checkbox"/> Yes 7/30/2021 <input type="checkbox"/> No	The sediment deposit previously observed has been removed from beyond the limits of work and the area has been seeded. No sediment migrated within 50 feet of a "water of the US". Additional seed should be hand-applied to this area due to lack of germination observed during the inspection, as well as the ongoing scour due to ineffective erosion control measures.
4. Area beyond limits of work at newly discovered erosion control breach	Hand application of seed	<input type="checkbox"/> Yes [Enter date] <input checked="" type="checkbox"/> No	Scour beyond the limits of work resulting from runoff undercutting siltation fencing should be raked out by hand and seeded.

Description of Discharges (CGP Part 4.6.6)

Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? Yes No

If "yes", provide the following information for each point of discharge:

Discharge Location (As referenced on attached markup)	Observations
<p>1. Southwest of the timber mat entrance road, at the location of the former erosion control breach (Discharge 1)</p> <p>2. Along the northern limits of work, west of the aforementioned breach (Discharge 2)</p>	<p>Describe the discharge:</p> <p>Evidence of stormwater discharge leaving the Site (i.e. channelization) was observed downgradient of the limits of work due to the improper repair of siltation fencing. Although an erosion channel has begun to form, no sediment discharge was observed. As of the 8/23/2021 Site inspection, leaf litter scour was observed close to the boundary of the downgradient Vegetated Wetland.</p> <p>Evidence of stormwater discharge leaving the Site (i.e. channelization) was observed downgradient of the limits of work due to runoff undercutting the siltation fencing. Scour was observed approximately 100 feet upgradient of a Vegetated Wetland.</p> <p>At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue: Discharge 1 resulted in channelization due to concentrated stormwater runoff downgradient of the limits of work at the location of an erosion control breach. A modification of the proposed erosion control measures is recommended to address both the proper repair of the siltation fencing and the implementation of BMPs upgradient of the area to attenuate stormwater flows that appear to concentrate with two (2) discrete flow paths (i.e. installation of mulch berms).</p> <p>The newly discovered erosion control breach associated with discharge 2 should be addressed by raking and hand-seeding the area of scour, and by entrenching the siltation fencing. If entrenching the siltation fencing is not possible due to stony soils, then this portion of the limits of work should be protected with two (2) rows of compost filter tubes with a diameter of at least 12 inches.</p>

Contractor or Subcontractor Signature and Certification


"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ Date: _____

Printed Name and Affiliation: _____

Operator Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____  _____ Date: 8/23/2021

Printed Name and Affiliation: Jonathan Niro (BETA Group, Inc.) _____

Photo 1



View of exposed soils along the west side of the stabilized construction entrance—facing west.

Photo 2



View of scour associated with the exposed soils at the construction entrance; this scour is confined to the limits of work—facing southwest.

PHOTOGRAPHIC DOCUMENTATION

North Sturbridge Road Solar Facility

Charlton, Massachusetts

Photographs Documented 08.23.2021

Photo 3



View of the earthen access road—facing south.

Photo 4



View of runoff undercutting the siltation fencing at the area of erosion controls that required maintenance as identified on 7/22/2021 - facing southwest.

PHOTOGRAPHIC DOCUMENTATION

North Sturbridge Road Solar Facility

Charlton, Massachusetts

Photographs Documented 08.23.2021

Photo 5



View of scour forming upgradient of the off-site Vegetated Wetland—facing east.

Photo 6



View of erosion channels at the location of the informal access path along the northern limits of work—facing northwest.

PHOTOGRAPHIC DOCUMENTATION

North Sturbridge Road Solar Facility

Charlton, Massachusetts

Photographs Documented 08.23.2021

Photo 7



View of ponding associated with the runoff flowing down the access path depicted in Photo 6—facing northwest.

Photo 8



View of scour beyond the northern limits of work resulting from runoff undercutting the siltation fencing (Discharge 2)—facing north.

PHOTOGRAPHIC DOCUMENTATION

North Sturbridge Road Solar Facility

Charlton, Massachusetts

Photographs Documented 08.23.2021