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April 24, 2018

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Petition No. 1178 – Fusion Solar Center, LLC – Environmental Monitoring Daily Site Observation Form – Report No. 16**

Dear Ms. Bachman:

Enclosed are fifteen (15) copies of the Environmental Monitoring Daily Site Observation Form – Report No. 16 for the Fusion Solar Center facility in Sprague, Connecticut. If you have any questions regarding the information contained in this report please do not hesitate to contact Matt Gustafson or me.

Sincerely,



Kenneth C. Baldwin

KCB/kmd
Enclosures
Copy to:

Michael Perrone, Siting Analyst
Timothy Bates
Lance Weinkamer (*via electronic mail*)
Kevin Wilmot (*via electronic mail*)
Nick Detelich (*via electronic mail*)
Will Porter (*via electronic mail*)

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Melanie A. Bachman, Esq.

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Dean Gustafson (*via electronic mail*)

Matthew Gustafson (*via electronic mail*)

Deb Leonardo (*via electronic mail*)

Bradley J. Parsons (*via electronic mail*)

Matt Davison (*via electronic mail*)

Mike Libertine (*via electronic mail*)

Ellen Gustafson (*via electronic mail*)

Robert S. Melvin, Esq. (*via electronic mail*)



ENVIRONMENTAL MONITORING
DAILY SITE OBSERVATION FORM

Report No. 16

Project: DEPCOM Power, Fusion Solar Center
Address: Potash Hill Road, Sprague, Connecticut

APT Project #: CT511100

Date of Inspection: 4/13/2018	Weather: sunny, mid 60's
Time of Inspection: 1:00 PM	Latest Precipitation Event > 1/4" (NOAA): 0.25" on 4/7/18
Compliance Monitor:	Matthew Gustafson, Wetland Scientist

Regulatory Compliance Permitting Agency & Permit ID:	
CT Siting Council <input checked="" type="checkbox"/> Petition No. 1178, dated September 22, 2015	
CTDEEP NDDB <input checked="" type="checkbox"/> 201504279, dated January 28, 2016	
Resource Protection Program:	
Rare Species	<input checked="" type="checkbox"/> Species Name: wood turtle, bobolink, breeding birds & Wildlife Enhancement
Wetland	<input checked="" type="checkbox"/>
Vernal Pool	<input checked="" type="checkbox"/>
Workers Environmental Awareness Program Training Completed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Date of Training: 2/15/17	
Signage Installed Date: 2/3/2017	
Compliance Species Observed During Inspection: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Species Name: N/A	
# Species: N/A	
Progress of Construction:	
Pre-Construction	<input type="checkbox"/>
Initial Exclusion Fencing Inspection	<input type="checkbox"/>
Clearing & Grubbing	<input type="checkbox"/>
Intermediate	<input checked="" type="checkbox"/>
Final Inspection	<input type="checkbox"/>

DESCRIPTION OF OBSERVED ACTIVITY	
Compliance Level:	
Communication	<input type="checkbox"/>
Acceptable	<input type="checkbox"/>
Problem Area	<input checked="" type="checkbox"/>
	<input type="checkbox"/> Minor exclusion fencing repair required <input checked="" type="checkbox"/> Additional exclusion fencing required <input type="checkbox"/> Additional sedimentation & erosion control measure required <input type="checkbox"/> Sediment release into upland habitat without risk of resource impact <input type="checkbox"/> Silt laden water release into upland habitat without risk of resource impact <input type="checkbox"/> Soil stabilization required <input type="checkbox"/> Brush/logs in wetlands
Non-Compliance	<input type="checkbox"/>
	<input type="checkbox"/> Sediment release into upland habitat with risk of resource impact <input type="checkbox"/> Sediment release into wetland habitat <input type="checkbox"/> Sediment release into watercourse
Issues Requiring Corrective Action ("CA")	Corrective Action Implemented
Corrective Action #1 - Brush/logs in wetlands in southeast portion of property.	1/20/17
Corrective Action #2 – Eastern project limits of installed silt fence had 4 breaches (small holes) identified and flagged with orange tape.	2/14/17
Corrective Action #3 – Southern portion of silt fence needs 3 CA; one breach (small hole), one 10-foot section needs to be trenched in and corner near construction road needs repair – 10' section collapsed.	2/14/17
Corrective Action #4 – numerous areas of silt fence have separated from staking or ripped resulting in sagging and disconnected silt fencing needing repair. These tears in the silt fence have also resulting in two gaps/holes (3/7/17 additional areas were identified, and repairs were started during the inspection).	4/3/17
Corrective Action #5 – Several areas where wood chip backing to silt fence is pushed up to the top of the silt fence. Wood chips need to be pushed away from silt fence to not allow herpetofauna migration into work zone.	3/7/17
Corrective Action #6 – one area of insufficient silt fence height due to sagging.	3/7/17
Corrective Action #7 – numerous areas of silt fence have separated from staking or ripped resulting in sagging and disconnected silt fencing needing repair. (4/3 previous areas fixed CA #4 – new areas have been identified as of this inspection date).	5/15/17

Corrective Action #8 – One area identified where gaps in silt fence formed underneath due to focused erosion from stormwater flows. Small sediment release in uplands with little risk of migration off-site or into wetlands.	Original areas repaired by 5/15/17
Corrective Action #9 – SB-2 and SB-3 not retaining volume due to low flow outlet pipe not closing, blocked entry to temporarily allow for basin to fill up and outlet via armored outlet or skimmer outfall.	5/15/17
Corrective Action #10 – add new armored swale in southwest project corner to protect outlet flows from SB-3, add check dams to all problem drainage/diversion channels (maintain after each rain storm).	5/15/17
Corrective Action #11 – silt fence in several areas needs to be repaired, cleaned or stakes replaced.	All repairs noted previously on 5/15/17 completed by 7/7/17. No additional areas noted (beyond those identified in CA #12)
Corrective Action #12 – three areas identified where high-water volumes have knocked over silt fence and resulted in large accumulation of sediment in front of the silt fencing. Consider cleaning out any sediment build-up in front of these silt fence locations, repair silt fence, and reinforce as needed. Erosion paths noted at one location, suggest altering this flow path.	Silt build-up has been cleaned from in front of silt fencing, silt fencing reinforced/repaired where needed. Completed 8/24/17
Corrective Action #13 – Several areas noted where silt fence has separated from staking, split, and/or been knocked over during the recent rain events.	Completed in 2017
Corrective Action #14 – Discharge from SB-1 and ST-15 has resulted in turbid water leaving the site and entering onsite wetlands/vernal pool. While this discharge did not result in an impairment to these resources, contributing watersheds to SB-1 and ST-15 should be temporarily stabilized and interim protection measures should be put in place to reduce the risk of futures turbid water release in this location.	Completed in 2017
All gaps in the silt fence along the eastern end of the site should be closed up to prevent herpetofauna migration into the work zones.	
Project Modification Requested:	
Extra work space requested	<input type="checkbox"/>
Change to work area	<input type="checkbox"/>
Change to stormwater feature	<input type="checkbox"/>
Description of Modification: N/A	

Notes:

1/17/17 – construction entrance road with anti-tracking pad installed; land clearing activities 50-60% complete; initial grubbing started in southeast end of project in preparation of silt fence installation (to begin 1/18/17); minor brush pile with logs placed in wetlands in southeast portion of property by property owner - materials properly removed by DEPCOM Power on 1/20/17.

2/3/2017 - A majority of the project area has been cleared. A small patch in the northern end of the project remains to be cleared. Silt fence has been installed in most of the project limits minus the northern limits of the project.

2/14/17 – Received notification from Victor Menor, DEPCOM, that corrective actions #2 and #3 were made prior to heavy snow storm on February 9, 2017; APT will verify areas during next inspection.

3/3/17 – APT discussed CA #4, 5 & 6 with Chance Combs, DEPCOM. Mr. Combs indicated to APT that corrective actions were already scheduled for the western side of the project on Friday (3/3) afternoon and all corrective actions would be completed on Monday (3/6). Tree clearing activities have been completed for the entire project. Temporary sediment traps are currently under construction.

3/7/17 – Grubbing on the project is ongoing. Temporary sediment traps and drainage swales are currently under construction. Silt fence deficiencies are currently under repair (CA#4). An on-site meeting between the Connecticut Siting Council ("CSC") staff, DEPCOM, and neighbors to the project was held to address concerns regarding the project construction. All environmental awareness posters are still intact.

4/3/17 – Neighbor (to the south) observed and reported silt laden stormwater leaving site and flowing through their property. No clear cause identified onsite during inspection due to dry site conditions. Two possible locations identified where sediment accumulation has occurred in front of perimeter controls and reviewed with DEPCOM. With the rain forecasted 4/4/17, the site will be reviewed, and additional control installation will be evaluated and implemented, as necessary.

4/4/17 – breach in diversion swale repaired, silt fence knocked over by overflow in south end of project repaired and stormwater released during 3/31 to 4/1 rain storm and again on 4/4 resulted in silt laden water released off site at two locations (one of which is a wetland/IWC and other is a southern neighbor's property). No significant release of sediment occurred in either location. Corrective actions were immediately taken on 4/3 and 4/4 to reinforce perimeter controls, drainage patterns, and basins to remedy situation. Additional temporary stormwater controls will be installed on 4/5 as identified on attached sketch map. All basins should be reevaluated to ensure they are functioning as designed, proper drainage is being received, and if they are sufficient to handle the stormwater being received. Meeting with CSC staff occurred on 4/4/17 to review recent stormwater release and remedial actions taken and to be taken by DEPCOM; Town Wetlands Agent also present at meeting.

4/10/17 – (info provided by DEPCOM via phone conversation) low flow outlets on the two basins were plugged on 4/6-4/7 (precipitation event) to improve sediment removal capabilities of the basins.

4/26/17 – Items 7 through 10 have been addressed by DEPCOM but have not yet fully resolved the existing issues of sediment laden water leaving the site (condition has improved however). Additional controls and repairs have been recommended and implemented. Permanent fencing install is currently underway and majority of grubbing/chipping of the site is complete.

5/08/17 – large release occurred Friday (5/5/17). SB-3 overtopped resulting in direct discharge of sediment laden water (large volume and velocity) to drainage swale and silt fence eventually leading off property. Impacts occurred to 2 known properties including a small pond (murky with suspended sediments) and erosion of a driveway (information provided by Nick Detelich of DEPCOM). Corrective actions were taken immediately including enlarging SB-3 by approximately two-fold and removing all sand/silt from the drainage swale. New armoring of the swale plus new reinforced perimeter controls will occur. New settling basins were installed along drainage swale (all armored with rip rap). A full EOR ("Engineer of Record") review of the temporary stormwater controls is to occur May 9, 2017 with recommendations to be implemented as soon as possible.

5/15/17 – Water observed leaving site was of lower volume/velocity with fewer suspended sediments than noted during previous inspections. All repairs from 5/8/17 were addressed with previous action items reoccurring on 5/15/17. Corrective Action #8 continues to be an issue, recommend reinforcing silt fence. All sediment basins and traps should be reevaluated to ensure they are functioning and built properly.

5/26/17 – Seed has been distributed throughout the project area to provide some surface stabilization. Water leaving site (including drainage from SB-3 outfall) has few suspended sediments. Permanent chain-link fence install is still ongoing. Sediment trap reconstruction is currently ongoing. Several areas noted where rill erosion paths are focusing water to silt fence corners. Some silt build up has occurred in these silt fence corners. These areas should be closely monitored after each rain event to remove built-up silt and make any necessary repair or reinforcements.

6/7/17 – Post driving for solar panel racking system underway. Permanent fence install ongoing. Sediment basin reconstruction is largely completed (final slope stabilization incomplete but ongoing at time of inspection). Seed has begun germinating. Additional areas where silt fence have become broken have been noted from the 5/26/17 report. Several areas where sediment has built-up should be cleared out and silt fence restored where necessary. Stormwater releases from the site noted during the referenced inspection were largely free of coarse suspended sediments. Corrective action repairs are ongoing.

7/7/17 – Diversion ditches leading to ST-7 and ST-8 have not been graded to allow free drainage into the basins. Water is diverting from the ditches around the basins. Consider re-grading inlet to allow for free drainage. All water leaving the site that was observed during the inspection is generally free of suspended sediments. Side areas of the project that have been seeded are starting to germinate with vegetation.

7/18/17 – Stabilize all areas between LOD & Solar Array limits that are at final grades. Clear out SB's, ST's and diversion ditches of accumulated sediments. Diversion ditches from ST-7 and ST-8 have been regraded to allow free drainage into basins. Outfall system from SB-3 needs repairs, sidewalls have failed at several locations.

8/24/17 – Solar PV racking is ongoing in the southern end of the site. Trenching for utilities is ongoing in the northern end of the site. Project peripheries have been stabilized with a combination of hydroseeding mixed with a bonded fiber matrix and mulched with hay. No release of sediment was noted during the site inspection. A laborer was performing silt fence repairs during the site inspection.

10/30/17 – Solar PV racking has been completed in a majority of the southern extents of the project area. Western and northern extents are still ongoing. A majority of the Project peripheries have been temporarily stabilized with a seed, tackifier, and mulching treatment. Areas within the project have also had this treatment applied. Due to recent storms, numerous silt fence areas are in disrepair. New sections of silt fence installed to repair some of these stretches have not been properly towed in yet. Recent stormwater discharges from the site have not resulted in a significant negative impact to any onsite wetland resources or do not appear to have resulted in a significant negative impact to any of the species protected under the Resource Protection Program.

4/13/18 – Site is generally temporarily stable with no releases observed. All arrays etc. are fully constructed and no more heavy machinery traffic is expected on site until the site is transitioned to permanent stabilization. Openings/gaps in the silt fence have been created on the western and eastern ends of site. The eastern end of the site, being close to vernal pool resources, should have all gaps closed to recreate the isolation barrier for the remainder of the breeding season. All gaps should be closed when heavy machinery is active again.

Enclosures: Photo Documentation



Photo 1: View of access road entrance looking north.



Photo 2: View of a typical sediment basin.



Photo 3: View of eastern edge of project area.



Photo 4: View of northwest project corner.



Photo 5: View of northwest project corner.



Photo 6: View of typical silt fence opening.



Photo 7: View of typical silt fence perimeter.