PULLMAN &COMLEY

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June 11, 2020

VIA ELECTRONIC FILING AND U.S. MAIL

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

Re: Petition No. 1347A – GRE GACRUX LLC Petition for a Declaratory Ruling, pursuant to Connecticut General Statutes § 4-176 and § 16-50k, for the proposed construction, maintenance and operation of a 16.78-megawatt AC solar photovoltaic electric generating facility in Waterford, Connecticut. Reopening of this petition based on changed circumstances

Dear Ms. Bachman:

I am enclosing the Response of GRE GACRUX, LLC to Interrogatories Propounded by the Siting Council on May 29, 2020 in the above-referenced Petition.

If you have any questions concerning this submittal, please contact the undersigned at your convenience. I certify that copies of this submittal have been submitted to the service list via electronic mail.

Sincerely,

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Lee D. Hoffman

cc: Service List

STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

GRE GACRUX LLC petition for a declaratory ruling for the proposed construction, maintenance and operation of a 16.78-megawatt AC solar photovoltaic electric generating facility in Waterford, Connecticut. Reopening of this petition based on changed conditions. Petition No. 1347A

June 11, 2020

PETITION 1347A: GRE GACRUX LLC'S RESPONSES TO THE SITING COUNCIL'S MAY 29, 2020 INTERROGATORIES TO PETITIONER

Petitioner GRE GACRUX LLC ("GRE" or "Petitioner") hereby submits the following responses to the Siting Council's May 29, 2020 Interrogatories that were directed to GRE.

32. Referring to the response to Council interrogatory #28,

- a) Was a minimum distance from the solar array to steep slopes specified by the DEEP Stormwater Division?
- b) What is considered a steep slope in relation to the project redesign?
- c) What is the approximate distance of the reconfigured solar array to steep slopes?
- d) Why was the solar array pulled back from some of the steep slopes rather than all of the steep slopes?
- e) For site regrading, how is *"to the extent practicable"* defined? Is it possible to regrade all slopes to less than 15%?

Answer:

a-No regulatory or guidance documents have been provided to the Petitioner to date prescribing a minimum distance to proposed solar panels from steep slopes.

b-CTDEEP's most current guidance and regulatory documentation does not state what shall be considered to be "steep slopes." For the purposes of Project redesign, slopes exceeding 15% were considered to be "steep slopes."

c-CTDEEP's most current guidance and regulatory documentation does not state a required or suggested clearance between a solar array and "steep slopes." For the purposes of construction and racking tolerances, the reconfigured solar array has been pulled back such that solar panels are not proposed on slopes which will exceed 15% post-construction. Although the distance between the solar array and "steep slopes" varies across the site, no prescribed minimum buffer distance is provided. It is proposed to regrade a small amount of area within the project limits which exceeds 15% slope today.

d-The Project was pulled back from steep slopes around the perimeter of the development area primarily to control for off-site erosion. The relatively-small number of slopes exceeding 15% within the development limits will be protected by stabilization measures and a system of swales and sediment traps.

e- It is proposed to regrade any significant areas exceeding 15% slope within the development limits. Relatively small areas of the development area which may exceed 15% - which would not affect construction tolerances - were not proposed to be regraded to reduce the overall amount of earthwork and potential for erosion. It is possible to regrade all slopes within the development limits to be less than 15%; however, this would increase the amount of site disturbance proposed.

33. Referring to Site Detail Sheet 6.2,

- a) Sediment Trap Cross Section and Permanent Stormwater Basin details, clarify where the geotextile fabric will be installed. Will the proposed riprap armoring be placed on top of the erosion control blankets? If so, how are these two control features compatible?
- b) Provide a side profile of the rip rap lined swales.
- c) Do any of the proposed swales have rip rap or other features to reduce water velocity? If so, at what slope/spacing interval?

Answer:

a-It is proposed to install geotextile fabric to act as a barrier between any proposed rip-rap and native soil. It is not proposed to install geotextile fabric on the basin bottom. Where rip-rap armoring is proposed on basin side slopes, the use of erosion control blankets is not required.

b-Side profiles of all proposed swales have been prepared and are included herewith.

c-The swales have been designed in accordance with documentation from the 2000 Connecticut Department of Transportation Drainage Manual and the lining material for each swale was designed to accommodate expected shear stresses and velocities. Computations for the swales are included in the Stormwater Report and proposed lining materials are included on site plan Sheet C-6.2. Accordingly, the proposed swales do not propose additional measures to reduce water velocity; however, the Petitioner is amenable to adding proposed straw wattles or stone check dams to the swales during construction to assist in the removal of sediment should the Council so choose.

34. What construction methods will be used to stabilize the temporary sediment basins to avoid potential erosion issues at the spillway and basins side slopes in the event of extreme weather events that exceed the capacity of the basins?

Answer: The sediment traps and basins are proposed to be constructed with rip-rap armoring at the swale outlets and with erosion control blankets for the remainder of the interior side slopes. In accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, each trap or basin is proposed to include a rip-rap spillway capable of safely discharging large storm events up to and including a 100-year rainfall event. As part of the Petitioner's CTDEEP Stormwater General Permit application, a qualified inspector will visit the site weekly, and after significant rainfall events, to investigate for sites of erosion.

35. Referring to the response to Council interrogatory #4 and Petition p. 10, provide a detail of the wood chip berm. Is the intent to surround the entire Project Limit with the wood chip berm, including downgradient of basin outflows that have E-Fence? Would wood chips be imported into the site, if necessary, to complete the berms?

Answer: A detail of the proposed wood chip berm is included herewith. The use of the wood chip berm is above and beyond measures proposed to meet guidelines in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. Accordingly, the Petitioner is not proposing to surround the

entire Project limits with this measure nor does it intend to import wood chips to the Site to do so. The wood chip berm will primarily be installed in areas of tree removal to act as an additional protective erosion control measure. It is not proposed to install wood chip berms downstream of the basin outflow E-fence locations.

36. Referring to GRE's response to Town of Waterford question #18, does the Petitioner intend to use the solar field as pasture for livestock with ground cover specific to grazing? Would grazing potentially preclude or compete with the establishment of pollinator ground cover habitat?

Answer: No, the Petitioner does not intend to use this project as pasture for livestock. Pasturing is not an appropriate use for this site given the characteristics of the land. For clarity on response to Town of Waterford Interrogatory #18, the Petitioner has communicated with outside groups on plant species that provide value for grazing because the external organizations can offer valuable insight in land management and because the Petitioner is considering grazing on other projects. The Petitioner cannot comment at this time on the compatibility of grazing and pollinator habitat in the same area.

37. If the solar field will not be used for grazing, would the Petitioner be willing to adhere to the UMASS CLEAN Energy Extension's Best Management Practices document to the extent practicable to establish and maintain pollinator friendly ground cover within the solar field area?

Answer: The Petitioner is willing to establish pollinator friendly habitat in the solar field area. The Petitioner is willing to incorporate as much as is reasonable of the guidelines, following the spirit of them, from the UMASS CLEAN Energy Extension's Best Management Practices document. There are some aspects, however, that do not completely apply to the proposed project site. For example, the UMASS focus on plants native to Massachusetts would not be applicable to this project, but the Petitioner is willing to evaluate plants that would be native to Connecticut in this project. Additionally, the Petitioner cannot commit to gaining the Pollinator-Friendly Certification overseen by UMass Clean Energy Extension. However, the Petitioner would note that it has been working with Dr. David Wagner of the University of Connecticut on appropriate pollinator and/or bee habitat on other projects. The Petitioner would be willing to work with Dr. Wagner on this site as well, if that is warranted.

38. Site Plan C-5.0 – Construction sequence note #2 states a 3 inch minimum topsoil depth is required for regraded areas. What minimum topsoil depth is specified for other areas of the site? Will topsoil be imported into the site prior to final seeding to ensure proper soil depth within the solar field areas?

Answer: As part of the Petitioner's CTDEEP Stormwater General Permit application, adequate permanent vegetation will be required before a Notice of Termination of the permit can be filed. While it has not specified a minimum topsoil depth across areas of the site that have not been regraded, the Petitioner is committed to establishing vegetation throughout the construction process. This may include importing topsoil on an as-needed basis, or other means such as composting or additional seeding periods.

39. Site Plan C-1 – Erosion control note #6, Site Plan C-5.0 – Construction sequence note #2, and the call out notes on Site Plans C-5.6, C-5.7, C-5.8, and C-5.11 all contain different time periods for site stabilization and seeding (72 hours, 10 days and 14 days). Please clarify what time interval will be used upon completion of construction in a specific area.

Answer: In accordance with the CTDEEP Guidance Regarding Solar Arrays document, regrading areas exceeding 8% slope shall be seeded and stabilized within 72 hours once earthwork activities are complete. Disturbed areas not associated with regrading activities shall be reseeded and stabilized within 10 days on an as-needed basis. Stockpiles intended to be left dormant for 14 days or longer shall be seeded and stabilized.

40. Do any of the sediment/permanent stormwater basins qualify as dams under DEEP's Dam Safety Program?

Answer: The Petitioner has met with CTDEEP Stormwater staff on multiple occasions to discuss the Project and has not to date been requested to discuss the project with CTDEEP's Dam Safety Division. The Petitioner is amenable to doing so if required.

41. Referring to GRE's response to STRSTH question #19, a "wet season" is described. Please describe the wet season and the expected duration of wet season water ponding in Stormwater Basins #1, #4, #6, #9, #11, #12, and #16.

Answer: Reference to the "wet season" is intended to mean spring months (i.e. March to June) where groundwater levels are generally expected to be at their highest point in a calendar year. Groundwater levels will fluctuate year to year based upon actual precipitation; however, this season is generally considered to be a 3-month period of elevated groundwater levels.

42. What is the distance of Stormwater Basin #1 and #16 to Vernal Pool 3? Is it possible that these basins would act as decoy pools for vernal pool species that were documented in Vernal Pool 3? Can the basins be altered to reduce or eliminate wet season water ponding?

Answer: The closest point of potential ponding at Stormwater Basin #1 to Vernal Pool 3 is approximately 280 feet and the closest point of potential ponding at Stormwater Basin #16 to Vernal Pool 3 is approximately 470 feet. While it is feasible for the stormwater basins to act as decoy pools, the stormwater basins are at a higher elevation from the vernal pool and the cleared nature of the area makes it less desirable habitat for vernal pool species breeding. The basins were designed with permanent "wet season" ponds to promote more infiltration during the drier seasons of the year and also because it was not feasible to provide the regulatory-governed vertical separation between the basin bottoms and groundwater if they were designed as standard infiltration basins.

43. Referring to GRE's response to STRSTH question #5, what areas of the solar field are within 200 feet of an on-site wetland? If the panels are removed from these areas, would they be relocated to other areas of the site? If the panels are not re-located and permanently removed, how would the output of the facility be affected?

Answer: The approximate count of 300 panels that are located within 200 feet of an on-site wetland are generally found between Stormwater Basins #12 and #13, and between Stormwater Basins #5 and #6. If the panels were removed from these areas, it would not be intended to replace them elsewhere on the project. The loss of approximately 300 panels would reduce the proposed panel count from 45,976 to 45,676. This would result in a minor reduction in MW-DC collection capability of the solar array, but it is not expected to affect the MW-AC output from the facility.

44. Referring to GRE's response to STRSTH question #12, describe the stable settling medium to be installed within the pond detention basins.

Answer: In concert with promoting infiltration to the maximum extents practicable as a design goal of the Project, it is expected that the pond detention basins will have the capability to infiltrate runoff during periods of the year where groundwater levels are lower. During the "wet season," as described in response to Interrogatory number 41 above, a standing pool of water will slow runoff entering the basin and allow sediments to settle to the bottom of the basin.

45. Referring to GRE's responses to STRSTH questions #23, provide a side profile detail of the pretreatment areas for the sand filter basins.

Answer: A side profile detail of the pretreatment areas for the sand filter basins is enclosed herewith.

46. In its responses to STRSTH's questions #26 & #27, GRE states it would modify the design details of Basins #3, #5, and #10 "if the Council so desires." Would this design detail be reviewed by the DEEP Stormwater Division prior to the issuance of EITHER an Individual Permit or a General Permit? Has GRE had a discussion with DEEP regarding the design detail?

Answer: As of the date of this response, the Petitioner has not had a discussion with CTDEEP regarding these specific design details. It is Petitioner's understanding that these changes would be handled as an amendment to the general permit.

47. Referring to the Stormwater Report -Appendix C – Erosion and Sedimentation Control Checklist,

- a) Construction Practices list no Best Management Practices are included for either the E-Fence or wood chip mulch berm. Please clarify and provide detail.
- b) Long Term Practices list states "Inspect monthly for the first 3 months and after any rain event exceeding 0.5". Inspect 2x per year thereafter." When does the 3 month period begin? Why was a 3 month period chosen for more frequent inspections?

Answer:

a-A revised Construction Practices list is enclosed herewith containing the requested information.

b-No work shall be performed on the project without securing a Permit for Stormwater Activities During Construction from CTDEEP. It is intended that this permit will govern inspection practices during construction. Once a Notice of Termination of this permit is accepted by CTDEEP, the inspection requirements will follow that as prescribed by the Long Term Practices list. The Petitioner is not aware of any regulations governing the requirements of long term maintenance and inspections pertaining to site features. A 3-month period was selected for more frequent inspections because the site has presumably been agreed upon as "stabilized" following the acceptance of the Notice of Termination.

48. Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identifies the locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, as applicable:

- 1. wetlands, watercourses and vernal pools;
- 2. forest/forest edge areas;
- 3. agricultural soil areas;
- 4. sloping terrain;
- 5. proposed stormwater control features;
- 6. nearest residences;
- 7. Site access and interior access road(s);
- 8. utility pads/electrical interconnection(s);
- 9. clearing limits/property lines;
- 10. mitigation areas; and
- 11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site-specific and representative site features show (e.g., physical staking/flagging or other means of marking the subject area).

The submission shall be delivered electronically in a legible portable document format (PDF) with a maximum file size of <20MB. If necessary, multiple files may be submitted and clearly marked in terms of sequence.

Answer: A photo log and exhibit has been prepared. A link to access the photos has been provided to both the Council and all parties on the Service List for this Petition to allow them to access the photo log without concern to maximum file size.

Respectfully submitted,

GRE GRACRUX LLC

By: Lee D. Hoffman

Infiman @pullcom.com Amanda G. Gurren agurren@pullcom.com Pullman & Comley, LLC 90 State House Square Hartford, CT 06103-3702 Ph. (860) 424-4315 Ph. (860) 424-4338 Fax (860) 424-4370 Its Attorneys

CERTIFICATION

I hereby certify that a copy of the foregoing document was delivered by e-mail on June 11, 2020 to the following service list:

The Honorable Robert J. Brule First Selectman Waterford Town Hall 15 Rope Ferry Road Waterford, CT 06385 rbrule@waterfordct.org apiersall@waterfordct.org

Deborah Moshier-Dunn VP, Save the River-Save the Hills, Inc. P.O. Box 505 Waterford, CT 06385 <u>debm0727@sbcglobal.net</u> Jean-Paul La Marche Development Manager Clean Focus Renewables, Inc. jean-paul.lamarche@cleanfocus.us

Emily A. Gianquinto EAG Law LLC 21 Oak Street, Suite 601 Hartford, CT 06106 (860) 785-0545 (860) 838-9027 -fax emily@eaglawllc.com

Lee D. Hoffin Lee D. Hoffman



NOTE:

1. ALL SIDE SLOPES SHALL NOT EXCEED 1:1 IN RIP-RAP OR 3:1 IN GRASS.

- 2. REFER TO "DIVERSION SWALE SIZING" TABLE FOR SELECTION OF LINING MATERIAL TO BE INSTALLED OVER ENTIRE SWALE AREA.
- 3. REFER TO "DIVERSION SWALE SIZING" TABLE FOR VARIABLE SIZING.
- 4.THE INTENT IS TO USE THE MATERIAL EXCAVATED FROM THE SWALE TO CONSTRUCT THE RIDGE.

Rip-Rap Lined Diversion Swale

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100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300



Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No. Revision

Application	June 11, 2020
Issued for	Date
Designed by	Checked by

Not Approved for Construction

Swale Profiles



Date Appvd.

Project Number 42496.00













Swale 9-1



Suite 200 Wethersfield, CT 06109 860.807.4300



117 Oil Mill Road Waterford, Connecticut

No. Revision





Swale Profiles



Project Number 42496.00



Swale 10-1













Swale 13-1



100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300

Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No. Revision



Not Approved for Construction

Swale Profiles

SW-3 Sheet of 3 5

Date Appvd.

Project Number 42496.00















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Wethersfield, CT 06109 860.807.4300

Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut No. Revision



Not Approved for Construction

Swale Profiles



Date Appvd.

Project Number 42496.00





Suite 200 Wethersfield, CT 06109 860.807.4300

Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No. Revision

ssued for	Date
Designed by	Checked by

Not Approved for Construction

Swale Profiles

Date Appvd.

Project Number **42496.00**

NOTES:

1. WOOD CHIP MULCH BERM TO BE INSTALLED DOWNSTREAM OF PERIMETER SILT FENCE IN VARIOUS LOCATIONS AROUND SITE.

Wood Chip Mulch Berm

NOTE:

1. PRETREATMENT BASIN LENGTH, WIDTH, AND DEPTH AS NOTED ON SITE PLANS.

2. SIDE SLOPES SHALL BE 3:1.

Pretreatment Basin

Waterford Solar – Waterford, CT – 117 Oil Mill Road

Best Management Practices – Maintenance/ Evaluation Checklist

Construction Practices

Best Management	Inspection	Date		Minimum Maintenance	Cleaning/Repair Needed	Date of	Performed
Practice	Frequency	Inspected	Inspector	and Key Items to Check	yes no (List Items)	Cleaning/Repair	by
Silt Fencing	Once per week or						
	after a 0.5" or greater						
	storm event						
Compost Filter	Once per week or						
Sock	after a 0.5" or greater						
	storm event						
Straw Wattles	Once per week or						
	after a 0.5" or greater						
	storm event						
Stabilized	Once per week or						
Construction Exit	after a 0.5" or greater						
	storm event						
Temporary	Once per week or						
Sediment	after a 0.5" or greater						
Trap/Basin &	storm event						
Diversion Swales							
Vegetated Slope	Once per week or						
Stabilization	after a 0.5" or greater						
	storm event						
Energy Dissipators	Once per week or						
	after a 0.5" or greater						
	storm event						
E-Fence	Once per week or						
	after a 0.5" or greater						
	storm event						
Wood Chip Mulch	Once per week or						
Berm	after a 0.5" or greater						
	storm event						

Stormwater Control Manager _____