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October 28, 2020

VIA ELECTRONIC MAIL
Melanie Bachman
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 492 - Gravel Pit Solar application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 120-megawatt-AC solar photovoltaic electric generating facility on eight parcels generally located to the east and west of the Amtrak and Connecticut Rail Line, south of Apothecaries Hall Road and north of the South Windsor town boundary in East Windsor, Connecticut and associated electrical interconnection

Dear Ms. Bachman:

I am writing on behalf of my client, Gravel Pit Solar, in connection with the above-referenced Application. With this letter, I am enclosing Gravel Pit Solar's Responses to the Connecticut Siting Council's October 7, 2020 Pre-Hearing Questions. The exhibits that accompany these Interrogatory Responses can be accessed at the following website:

https://www.dropbox.com/home/2020_10_28_Interrogatory_Exhibits

In addition, certain information that is responsive to these interrogatories contain confidential information. That confidential information is not contained in the exhibits found on the above-referenced website but will be filed under separate cover under a proposed protective order.

Should you have any questions concerning this submittal, please contact me at your convenience. I certify that copies of this submittal have been made to all parties on the Application's Service List as of this date.

Sincerely,

Lee D. Hoffman

Enclosure

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Gravel Pit Solar application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 120-megawatt-AC solar photovoltaic electric generating facility on eight parcels generally located to the east and west of the Amtrak and Connecticut Rail Line, south of Apothecaries Hall Road and north of the South Windsor town boundary in East Windsor, Connecticut and associated electrical interconnection.	**Docket No. 492** **October 28, 2020**

GRAVEL PIT SOLAR'S RESPONSES TO THE OCTOBER 7, 2020 (SET ONE) PRE-HEARING QUESTIONS FROM THE CONNECTICUT SITING COUNCIL

Gravel Pit Solar, LLC, Gravel Pit Solar II, LLC, Gravel Pit Solar III, LLC, and Gravel Pit Solar IV, LLC (collectively, "Gravel Pit Solar," "GPS," or the "Applicant") hereby submits the following responses to the Pre-Hearing Questions for the Gravel Pit Solar Project ("GPS," or the "Project") that were directed to Gravel Pit Solar by the Connecticut Siting Council on October 7, 2020.

Notice

1. **Of the letters sent to abutting property owners, how many certified mail receipts were received by Gravel Pit Solar (Applicant or GPS)? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners?**

   Gravel Pit Solar received all but two (2) certified mail receipts from abutting property owners. The two (2) abutters that did not receive notice(s) are Norton Farms, LLC and The JE Shepard Company. However, GPS has been in contact with these abutters in the past about the Project and they both have been made aware of its proposed development. Project informational postcards were also sent to each abutter on July 20, 2020. Please refer to Exhibit A for more information concerning the Project's abutters list and the current status of certified mailings.

Project Development

2. **If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s).**

   The following permits are necessary for the construction and/or operation of the Project:

   - CT Department of Energy and Environmental Protection ("DEEP"), Registration in accordance with the Construction General Stormwater Permits;
   - Town of East Windsor, Building Permit;
   - Town of East Windsor, Electrical Permit;
   - Federal Aviation Administration ("FAA") Notice of Proposed Construction and Determinations of No Hazard; and,
   - CT Siting Council (CSC or Council), Certificate of Environmental Compatibility and Public Need

   Gravel Pit Solar will hold these permits.

3. **Referencing pages 5 and 6 of the Application, a portion of the proposed project was bid into the Zero Carbon Request for Proposals (Zero Carbon RFP) and selected by the Department of Energy and Environmental Protection (DEEP); a portion of the project's generation was subsequently approved by the Public Utilities Regulatory Authority (PURA); a portion of the project's generation was selected by Rhode Island Long-Term Contracting Standard RFP and subsequently approved by the Rhode Island Public Utilities Commission; and the balance of the project's capacity would be used for New England municipal light departments and/or commercial off-takers. Provide a table showing the breakdown of the total 120 MW AC capacity of the project by each entity and include the dates of RFP selections and public utility commission approvals of generation and/or power purchase agreements (PPAs), as applicable**.

   Please refer to the table below.

Offtaker/Buyer	Amount (MW)	Percentage of Facility	Selection	Regulatory Approval[1]
The Connecticut Light and Power Company d/b/aEversource Energy	16.076	13.40%	Dec. 28, 2018	Nov. 27, 2019
The United Illuminating Company	3.924	3.27%	Dec. 28, 2018	Nov. 27, 2019
The Narragansett Electric Company, d/b/a NationalGrid	49.5	41.25%	Jul. 26, 2019	May 28, 2020
Block Island Utility District d/b/a Block Island Power Company[2]	0.4	0.33%	Jul. 26, 2019	N/A
Pascoag Utility District[2]	0.1	0.08%	Jul. 26, 2019	N/A
Belmont Municipal Light Department	1.415	1.18%	*Jun. 26, 2020*	N/A
Block Island Utility District d/b/a Block Island Power Company	0.15	0.13%	*Jun. 26, 2021*	N/A
Braintree Electric Light Department	4.07	3.39%	*Jun. 26, 2022*	N/A
Town of Concord, Massachusetts, acting through its Concord Municipal Light Plant	1.85	1.54%	*Jun. 26, 2023*	N/A
Town of Danvers Electric Division	3.32	2.77%	*Jun. 26, 2024*	N/A
Georgetown Municipal Light Department	0.55	0.46%	*Jun. 26, 2025*	N/A
Hingham Municipal Light Plant	2.215	1.85%	*Jun. 26, 2026*	N/A
Littleton Electric Light and Water Department	3.12	2.60%	*Jun. 26, 2027*	N/A
Merrimac Municipal Light Department	0.325	0.27%	*Jun. 26, 2028*	N/A
Middleborough Gas and Electric Department	3.11	2.59%	*Jun. 26, 2029*	N/A
Middleton Municipal Electric Department	1.085	0.90%	*Jun. 26, 2030*	N/A
North Attleborough Electric Department	2.5	2.08%	*Jun. 26, 2031*	N/A
Norwood Municipal Light Department	3.555	2.96%	*Jun. 26, 2032*	N/A
Pascoag Utility District	0.67	0.56%	*Jun. 26, 2033*	N/A
Reading Municipal Light Department	7.505	6.25%	*Jun. 26, 2034*	N/A
Rowley Municipal Light Plant	0.49	0.41%	*Jun. 26, 2035*	N/A
Taunton Municipal Light Plant	7.37	6.14%	*Jun. 26, 2036*	N/A
Wellesley Municipal Light Plant	2.68	2.23%	*Jun. 26, 2037*	N/A
Westfield Gas and Electric Light Department	4.02	3.35%	*Jun. 26, 2038*	N/A
Total	120	100.00%		

[1] Municipal light department power purchase agreements entered into outside of state run RFP processes did not require regualtory approval

[2]Block Island Utility District and Pascoag Utility District have entered into two separate sets of power purchase agreements for the project, once as part of the Rhode Island Long-term Contracting RFP and again under a separate procurement process.

Italics indicates date of power purchase agreement execution.

4. **Page 7 of the Application notes that, "GPS will participate in FCAs over the term of its Power Purchase Agreements (PPAs) and is expected to clear each year." Which is the first Forward Capacity Auction (FCA) that GPS plans to participate in? If it is FCA #15, has or would the Applicant participate in the pre-qualification process?**

   GPS has submitted an application to qualify the Project as a capacity resource with the Independent System Operator of New England ("ISO-NE"). FCA # 15 would be the first FCA that Gravel Pit Solar intends to participate in. In the event that the Project is not able to pre-qualify in time for FCA # 15, the Project would attempt to participate in the annual replacement auction the first year after COD and subsequent FCAs. The Project will participate in the capacity market to the extent that it is prudent and economical to do so.

5. **Provide the estimated total cost for the proposed project. Does this total include the Applicant's substation? What would the total cost be if the entire project had fixed solar panels?**

   The total estimated cost of the Project, as proposed, is approximately **REDACTED**. If the entire Project had fixed solar panels, the total estimated cost of the Project would be approximately three percent (3%) less, or

REDACTED. These estimates, however, are subject to change as the Applicant proceeds with final Project design, equipment selection, and procurement.

6. **Explain why portions of the project footprint near Plantation Road were selected for tracking panels, and other areas were selected for fixed panels.**

   The portion of the Project north and south of Plantation Road was selected for tracking panels because it is very flat. The onsite gravel mine areas are less suitable because of the undulating terrain (trackers require a slope tolerance of 0.5 percent (%), or less, between foundation posts). In addition, trackers require stronger foundations, and although the gravel mine areas have sufficient subsoil strength for fixed-racking, Gravel Pit Solar is not certain that these areas have sufficient subsoil strength for the requirements of tracker foundation(s).

Proposed Site

7. **Would the site be leased or, for example, subject to a purchase option? If the site would be leased, in the lease agreement with property owner, are there any provisions related to decommissioning and/or site restoration at the end of the project's useful life? If so, please provide any such provisions.**

   Currently, there are two (2) sets of properties under an Option to Lease: (1) the Northern Capital Region Disposal properties and (2) the Back 124, LLC property. Both referenced lease option agreements include the following language regarding the removal fo the Project and restoration of the properties:

   *"7. **TERMINATION, SURRENDER OF LEASED PREMISES.** Tenant's right to access the Leased Premises shall continue in full force and effect for a period of nine (9) months following the expiration or earlier termination of this Lease for purposes of removing all equipment, installations and Improvements from the Leased Premises (the "Restoration Period"). During the Restoration Period, Tenant shall (i) restore the subsurface of the Leased Premises to the extent reasonably required by Landlord or any applicable city, county or state ordinance, and (ii) remove all solar generating and other equipment, structures, installations and Improvements including all foundations, structures or installations of every kind and nature installed by Tenant and located below the surface of the Leased Premises. In addition, Tenant shall restore the surface of the Improvements as is reasonably practicable to its original condition as the same existed at the inception of this Lease and shall repair any damage, to the extent reasonably practicable, to the Leased Premises as a result of any removal of Tenant's Improvements under this Section 7. Notwithstanding any of the foregoing, in no event shall*

Tenant have the obligation to modify the grade of the Leased Premises as established by Tenant for its uses or to restore any vegetation. Tenant's restoration obligation under this Section 7 is expressly conditioned upon Landlord granting to Tenant such access to the Leased Premises as Tenant may reasonably require to comply with such obligation. All of the obligations of Tenant set forth in this Section 7 are hereinafter collectively referred to as the "Restoration Obligations". Tenant shall have no obligation to pay Rent during the nine (9) month Restoration Period, but shall pay Base Rent at the amount then payable at the time of termination of this Lease if the Restoration Obligations cannot be completed within the nine (9) month period. Following completion of the Restoration Obligations, Tenant shall be obligated to immediately surrender possession of the Leased Premises."

The remaining properties are currently under purchase options.

8. **Provide a copy of any lease agreements per Connecticut General Statutes §16-50o.**

   Copies of the Project's lease agreements are provided in Exhibit B.

9. **Is the site parcel, or any portion thereof, part of the Public Act 490 Program? If so, how does the municipal land use code classify the parcel(s)? How would the project affect the use classification?**

   As depicted on Figure 2, Site Location Map in the Application, Parcels 016-49-007, 16-50-001, 025-49-017A, 025-49-017C, and 037-65-005A are classified and recorded as "farm" and "forest land" under Public Act 490. Assuming the Council grants the Project a certificate, and approves the Project's Development & Management ("D&M") Plan (if one is required), these parcels would then be reclassified. For details regarding the respective municipal land use code classifications for the parcel(s), please refer to the Site Location Figure provided in Exhibit A of the Application.

10. **Has the State of Connecticut Department of Agriculture purchased any development rights for the project site or any portion of the project site as part of the State Program for the Preservation of Agricultural Land?**

    No.

11. **Referencing page 25 of the Application, it states, "Currently the site is used for active sand and gravel mining and tobacco farming operations." How many acres are used for the active farming**

operations, and is it used by the property owner or is it leased to a third party?

Approximately 230 acres of the Project Site are used for active farming operations. Of this approximate 230 total acres, approximately 152 are farmed by the property owner, and approximately 78 acres are leased to a third party.

12. **Would all components of the solar photovoltaic panels be recyclable? Could components of panels be reused to make photovoltaic cells or whole panels be used to make new solar panels at the end of the life of this project? Could the solar panels and/or associated components be repurposed for a different use or product?**

    Solar photovoltaic panels typically consist of glass, polymer, aluminum, copper, and semiconductor materials that can be recovered and recycled at the end of their useful life. These recycled materials could be used for various manufactured goods which may include new solar panels.

13. **Provide the distance, direction and address of the nearest property line and nearest off-site residence from the solar field perimeter fence**.

    The nearest residential property line to a proposed perimeter fence is 341 Rye Street, where the property line is approximately 30 feet southwest of the proposed perimeter fence. The nearest off-site residence to a proposed perimeter fence is 25 Plantation Road; the residence is approximately 125 feet west of the proposed perimeter fence at its closest point.

Energy Output

14. **Referencing page 12 of the Application, the Applicant notes that the proposed solar panels are likely to be between 400 to 550 Watts DC each. Has the Applicant determined the wattage of the solar panels? Would the Applicant utilize a different wattage for the fixed panes as opposed to the tracking panels?**

    Final panel selection and procurement will be made closer to the start of Project construction and it is possible that the Project will have a mix of different voltage panels. GPS will provide the final selected panel(s) as part of its D&M Plan.

15. **What factors were used to determine the capacity of the proposed project?**

The following factors were used to determine the capacity of the proposed Project:

- Availability of suitable real estate of the Project;
- Estimated capacity of the transmission lines crossing the Project Area; and,
- Suitable capacity to fulfill the Project's power purchase agreements.

16. **Please provide a breakdown of the products (ex. Energy, Renewable Energy Credits, ancillary services, etc.) to be sold from the facility and contracted parties.**

    The Project is contracted to sell energy and Renewable Energy Credits ("RECs") in accordance with the table provided in response No. 3. All of the Project's power purchase agreements are for the bundled sale of energy and RECs. The Project intends to sell capacity in the ISO-NE Forward Capacity Market but is not currently contracted to do so. Other products, such as ancillary services, are not currently contracted.

17. **Have electrical loss assumptions been factored into the output of the facility? What is the output (MW AC) at the point of interconnection?**

    Yes, electrical loss assumptions have been factored into the output of the facility. The Project has been designed to provide 120 MW AC at the point of interconnection.

18. **Referencing Tab O of the Application, Carbon Debt Analysis, page 2, the project would generate about 253,000 MWh of electrical energy in the first year of operation. Would this number be affected by the final selection of solar panel capacity, e.g. 400 W to 550 W?**

    The estimate of 253,000 MWh of electrical energy in the first year of Project operation was based upon an assumed 450 W solar panel(s) at time of construction. A slight increase or decrease is expected with a higher or lower wattage panel(s), estimated to be an approximated two percent (2%) +/- change in capacity.

19. **What is the overall projected capacity factor (expressed as a percentage) for the proposed project (taking into account the proposed mix of fixed and tracking panels)? For clarity, is this capacity factor based on a ratio of AC MWh to AC MWh, or a ratio of AC MWh to DC MWh?**

    Assuming a 450 W panel, the overall estimated capacity factor (P-50) for the entire facility is approximately eighteen percent (18%). This factor is based on the ratio of AC MWh produced per year to the AC MWh capacity of the site, and the proposed mix of fixed and single axis trackers.

20. **As a comparison, estimate what the project capacity factor would be if only fixed panels were utilized. For clarity, also indicate if this capacity factor is based on a ratio of AC MWh to AC MWh, or a ratio of AC MWh to DC MWh?**

    If the portions of the site that are presently designed with single axis tracker-mounted solar modules were changed to fixed-mount solar modules, the capacity factor would be seventeen percent (17%), assuming a 450 W module. This is as a ratio of AC MWh produced per year to the AC MWh capacity of the site.

21. **What is the efficiency (or range of efficiency) of the photovoltaic module technology of the proposed project?**

    The respective manufacturer provides a module efficiency of 20.7 percent for the 450W module used in the design of the Project. For additional detail(s) regarding module efficiency information, please refer to the specification sheet attached hereto as Exhibit C.

22. **Would the power output of the solar panels decline as the panels age? If so, estimate the percent per year.**

    Yes, the power output of a solar panel will decline with age. It is estimated that the power output of solar panels declines approximately 0.5 percent per year.

23. **Is the project being designed to accommodate a potential future battery storage system? If so, please indicate the anticipated size of the system, where it may be located on the site, and the impact it may have on any RFP awards or PPAs.**

    Although the Project design would not preclude a future battery storage system, the Project as proposed does not consider a potential battery nor is one anticipated at this time. If a battery storage system is considered in the future, the size and location(s) would be selected as part of a state and/or ISO-NE approval process.

24. **Would the impact of soft or hard shading reduce the energy production of the proposed project? If so, was this included in the proposed projects capacity factor?**

    Yes, shading would reduce the energy production of the proposed Project; however, these impacts were considered and included in the Project's proposed capacity factor. Soft-shading of the Project was accounted for through the inclusion of a soiling factor in the estimated production. Hard-

shading factors, including tree heights, were included in the Project's analysis and production was adjusted accordingly.

25. **If one section of the solar array experiences electrical problems causing the section to shut down, could other sections of the system still operate and transmit power to the grid?**

    Yes, if one section of the solar array experiences electrical problems that causes that specific section to shut down, other sections comprising the system could still operate and transmit power to the grid. The solar facility will have an internal protection system to shut down, as appropriate, the affected portion(s) of the solar facility (including the entirety thereof), should a fault occur.

26. **Do solar facilities present a challenge for the independent system operator for balancing loads and generation (to maintain the system frequency) due to the changing (but not controlled) megawatt output of a solar facility? What technology or operational protocols could be employed to mitigate any challenges?**

    GPS objects to this interrogatory to the extent that it is beyond the scope of an application proceeding under Conn. Gen. Stat. § 16-50k and to the extent that it calls upon GPS to assume challenges being faced by the independent system operator, to which GPS has only limited insight. Subject to the foregoing objection, GPS states that the region's grid is gradually transforming to a "sustainable, hybrid grid that supports the connection of more renewable energy[.]" *See* 2019 ISO-NE Regional System Plan. It is Gravel Pit Solar's present understanding that the ISO-NE is working closely with generation facilities, such as the Project, to ensure that new variable energy resources, such as solar and wind, are interconnected to the grid effectively to assure that reliability standards are met.

    Certain technologies, including energy-storage systems, can help improve the consistency of supply and overall system performance, as described by the ISO-NE in the 2019 Regional System Plan. Energy-storage—although increasingly more common—still presents significant economic challenges, and without specific programs to incentivize deployment, energy-storage remains an emerging technological solution. Additionally, improved forecasting methods by the ISO-NE for solar and wind can help mitigate some of the challenges associated with variable energy resources. GPS's development team and owners have extensive experience providing energy resource forecasting information to ISO-NE at GPS's other operational facilities.

Site Components and Solar Equipment

27. **Provide the specifications sheets for a) proposed inverters and b) solar photovoltaic panels if such specifications have been determined.**

    Specification sheets for the proposed inverter(s) and photovoltaic panel(s) are provided in the attached Exhibit C. Final panel selection and procurement will be made closer to the start of Project construction. Gravel Pit Solar will provide the final selected panel(s) as part of its D&M plan.

28. **Indicate if the proposed fixed and tracking panels would be mounted in a portrait or landscape fashion**.

    Both the fixed and tracking panels are proposed to be mounted in portrait fashion. A detail for each panel system has been added to Site Plan Sheet C-6.1. Please refer to Exhibit D for the revised site plans.

29. **Which angle (or range of angles if not yet determined) would the fixed and tracking panels be above the horizontal?**

    Fixed-tilt panels will be angled between 20 to 30 degrees; the tracker-panels will be tilted approximately zero (0) to 60 degrees above the horizontal.

30. **Is the wiring from the panels to the inverters installed on the racking? If wiring is external, how would it be protected from potential damage from weather exposure, vegetation maintenance, or animals?**

    The wiring that will be used and installed for the Project will meet and/or exceed National Electrical Code ("NEC") standards. As proposed, wiring will be strung along the underside of the panels and will be either buried below ground or suspended in a CAB system. Wiring material will be outdoor rated and protected from climate exposure and animal damage. Vegetation that has the ability to affect wiring will be maintained and/or removed as part of the regular operational vegetation maintenance practices for the Project.

31. **Referencing Tab A of the Application, Project Layout Map, what is the total length (in linear miles) of the proposed access roads that would serve the solar arrays located south of Plantation Road? What is the total length (in linear miles) of the proposed access roads that would serve the solar arrays located north of Plantation Road and west of the railroad corridor? What is the total length (in linear miles) of the proposed access roads that would serve the substation, switchyard and solar arrays east of the railroad corridor (and including the crossing of the railroad corridor)? For each of those three numbers, indicate how much would be existing access (to be improved) versus new access.**

The layout of interior site access roads has been revised slightly to provide increased access to the Project's proposed stormwater basins. This revised road(s) layout can be located on Exhibit D, Site Plan Sheets C-3.0 through C-3.25, included herein. Below is a summary of the Project's access roads, by area:

- South of Plantation Road: ± 0.2 miles existing to be reused, ± 1.3 miles proposed;
- North of Plantation Road: ± 0.2 miles existing to be reused, ± 2.2 miles proposed; and,
- East of Railroad (including crossing): ± 0.5 miles existing to be reused, ± 1.3 miles proposed

32. **Referencing page 12 of the Application, it states, "Spacing between panels will be approximately 8.8 feet for fixed-tilt and 15.2 feet for single-axis trackers." What are the minimum panel spacing distances or "aisle widths" at which the fixed and the tracking panels could be installed?**

The minimum panel-spacing distance, or "aisle widths," is not anticipated to be less than 8.8 feet for fixed-tilt, and 15.2 feet for single-axis trackers. However, the newer generation of solar modules are slightly larger, and it is possible that the subject manufacturer will be delivering the larger-format modules at the time of Project construction. If the newer (larger) modules are installed, the aisle widths could be reduced to approximately eight (8) feet for fixed-tilt, and 14.4 feet for single-axis trackers.

33. **Identify the height (e.g. six inches) and locations of wildlife gaps at the bottom of the proposed fencing if applicable**.

Six-inch wildlife gaps are proposed along the fence and located intermittently along the fence limits. In addition, the agricultural fence that is proposed along the Project's perimeter has larger-sized meshing compared to typical chain-link fencing—thereby allowing small animals to ingress/egress the Site.

Interconnection

34. **Where would the demarcation point (or point of change of control/responsibility) between the Applicant and The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) be located? For example, would it be the 115-kV side of the generator step-up transformer (GSU) inside the Applicant's substation?**

According to the Project's draft interconnection agreement, the point of change of ownership between the Project's interconnection facilities and Eversource's facilities will be at the physical and electrical connection,

between two (2) "not yet named" breakers from the 115-kV side of the Project's substation to the new Eversource switchyard.

35. **Has the Applicant received a determination of no adverse impact to the transmission system from the ISO-NE Reliability Committee? If yes, please submit such determination letter. If not, when is a determination anticipated?**

In July of 2020, Eversource, on behalf of the Project, submitted a Proposed Plan Application to the NEPOOL Reliability Committee for queue position 892, for a 50 MW portion of the Project. A "No Adverse Impact" determination was issued on July 27, 2020, attached hereto as Exhibit E. Once Gravel Pit Solar's two (2) other queue positions are through the ISO-NE system impact study process(es), GPS will similarly file these Proposed Plan Applications to the NEPOOL Reliability Committee, in accordance with ISO-NE I.3.9 requirements. Gravel Pit Solar expects to submit these Applications by the end of 2020 or early 2021 and receive approval shortly thereafter.

Public Safety

36. **Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association (NFPA) codes and standards, including, but not limited to, NFPA Code Section 11.12.3?**

The Project will be designed to comply with all applicable regulations and standards of the National Electrical Code ("NEC"), the National Electrical Safety Code ("NESC") and the National Fire Protection Association Code ("NFPA"), including, but not limited to, NFPA Code Section 11.12.3.

37. **Referencing page 41 of the Application, of the three airports listed, which is the nearest federally-obligated airport? Is a glare analysis required to comply with Federal Aviation Administration (FAA) policy?**

According to the Federal Aviation Administration ("FAA"), Ellington Airport, in Ellington, and Skylark Airpark, in East Windsor, are both privately-owned but open to the public. FAA's website lists four (4) Connecticut airports that have received federal funding (and are therefore considered to be federally-obligated airports): Bradley, Groton-New London, Sikorsky Memorial and Tweed-New Haven. The closest of these federally-obligated airports is Bradley, which is approximately seven (7) miles away from the Project. FAA's "No Effect" determination for the Project, issued on June 12, 2020, indicates that further studies are not required for the development.

38. **Referencing Tab Q of the Application, the FAA No Hazard Determinations for the solar facility are attached. Would the Applicant need to apply to FAA for any temporary structures such as cranes?**

    No; although it is anticipated that a crane will be required for the construction of the Eversource switchyard and the GPS substation, the height of the required crane would be less than 200 feet and would therefore not require any construction notice to FAA.

39. **What is the proximity of any existing or proposed outbuildings, structures, etc.? Would this proximity present a fire safety or other hazard?**

    GPS is unaware of any newly proposed buildings in proximity to the Project. GPS is currently in consultation with the CT SHPO regarding the existing, above-ground structures at the Site. Gravel Pit Solar expects that some structures that currently exist at the Site will remain during construction and Project operation(s)—primarily, the tobacco barns and other farm-related buildings. The majority of these structures will be located within the Project fence line and will remain locked and monitored to ensure that they do not pose an increased risk of fire and/or other safety hazards.

40. **Referencing page 51 of the Application, has there been any assessment for the potential of pesticide residues to be within the project area soils? If pesticide residues are present, would development of the project contaminate deep soil layers or cause an environmental hazard due to exposed soils and re-grading activities?**

    GZA GeoEnvironmental, INC ("GZA") led the geotechnical studies and environmental assessments for the Project. GZA indicated that it is not aware of any testing that reveals the presence of pesticides, therefore sampling for pesticides was not completed. It is GZA's experience that most historically-applied pesticides are present within the upper six (6) inches to one foot of soil. This shallow soil would likely be displaced horizontally, as a result of the installation of a typical pole-mounted support for solar panels, and it would be unlikely that deeper soil layers would be affected by contamination, if present, in the shallow soils. It is also GZA's opinion that the potential for pesticide residues located at the Project Site to cause an environmental hazard as a result of the construction of the Project would be low, provided that best management practices are included into Project plans and implemented for dust control, erosion control, stormwater management, and the handling and management of disturbed soil.

    Gravel Pit Solar will implement best management practices for dust control, erosion control, stormwater management, and the handling and management of disturbed soils for the Project. The Project's Erosion Sedimentation Control Plan has been developed in accordance with the *2002 Connecticut*

Guidelines for Soil Erosion and Sediment Control, the *2004 Connecticut Stormwater Quality Manual*, as well as the CTDEEP (January 8, 2020) Appendix I, *Guidance Regarding Solar Arrays*, to prevent potential erosion and sedimentation during construction and to ensure that disturbed soils are managed properly. Gravel Pit Solar has also identified measures to mitigate potential fugitive dust by periodically spraying exposed soils with water, as necessary, during construction and utilizing crushed stone aprons as anti-tracking pads at access road entrances. Regarding stockpiled and disturbed material(s), Gravel Pit Solar intends to adequately protect stockpiles with silt fence and/or hydroseed/mulch. Any areas disturbed or regraded as part of construction will be re-vegetated within a prescribed timeframe in accordance with the Project's Construction General Permit.

41. **Referencing Tab A of the Application, Project Layout Map and Floodplain, Surface & Groundwater Resources Map, the proposed project is located outside of the 100-year flood zone, except for a portion of the Ketch Brook Crossing Cable. Would any of the proposed project be located within a 500-year flood zone? If yes, how would that impact the project?**

    Based upon a review of the latest available FEMA mapping of the Project Site (maps effective September 26, 2008), there are no 500-year flood zone and/or Zone X areas within the Project Area. The current FEMA map is included in Appendix A of the Project Stormwater Report (Application, Exhibit L).

Environmental

42. **Referencing page 14 of the Application, Ketch Brook Crossing Cable Route, has it been determined whether jack and bore or horizontal directional drill (HDD) would be utilized for crossing Ketch Brook? Explain.**

    An HDD crossing method is being proposed for the collection cable route under Ketch Brook and its associated wetland and floodplain. Utilization of the HDD crossing method will avoid impacts to these resources.

43. **Referencing Tab A of the Application, Wetland Delineation Map, please superimpose the proposed solar arrays, wetland buffers distances, distances to watercourses, vernal pool envelopes, and critical terrestrial habitats.**

    To address this request, a Wetland Impact Map has been prepared, and is included herein as Exhibit F.

44. **Provide a table of the distances from each wetland/watercourse (except Wetland 10) to the nearest project limits of disturbance.**

To address this request, a Wetland Impact Map has been prepared, and is included herein as Exhibit F.

45. **Referencing page 2 of the comments of the Council on Environmental Quality dated October 1, 2020, could the elimination of Wetland 10 be avoided or mitigated? Explain.**

Wetland 10 ("W10") is an isolated depression that has been formed by previous gravel extraction cuts and compacted soil resulting from heavy all-terrain vehicles ("ATVs") and equipment travel. This wetland has been observed to be hydrologically disconnected from the local groundwater, and its inputs are limited to runoff received from the immediate surrounding areas and precipitation. This depression does not function as a vernal pool and the majority of this wetland is devoid of vegetation due to ongoing impacts from ATV travel.

Under the revised Site Plans (attached hereto as Exhibit D), the Project will not be eliminating W10; however, the Project contemplates driving posts and installing panels within the wetland. GPS intends that the wetland will retain the same function(s) post-Project development but will have the ability to revegetate and recover from frequent vehicular travel.

46. **Referencing page 28 of the Application, it notes that Wetland 10 "…does not show connectivity to Waters of the United States and therefore is not jurisdictional to the United States Army Corps of Engineers." Please explain.**

Wetland 10 is an isolated, non-navigable water resource that lacks a sufficient connection to traditional navigable waters. The wetland does not have a direct hydrological surface connection in a typical year to navigable waters. This wetland is also small in size, has a shallow water depth, and contains limited vegetative cover; therefore, it likely does not support habitat for migratory birds and would not be considered jurisdictional to the United States Army Corps of Engineers.

47. **Referencing Tab J of the Application, provide an update on the Applicant's consultation with DEEP's Natural Diversity Database (NDDB) Program. Has the Applicant received any follow-up correspondence from DEEP NDDB? Please include any such correspondence.**

Gravel Pit Solar received email correspondence from Dawn McKay of the Wildlife Division of CTDEEP confirming receipt of the July 19, 2020 Report on Proposed Conservation Measures for the Project.

GPS has made multiple attempts to correspond with CTDEEP's Natural Diversity Database ("NDDB") Program since confirming receipt of the July 19, 2020 report. On October 23, 2020, representatives of the Project participated in a Zoom video conference with CTDEEP NDDB staff to discuss the Project. The conversation was positive in tone and the Gravel Pit Solar will continue to work with NDDB regarding appropriate protective measures. GPS will keep the Council apprised of future developments and will provide any NDDB correspondence(s) received.

48. **Did the Applicant conduct a Shade Study Analysis? Would shading present any challenges for the proposed project? If so, provide acreage of trees that would be removed to mitigate for shading? How were the limits of tree shading determined?**

A preliminary shading analysis was done as part of the Project's design process. The need to remove trees (to avoid shading) was minimized by setting panels back approximately two (2) to three (3) times the height of the trees, where feasible. The proposed clearing limits for the Project, as detailed in the Application, are sufficient to minimize shading.

49. **The Greenhouse Gas (GHG) Assessment in Appendix M of Council Petition No. 1352 compared the life cycle GHG emissions from a solar project to a scenario where the solar project is avoided and an equivalent amount of natural gas-fired electric generation operated for the estimated life of the solar facility. For the proposed project, how would the net GHG emissions (or reduction) over the life of the solar facility and carbon debt payback be affected under this natural gas-fired generation versus proposed solar generation scenario? Would this analysis be materially impacted by the final selection of solar panels e.g. 400 W to 550 W?**

Assuming a one percent (1%) degradation of solar output per year, and a starting yearly output of approximately 253,000 MWh for the Project, it is anticipated that approximately 7,030,317 MWh will be generated over an assumed 30-year lifespan of the Project. Utilizing the conversion ratio described in Appendix M of Council Petition No. 1352 (relating 744,038 MWh of natural gas electricity production to 1,273,861 MT of CO2eq), it can be anticipated that the Project's approximated 7,030,317 MWh would produce approximately 12,036,544 MT of CO2eq, if alternatively generated by a natural gas-fired facility. In relation, this natural gas carbon debt estimate of 12,036,544 MT of CO2eq is nearly 51 times greater than the Project's estimated carbon debt of 230,105 MT of CO2eq. The final selection of solar panels will not materially impact this analysis indicating a significant reduction of GHG emissions when compared to natural gas-fired generation.

50. **Are there any wells on the site or in the vicinity of the site? If so, how would the Applicant protect the wells and/or water quality from construction impacts?**

There are two (2) wells located within the Project Site. Reviewing the Connecticut Department of Public Health Public Water Supply Map viewer on October 19, 2020, [1] the majority of the neighboring residences use private wells—with the exception of the adjacent neighborhood located south of the Project, along Wapping Road in South Windsor, which is served by a municipal water supply.

The two (2) known wells within the Project Site are associated with buildings located south of Plantation Road. One well services a cluster of greenhouses and is used for irrigation purposes; the other well is associated with a seasonal camp and is used by tobacco workers. Both the greenhouses and camp buildings are planned to be removed during construction. GPS may utilize these wells for non-potable uses during Project construction and operations.

GPS does not anticipate any impacts to water quality as a result of the Project's construction. Construction will not require blasting, and proposed site grading within the agricultural fields will be minimal. Additionally, potential impacts to groundwater quality will be minimized by adhering to a DEEP-approved erosion control and stormwater management plan, as well as Spill Prevention Control and Countermeasure ("SPCC") Plans.

51. **Would any fuels be stored on site during construction? Please provide a Spill Prevention, Control and Countermeasure Plan.**

It is feasible that fuels may be stored onsite during construction; however, as a Best Management Practice, they will not be stored within the designated Aquifer Protection Area ("APA") that exists within the northern portion of the parcels east of the railroad tracks. A preliminary SPCC Plan has been prepared for construction and is included herewith as Exhibit G. A final SPCC Plan will be prepared by the Project contractor prior to the start of construction.

52. **What effect would runoff from the drip edge of each row of solar panels have on site drainage patterns? Would channelization below the drip edge be expected? If not, why not?**

Due to the fact that the development is not graded directly to the east or west in the location of any proposed fixed-tilt panels, or directly to the north or south in the location of any proposed tracking panels, it is not anticipated

[1] Accessible at https://portal.ct.gov/DPH/Drinking-Water/DWS/Public-Water-Supply-Map.

that runoff from the panel drip edges will channelize or have an effect on existing site drainage patterns.

53. **What is the length of the posts and to what depth would the posts be driven into the ground to provide structural stability? Are any impacts to groundwater quality anticipated? If so, how would the Applicant manage and/or mitigate these impacts?**

    The solar racking support posts are anticipated to be approximately 16 feet in length and embedded approximately nine (9) to ten (10) feet into the ground. The steel posts are not expected to impact groundwater quality. Based on the results of the geotechnical studies that were conducted on site, the groundwater was not observed in most of the test pit locations; where groundwater was observed, it was at approximately 11 to 16 feet. Therefore, the majority of the posts are not anticipated to encounter groundwater during typical conditions.

54. **Where is the nearest parcel used for publicly accessible recreational purposes? Describe the visibility of the proposed project from this parcel.**

    The nearest parcels used for public accessible recreational purposes are Topstone Golf Course, located in South Windsor, and Pierce Memorial Park, located in East Windsor.

    Topstone Golf Course is approximately 275 feet east of the nearest Project boundary. Project visibility from this golf course was assessed during the Visual Resource Assessment ("VRA") conducted for the Project. *See* Application, Exhibit G, Appendix A – *Viewpoint 16*. As illustrated in the referenced photograph, the Project would sit atop a steep topographic rise on the north side of Windsorville Road. While portions of the fence and panels may be visible from this discrete location during leaf-off conditions, it is unlikely to draw viewer attention due to the significant screening provided by the existing, dense vegetation. During the height of the summer season (and likely the highest "use" period of the golf course), it is anticipated that the Project will be fully screened from view.

    Pierce Memorial Park is approximately 600 feet east of the nearest Project boundary. Project visibility from this location will be screened by the existing, dense vegetative buffer and multiple residences that are along Windsorville Road. Project visibility, immediate south of the Pierce Memorial Park and along Windosville Road, was assessed during the VRA. *See* Application, Exhibit G, Appendix A – *View Point 7*.

55. **Referencing Tab A of the Application, Wetland Delineation Map. Please submit a revised Wetland Delineation Map that includes Vernal Pool #6.**

Vernal Pool No.6 is included in the revised copy of the Wetland Delineation Map, included herein as Exhibit H.

56. **Would the proposed project be consistent with the 2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices?**

Yes; the Project, as designed, would be consistent with the *2015 U.S. Army Corps of Engineers Vernal Pool Best Management Practices* ("USACE VP BMPs"). In accordance therewith, no disturbance will occur within the Vernal Pool Envelopes ("VPE"); the majority of the disturbance(s) within the Critical Terrestrial Habitats ("CTH") envelope will be within already developed areas. According to the USACE VP BMPs, "developed areas" include fields—which, in previous calculations for the Project, were not considered to be "developed areas." Fields are considered developed areas since vernal pool breeding species are forest-dwelling. The Land Use Calculation tables for the Project have been updated to reflect this standard; please see Table 1 below.

Table 1. Land Use Calculations for Upland Vernal Pool Habitats – Pre-development

Habitat Zone	Category	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6
Vernal Pool Envelope (0-100 ft)	Undeveloped (accessible forest)	100%	100%	100%	100%	100%	100%
	Developed*	0%	0%	0%	0%	0%	0%
Critical Terrestrial Habitat (100-750 ft)	Undeveloped (accessible forest)	65%	85%	96%	81%	83%	44%
	Developed*	35%	15%	4%	19%	17%	56%

*Calculations include agricultural fields.

Proposed tree-clearing within the CTH envelope has been minimized to the extent practicable; USACE VP BMPs recommends limiting development to less than 25 percent (%) of the CTH. Post-construction, all undeveloped areas within the CTH will range from 39 to 94 percent (%). *See* Table 2, below. The CTH with the most impact will be VP-1, which will experience a seven percent (7%) increase in developed area(s) within the CTH. However, the Project is sited to occur within previously-developed areas with minimal tree clearing on the edges of these developed areas, and, therefore, will not impede on amphibian terrestrial passage within the upland forest and wetlands.

Table 2. Land Use Calculations for Upland Vernal Pool Habitats – Post-development

Habitat Zone	Category	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6

Vernal Pool Envelope (0-100 ft)	Undeveloped (accessible forest)	100%	100%	100%	100%	100%	100%
	Developed*	0%	0%	0%	0%	0%	0%
Critical Terrestrial Habitat (100-750 ft)	Undeveloped (accessible forest)	58%	79%	94%	80%	82%	39%
	Developed*	42%	21%	6%	20%	18%	61%

*Calculations include agricultural fields.

57. **Referencing Tab K of the Application, Vernal Pool Survey, page 3, Table 2 – Land Use Calculations for Upland Vernal Pool Habitats. This table provides pre-construction conditions. Please provide a similar table with post-construction conditions.**

    Updated Land Use Calculations Tables for pre-construction and post-construction Project conditions have been prepared in response to Interrogatory No. 56, above. Accordingly, please refer to the tables provided therein.

58. **Referencing page 41 of the Application, the Applicant notes that, "Cultural surveys and consultation with CT SHPO in regard to investigation and potential mitigation methods are on-going." Please provide an update on the cultural resource surveys and consultation with SHPO. Provide a copy of any cultural resource surveys e.g. Phase 1B Survey and any correspondence received from SHPO if available.**

    On September 11, 2020, GPS submitted the Phase IB Survey Report to the SHPO. A field visit of the Project Site (with focus on the above-ground structures) was subsequently conducted on October 20, 2020. Gravel Pit Solar is continuing to consult with SHPO on appropriate ways to avoid, minimize, and mitigate impacts to these structures, where feasible.

59. **Where is the nearest national, state and/or locally-designated scenic road from the proposed site? Describe the visibility of the proposed project from the nearby scenic road.**

    The Project will not be visible from any (currently-listed) designated scenic road. The nearest scenic road is a state-designated segment of Route 74 that is located in Tolland, over four (4) miles southeast of the Project.

60. **Referencing pages 10 and 11 of the visibility analysis, about 3.9 percent of the two-mile radius study area would have some level of visibility. This is based on the proposed configuration including about 15.5 feet of height for tracking panels and about 9 feet of height for fixed panels. As a comparison, what percentage of the two-mile study area would have visibility if the proposed project had fixed panels (e.g. ~9 feet tall) only?**

A viewshed analysis was completed to determine whether a consistent nine (9)-foot-tall panel applied to the entire Project would result in reduced visibility within the two (2)-mile visual study area. Assuming nine (9)-foot tall panels throughout the entire Project Area would result in a 1.3-acre decrease in predicted visibility. This is approximately 0.008 percent (%) of the two (2)-mile visual study area. The areas of reduced Project visibility are very discrete and are spread throughout the visual study area. Notable areas of reduced Project visibility are illustrated in Exhibit G of the Application. These include an area south of Wapping Road and Plantation Road. All of the referenced areas of reduced visibility are in non-public open fields, and this reduction will not be experienced by any private residences. In terms of overall Project visibility, the effect of a reduced panel height would likely go unnoticed by viewers within the visual study area.

61. **Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identify 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. **substation/switchyard site/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.

As requested, a Project photolog and map has been prepared. Please refer to Exhibit I.

Facility Construction

62. **Has the Applicant submitted an application for a Stormwater Permit from DEEP?**

Gravel Pit Solar expects to submit a Stormwater application to CTDEEP following receipt of NDDB's final determination for the proposed Conservation Measures for the Project. This NDDB final determination is a prerequisite to filing a stormwater permit application.

63. **Referencing page 22 of the Application, the Applicant met with DEEP Stormwater Division during a site walk held on July 28, 2020. Have any additional meetings with DEEP Stormwater Division been held subsequent to the site walk? Please describe any recommendations, comments or concerns about the project provided by the Stormwater Division**.

Following the July 28, 2020 site walk, GPS participated in teleconference meetings with CTDEEP Stormwater Division staff on September 15, 2020 and September 29, 2020, respectively. The purpose of these meetings (including the referenced site walk) was to review the Project's proposed stormwater management approach and methods, as well as the Project's plans to utilize existing uplands depressions and valleys located onsite. Additional discussions regarding the handling of a large area onsite, primarily located within and adjacent to the northern active gravel pit (which will not have discharge of stormwater runoff from the Site), are ongoing.

CTDEEP Stormwater staff has verbally concurred with the Project's approach and requested that areas of the Project that do not have the ability to discharge off-site nonetheless be included under the Project's Construction Stormwater General Permit. In addition, CTDEEP requested a summary of how the Project is compatible with the (January 8, 2020) Appendix I, *Guidance Regarding Solar Arrays*, as well as the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, and that the Applicant provide reasoning/justification(s) for any condition that is met by alternative or appropriate methods. This summary has been provided to CTDEEP.

64. **Has the Applicant consulted with DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins?**

During a teleconference meeting held on June 22, 2020, Gravel Pit Solar provided a Project overview to the CTDEEP Dam Safety program. GPS intends to update and consult with CTDEEP Dam Safety Division, as appropriate, when it files its application for the CTDEEP Stormwater General Permit. The results of the consultation(s) will be provided to the Council for reference.

65. **With regard to earthwork required to develop the site, provide the following:**
    - **a) Will the site be graded? If so, in what areas?**
    - **b) What is the desired slope within the solar array areas?**
    - **c) Could the solar field areas be installed with minimal alteration to existing slopes?**
    - **d) If minimal alteration of slopes are proposed, can existing vegetation be maintained to provide ground cover during construction?**
    - **e) Estimate the amounts of cut and fill in cubic yards for the access road(s)**
    - **f) Estimate the amounts of cut and fill in cubic yards for solar field grading.**
    - **g) If there is excess cut, will this material be removed from the site property or deposited on the site property?**

a) The majority of the proposed site-grading is associated with the existing gravel pit areas and for work related to the proposed stormwater basins. A small amount of grading is proposed in areas of existing agricultural fields to accommodate the tracker panels. For revised Site Plans, please refer to the attached Exhibit D.

b) The desired slope for fixed-tilt racking installation(s) is less than fifteen percent (15%) slope, and approximately 0.5 percent (%) or less between tracker foundation posts within the same row or panels.

c) Yes; in fact, the Project's solar field areas have been designed, to the extent(s) feasible, with only minimal alteration to the existing slopes. Grading will only be required in the gravel pit areas that contain steeper slopes and in limited areas within the agricultural fields.

d) Yes; to the extent practicable, existing vegetation will be maintained onsite where grading is not proposed. However, the majority of the Site may be bare due to active farming, gravel mining, and frequent ATVs traffic occurring thereon. GPS plans to vegetate the Site as early as practicable by seeding prior to the start of construction to allow the Site to vegetate/stabilize.

e) As the Project contemplates the use of compacted native soil roads, it is not anticipated that any cut or fill will be required to install the proposed roads.

f) Based upon an earthwork analysis, it is anticipated that approximately 873,000 cubic yards of soil will be moved within the gravel pit portions of the Project, and that those portions of the Project will be balanced with no excess material imported or exported. It is anticipated that an updated earthwork analysis will be required for the active gravel pit areas to account for new site conditions.

g) The plan is to balance the cut and fill from the gravel pit portions of the Project. Any excess cut from the farm field, including top soil(s), will likely be kept and either stockpiled onsite or utilized in the gravel pit area.

66. **Would topsoil be stripped from the site prior to grading? If so, would the topsoil be spread over the disturbed areas once grading is complete? If not, how would growth of new vegetation/grasses be promoted within the graded areas if nutrient rich soils are not present?**

The Applicant anticipates that topsoil will be stripped from the Site prior to grading and will be stockpiled for reuse, as necessary. Vegetative growth across the Site will be monitored throughout Project construction in support of the Project's future CTDEEP Stormwater General Permit approval; any areas struggling to support vegetative growth will be examined and remedied on a case-by-case basis. GPS expects that composting of onsite material may be employed in some areas to support achieving permanent vegetation.

67. **How would the posts (that support the racking system) be driven into the ground? In the event that ledge is encountered, what methods would be utilized for installation?**

The posts will be driven into the ground by a track-mounted pile driver; ground screws will be used in the event that ledge is encountered. However, based on the results of the geotechnical report, it is not anticipated that shallow ledge will be encountered at the Site.

68. **What is the minimum road width required for post-construction use?**

The Applicant's preferred minimum road width for post-construction operations and maintenance is approximately fifteen (15) feet.

69. **Has a comprehensive geotechnical study been completed for the site to determine if site conditions support the overall Project design? If so, summarize the results. If not, has the Applicant anticipated and designed the Project with assumed subsurface conditions? What are these assumed conditions?**

A comprehensive geotechnical study has been completed for the Site and reveals that the conditions do support the overall design of the Project. Please refer to Exhibit J for the Geotechnical Report Narrative, which provides a summary of the results and the conditions identified at the Site.

70. **Provide the estimated typical construction hours and days of the week (e.g. Monday through Friday 8 AM to 5 PM)?**

    Typical construction days/hours are estimated to be between Monday through Friday, 7 a.m. to 5 p.m.; however, GPS anticipates that weekend work and some longer hours may occur to meet critical milestones.

Maintenance Questions

71. **Referencing Tab P – Operations and Maintenance Plan, p. 4, would snow accumulation on the solar panels affect the output of the facility? Under what circumstances would snow be removed? Describe snow removal methods.**

    Snow accumulation will have a temporary effect on facility output. Typically, however, snow accumulation will not be cleared unless accumulation persists for a longer duration. If snow or ice conditions are forecasted to persist for long periods, GPS may consider snow removal using best practices (i.e. by hand with brooms or pressure washer).

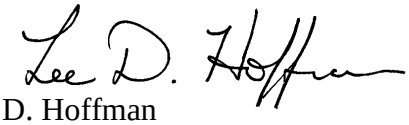
72. **Would the Applicant store any replacement modules on-site in the event solar panels are damaged or are not functioning properly? If so, where? How would damaged panels be detected?**

    GPS intends to store replacement modules within either an existing, onsite Tobacco shed or within a Conex box (that will be located adjacent to the Project substation). Damaged modules will also likely be (temporarily) stored within one of the existing Tobacco sheds (potentially the same as the one housing the replacement modules), before being shipped offsite for recycling purposes.

    Damaged modules will be detected by routine inspections, identifying production loss along a string of panels, and by annual overhead aerial infrared scanning of the Project facility.

Respectfully submitted,

Gravel Pit Solar

By: 

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