



December 22, 2021

VIA ELECTRONIC DELIVERY

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

RE: Petition 1469 – LSE Indus LLC (“Lodestar”) for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need is Required for the Construction, Operation and Maintenance of Solar Photovoltaic Facility in North Canaan, Connecticut

Dear Attorney Bachman:

In connection with the above-captioned petition, please find enclosed the original and fifteen (15) copies of Petitioner’s interrogatory responses (set one) dated December 22, 2021. In addition, under separate cover, Petitioner is bulk filing four (4) copies of the environmental assessment report with attachments per the Council’s request.

Please let me know if you have any questions.

Sincerely,

Carrie Larson Ortolano

Carrie L. Ortolano
General Counsel

Enclosures

STATE OF CONNECTICUT SITING COUNCIL

PETITION OF LSE INDUS LLC
FOR A DECLARATORY RULING
THAT NO CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED IS
REQUIRED FOR THE CONSTRUCTION,
OPERATION, AND MAINTENANCE OF
A 1.99 MW AC SOLAR PHOTOVOLTAIC
FACILITY IN NORTH CANAAN, CONNECTICUT

PETITION NO. 1469

DECEMBER 21, 2021

**PETITIONER LSE INDUS LLC'S RESPONSES TO SITING COUNCIL INTERROGATORIES
SET ONE DATED DECEMBER 1, 2021**

NOTICE

1. ***Referring to Petition Appendix 5, did the Petitioner receive any comments from the mailers sent out on October 21, 2021? If so, how many abutters responded and how were their concerns addressed?***

RESPONSE: As of the date hereof, Petitioner has not received any comments. Petitioner will provide an update of this response if any comment is received.

PROJECT DEVELOPMENT

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

RESPONSE: The Project will require a stormwater General Permit (GP 15) from the Department of Energy and Environmental Protection ("DEEP") along with both building and electrical permits from the Town of North Canaan.

3. ***Referencing page 3 of the Petition, would all 1.99 megawatts (MW) alternating current (AC) be dedicated to VNM?***

RESPONSE: Yes.

4. ***Referencing page 3 of the Petition, can the ZREC contract be extended/renewed? If not and the solar facility has not reached the end of its lifespan, will the Petitioner decommission the facility at that time or seek other revenue mechanisms for the power produced by the facility?***

RESPONSE: Yes, the LREC contract can be extended.

5. Would the Petitioner participate in the ISO-NE Forward Capacity Auction? If yes, which auction(s) and capacity commitment period(s)?

RESPONSE: Yes, the Petitioner may submit this Project in the next Forward Capacity Auction #16 in the summer of 2022.

6. What is the estimated cost of the project?

RESPONSE: Petitioner anticipates that the procurement and construction of the Project will cost approximately \$4 million.

PROPOSED SITE

7. Please submit a map clearly depicting the boundaries of the solar project site and the boundaries of the host parcel(s). Under RCSA §16-50j-2a(29), "Site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located.

RESPONSE: A map clearly depicting the boundaries of the solar project site and the boundaries of the host parcel(s) is attached as Exhibit 1.

8. Referencing page 6 of the Petition, what portions of the host properties may be purchased by LSE?

RESPONSE: None. The reference on page 6 is incorrect and should be updated to reflect that Petitioner will exercise its option to lease (not purchase).

9. Is the site parcel, or any portions 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?

RESPONSE: No, no portion of the Property is part of the Public Act 490 program.

10. Referencing page 7 of the Petition, what specific upgrades to the existing gravel drive are proposed? How will stormwater runoff along the access drive be controlled? How was the access road designed to accommodate emergency vehicles?

RESPONSE: As noted in the Petition, Petitioner proposes to utilize the existing driveway at the Property. The existing driveway is approximately twelve (12) feet wide and there are existing swales and culverts that convey stormwater associated with the road. The project design should have a minimal impact on the existing driveway and upon completion of construction activities, any construction impacts will be corrected and a top coating of gravel will be applied if necessary.

ENERGY OUTPUT

11. What is the projected capacity factor (expressed as a percentage) for the proposed project? What electrical loss assumptions been factored into the output of the facility?

RESPONSE: The projected capacity factor: 14.1%. The loss assumptions that have been factored include: shading, soiling, reflection, inverter loss, mismatching, temperature, wiring, and clipping.

12. Could the project be 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 the VNM.

RESPONSE: There is no current plan for battery installation because such technology is not currently provided for under the existing regulatory regime. In the event that the regulatory environment changes, Petitioner may later seek to install batteries at the Project and, if so, would seek the required regulatory approvals to do so, including any approvals required by the Siting Council. In anticipation of future battery installation, Petitioner has included an additional equipment pad, as shown on the site plans.

13. Could the project be designed to serve as a microgrid?

RESPONSE: There is no current plan for this Project to service as a microgrid. Petitioner's interconnection agreement with Eversource is not designed for islanding the power and no energy storage is proposed on-Site.

14. If one section of the solar arrays experiences electrical problems causing the section to shut down, could other sections of the system still operate and transmit power to the grid? By what mechanism are sections electrically isolated from each other?

RESPONSE: In the event there is an issue with a portion of the array, the inverter dedicated to this portion will issue a fault and safely restrict power flow. The operations and maintenance team will receive an alert that this inverter requires attention and will repair as necessary. The remainder of the inverters will remain operational during this repair/diagnostic period.

In the event there are abnormal conditions or a complete outage from the utility grid, all inverters will disconnect from the grid in unison, immediately, and automatically via the SEL vista switchgear.

SITE COMPONENTS AND SOLAR EQUIPMENT

15. 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?

RESPONSE: Yes, DC wiring is to be installed on the racking directly below the modules. The racking system is designed to incorporate the wiring close to the modules with no loose conductors. According to the National Electric Code, this circuitry must be comprised of a special conductor called USE-2 also known as “photovoltaic wire.” USE-2 is specifically designed for this Project. Although the circuitry is mounted below the modules and not exposed to direct sunlight, USE-2 consists of a unique insulation that is resistant to UV exposure for extended periods. In addition, USE-2 wire consists of a thicker insulation jacket that shields the circuit from animal intrusion, chafing, etc. As a fail-safe for unanticipated events, each circuit is fuse-protected, which protects the circuit from thermal concerns and short circuits.

INTERCONNECTION

16. Is the project interconnection required to be reviewed by ISO-NE?

RESPONSE: No.

17. Would any off-site upgrades to the electrical distribution system be required? If so, describe.

RESPONSE: No.

18. Page 11 of the Petition states the interconnection extension will follow the path of the access road with poles installed adjacent to the access road on its east side. How many utility-side interconnection poles will be installed? How many customer side poles will be installed?

RESPONSE: Approximately three (3) utility poles, approximately twenty (20) feet in height will be installed. Two (2) will be utility-side and one (1) will be customer-side.

Public Safety

19. 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.

RESPONSE: Yes. The Project will comply with all applicable standards.

20. What and where is the nearest federally-obligated airport from the site? Is a glare analysis required to comply with FAA policy?

RESPONSE: The closest federally-obligated airport is a private airport located 1.9 miles away to the northwest of the Project in North Canaan, CT as depicted in the FAA determinations included in Exhibit 9 of the Petition. No glare analysis is required.

21. *Is the on-site airstrip still active? Would glare from the proposed facility present a hazard to aircraft using the airstrip?*

RESPONSE: The property owner does infrequently use the airstrip and intends to continue such use indefinitely. Glare will not present a hazard.

22. *With regard to emergency response:*

a. *Is outreach and/or training proposed for local emergency responders in the event of a fire or other emergency at the site?*

b. *How would site access be ensured for emergency responders?*

c. *In the event of a brush or electrical fire, how would the Petitioner mitigate potential electric hazards that could be encountered by emergency response personnel?*

d. *Could the entire facility be shut down and de-energized in the event of a fire? If so, how?*

RESPONSE: After construction completion and prior to energization, local emergency responders are provided on-Site training with the O&M team to ensure emergency response personnel are educated upon the location of specific components of the emergency response plan. The fire department is provided 24/7 access by installing their own lock on the access gate to the Site. In the event of a brush or electrical fire, the emergency shutdown procedure as outlined in Section E of Exhibit 3 Operations and Maintenance Plan included in Petitioner's petition filing. Once this shutdown procedure has been executed, the site will be de-energized to mitigate potential electrical hazards for emergency personnel. In the event of a fire, the entire site can be de-energized by following the emergency shutdown procedure as outlined in Section E of Exhibit 3 Operations and Maintenance Plan.

23. *The Petition Exhibit 8, Environmental Assessment Attachments were not included with the submitted Petition. Provide the attachments as a bulk file.*

RESPONSE: Please see the bulk filing, which is being mailed to the Council's offices.

24. *Would the solar field areas be visible from Route 44?*

RESPONSE: The Project is not anticipated to be substantially visible from Route 44. The Project will be installed at a higher elevation than Route 44 and sufficient existing tree cover will remain to prevent direct views of the Project. There may be some fleeting glimpses of a portion of the project from select locations to the east of the Property (at distance between 0.25-mile and 0.5-mile) where roadside trees are not as abundant and open fields lie north of Route 44.

25. The selected grass mix for the site is composed of more than 90% lawn grass species. Can a seed mix be used that provides a larger component of flowering pollinator species?

RESPONSE: Yes.

26. Does the property owner currently use the parcel for agriculture? If so, what specific crops/agricultural use would be lost due to development of the Project?

RESPONSE: No, to the Petitioner's knowledge, the property owner does not currently utilize the Property for any type of agricultural use.

27. Petition Exhibit 8, Table 4 indicates there is 2.8 acres of prime farmland soil within the project footprint. How many acres of mapped prime farmland soil within the Project footprint are forested and how many acres are within existing fields?

RESPONSE: The amount of prime farmland soils within the Project footprint that occupies forested areas totals approximately 2.65 acres; approximately 0.15 acre of prime farmland soil within the Project footprint is located in the existing field.

28. Has the Petitioner considered an agricultural co-use of the property?

RESPONSE: The Petitioner has not considered an agricultural co-use for the property. With the consent and approval of the land owner, the Petitioner would consider grazing sheep for vegetation management on any areas suitable for such purpose. Petitioner would also consider, with the land owner's consent, permit beekeeping within the array area as Petitioner has done in similar facilities in Connecticut.

29. Due to the presence of the Eddy Aquifer Protection Area adjacent to the site, submit a detailed Fuel Storage and Spill Prevention Control Plan.

RESPONSE: A Spill Prevention Control Plan ("SPCP") has been included in the Stormwater Pollution Control Plan ("SWPCP") submitted to DEEP, an excerpt from which is attached hereto as Exhibit 2.

30. Would groundwater quality be affected by racking post driving/drilling?

RESPONSE: No. Groundwater quality is not anticipated to be affected by the installation of the proposed racking system. *See also* Exhibit 2. Petitioner anticipates utilizing ground screws to install racking. The methodology will be finalized once full geotechnical analysis has been completed during the construction phase of the Project. Regardless of the methodology, Petitioner anticipates no impact to groundwater quality.

31. Did the State Historic Preservation Office comment on the project? If so, provide such correspondence.

RESPONSE: The response from the State Historic Preservation Office is attached hereto as Exhibit 3, confirming that the Project will have no impact on any historic resources in the vicinity of the Project.

32. Referring to Petition Exhibit 8 Figure 2, it appears there is forestland marked as developed in the eastern portion of the parcel (northeast of the on-site building)? If forest is present, revise Table 1 and the Figure 4 tables to account for forested areas marked as developed. How many acres of forest in this area will be cleared?

RESPONSE: Figure 2 in Exhibit 8 is accurate. As discussed below, this area has been previously cleared of the majority of trees by the property owner. No additional tree clearing will occur in the area depicted as “developed”.

33. Is it possible to shift the project to avoid clearing the mature forest northeast of the on-site building and south of the vernal pool?

RESPONSE: Trees within the area northeast of the outbuilding and south of the property line and vernal pool have been selectively harvested by the property owner over the past two (2) years to facilitate the property owner’s operations and, as a result, the aerial photographs contained in the Petition are not entirely accurate with respect to existing conditions. This area now has access roads and clearings used for equipment and material storage. As such, there is no longer a contiguous forest present and the project will now require minimal clearing of remaining trees to install an array in this area. No tree removal or ground disturbances are proposed north of the existing access road that extends along the north side of this area.

34. 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:

- a. wetlands, watercourses and vernal pools;***
- b. forest/forest edge areas,***
- c. the eastern area marked in Petition Exhibit 8 Figure 2 as developed;***
- d. agricultural soil areas;***
- e. sloping terrain;***
- f. proposed stormwater control features;***
- g. nearest residences;***
- h. Site access and interior access road(s);***
- i. utility pads/electrical interconnection(s);***
- j. clearing limits/property lines;***
- k. mitigation areas; and***

l. 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.

RESPONSE: See attached Exhibit 5.

Facility Construction

35. Would any fuels be stored on site during construction? If so, provide fuel storage/spill prevention control details.

RESPONSE: No. Please see Exhibit 2 attached hereto as well as the operations and maintenance plan attached to the Petition as Exhibit 3.

36. What is the size (in acres) of the fenced area for each of the four project sections?

RESPONSE: The four fenced areas of the Project sections encompass ± 0.71 acres (north west), ± 1.68 acres (north middle), ± 2.02 acres (north east), and ± 3.20 acres (south), respectively.

37. Provide the distance, direction and address of the nearest property line and nearest residence from the perimeter fence.

RESPONSE: The nearest property line to the proposed perimeter fence in a northeast direction is ± 39 feet from the northern middle array associated with Parcel ID number 16/060-0. (306 Daisy Hill Road). The nearest residence to the proposed perimeter fence is ± 343 feet from the southern array in the western direction associated with Parcel ID number 16/049-0 (79 East Main Street).

38. Referring to Site Plan EC-1, Phase 1 Notes, why is Basin B-3 referred to as a permanent basin at the time of construction rather than as a temporary sediment trap (TST) similar to TST-1A and TST-1B? If B-3 is not intended to be a TST, how would it be protected from potential sediment accumulation during construction?

RESPONSE: The Petitioner proposes to manage areas upstream of Basin-3 (which totals less than one acre) with perimeter controls. As such, sediment control from this specific project area is not anticipated to require the volume associated with Basin-3 during construction. Further, Basin-3 is located within the fenced area and the proposed racking extends slightly into the basin area, requiring construction of Basin-3 prior to the installation of the racking and fencing. Additional perimeter controls can be added along the

upstream edge of Basin-3 and the Petitioner's contractor can be required to clean it out as needed during and post-construction.

39. Referring to Site Plan EC-1, the construction phasing notes do not refer to Basins B-2 and B-4 – during what phase would these basins be constructed? Would these basins be used as a TST during construction? If not, how would they be protected from potential sediment accumulation during construction? At what point would they be cleaned? (note 17 does not refer to cleaning of permanent basins)

RESPONSE: Basins B-2 and B-4 are intended to be constructed after the construction of the racking and fenced array areas are complete. Perimeter controls are proposed as sediment and erosion controls for the Project areas upstream of Basins B-2 and B-4. A note will be added to the Site Plans to specify that the Petitioner's contractor will clean Basins B-2 and B-4 after their construction as needed.

40. Referring to the Site Plans, what do the gray shaded areas on the downgradient sides of Basins B-1A and B-1B represent?

RESPONSE: Referring to the Site Plans, the gray shaded areas on the downgradient sides of Basins B-1A and B-1B represent proposed stone side-slope stabilization, as requested by the DEEP during the Pre-Application meeting on Wednesday June 23, 2021.

41. Referring to Petition p. 5, how did DEEP define a “full growing season”?

RESPONSE: Petitioner understands that DEEP defines a full growing season as the timeframe encompassed by two (2) consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

42. Which sediment traps/permanent basins would be constructed prior to the commencement of the “full growing season”?

RESPONSE: Proposed temporary sediment traps TST-1A and TST-1B and proposed basin B-3 are proposed to be constructed prior to the commencement of the “full growing season” as a part of the initial phase of construction (i.e., clearing and grubbing). The remaining permanent stormwater management basins are phased to be constructed after the completion and stabilization of the proposed array areas. The temporary sediment traps TST-1A and TST-1B and basin B-3 will be cleaned out and converted to permanent basins after the completion and stabilization of the proposed array areas.

Maintenance Questions

43. Would pesticides/herbicides be used during maintenance at the site? If so, is there a recommended distance to water resources such as wetlands and stormwater basins?

RESPONSE: None will be used.

44. Would the Petitioner store any replacement modules on-site? If so, indicate where the modules would be stored.

RESPONSE: No, there are no plans to store modules on-site.

45. Has the manufacturer of the proposed solar panels conducted Toxicity Characteristic Leaching Procedure (TCLP) testing to determine if the panels would be characterized as hazardous waste at the time of disposal under current regulatory criteria? If so, submit information that indicates the proposed solar modules would not be characterized as hazardous waste. If not, would the Petitioner agree to install solar panels that are not classified as hazardous waste through TCLP testing?

RESPONSE:

Although the Petitioner has not finalized which modules will be utilized on the Project, TCLP testing has been conducted on Phono Sumec modules. These are standard polycrystalline silicon (PolySi) module types utilized throughout the solar industry and Petitioner anticipates utilizing a similar make/model of module for this Project. The associated TCLP report is attached as Exhibit 4. Within this report hazardous materials were tested and ultimately not detected. This includes arsenic, barium, chromium, selenium, cadmium, and mercury. Trace amounts of lead from the soldering process were found however the 4.3 mg/L result is below the level that qualifies a substance as “toxic” and does not require the material to be disposed of as “hazardous waste.” Thin-film solar modules are composed of cadmium telluride (CdTe) and have been a source of concern with respect to disposal. If the Project is approved, the Petitioner commits to the installation of standard polycrystalline silicon (PolySi) modules that are not considered toxic or hazardous waste and align with the results of the Phono Sumec TCLP report.

Respectfully submitted,

Petitioner
LSE INDUS LLC

By: _____
Jeffrey J. Macel, Manager
Carrie Larson Ortolano, General Counsel
% Lodestar Energy LLC
40 Tower Lane, Suite 201
Avon, CT 06001

EXHIBIT 1



LSE INDUS LLC
 40 TOWER LANE, SUITE 201
 AVON, CT 06001



567 VAUXHALL STREET EXTENSION - SUITE 311
 WATERFORD, CT 06385 PHONE: (860)-663-1697
 WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

EXHIBIT		
NO	DATE	REVISION
0	12/08/21	FOR REVIEW: KAM
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD
 PROF: KEVIN A. MCCAFFERY, P.E.
 COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
 ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: JOHN BUNCE
ADDRESS: 81 EAST MAIN ST NORTH CANAAN, CT

BUNCE 1 SOLAR FACILITY

SITE 81 EAST MAIN ST
ADDRESS: NORTH CANAAN, CT
APT FILING NUMBER: CT606140
DRAWN BY: JT
DATE: 12/08/21 **CHECKED BY:** KAM

SHEET TITLE:
 EXHIBIT 1

SHEET NUMBER:
 EXH-1

EXHIBIT 2



STORMWATER POLLUTION CONTROL PLAN

**PROPOSED
BUNCE 1
SOLAR PROJECT**

**EAST MAIN STREET
NORTH CANAAN, CONNECTICUT
LITCHFIELD COUNTY**

Prepared for:

**LSE Indus LLC
40 Tower Lane - Suite 201
Avon, CT 06001**

Prepared by:

**All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06385**

October 2021

This Stormwater Pollution Control Plan (SWPCP) is prepared to comply with the requirements for the General Permit for the Discharge and Dewatering Wastewaters from Construction Activities. Also to be considered part of the SWPCP are the proposed construction plans, special provisions, and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (Guidelines).

Table of Contents

INTRODUCTION	1
SITE DESCRIPTION AND PROPOSED WORK.....	1
APPENDIX I – STORMWATER MANAGEMENT AT SOLAR ARRAY CONSTRUCTION PROJECTS.....	2
RECEIVING WATERS	2
WETLANDS, WATERCOURSES, AND WATERBODIES ON SITE.....	2
VERNAL POOLS.....	3
FLOOD ZONES.....	3
CONSTRUCTION SEQUENCE.....	3
CONTROL MEASURES	4
EROSION AND SEDIMENTATION CONTROLS GENERAL NOTES	5
SOIL STABILIZATION AND PROTECTION	6
TEMPORARY STABILIZATION PRACTICES	6
PERMANENT STABILIZATION PRACTICES	7
STRUCTURAL MEASURES	7
MAINTENANCE	7
DEWATERING WASTEWATERS.....	8
POST-CONSTRUCTION STORMWATER MANAGEMENT	9
POST-CONSTRUCTION GUIDELINES.....	9
OTHER CONTROLS.....	9
SPILL PREVENTION CONTROL PLAN	9
WASTE DISPOSAL	10
WASHOUT AREAS.....	10
ANTI-TRACKING PADS AND DUST CONTROL	11
POST-CONSTRUCTION	11
INSPECTIONS.....	11
INSPECTION GUIDELINES.....	11
CORRECTIVE ACTIONS.....	13
CONTRACTORS	13
GENERAL	13
CERTIFICATION STATEMENT.....	13
KEEPING PLANS CURRENT.....	14
TERMINATION.....	14

Appendix	Title
APPENDIX A	SITE LOCATION MAP
APPENDIX B	IDENTIFICATION OF CONTRACTORS AND CERTIFICATION STATEMENTS
APPENDIX C	STORMWATER MANANGEMENT REPORT
APPENDIX D	DESIGN PLANS
APPENDIX E	STORMWATER MONITORING REPORT FORM
APPENDIX F	NOTICE OF TERMINATION FORM

WETLAND DELINEATION REPORT PROVIDED UPON REQUEST

Post-Construction Stormwater Management

Post-construction Guidelines

After the Project is complete the developer will perform the following maintenance and restoration measures:

- Mowing and maintenance of the turf and vegetated areas will occur as needed.

Other Controls

Spill Prevention Control Plan

Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill to avoid possible impact to nearby habitats.

A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.

The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.

1. Petroleum and Hazardous Materials Storage and Refueling
 - a. Refueling of vehicles or machinery shall occur within the Construction Laydown Area ONLY and shall take place on an impervious pad with secondary containment designed to contain fuels. This area must be a minimum of 100 feet from wetlands or watercourses.
 - b. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.
2. Initial Spill Response Procedures
 - a. Stop operations and shut off equipment.
 - b. Remove any sources of spark or flame.
 - c. Contain the source of the spill.
 - d. Determine the approximate volume of the spill.
 - e. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
 - f. Ensure that fellow workers are notified of the spill.
3. Spill Clean Up & Containment
 - a. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
 - b. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.

- c. Isolate and eliminate the spill source.
 - d. Contact the appropriate local, state and/or federal agencies, as necessary.
 - e. Contact a disposal company to properly dispose of contaminated materials in accordance with all local, state and federal regulations.
4. Reporting
 - a. Complete an incident report.
 - b. Submit a completed incident report to the appropriate Connecticut Department of Environmental Protection, , Municipal Official, Connecticut Siting Council and other applicable local, state and federal officials.

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period. Additionally;

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain directly to the adjacent wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overflowing.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials should be confined to the designated area as defined by the engineer.

Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete shall be conducted in a designated washout area. No surface discharge of washout wastewaters from the area will be allowed. All concrete wash water will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources as shown on the plans.

The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt. Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The contractor shall remove hardened concrete waste when it accumulates to a height of 1/2 of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent with all applicable laws, regulations, and guidelines.

EXHIBIT 3



Department of Economic and
Community Development

State Historic Preservation Office

December 10, 2021

Mr. David R. George
Heritage Consultants
PO Box 310249
Newington, CT 06131

Subject: Phase IA Cultural Resource Reconnaissance Survey and Addendum
Bunce Solar
81 East Main Street
North Canaan, Connecticut
ENV-22-0418

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the cultural resource reconnaissance survey prepared by Heritage Consultants, LLC (Heritage), dated March 2021. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed undertaking includes the construction of a solar facility, which is to occupy smaller project area within a larger 68 acre parcel. The parcel is bordered to the north, east, and west by wooded areas, and to the south by East Main Street. Access is to be the south, through an access road originating from East Main Street. The submitted report is well-written, comprehensive, and meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

Twelve previously recorded archaeological sites are located within 1 mile of the project area; however, none will be impacted by the undertaking. Four properties listed on the National Register of Historic Places (NR) are located within one mile of the project area: the Canaan Village Historic District (NR# 90001800), Union Depot (NR# 72001317), the Samuel Forbes Homestead (NR# 92001578), and the Isaac Lawrence House (NR# 83001270). One property listed on the State Register of Historic Places is also located within 1 mile of the project area: the Colonel Joseph Peet House; however, none of these resources will be impacted by the proposed undertaking.

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

An Affirmative Action/Equal Opportunity Employer An Equal Opportunity Lender



Department of Economic and
Community Development

State Historic Preservation Office

Following a pedestrian survey, it was determined that the project area was characterized as steep slopes, evidence of land clearing, and large boulders, and therefore contains low archaeological sensitivity.

As a result of the information submitted, SHPO concurs with the findings of the report that additional archeological investigations of the project area is not warranted and that no historic properties will be affected by the proposed activities. However, please be advised that if construction plans change to include previously uninvestigated/undisturbed areas, this office should be contacted for additional consultation.

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Kinney". The signature is written in a cursive style with a long, sweeping underline.

Jonathan Kinney
State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

An Affirmative Action/Equal Opportunity Employer An Equal Opportunity Lender

EXHIBIT 4

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-122464-1
Client Project/Site: Solar Module TCLP

For:
SUMEC Energy Holdings Co. Ltd.
No.1 Xinghuo Road
Nanjing Hi-tech Zone
Nanjing, China 210061

Attn: Mr. Chester Chen



Authorized for release by:
12/3/2019 7:25:49 PM

Michael DelMonico, Project Manager I
(330)497-9396
michael.delmonico@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	5
Sample Summary	6
Detection Summary	7
Client Sample Results	8
QC Sample Results	9
QC Association Summary	11
Lab Chronicle	12
Certification Summary	13
Chain of Custody	14

Definitions/Glossary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Job ID: 240-122464-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: SUMEC Energy Holdings Co. Ltd.

Project: Solar Module TCLP

Report Number: 240-122464-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The sample was received on 11/18/2019 11:10 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 13.8° C.

TCLP METALS (ICP)

Sample SOLAR PANEL (240-122464-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The sample was leached on 11/25/2019, prepared on 11/26/2019 and analyzed on 11/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY

Sample SOLAR PANEL (240-122464-1) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The sample was leached on 11/25/2019, prepared on 11/26/2019 and analyzed on 11/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
1311	TCLP Extraction	SW846	TAL CAN
3010A	Preparation, Total Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
Part Size Red	Particle Size Reduction Preparation	None	TAL CAN

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-122464-1	SOLAR PANEL	Solid	11/14/19 00:00	11/18/19 11:10	

1

2

3

4

5

6

7

8

9

10

11

12

13

Detection Summary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Client Sample ID: SOLAR PANEL

Lab Sample ID: 240-122464-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	4.3		0.050		mg/L	1		6010B	TCLP

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Client Sample ID: SOLAR PANEL

Lab Sample ID: 240-122464-1

Date Collected: 11/14/19 00:00

Matrix: Solid

Date Received: 11/18/19 11:10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1
Barium	ND		0.50		mg/L		11/26/19 14:00	11/27/19 10:08	1
Cadmium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1
Chromium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1
Lead	4.3		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1
Selenium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1
Silver	ND		0.050		mg/L		11/26/19 14:00	11/27/19 10:08	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020		mg/L		11/26/19 14:00	11/27/19 18:19	1

QC Sample Results

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-412722/2-A
Matrix: Solid
Analysis Batch: 412928

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1
Barium	ND		0.50		mg/L		11/26/19 14:00	11/27/19 09:59	1
Cadmium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1
Chromium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1
Lead	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1
Selenium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1
Silver	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:59	1

Lab Sample ID: LCS 240-412722/3-A
Matrix: Solid
Analysis Batch: 412928

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.00	2.15		mg/L		108	50 - 150
Barium	2.00	2.00		mg/L		100	50 - 150
Cadmium	1.00	1.05		mg/L		105	50 - 150
Chromium	1.00	1.01		mg/L		101	50 - 150
Lead	1.00	0.900		mg/L		90	50 - 150
Selenium	2.00	2.13		mg/L		106	50 - 150
Silver	0.100	0.107		mg/L		107	50 - 150

Lab Sample ID: LB 240-412574/1-B
Matrix: Solid
Analysis Batch: 412928

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 412722

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1
Barium	ND		0.50		mg/L		11/26/19 14:00	11/27/19 09:54	1
Cadmium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1
Chromium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1
Lead	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1
Selenium	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1
Silver	ND		0.050		mg/L		11/26/19 14:00	11/27/19 09:54	1

Lab Sample ID: 240-122464-1 MS
Matrix: Solid
Analysis Batch: 412928

Client Sample ID: SOLAR PANEL
Prep Type: TCLP
Prep Batch: 412722

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		5.00	5.46		mg/L		109	75 - 125
Barium	ND		50.0	51.9		mg/L		103	75 - 125
Cadmium	ND		1.00	1.12		mg/L		112	75 - 125
Chromium	ND		5.00	5.38		mg/L		108	75 - 125
Lead	4.3		5.00	9.84		mg/L		110	75 - 125
Selenium	ND		1.00	1.14		mg/L		114	75 - 125
Silver	ND		1.00	1.07		mg/L		107	75 - 125

QC Sample Results

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 240-122464-1 MSD
Matrix: Solid
Analysis Batch: 412928

Client Sample ID: SOLAR PANEL
Prep Type: TCLP
Prep Batch: 412722

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Arsenic	ND		5.00	5.59		mg/L		112	75 - 125	2	20
Barium	ND		50.0	54.0		mg/L		108	75 - 125	4	20
Cadmium	ND		1.00	1.14		mg/L		114	75 - 125	2	20
Chromium	ND		5.00	5.43		mg/L		109	75 - 125	1	20
Lead	4.3		5.00	9.95		mg/L		112	75 - 125	1	20
Selenium	ND		1.00	1.16		mg/L		116	75 - 125	2	20
Silver	ND		1.00	1.09		mg/L		109	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-412725/2-A
Matrix: Solid
Analysis Batch: 413058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412725

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.0020		mg/L		11/26/19 14:00	11/27/19 18:15	1

Lab Sample ID: LCS 240-412725/3-A
Matrix: Solid
Analysis Batch: 413058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412725

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00500	0.00549		mg/L		110	80 - 120

Lab Sample ID: LB 240-412574/1-D
Matrix: Solid
Analysis Batch: 413058

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 412725

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.0020		mg/L		11/26/19 14:00	11/27/19 18:13	1

Lab Sample ID: 240-122464-1 MS
Matrix: Solid
Analysis Batch: 413058

Client Sample ID: SOLAR PANEL
Prep Type: TCLP
Prep Batch: 412725

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	ND		0.00500	0.00564		mg/L		113	80 - 120

Lab Sample ID: 240-122464-1 MSD
Matrix: Solid
Analysis Batch: 413058

Client Sample ID: SOLAR PANEL
Prep Type: TCLP
Prep Batch: 412725

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	ND		0.00500	0.00563		mg/L		113	80 - 120	0	20

Eurofins TestAmerica, Canton

QC Association Summary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Metals

Processed Batch: 412195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	Part Size Red	
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	Part Size Red	
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	Part Size Red	

Leach Batch: 412574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	1311	412195
LB 240-412574/1-B	Method Blank	TCLP	Solid	1311	
LB 240-412574/1-D	Method Blank	TCLP	Solid	1311	
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	1311	412195
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	1311	412195

Prep Batch: 412722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	3010A	412574
LB 240-412574/1-B	Method Blank	TCLP	Solid	3010A	412574
MB 240-412722/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-412722/3-A	Lab Control Sample	Total/NA	Solid	3010A	
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	3010A	412574
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	3010A	412574

Prep Batch: 412725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	7470A	412574
LB 240-412574/1-D	Method Blank	TCLP	Solid	7470A	412574
MB 240-412725/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-412725/3-A	Lab Control Sample	Total/NA	Solid	7470A	
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	7470A	412574
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	7470A	412574

Analysis Batch: 412928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	6010B	412722
LB 240-412574/1-B	Method Blank	TCLP	Solid	6010B	412722
MB 240-412722/2-A	Method Blank	Total/NA	Solid	6010B	412722
LCS 240-412722/3-A	Lab Control Sample	Total/NA	Solid	6010B	412722
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	6010B	412722
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	6010B	412722

Analysis Batch: 413058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-122464-1	SOLAR PANEL	TCLP	Solid	7470A	412725
LB 240-412574/1-D	Method Blank	TCLP	Solid	7470A	412725
MB 240-412725/2-A	Method Blank	Total/NA	Solid	7470A	412725
LCS 240-412725/3-A	Lab Control Sample	Total/NA	Solid	7470A	412725
240-122464-1 MS	SOLAR PANEL	TCLP	Solid	7470A	412725
240-122464-1 MSD	SOLAR PANEL	TCLP	Solid	7470A	412725

Lab Chronicle

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Client Sample ID: SOLAR PANEL

Lab Sample ID: 240-122464-1

Date Collected: 11/14/19 00:00

Matrix: Solid

Date Received: 11/18/19 11:10

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
TCLP	Processed	Part Size Red			412195	11/22/19 08:42	POP	TAL CAN
TCLP	Leach	1311			412574	11/25/19 16:55	DRJ	TAL CAN
TCLP	Prep	3010A			412722	11/26/19 14:00	MRL	TAL CAN
TCLP	Analysis	6010B		1	412928	11/27/19 10:08	WKD	TAL CAN
TCLP	Processed	Part Size Red			412195	11/22/19 08:42	POP	TAL CAN
TCLP	Leach	1311			412574	11/25/19 16:55	DRJ	TAL CAN
TCLP	Prep	7470A			412725	11/26/19 14:00	MRL	TAL CAN
TCLP	Analysis	7470A		1	413058	11/27/19 18:19	SLD	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: SUMEC Energy Holdings Co. Ltd.
Project/Site: Solar Module TCLP

Job ID: 240-122464-1

Laboratory: Eurofins TestAmerica, Canton

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State Program	2927	02-23-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
7470A	7470A	Solid	Mercury



13.1/13.8
SUMEC

SUMEC ENERGY HOLDINGS CO.,LTD.
 江苏苏美达能源控股有限公司

致TO Eurofins TestAmerica
 4101 Shuffel Street NW, North Canton, OH 44720, USA

发票编号 INV.NO. SUMEC-EUROFINS-20191114
 日期 DATE 2019/11/14

发 票
COMMERCIAL INVOICE

L/C NO.

唛头及编号 Mark && Numbers	品名 Descriptions	数量 Quantities	单价 Unit Price	总价 Amount
N/M	raw material sample of solar module	2 SET	USD 5.00	USD 10
		2 SET		10.00

TOTAL:PACKED IN: 1 CARTON
 G/W: 1 KGS
 N/W: 0.9 KGS

SUMEC ENERGY HOLDINGS CO.,LTD.
 NO.1 XINGHUO ROAD, NATIONAL LEVEL NANJING
 HI-TECH ZONE, NANJING, 210061 P.R. CHINA

江苏苏美达能源控股有限公司
 SUMEC ENERGY HOLDINGS CO.,LTD

王健

Accepted by Lab 11/13/19
 TAC/ETA 1110



240-122464 Chain of Custody

1
2
3
4
5
6
7
8
9
10
11
12
13

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 122464
Canton Facility


Client Sumec Energy Holdings Inc Site Name _____ Cooler unpacked by: Ryan Criddle
 Cooler Received on 11-18-19 Opened on 11-18-19 1110
 FedEx: 1st Grd Exp UPS FAS Clipper ~~Client Drop Off~~ TestAmerica Courier Other DHL

Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

TestAmerica Cooler # _____ Foam Box _____ Client Cooler Box Other _____
 Packing material used: Bubble Wrap _____ Foam Plastic Bag None _____ Other _____
 COOLANT: Wet Ice _____ Blue Ice _____ Dry Ice _____ Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7°C) Observed Cooler Temp. 13.1 °C Corrected Cooler Temp. 13.8 °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples? Yes No
 If yes, Questions 12-16 have been checked at the originating laboratory.
 12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364
 13. Were VOAs on the COC? Yes No
 14. Were air bubbles >6 mm in any VOA vials? Yes  Larger than this. Yes No NA
 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
 16. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

Will log ID as "Solar Panel" sample date w/ 11/14/19 (date at top of COC/letter), no sample time. Will log TCLP Metals w/ PSR per PM.

18. SAMPLE CONDITION
 Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

EXHIBIT 5

**PDF Filed Separately
Due To Size)**