Dynamic Energy™

December 30th 2021

Melanie Bachman
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, Connecticut 06051

Re: PETITION NO. 1472 – Dynamic Energy Solutions, LLC as agent for Stag Industrial Holdings, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 1.5 megawatt AC solar photovoltaic electric generating facility located at 40 Pepes Farm Road, Milford, Connecticut, and associated electrical interconnection.

Enclosed please find and original and 15 copies of Petitioners' response to the CT Siting Council's questions as set forth in your letter dated December 28th.

We hope that you find the response satisfactory in form and nature. If you have any question or concerns, please feel free to contact me at any time.

Pat Hastings

SVP. PROJECT ENGINEERING & DELIVERY

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1550 Liberty Ridge Drive, Suite 310, Wayne, PA 19087

phastings@dynamicenergy.com

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Petition No. 1472
Dynamic Energy Solutions, LLC
Milford Connecticut

Interrogatories

Project Development

1. What is the estimated cost of the project?

    a. **$3,100,000**

Proposed Site

2. Provide a map of the abutting properties and names of the abutting property owners.

    a. **Please see attached Abutting Properties Map.pdf**

3. What are the existing land uses abutting the site?

    a. **Please see attached Abutting Properties Map.pdf (uses are Industrial, Light Industrial, Municipal and Wet Res PV as listed on the listing reports**

4. Referring to Petition p. 6, provide the address and direction of nearest residence.

    a. **The nearest residence(s) is approximately 565 feet South east across Pepe Farm Road. Please see attached Nearest Residence.pdf**

5. Provide a legend for the land use map provided in Exhibit B.

    a. **Please see attached Exhibit B LEGEND.pdf**

Energy Output

6. What is the anticipated capacity factor of the project? Would the capacity of the system decline over time? If so, estimate annual losses.

    a. **Capacity factor is approx. 20% (2,675 MWh/year / 13,140 MWh/year) AC Capacity. Annual losses from module degradation can be approx. .5% - 1% each year**

7. Would the impact of soft shading, such as air pollution or hard shading, such as bird droppings, or weather events, such as snow or ice accumulation, hail, dust, pollen, etc. reduce the energy production of the proposed project? If so, was this included in the proposed project capacity factor assumptions? Would any of these expose the solar panels

to damage? If applicable, what type of methods would be employed to clear the panels of the bird droppings, snow and ice accumulation, hail, dust or pollen and at what intervals?

a. **Yes, soft shading such a mentioned does reduce the energy production of the project. These "losses" are taken into account in the generation simulations and project capacity factor. The modules are tilted at 10 degrees and general rain events clean the modules of these shadings. It is generally cost prohibitive to proactively employ methods of cleaning and snow removal.**

8. Would prey shells from shorebirds damage or otherwise affect the Project? How can such damage be prevented?
   a. **The glass density of solar module is such that damage like this does not occur. If by chance it should damaged by this or any other event the module glass is tempered and does not shatter. It would be easily replaced.**

9. Have any power purchase agreements been executed for the Project within the Shared Clean Energy Facility Program? If so, with what entities?
   a. **A SCEF Tariff Terms Agreement between Dynamic Energy Solutions LLC & The United Illuminating Company ("UI") was executed.**

10. Is the project subject to a virtual net metering agreement? Would total project output be dedicated to virtual net metering?
    a. **No**

11. Does the Petitioner have a contract to sell the electricity and renewable energy certificates (RECs) it expects to generate with the proposed project? If so, to which public utility? If the electricity is to be sold to more than one public utility, provide the percentage to be sold to each public utility.
    a. **A SCEF Tariff Terms Agreement between Dynamic Energy Solutions LLC & The United Illuminating Company ("UI") was executed.**

12. Is the project being designed to accommodate a future potential battery energy storage system? If so, where would it be located?
    a. **No**

Site Components and Solar Equipment

13. Referencing Drawing E-100, five PV systems are identified. Will these systems operate independently such that if an interconnection failure or maintenance shut down occurs at one, the others will continue to operate?
    a. **The PV-AC 1 thru 5 references on E100 reference banks of inverters and their corresponding rooftop electrical equipment. This project is only 1 PV system and operated independently. Having said that there are 30 separate inverters on the roof. If one of those inverters has a maintenance issue the others can operate.**

Interconnection

14. Referring to Petition p. 6, it states United Illuminating has contingently approved construction and interconnection of the project. Please explain.
    a. **We have made our application for interconnection with UI. They have performed an impact study and facility study per interconnection guidelines for this system. They have approved our design and are awaiting our execution of a construction agreement to move forward. If this petition is approved the construction agreement will be executed and construction planning etc will commence.**

15. Is the existing electric distribution three-phase or would it have to be upgraded from single-phase to three-phase?
    a. **Existing distribution is 3 phase. No upgrade is needed.**

16. For the five proposed utility poles, where is the point of change of ownership from Dynamic Energy Solutions, LLC to United Illuminating? Is it possible to reduce the number of utility poles required for the Project?
    a. **Please see Pole and Equipment Lay-Out.pdf (call out in red). The POI is between the UI metering cabinet and pad mounted fused disconnect. All the poles and wires up to these points are owned by UI an a necessary part of the distribution to the facility and the solar project.**

17. Would any of the power produced by the facility be used on-site? If so, identify the on-site use and the percentage of facility output consumed by this use.
    a. **No. This is a direct to grid project per SCEF requirements. Parasitic load will be used by solar specific equipment but a very small amount.**

Public Safety

18. Would the Petitioner conduct outreach/training to local emergency responders in the event of a fire or other emergency at the site?
    a. **Part of the town review is a review by Fire Department officials. We generally offer an onsite meeting to emergency and fire responders at conclusion of the project.**

19. In the event of a fire or emergency, describe procedures that will allow emergency responders to shut down the facility.
    a. **The PV system will have all required National Electric code and NFPA required system labeling. This includes labeling includes a map of all associated system disconnects. There will be one main point of disconnect (a ground mounted manual lever switch) that can immediately disconnect and shutdown the facility.**

20. How would emergency responders access the solar facility?
    a. **Emergency responders would access the facility typical to any type of building access via fire truck ladders etc. There is no specialized equipment needed because of the solar facility.**

21. If there is a structure fire or rooftop fire, what substances (water, foam etc.) can be used on the solar array to extinguish the fire?
    a. **This is up to the emergency responders specifically but water at the correct distance and spray pattern is generally used.**

22. Referring to Petition p. 6, submit documentation that indicates the project would not be a hazard to air navigation. Where is the nearest federally-obligated airport? Is a glare analysis required to comply with FAA policy?
    a. Please see attached. STAG_FAA_letter_500126415.pdf. The closest airports are Bridgeport Municipal & Tweed New Haven Airport. Both are approx. 7.5 miles away. Glare analysis is not required to comply with FAA.

23. What structural design standards were used to design the roof-mount solar panel racking system? What wind speed was used in the design calculations?

    a. 2018 CT State Building Code, ASCE 7-16, 123 MPH wind speed was used in design calculations. (See submitted Exhibit M Structural Analysis)

Environmental

24. For the ground mounted equipment area, were subsurface soils evaluated for hazardous contaminants? Would excavated soils require disposal at a hazardous materials facility?
    a. A Phase 1 ESA was completed in November of 2021. No RECs,CRECs,DeMinimis Conditions or BERs were revealed. See attached Phase 1 ESA report.pdf (pg 19 for Conclusions)

25. Is the Project site within the Connecticut Coastal Zone Boundary? If yes, what affect would the Project have on coastal resources?
    a. The project parcel falls within the Coastal Zone Boundary per the CT DEEP GIS. The project or activities does not take place in tidal wetlands, or in tidal, coastal, or navigable waters and will have no effect on coastal resources.

26. Although the ground equipment is located outside of the designated flood zone, what is the cost to elevate the ground equipment an additional foot above mean sea level?
    a. **The cost to raise the equipment would range from approx. $8,000 to $12,000. Please also note that the equipment location selected is at the highest elevation on the parcel. Please see attached GM Equipment Elevation Photos.pdf**

27. Are there any recreational areas near the proposed site? If yes, describe the visibility of the proposed project from the recreational area(s).
    a. No

28. Are there any national, state and/or locally-designated historic areas near the proposed site? If yes, describe the visibility of the proposed project from these area(s).
    a. **No**

29. Are there any national, state and/or locally-designated scenic roads near the proposed site? If yes, describe the visibility of the proposed project from these road(s).
    a. **No**

Facility Construction

30. Where would the construction staging area be located?
    a. **The construction staging area will be located in the existing parking lot areas. See attached. Staging and Storage Area.pdf**

31. Is notification required to the Metro North Railroad or the FAA for use of cranes at the site?
    a. **No. Please see STAG_FAA_letter_500126415.pdf. If a crane is used at the site it will be on the opposite side of the building where the railroad is located. See Staging and Storage Area.pdf for roof loading area.**

32. Would the proposed installation affect existing rooftop stormwater drainage? How is rooftop stormwater captured and where is it discharged?
    a. **No. the solar will not affect the existing rooftop drainage. The existing drainage will remain in place and no be impeded. The rooftop has existing drains which capture water and pipe to facility water discharge (public sewer).**

Maintenance/Decommissioning

33. 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?
    a. **Please see attached. J148075-3 UDS Level 2 Report Final Report (1).pdf. In addition We do assert that upon decommissioning and disposal that decommissioning and/or disposal of all project materials will take place following all guidelines set forth by Local, State and Federal governing bodies at that time.**

34. What is the cleaning interval of the solar panels? What substances would be used to clean the panels?

    a. **Proactive cleaning of solar panels will not take place. Natural rain events will suffice for cleaning. No additional substances will be used.**

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Nearest Residence.pdf

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Full Town View
Reset Map
Search
Print
Select
Legend
Base Maps / Air Photos
Map Layer
Click to start drawing
ID
LI
37 Ingersol Road
Milford, CT
560' away
OS
R-18
2 Timber Trail
Milford, CT
565' feet away
CDD-4
OS
R-10
R-12.5
Full Extent
Zoom In
Zoom Out
Prev Extent
Next Extent
Pan
Parcel Information
Simple Measure
Path Measure
Area Measure
MapXpress v1.2
Scale: 1 in = 200 ft
CT State Plane NAD 1983 - X,Y 923229, 644817


40 Pepes Farm Rd
Pepes Farm Rd
Ingersol Rd
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 560.33 Feet
Ground Length: 560.50
Heading: 291.83 degrees
Mouse Navigation
Save
Clear
New Haven Ave
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google Earth
41°13'40.05" N 73°01'16.97" W elev 33 ft eye alt 3300 ft


40 Pepes Farm Rd
Pepes Farm Rd
Pepes Farm Rd
Ingersol Rd
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 563.22 Feet
Ground Length: 563.44
Heading: 313.89 degrees
Mouse Navigation
Save
Clear
New Haven Ave
Barker Rd
Eccs Hill Rd
Alena Dr
Baxter Ln
Fowler Terrace
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google Earth
41°13'39.85" N 73°01'17.77" W elev 71 ft eye alt 3300 ft

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Exhibit B LEGEND.pdf

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Planimetric Symbols

- Parcels
- Right of Way
- Coastal Area Mgmt
- Historic
- Public Beach Access
- Wetlands

Zoning

- R-A
- R-30
- R-18
- R-12.5
- R-10
- R-7.5
- R-5
- OSAHD-MF
- PRD
- SFA-10
- BB
- WDD
- RMF-9
- RMF-16
- BD
- BD-1
- MCDD
- CBDD
- CDD-1
- CDD-2
- CDD-3
- CDD-4
- CDD-5
- ICD
- SCD
- DO-10
- DO-25
- RO
- OD
- OS
- LI
- ID
- HDD

Farmland Soils

- Prime Farmland Soils
- Statewide Important Farmland Soils
- Locally Important Farmland Soils

Wetland Soils

- Poorly Drained and Very Poorly Drained Soils
- Alluvial and Floodplain Soils

Local Basin Subregion

- Housatonic River
- Indian River
- South Central Shoreline
- Wepawaug River

Regional Basin

- Housatonic Main Stem
- South Central Shoreline
- South Central Western Complex

Critical Habitat

- Beachshore, B
- Intertidal Marsh, IM
- Coastal Woodland/Shrubland, CWS

Sewer Service Area

- Service
- Proposed Service

Natural Diversity Database

- Natural Diversity Area

Flood Zones 2013

- A
- AE
- VE

Ground Water Quality

- GA
- GB
- GA, GAA May be impaired

Bedrock Geology Property

- DSw
- Oa
- Oa+Oma
- Oma
- Omal
- Omau
- Oo
- Zl
- I

Surface Water Quality

- State Park
- State Park Scenic Reserve
- Wildlife Area
- Wildlife Sanctuary
- Water Access
- Other

- A
- B, B*
- SA
- SB

2013 FEMA Flood Zones

100 Year Flood Zone
- A - 1% Annual, 26% 30yr Mortgage (High Risk Area)
- AE - Base Floodplain (High Risk Area)
- AE - Floodway

500 Year Flood Zone
- X - Minimal Flood Hazard (Low Risk Area)

- Base Flood Elevation

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Pole and Equipment Lay-Out.pdf

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Point of change of ownership / Point of Interconnectio n

PV-AC -1

PV-AC -3

PV-AC -5

PV-AC -2

PARKING LOT

SOLAR CONDUIT(S) FROM PAD UP SIDE OF BUILDING TO ROOF. MODULES AND INVERTERS ON ROOF

NEW SERVICE TRANSFORMER FOR BUILDING SERVER. EXISTING TRANSFORMER TO BE REMOVED. EXISTING SERVICE TO BE REFED FROM NEW SERVICE TRANSFORMER

5'-0"

5'-0"

5'-0"

12'-0"

12'-8"

PV-AC -4

PV PANEL & INVERTER LOCATIONS

NEW TRANSFORMER, SWITCHGEAR AND FUSED DISCONNECT CONCRETE PAD

NEW SOLAR SWBD #1

NEW 2MVA SOLAR TRANSFORMER

NEW PAD MOUNTED FUSED DISCONNECT

NEW PRIMARY METERING CABINET / SOLAR SHALLBETTER CABINET

NEW SOLAR VISTA SWITCH

NEW GRAVEL ACCESS ROAD TO EQUIPMENT

GREEN=NEW UNDERGROUND UTILITY LINES

RED=NEW OVERHEAD UTILITY LINES

NEW GRAVEL ACCESS ROAD TO TRANSFORMER

PARKING LOT

NEW UTILITY'S RISER POLE

NEW UTILITY'S RISER

NEW UTILITY'S GOAB POLE

NEW UTILITY'S JUCTION POLE

PARKING LOT

PROPERTY BOUNDRY

PEPES FARM ROAD

PROPOSED INTERCONNECTION CIRCUIT

0' 32' 64' 96'

HENDRIK J. BURGER
PROFESSIONAL ENGINEER
1368 SHEEP HILL ROAD
POTTSTOWN, PA 19465

SEAL

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STAG INDUSTRIAL HOLDINGS
40 PEPES FARM ROAD
MILFORD, CT 06460

N W E S

DRAWING ISSUE
- [ ] INTERCONNECTION
- [x] PERMITTING
- [ ] CONSTRUCTION
- [ ] RECORD

REV. #	DESCRIPTION	DATE
0	PERMIT SET ISSUED	09-15-2021
1	LAYOUT REVISED	09-27-2021

DRAWING NAME
OVERVIEW

DRAWING NUMBER
U1

Dynamic Energy™

STAG_FAA_letter_500126415.pdf

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POWER AHEAD.

DYNAMICENERGYUSA.COM

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-ANE-6398-OE

Issued Date: 11/05/2021

Andrew Matson
Dynamic Energy Solutions, LLC
1550 Liberty Ridge Dr
Suite 310
Wayne, PA 19087

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building STAG Solar Array
Location:	Milford, CT
Latitude:	41-13-47.00N NAD 83
Longitude:	73-01-23.70W
Heights:	20 feet site elevation (SE)
	40 feet above ground level (AGL)
	60 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/05/2023 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-ANE-6398-OE.

Signature Control No: 498250490-500126415 (DNE)
Stephanie Kimmel
Specialist

Attachment(s)
Map(s)

Sectional Map for ASN 2021-ANE-6398-OE

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Phase 1 ESA report.pdf

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1550 Liberty Ridge Drive | Suite 310 | Wayne, PA 19087

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Site Name
40 Pepes Farm Road
Milford, Connecticut 06460

November 2021

Project Number: 465947

Prepared For:
Dynamic Energy
1550 Liberty Ridge Drive, Suite 310
Wayne, Pennsylvania 19087

Prepared By:
TRC
21 Griffin Road North
Windsor, Connecticut 06095
(860) 298-9692

Prepared by:
Florencia M. Bugatti
Project Scientist

Reviewed and Approved by:
Meg Winfield, LEP, CPG
Senior Project Manager

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Tables

Figures

Appendices

EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) was retained by Dynamic Energy (also known as "Client" or "User") to perform a Phase I Environmental Site Assessment (ESA) of the property located at 40 Pepes Farm Road, in Milford, CT (herein referred to as the "Site"). TRC conducted the Phase I ESA in connection with the Client's planned leasing transaction involving the Site. The Phase I ESA described in this report was performed in accordance with the scope and limitations of the American Society for Testing and Materials Practice E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13). Limiting conditions and/or deviations from the ASTM E 1527-13 standard are described in Sections 1.3 and 7.7 of this report.

The approximately 14.56-acre Site is located at 40 Pepes Farm Road in Milford, Connecticut 06460, in a light industrial use area. The Site is described by the Milford tax assessor as parcel number 16008, zoned as light industrial (LI), and is currently owned by Stag Industrial Holdings, LLC. One 199,680-square feet warehouse building constructed in 1981 is present on the Site. The property is currently used as a storage and distribution center of vehicle cargo parts. Prior to 2017, various product distribution tenants occupied the Site.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Site.

This Executive Summary is part of this complete report; the findings, opinions, or conclusions in this Executive Summary are made in context with the complete report. TRC recommends that the User read the entire report for supporting information related to findings, opinions, and conclusions.

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this Phase I Environmental Site Assessment (ESA) for Dynamic Energy (hereinafter, the "User"). This report was prepared for and may be relied upon by Client and User for the purposes set forth herein; it may not be relied on by any party other than the Client and User. TRC will consider authorization for third-party reliance on this report if requested by the Client. TRC reserves the right to deny reliance on this report by third parties.

1.1 Purpose and Scope of Services

The following Phase I ESA was performed for the property located at 40 Pepes Farm Road in Milford, Connecticut 06460 (hereinafter the "Site"). A Site location map is included as **Figure 1**. TRC prepared this Phase I ESA in accordance with the American Society for Testing and Materials E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I ESA Process* (ASTM E 1527-13) and is intended for the sole use of Dynamic Energy per TRC's October 4, 2021 Proposal for Phase I Environmental Site Assessment, authorized on October 15, 2021.

The purpose of this assessment is to identify *Recognized Environmental Conditions* (RECs) at the Site, as defined by the ASTM E 1527-13 standard. The completion of this Phase I ESA report may be used to satisfy one of the requirements for the User to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* liability protections pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), thereby constituting *all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice* as defined by 42 United States Code §9601(35)(B) of CERCLA.

TRC understands that this assessment is not funded with a federal grant awarded under the United States Environmental Protection Agency (EPA) Brownfields Assessment and Characterization program or for Small Business Association financing.

The Scope of Services for this Phase I ESA included the following tasks:

- Site and vicinity reconnaissance;
- Site and vicinity description and physical setting;
- Historical sources review and a description of historic Site conditions;
- Interviews with owners, operators, and/or occupants of the Site, and/or local officials;
- Review of environmental databases and regulatory agency records;
- Review of previous environmental reports/documentation, as applicable;
- Review of environmental liens, if provided or authorized to obtain by the User; and
- Preparation of a report summarizing findings, opinions, and conclusions.

1.2 Additional Services

Items outside the scope of the ASTM E 1527-13 standard include but are not limited to the following:

- Asbestos-containing building materials
- Radon
- Lead-based paint
- Lead in drinking water
- Wetlands
- Regulatory compliance
- Cultural and historic resources
- Industrial hygiene
- Health and safety
- Ecological resources
- Endangered species
- Indoor air quality unrelated to *releases* of *hazardous substances* or *petroleum products* into the environment
- Biological agents
- Mold

No additional services were performed outside the scope of the ASTM E 1527-13 standard.

1.3 Deviations to ASTM E 1527-13 Standard

No significant deviations or deletions to the ASTM standard were made during this Phase I ESA.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The approximately 14.56-acre Site is located at 40 Pepes Farm Road in Milford, Connecticut, 06460 in a light industrial mixed-use area. The Site is described by the Milford tax assessor as parcel number 16008, is zoned as light industrial (LI), and is currently owned by Stag Industrial Holdings, LLC and operated by Thule Group. A Site location map is included as **Figure 1**.

2.2 Site Improvements

Current on-Site improvements are listed in the following table. A Site layout plan is included as **Figure 2**.

Table 2.1 - Site Improvements

Site Feature	Description
Buildings (stories)	One single-story warehouse building.
Construction date(s)	1981
Exterior areas	Paved, vegetated, and landscaped areas.
On-Site roads/rail lines	N/A
Other large equipment	N/A
Potable water supply	Water is supplied by South Central Connecticut Regional Water Authority.
Sewage disposal system(s)	Municipal sanitary sewer service since building construction in 1981.
Stormwater system	Municipal stormwater sewer system.
Heating/cooling system fuel source(s)	Natural gas is supplied by Southern Connecticut Gas.
Back-up fuel source(s)	N/A
Electricity supplier(s)	United Illuminating Co.

2.3 Current and Historic Site Use

2.3.1 Current Site Use(s)

The Site is currently used by the Thule Group as a warehouse for automobile cargo and bicycle storage parts and products for assembly and distribution.

Prior to 2017, the site was occupied by Schrier Bros. Inc., a paper, plastic bags, and disposable plastic items distributor (2013); Bunzl, a distribution company which received large quantities of paper and plastic products into the facility and redistributed the items for shipment to wholesalers and retailers (2008); Clairol, a cosmetic company previously received products for redistribution and shipping (2008); Sprint North Supply, a distributor of telecom gear telephone carriers (2008, 1999, 1995), and Early Learning Center (1995, 1992).

2.3.2 Previous Owner and Operator Information

Based on information provided by the User (Section 3.0), the historical record review (Section 4.0), and/or interviews conducted during this Phase I ESA (Section 5.0), historic Site ownership and operator information are provided in the tables below.

Table 2.2 - Previous Owner Information

Site Owner	From	To
Stag Industrial Holdings, LLC	March 3, 2017	Present
CPI 40 Pepes Farm Road, LLC	December 3 2014	March 3, 2017
SREF Pepe, LLC	October 20, 2006	December 3, 2014
Pepes Farm LLC	April 20, 2005	October 20, 2005
Cabot Acquisition, LLC	August 12, 2002	April 20, 2005

2.4 Physical Setting

According to the United States Geological Survey, 2012, *7.5-Minute Topographic Map for Milford, Connecticut* (refer to **Figure 1**), the Site is located approximately 0.5 miles to the northeast from Gulf Pond, the Site topographic elevation is approximately 27 feet above mean sea level, and local topography slopes slightly to the southwest. The topographic downward slope observed at the Site during the Site reconnaissance is generally toward the southwest. Based on local topography, the assumed direction of shallow groundwater flow is to the southwest, toward Gulf pond. However, a subsurface investigation would be required to determine actual groundwater flow direction.

Based on the Connecticut Surficial Materials digital map published in 1995 by the CTDEEP in cooperation with the US Geological Survey review for this report, the surficial materials at the Site is described as Sands overlying Fines. The database radius report, supplied by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, was reviewed to obtain information regarding the dominant soil composition in the Site vicinity. This information is summarized below:

Hydric Status:	Soil does not meet the requirements for a hydric soil
Soil Surface Texture:	Loam
Soil Component Name:	Udorthents
Deeper Soil Types:	Gravelly loam

Please refer to the Geocheck Physical Setting Source Summary of the EDR report presented in **Appendix A** for further information regarding the soil composition in the Site vicinity. According to EDR, the Site is not located in a Federal Emergency Management Agency Special Flood Hazard Area (1% a.k.a 100-year flood zone).

3.0 USER-PROVIDED INFORMATION

According to the ASTM E 1527-13 standard, certain tasks that may help identify the presence of RECs associated with the Site are generally conducted by the Phase I ESA User. These tasks include providing or authorizing the *environmental professional* to obtain recorded land title records for environmental liens or activity and use limitations (AULs); providing specialized knowledge related to RECs at the Site (e.g., information about previous ownership or environmental litigation); providing commonly known or *reasonably ascertainable* information within the local community about the *property* that is material to RECs in connection with the *property*; and informing the *environmental professional* if, as believed by the User, the purchase price of the *property* is lower than the fair market value due to contamination. Information provided by the User is listed below. A copy of the User questionnaire is included in **Appendix B**.

3.1 Title and Judicial Records for Environmental Liens or AULs

The User has not provided TRC with information associated with a review of title and judicial records for environmental liens or AULs associated with the Site and remains as a User requirement to satisfy All Appropriate Inquiries.

The User has indicated that a title and judicial records for environmental liens or AULs associated with the Site is currently underway.

3.2 Specialized Knowledge

The User was not aware of specialized knowledge related to RECs at the Site.

3.3 Property Value Reduction Issues

The User was not aware of property valuation reduction issues regarding the Site.

3.4 Commonly Known or Reasonably Ascertainable Information

The User did not provide commonly known or reasonably ascertainable information to TRC.

3.5 Reason for Conducting a Phase I ESA

TRC understands the User requires a Phase I ESA for their planned leasing transaction involving the Site.

4.0 RECORDS REVIEW

4.1 Historic Use Information

Information regarding Site and vicinity historic uses was obtained from various publicly available and practically reviewable sources including:

- Aerial photographs (scale: 1 inch = 500 feet) dated 1934, 1940, 1949, 1951, 1959, 1960, 1963, 1971, 1974, 1980, 1985, 1991, 2005, 2008, 2012, and 2016;
- Topographic maps dated 1889, 1891, 1892, 1893, 1915, 1920, 1951, 1960, 1964, 1971, 1984, and 2012;
- City directories dated 1961, 1966, 1971, 1977, 1986, 1992, 1995, 2000, 2005, 2010, 2014, and 2017;
- Local municipal records;
- An environmental database report; and
- Interviews with Site representative(s) and regulatory agency official(s), as necessary.

Historical research documentation is included in **Appendix C**.

Sanborn Maps were originally produced for assessing fire insurance liability in urban areas in the United States. The maps provide detailed information (e.g., building construction, facility occupants, storage tank locations, and hazardous material storage areas), which can be used as a resource to document land use and structural change over time. EDR researched the availability of Sanborn Maps in the vicinity of the Site; however, EDR stated that Sanborn Map coverage does not exist for the Site or nearby surrounding area.

4.1.1 Site History

Operational History

Table 4.1 - Site History

Year	Site History
From at least 1889 to at least 1920	According to the 1889, 1891, 1892, 1893, 1915, and 1920 topographic maps, the Site is vacant and bounded to the northeast and south by wetlands from an unnamed tributary to the Gulf Pond. The New York, New Haven & Hartford Railroad (NYNHH) is depicted adjacent the northwestern boundary.
From at least 1934 to at least 1980	Aerial photographs from 1934 to 1974 depict the subject Site undeveloped, partially covered with trees, and without significant changes. In the 1980 aerial photograph, The Site appears with less tree cover and access roads appear along the southern and eastern portion of the parcel. No other significant changes are noted.
From at least 1984 to at least 1991	The 1984 topographic map and the 1985 aerial photograph depict the Site as improved with one rectangular commercial/industrial building structure and a paved driveway/loading area adjacent to the building's southeastern side.
From at least 1992 to 2016	From 1992 to 2017, the city directories list the Site as occupied under different tenants, including Early Learning Center, Sprint North Supply Inc., Clairol Inc. Del Corp., and Shrier Brothers Corp. The 2005 aerial photograph depicts a paved parking

Table 4.1 - Site History

Year	Site History
	area in the south of the Site building. The Site appears primarily unchanged through 2016, the date of the most recent aerial photograph provided.

4.1.2 Adjoining Property History

Table 4.2 - Adjoining Property History

Direction from Site	Adjoining Property History
North	From at least the late 1800s to 2016, aerial photographs and topographic maps depict the NYNHH railroad line running adjacent to the parcel's north-northwestern boundary and undeveloped, wooded land.
East	From the late 1800's to 2016, aerial photographs and topographic maps depict the Site's adjoining properties to the east as mixed wetlands/wooded area. The general area has remained undeveloped through at least 2016.
South	From the late 1800's to 2016, aerial photographs and topographic maps depict the Site's adjoining properties to the south as mixed a wetlands/wooded area. The general area has remained undeveloped through the present.
West	Aerial photographs and topographic maps depict the Site's adjoining properties to the west as wetlands. The area has remained undeveloped through the present

4.1.3 Surrounding Property History

Table 4.3 - Surrounding Property History

Direction from Site	Surrounding Property History
North	From the late 1800's to at least 1963 the northern surrounding area is depicted as vacant, wooded land. The area north of the NYNHH railroad becomes increasingly developed with a mix of commercial/industrial buildings starting in 1971. By 1980 the area had become densely developed with industrial/commercial building structures and remained unchanged through 2016, the date of the most recent aerial photograph provided.
East	From at least the late 1800s to at least 1949, the eastern surrounding area is depicted as a mix of wooded land followed by open land. Commercial/industrial development is observed in the 1951 aerial photograph where the former U.S. Electric Motors building complex is depicted. The eastern area becomes increasingly developed with industrial/commercial structures in the following decades, culminating in heavy industrial/commercial development as depicted in the 2016 aerial photograph.
South	Few dwellings are observed in the area as early as 1886. By the mid-1970s, the south surrounding area becomes heavily developed with residential dwellings along and south of present-day New Haven Avenue. The area appeared primarily unchanged through 2016, the date of the most recent aerial photograph provided.
West	From at least 1886 the west surrounding area is depicted as vacant, wooden land, followed by few residential dwellings appearing in the mid-1980s. The development of the area has not substantially changed through 2016, the date of the most recent aerial photograph provided.

4.2 Database Report and Environmental Record Review

A database search report that identifies properties listed on state and federal databases within the ASTM-required radii of the Site was obtained from EDR and is included in **Appendix A**.

The environmental database report identified no records/listings for the Site and 131 records/listings for other properties within the search radii of the Site. These properties included those that could be mapped and those that could not (i.e., orphan properties).

4.2.1 Subject Site

Site information included in the database search report is summarized in the following table:

Site Facility Name(s) and/or Listed Address(es)	40 Pepes Farm Road, Milford CT
Map No(s).	A1
Database(s)	CT SPILLS
Description/ID No(s).	SPILLS Case No. 200002407
Database Review Summary	The Site's address is listed in the CT SPILLs database due to the release of 6 to 7 quarts of gasoline into a stream/brook near the property. According to the regulatory database, the local fire department responded to the release. Reportedly, the subject Site was the closest address to the spill.

4.2.2 Adjoining and Surrounding Property Record Review

TRC evaluated the following factors to determine whether additional environmental records should be reviewed with respect to the potential for contaminant migration from the adjoining and surrounding properties:

(1) Whether the property is upgradient or downgradient of the Site related to potential groundwater migration based on the local topography, and the assumed (or known) groundwater depth and southwest shallow groundwater flow direction;
(2) Whether the property is upgradient or downgradient of the Site related to potential vapor migration based on readily available information pursuant to the ASTM E 1527-13 standard including soil and geological characteristics; contaminant characteristics; contaminated plume migration data; and significant conduits that might provide preferential pathways for vapor migration such as major utility corridors, sanitary sewers, storm sewers, and significant natural conduits (vapor migration may also be influenced by the age and design of infrastructure features associated with these conduits);
(3) Property case status (i.e., whether the state environmental agency or applicable regulatory authority has issued a No Further Action letter or other similar closure document);
(4) Type of database and whether the presence of contamination is known; and
(5) The distance between the listed property and the Site.

Based on this evaluation, TRC limited the review of additional environmental records to the properties listed below because these properties are considered to have low potential for contamination to migrate to the Site.

4.2.2.1 Adjoining Properties

Information regarding adjoining properties (those which share a common property boundary with the Site) included in the database search report is summarized in the following table:

Facility Name(s) and/or Listed Address(es)	Richardson Polymer Corp. – 111 Pepes Farm Road, Milford, CT
Map No(s).	A2
Approximate Location Relative to Site	0.018 miles - East-northeast
Presumed Hydrogeologic Setting	Downgradient
Database(s)	RCRA NonGen/NLR, FINDS, ECHO, CT Manifest
Description/ID No(s)	EPA ID: CTD057109076
Database Review Summary	The property is designated as a non-generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA). According to the regulatory database, the property formerly stored, transported, and/or handled ignitable waste, spent halogenated and nonhalogenated solvents, selected volatile and semi-volatile compounds. No violations were reported for the property under the regulatory listing. The property is also listed under the CT Manifest database due to the documented transport of hazardous waste (corrosive, ignitable, flammable liquids wastes) in 1989.

4.2.2.2 Surrounding Properties

Information regarding surrounding properties (those within the general vicinity of the Site) included in the database search report is summarized in the following table(s):

Facility Name(s) and/or Listed Address(es)	CAAP Co. Inc., Camp Inc., Coap Co. – 152 Pepes Farm Road
Map No(s).	B5 through B13
Approximate Location Relative to Site	0.141 miles – East-northeast
Presumed Hydrogeologic Setting	Downgradient
Database(s)	RCRA-SQG, CT Manifest

Description/ID No(s)	EPA ID: CTR000507970
Database Review Summary	The property designated as a small quantity generator (SQG) of hazardous waste under the Resource Conservation and Recovery Act (RCRA). Small Quantity generators generate between 100 kg and 1,000 kg of hazardous waste per month. The CAAP Company made erosion resistant aircraft coatings at their facility. The facility was classified as a SQG in 2009, 2012, and 2013 and it was classified as a large quantity generator (LQG) in 2008. Several violations are listed in the regulatory database in 2008 that subsequently achieved compliance. An enforcement action is noted in 2014 due to failure to obtain necessary air emissions permits was settled without a penalty fine. The facility is also listed in the CT Manifest database due to the shipment of hazardous ignitable waste (D001).

Facility Name(s) and/or Listed Address(es)	Mesco Inc. – 634 New Haven Avenue
Map No(s).	C14 through C17
Approximate Location Relative to Site	0.164
Presumed Hydrogeologic Setting	Downgradient
Database(s)	CT CPCS, CT ENF, CT NPDES, CT LWDS, SEMS-Archive, CT UST, RCRA NonGen/NRL, CT SHWS, CT SDADB
Description/ID No(s)	EPA ID: CTD001176387
Database Review Summary	The Mesco facility operated as a metal plating and chassis manufacturing for trucks and busses. According to multiple regulatory databases, the facility was given a low priority for inclusion on the national priorities list (NPL) in 1988,1994, and 2001 and subsequently achieved non-NPL status in 2001. In 2001, the property was entered into the Connecticut Voluntary Clean-up Program.

Facility Name(s) and/or Listed Address(es)	J. T. Slocomb Co., Coating Design Group, Slocomb J. T. Corp.
Map No(s).	B18 through B21
Approximate Location Relative to Site	0.176
Presumed Hydrogeologic Setting	Upgradient
Database(s)	RCRA NonGen/NPL, CT Manifest, FINDS, ECHO
Description/ID No(s)	EPA ID: CTD982194078

Database Review Summary	The facility operated as a custom coating service for glass, plastics and other products. Under RCRA, the facility was classified as non-generator of hazardous waste in 1987. 1987 and 1989 manifest records indicate that the facility generated 1,1,1-trichloroethane waste (F001).

Facility Name(s) and/or Listed Address(es)	Lowes Companies, BVS Jai Alai, LLC – 311 Old Gate Lane
Map No(s).	E23 – E26
Approximate Location Relative to Site	0.186
Presumed Hydrogeologic Setting	Upgradient
Database(s)	RCRA SQGCT LUST, CT UST, CT SPILLS, CT NPDES, CT Manifest
Description/ID No(s)	EPA ID: CTR000518019, LUST ID: 59994, SPILLS Case No.: 200900519, SPILLS Case No. 201505212, NPDES Permit No. GSC000134 and SP0000199.
Database Review Summary	The facility, currently a home improvement retailer, is classified as a small quantity generator of hazardous waste under RCRA. Hazardous waste generated and handled at the facility include ignitable waste (D001), corrosive waste (D002), arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), mercury (D009), silver (D011), 2,4-dichlorophenoxyacetic acid (D016), benzene (D018), methyl ethyl ether (D035), tetrachloroethylene (D039), 2-propanone (U002), benzene (U072), hydrofluoric acid (U134), methanol (U154), 2-butanone (U159), naphthalene (U165), ethene, tetrachloroethylene (U210), salts and esters or acetic acid (U240), and zinc phosphide (U249). The property is also listed in the CT UST, CT LUST, CT SPILLS databases due to the removal of two 10,000-gallon heating oil USTs in 1997 and 2007, respectively. Additionally, the property is listed in the CT SPILLS regulatory database for the 2009 and 2015 release of 30 and 15 gallons of hydraulic, respectively. According to the database, both spills were contained and terminated. Two stormwater permits were issued for the Site during redevelopment activities in 2008 and 2009. The permits were related to earthworks, utilities, roadways, and parking construction. Both permits are currently expired.

4.3 Title and Judicial Records for Environmental Liens or AULs

User-provided information regarding potential environmental concerns associated with title or judicial records, or the existence of environmental liens or AULs for the Site is discussed in Section 3.0.

Completion of an additional title and judicial record search was beyond the scope of this Phase I ESA, was not requested by the User, and remains a User requirement.

4.4 Previous Reports

The User provided the following environmental reports regarding the Site for TRC's review:

- January 31, 2017, Phase I Environmental Site Assessment, prepared by Vannoy & Associates.

Information provided in these reports is summarized below:

Vannoy & Associates Phase I ESA concluded that the assessment found no evidence of any recognized environmental conditions at the Site. No further environmental investigation was recommended at that time.

4.5 Other Environmental Record Sources

Per the ASTM standard, local or additional state records were reviewed to enhance and supplement the ASTM-required federal and state records reviewed and discussed earlier in this report. These additional records include state agency lists of waste disposal facilities, Brownfield properties, hazardous waste/contaminated facilities, registered storage tanks, records of emergency release reports, and records of contaminated public wells. Local sources that were contacted to obtain this information include the Department of Health/Environmental Division; Fire Department; Building Permit/Inspection Department. Information from these sources is discussed below:

Table 4.4 - Other Environmental Record Sources

Regulatory Agency/ Department	Available Information
Department of Health/ Environmental Division	No files were identified at the Milford Department of Health.
Fire Department	No files were identified at the Milford Fire Department.
Building Permit/Inspection/ Construction/Engineering Department	N/A
Land Records	Thule lease agreement, Exhibit A.
Municipal Tax Assessor	Property tax card.

5.0 INTERVIEWS

The following persons were interviewed to obtain historically and/or environmentally pertinent information regarding RECs associated with the Site. The information provided by each is discussed and referenced throughout this report. Interview documentation is included in **Appendix D**.

- Matthew Carabetta, Thule's Operation Manager with 5 years of experience at the Site – *Key Site Manager* (as defined by the ASTM standard and identified by the property owner/User), was interviewed on October 21, 2021;
- Michelle Harper, JLL Property Management, with 5 years of experience at the Site, was interviewed on October 21, 2021.
- Pat Hastings from Dynamic Energy Solutions provided TRC with a completed User Questionnaire. The User was not aware of specialized knowledge related to RECs at the Site, nor any activity or land use limitations in place. The User Questionnaire provided by Mr. Hastings indicates that there is a potential lease of the Site's building rooftop and certain areas for the installation of a solar PV system. A copy of the User questionnaire is included in **Appendix B**.

The information provided by Mr. Carabetta and Ms. Harper is discussed and referenced in the text. Other references and sources of information are included in **Appendix D**.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

Florencia Bugatti, TRC's project scientist, conducted a Site reconnaissance of accessible areas on and around the Site on October 21, 2021 for the purpose of identifying potential RECs and was accompanied by Mathew Carabetta and Michelle Harper of Thule and JLL, respectively, who provided access to the property and answered questions during the reconnaissance. Photographs taken during the Site reconnaissance are provided in **Appendix E**. A Site layout plan is included as **Figure 2**.

No limiting conditions were encountered during the Site visit .

6.2 Interior and Exterior Site Observations

Unless otherwise noted, the items listed in the table below appeared in good condition with no visual evidence of staining, deterioration, or a discharge of hazardous materials; and there are no records of a release in these areas. Items where further description is warranted are discussed in the section(s) following the table.

Table 6.1 - Interior and Exterior Site Observations

Item	Present (Current/ Historic/ Not Observed)	Description
Hazardous material storage or handling areas	Yes	See Section 6.2.1.
Solid and liquid wastes including municipal wastes	Yes	See Section 6.2.2.
Underground Storage Tanks (USTs) and associated piping	Not Observed	See Section 6.2.3.
Aboveground Storage Tanks (ASTs) and associated piping	Yes	See Section 6.2.4.
Unlabeled Drums and containers (≥5 gallons)	Not Observed	
Odors	Not Observed	
Pools of liquid, including surface water bodies and sumps (handling hazardous substances or substances likely to be hazardous only)	Not Observed	
PCBs/transformers	Yes	One non-PCB concrete pad-mounted transformer is located outside the southwestern portion of the Site building.
Hydraulic equipment	Yes	
Stains or corrosion	Not Observed	
Drains and sumps	Not Observed	
Oil water separator	Not Observed	
Pits, ponds, and lagoons	Not Observed	
Stressed vegetation	Not Observed	
Historic fill or other fill material	Not Observed	

Table 6.1 - Interior and Exterior Site Observations

Item	Present (Current/ Historic/ Not Observed)	Description
Wastewater (including stormwater or discharge into a drain, ditch, underground injection system, or stream on or adjacent to the Site)	Not Observed	
Wells (including dry wells, irrigation wells, injection wells, abandoned wells, oil and gas wells, or other wells)	Not Observed	
Septic systems or cesspools	Not Observed	
Debris piles	Not Observed	
Evidence of Uncontrolled Access	Not Observed	

6.2.1 Hazardous Substances

Hazardous substances including raw materials, finished products and formulations, hazardous wastes, hazardous constituents and pollutants including intermediates and byproducts that are currently present at the Site, and unidentified substance containers (when open or damaged, and containing unidentified substances suspected of being hazardous or petroleum products) are listed in the following table.

Table 6.2 - Current Site Hazardous Substances

Material Name	Approximate Quantity on Site During Reconnaissance (gallons/pounds)	Storage Containers and Conditions*
Diesel fuel	350-gallon AST	Excellent. No staining observed on or around the tank.

*Definition of conditions:
Compromised: Obvious holes in container or visual evidence of a release.
Poor: Container appears dented, bulging, rusted, or visual evidence of spillage.
Fair: Container appears intact with visual traces of rust.
Good: No visual evidence of container damage.
Excellent: Container appears like new.

6.2.2 Solid and Liquid Wastes

Solid and liquid wastes are generated and stored on the Site. A summary of the observations made during the Site visit regarding solid and liquid waste generation and disposal is provided in the following table.

Table 6.3 - Current Site Solid and Liquid Wastes

Waste Generated	Current Waste Storage /Containers Location	Condition of Storage Area /Secondary Containment	Waste Disposal or Recycling Contractor
Office trash and general shipping material debris	Outdoor dumpster	Good – The dumpster was closed, and no perforations or staining were observed.	All American Waste

Table 6.3 - Current Site Solid and Liquid Wastes

Waste Generated	Current Waste Storage /Containers Location	Condition of Storage Area /Secondary Containment	Waste Disposal or Recycling Contractor
Shipping cardboard and plastic material	Two interior trash (paper and plastic) balers are located in the northeastern corner of the site building.	Good. No perforations or staining were observed. No staining was observed in the concrete floor adjacent to the units.	Able Walnut Services
Sanitary wastewater	Sanitary sewer system	Indiscernible due to its underground location.	Municipal sanitary sewer system

According to the facility representatives, the facility does not generate any hazardous or universal waste. Minor use of lubricants, hydraulic oils, paints, and cleaners is required for maintenance of the facility. Two trash balers, one for cardboard and one for plastic are serviced twice a year by a contractor. One 5-gallon of hydraulic fluid container was observed in the area of the compactors. According to the Site contact, the hydraulic fluid is only handled by an external servicing contractor. No stains were noted on or around the bucket.

Nineteen subgrade hydraulic back plates associated with the loading doors along the southern portion of the Site are also serviced twice a year by a contractor. Battery charging stations for battery powered lift trucks were observed in the southwestern portion of the warehouse. No signs of spillage or leakage were noted during the Site visit. All forklifts are serviced by a contractor every Friday as part of a maintenance plan. Apart from the forklift batteries, the 5-gallon hydraulic fluid container near the balers, and the diesel fuel AST located inside the sprinkler pump room, no other hazardous materials or petroleum products were observed or reported. Additionally, no information was provided by the facility representative regarding hazardous wastes generated prior of the occupation of the current tenant.

According to facility representatives, there has been no release of hazardous waste at the facility that has resulted in RCRA Corrective Action.

6.2.3 USTs

No USTs were identified by the Key Site Manager or observed during the Site visit.

6.2.4 ASTs

According to the Key Site Manager, the facility currently maintains a 350-gallon diesel fuel AST inside the sprinkler room.

Table 6.4 - Site ASTs

Tank ID	Contents	Capacity (gallons)	Location	Secondary Containment	Status
N/A	Diesel fuel	350	Inside the sprinkler pump room	none	Active

TRC observed the AST is on stilt legs, without a secondary containment. The ASTs appeared to be in good condition with no visual evidence of surface spills or staining.

6.3 Adjoining and Surrounding Properties Reconnaissance

6.3.1 Adjoining Properties

During the Site reconnaissance, TRC viewed the adjoining properties from the Site and publicly accessible areas (e.g., public roadways, etc.).

Table 6.5 - Adjoining Properties Reconnaissance

Direction from Site	Current Land Use Description
North	Amtrak Railroad
East	Vacant land designated as wetlands
South	Residential and vacant land
West	Vacant land designated as wetlands

6.3.2 Surrounding Properties

Surrounding properties generally include light industrial entities to the north, mixed commercial/ residential land use to the east, residential use to the south, and mixed commercial/commercial to the west.

7.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Potential findings can include RECs, controlled RECs (CRECs), historical RECs (HRECs), and *de minimis* conditions, pursuant to the ASTM E 1527-13 standard.

RECs are defined as the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (1) due to any *release* to the environment; (2) under conditions indicative of a *release* to the *environment*; or (3) under conditions that pose a *material threat* of a future *release* to the *environment*.

CRECs are defined as RECs resulting from past *releases* of *hazardous substances* or *petroleum products* that have been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (e.g., *property* use restrictions, *AULs, institutional controls*, or *engineering controls*).

HRECs are defined as past *releases* of any *hazardous substances* or *petroleum products* that have occurred in connection with the *property* and have been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the *property* to any required controls (for example, *property* use restrictions, *AULs, institutional controls*, or *engineering controls*).

De minimis conditions are defined as conditions that generally do not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis conditions* are not RECs nor CRECs.

TRC has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-13 at the property located at 40 Pepes Farm Road in Milford, Connecticut 06460 (Site). Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 7.7 of this report. The following conditions were noted during the preparation of this report.

7.1 RECs

This assessment has revealed no evidence of RECs in connection with the Site.

7.2 CRECs

This assessment has revealed no evidence of CRECs in connection with the Site. HRECs
This assessment has revealed no evidence of HRECs in connection with the Site.

7.3 *De Minimis* Conditions

This assessment has revealed no evidence of *de minimis* conditions in connection with the Site.

7.4 Business Environmental Risks (BERs)

This assessment has revealed no evidence of BERs that warrant further discussion in this section.

7.5 Data Gaps

TRC has made an appropriate inquiry into the commonly known and reasonably ascertainable resources concerning the historic ownership and use of the Site back to the first development per 40 CFR Part 312.24 (*Reviews of Historical Sources of Information*). Data gaps identified during this assessment include the following:

1. Past owners/operators were not available during this Phase I ESA for specialized knowledge of the Site and adjacent and nearby properties that may be indicative of a REC. However, TRC has not identified significant data gaps indicative of a REC based on the historical information reviewed and Freedom of Information Act information provided. Therefore, should interviews with a past owner be completed, findings in this Phase I ESA are not likely to substantially change.

Based on other historical sources reviewed, the data gap listed above is not considered *significant*.

7.6 Limiting Conditions and Deviations

7.6.1 Accuracy and Completeness

The ASTM E 1527-13 standard recognizes inherent limitations for Phase I ESAs that apply to this report, including:

- Uncertainty Not Eliminated – No Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Data gaps identified during this Phase I ESA are listed in Section 7.6.

- Not Exhaustive – A Phase I ESA is not an exhaustive investigation.

- Past Uses of the Property – A review of standard historical sources at intervals less than 5 years is not required.

The Client is advised that the Phase I ESA conducted at the Site is a limited inquiry into a property's environmental status, cannot wholly eliminate uncertainty, and is not an exhaustive assessment to discover every potential source of environmental liability at the Site. Therefore, TRC does not make a statement i) of warranty or guarantee, express or implied for any specific use; ii) that the Site is free of RECs or environmental impairment; iii) that the Site is "clean;" or iv) that impairments, if any, are limited to those that were discovered while TRC was performing the Phase I ESA. This limiting statement is not meant to compromise the findings of this report; rather, it is meant as a statement of limitations within the ASTM standard and intended scope of this assessment. Specific limiting conditions identified during the Site reconnaissance are described in Section 6.1. Subsurface conditions may differ from the conditions implied by surface observations and can be evaluated more thoroughly through intrusive techniques that are beyond the scope of this assessment. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes.

This report presents TRC's Site reconnaissance observations, findings, and conclusions as they existed at the time of the Site reconnaissance. TRC makes no representation or warranty that the

past or current operations at the property are or have been in compliance with applicable federal, state, and local laws, regulations, and codes. TRC makes no guarantees as to the accuracy or completeness of information obtained from others during the course of this Phase I ESA report. It is possible that information exists beyond the scope of this assessment, or that information was not provided to TRC. Additional information subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based upon reasonably ascertainable information and observed Site conditions at the time of the assessment.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not assessed. Regardless of the findings stated in this report, TRC is not responsible for consequences or conditions arising from facts that were not fully disclosed to TRC during the assessment.

An independent data research company provided the government agency database referenced in this report. Information regarding surrounding area properties was requested for approximate minimum search distances and was assumed to be correct and complete unless obviously contradicted by TRC's observations or other credible referenced sources reviewed during the assessment.

TRC is not a professional title insurance or land surveyor firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

7.6.2 Warranties and Representations

TRC prepared this document solely for the benefit of the User. With regard to third-party recipients of this document, neither TRC, nor the Client, nor the User, nor any of their respective parents, affiliates, or subsidiaries, nor any person acting on their behalf: (a) makes any warranty, expressed or implied, with respect to the use of any information or methods disclosed in this document; or (b) assumes any liability with respect to the use of any information or methods disclosed in this document. Any third-party recipient of this document, by its acceptance or use of this document, releases TRC, the Client, the User, and their parents, affiliates, and subsidiaries from any liability for direct, indirect, economic, incidental, consequential, or special loss or damage whether arising in contract, warranty, express or implied, tort, or otherwise, and irrespective of fault, negligence, and strict liability.

This report does not warrant against: (1) operations or conditions which were not evident from visual observations or historical information provided; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; (3) locations other than the client-provided addresses and/or legal parcel description; or (4) information regarding off-Site location(s) (with possible impact to the Site) not published in publicly available records.

7.6.3 Continued Validity/User Reliance

This report is presumed to be valid, in accordance with, and subject to, the limitations specified in the ASTM E 1527-13 standard, for a period of 180 days from completion, or until the Client obtains specific information that may materially alter a finding, opinion, or conclusion in this report, or until

the Client is notified by TRC that it has obtained specific information that may materially alter a finding, opinion, or conclusion in this report. Additionally, pursuant to the ASTM E 1527-13 standard, this report is presumed valid if completed fewer than 180 days prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction.

7.6.4 Significant Assumptions

During this Phase I ESA, TRC relied on database information; interviews with Site representatives, regulatory officials, and other individuals having knowledge of Site operations; and User-provided information as requested in our authorized Scope of Work. TRC has assumed that the information provided is true and accurate. Reliance on electronic database search reports is subject to the limitations set forth in those reports. TRC did not independently verify the information provided. TRC found no reason to question the validity of the information received unless explicitly noted elsewhere in this report. If other information is discovered and/or if previous reports exist that were not provided to TRC, our conclusions may not be valid.

8.0 REFERENCES

Table 8.1 - Reference Information

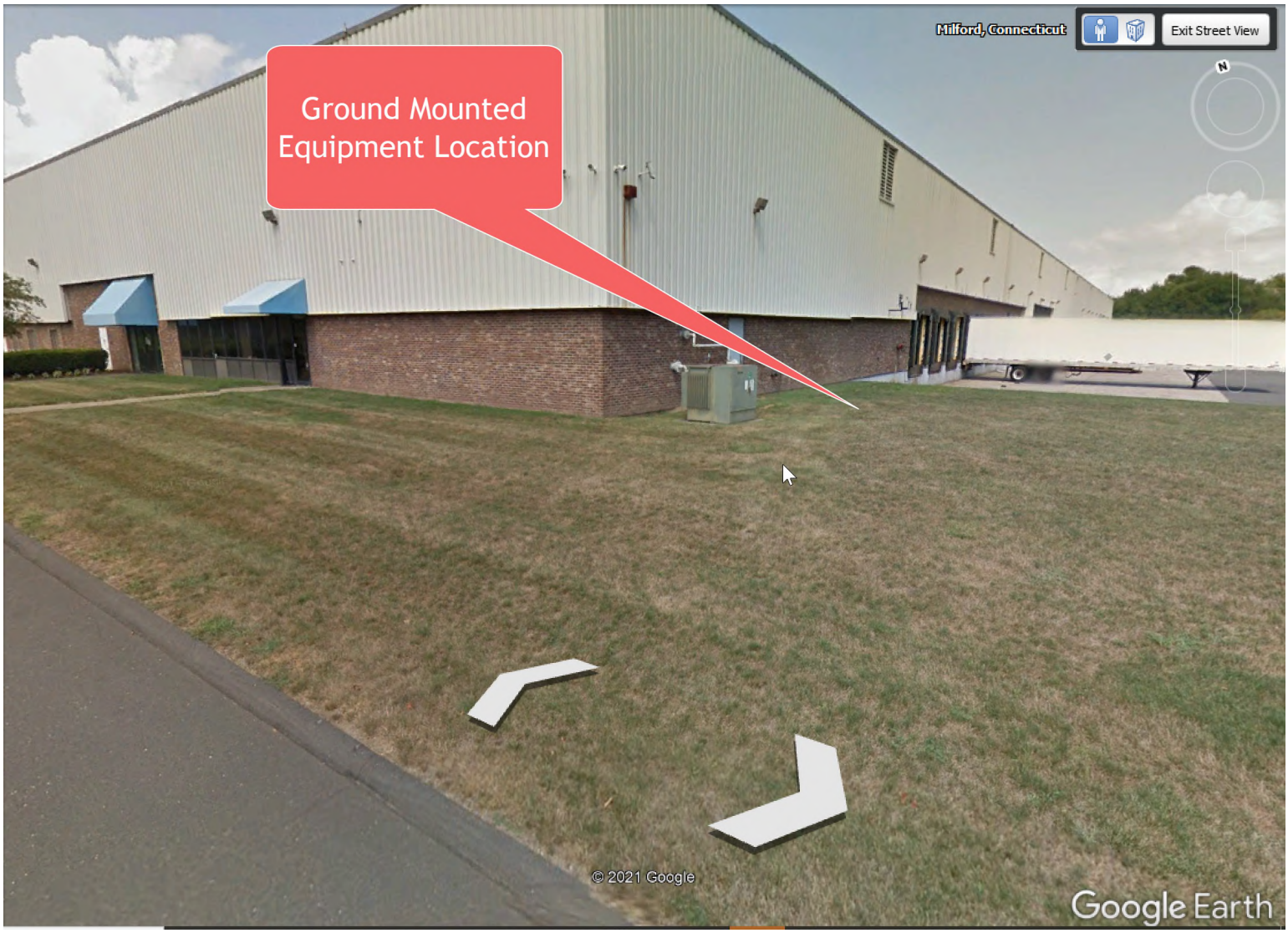
Description/Title of Document(s) Received or Agency Contacted	Date Information Request Filled/Date of Agency Contact	Information Updated	Reference Source
Regulatory database search and historical sources discussed herein	October 18, 2021	Yes	EDR Inquiry Number: 6707535.2s
Interview with Matthew Carabetta, Operations Manager	October 21, 2021	Yes	Current Occupant
Fire Department	October 18, 2021	Yes	City of Milford
Health Department	October 18, 2021	Yes	City of Milford
Tax Assessor Office	October 18, 2021		City of Milford
Provided prior environmental reports as discussed in Section 4.4	N/A	Yes	User Provided
Connecticut Department of Energy and Environmental Protection	October 21, 2021	Yes	Document Online Search Portal

Dynamic Energy™

GM Equipment Elevation Photos.pdf

P: 877.809.8884 F: 610.267.5403

1550 Liberty Ridge Drive | Suite 310 | Wayne, PA 19087


Ground Mounted
Equipment Location
Milford, Connecticut
Exit Street View
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Google Earth


Ground Mounted
Equipment Location
24 Pepes Farm Rd
Exit Street View
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Dynamic Energy™

Staging and Storage Area.pdf

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1550 Liberty Ridge Drive | Suite 310 | Wayne, PA 19087


40 Pepes Farm Rd
Temporary Construction Staging Area and Roof Loading
Temporary Construction Staging and Storage Area
Image Landsat / Copernicus

J148075-3 UDS Level 2 Report Final Report (1).pdf

P: 877.809.8884 F: 610.267.5403

1550 Liberty Ridge Drive | Suite 310 | Wayne, PA 19087

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-148075-3
Client Project/Site: Solar Module TCLP

For:
JA Solar
2570 North First Street
Suite 360
San Jose, California 95131

Attn: Teodor Galitev

Authorized for release by:
5/7/2021 9:38:58 AM

Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: JA Solar
Job ID: 240-148075-3
Project/Site: Solar Module TCLP

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Case Narrative

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Job ID: 240-148075-3

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative
240-148075-3

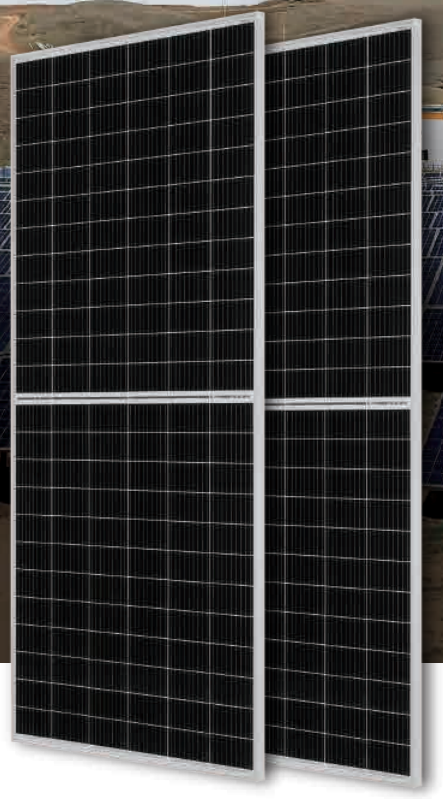
Comments
No additional comments.

Receipt
The samples were received on 4/23/2021 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 15.1° C.

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

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

Harvest the Sunshine



Mono

420W MBB Bifacial Mono PERC Half-cell Double Glass Module

JAM72D10 400-420/MB Series

Introduction

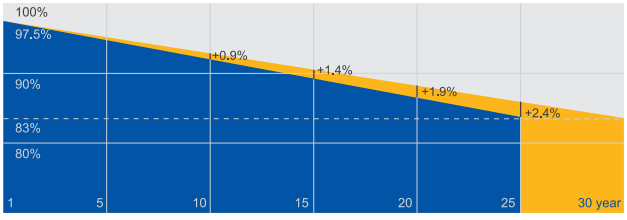
Assembled with MBB bifacial PERCIUM cells and half-cell configuration, these double glass modules have the capability of converting the incident light from the rear side together with the front side into electricity, providing higher output power, lower temperature coefficient, less shading loss, as well as enhanced tolerance for mechanical loading.

- Higher output power
- More reliable, more stable power generation
- Less shading effect
- Lower temperature coefficient

Superior Warranty

- 12-year product warranty
- 30-year linear power output warranty

0.5% Annual Degradation Over 30 years

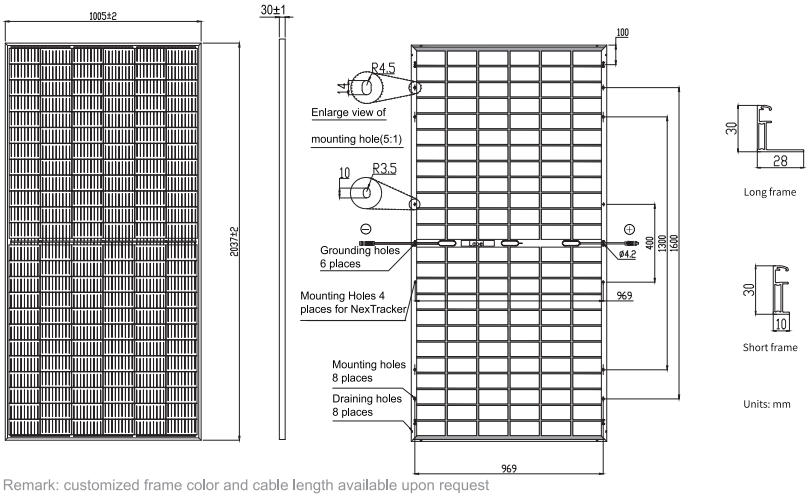


Additional Value From 30-Year Warranty JA Standard

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval

MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	25.0kg±3%
Dimensions	2037±2mm×1005±2mm×30±1mm
Cable Cross Section Size	4mm² (12AWG)
No. of cells	144(6×24)
Junction Box	IP68, 3 diodes
Connector	QC 4.10-35
Cable Length (Including Connector)	Portrait:300mm(+)/400mm(-); Landscape:1200mm(+)/1200mm(-)
Packaging Configuration	34 Per Pallet
Front Glass/Back Glass	2.0mm/2.0mm

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72D10 -400/MB	JAM72D10 -405/MB	JAM72D10 -410/MB	JAM72D10 -415/MB	JAM72D10 -420/MB
Rated Maximum Power(Pmax) [W]	400	405	410	415	420
Open Circuit Voltage(Voc) [V]	49.57	49.82	50.08	50.35	50.62
Maximum Power Voltage(Vmp) [V]	42.02	42.28	42.54	42.80	43.04
Short Circuit Current(Isc) [A]	10.14	10.20	10.26	10.32	10.37
Maximum Power Current(Imp) [A]	9.52	9.58	9.64	9.70	9.76
Module Efficiency [%]	19.5	19.8	20.0	20.3	20.5
Power Tolerance	0~+5W				
Temperature Coefficient of Isc(α_Isc)	+0.044%/°C				
Temperature Coefficient of Voc(β_Voc)	-0.272%/°C				
Temperature Coefficient of Pmax(γ_Pmp)	-0.354%/°C				
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G				

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN(REFRENCE TO 410W FRONT)

Backside Power Gain	5%	10%	15%	20%	25%
Rated Max Power(Pmax) [W]	431	451	472	492	513
Open Circuit Voltage(Voc) [V]	50.10	50.10	50.10	50.20	50.20
Max Power Voltage(Vmp) [V]	42.55	42.55	42.55	42.65	42.65
Short Circuit Current(Isc) [A]	10.76	11.28	11.79	12.30	12.81
Max Power Current(Imp) [A]	10.12	10.60	11.08	11.54	12.02

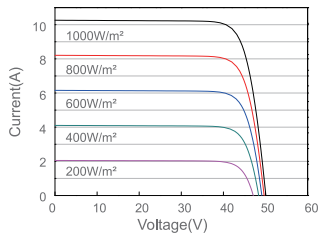
*For NexTracker installations static loading performance: front load measures 2400Pa, while back load measures 1800Pa.
**Bifaciality=Pmax,rear/Rated Pmax,front

OPERATING CONDITIONS

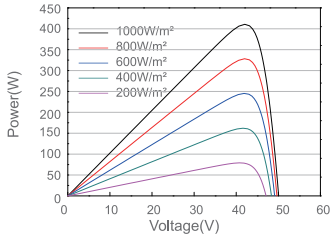
Maximum System Voltage	1500V DC(UL)
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	20A
Maximum Static Load,Front* Maximum Static Load,Back*	5400Pa(112 lb/ft²) 2400Pa(50 lb/ft²)
NOCT	45±2°C
Bifaciality**	70%±10%
Fire Performance	Type 29

CHARACTERISTICS

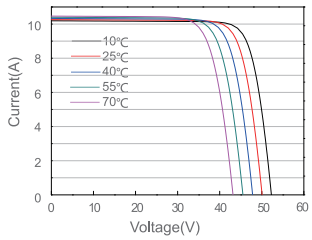
Current-Voltage Curve JAM72D10-410/MB



Power-Voltage Curve JAM72D10-410/MB



Current-Voltage Curve JAM72D10-410/MB



Method Summary

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

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: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-148075-3	D10	Solid	04/22/21 00:00	04/23/21 10:20	

Detection Summary

Client: JA Solar
Job ID: 240-148075-3
Project/Site: Solar Module TCLP

Client Sample ID: D10
Lab Sample ID: 240-148075-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	1.4		0.50		mg/L	1		6010B	TCLP
Lead	1.4		0.050		mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Client Sample ID: D10

Date Collected: 04/22/21 00:00
Date Received: 04/23/21 10:20

Lab Sample ID: 240-148075-3

Matrix: Solid

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1
Barium	**1.4**		0.50		mg/L		04/28/21 14:00	04/29/21 16:38	1
Cadmium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1
Chromium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1
Lead	**1.4**		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1
Selenium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1
Silver	ND		0.050		mg/L		04/28/21 14:00	04/29/21 16:38	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020		mg/L		04/28/21 14:00	04/30/21 11:02	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-483208/2-A
Matrix: Solid
Analysis Batch: 483437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483208

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1
Barium	ND		0.50		mg/L		04/28/21 14:00	04/29/21 13:52	1
Cadmium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1
Chromium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1
Lead	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1
Selenium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1
Silver	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:52	1

Lab Sample ID: LCS 240-483208/3-A
Matrix: Solid
Analysis Batch: 483437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	1.95		mg/L		97	50 - 150
Barium	2.00	1.90		mg/L		95	50 - 150
Cadmium	1.00	0.974		mg/L		97	50 - 150
Chromium	1.00	0.926		mg/L		93	50 - 150
Lead	1.00	0.942		mg/L		94	50 - 150
Selenium	2.00	2.01		mg/L		100	50 - 150
Silver	0.100	0.0995		mg/L		100	50 - 150

Lab Sample ID: LB 240-483078/1-B
Matrix: Solid
Analysis Batch: 483437

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 483208

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1
Barium	ND		0.50		mg/L		04/28/21 14:00	04/29/21 13:47	1
Cadmium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1
Chromium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1
Lead	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1
Selenium	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1
Silver	ND		0.050		mg/L		04/28/21 14:00	04/29/21 13:47	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-483211/2-A
Matrix: Solid
Analysis Batch: 483586

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483211

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020		mg/L		04/28/21 14:00	04/30/21 10:35	1

Lab Sample ID: LCS 240-483211/3-A
Matrix: Solid
Analysis Batch: 483586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00530		mg/L		106	80 - 120

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LB 240-483078/1-C
Matrix: Solid
Analysis Batch: 483586

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 483211

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020		mg/L		04/28/21 14:00	04/30/21 10:33	1

QC Association Summary

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Metals

Processed Batch: 482994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	Part Size Red	

Leach Batch: 483078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	1311	482994
LB 240-483078/1-B	Method Blank	TCLP	Solid	1311	
LB 240-483078/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 483208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	3010A	483078
LB 240-483078/1-B	Method Blank	TCLP	Solid	3010A	483078
MB 240-483208/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-483208/3-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 483211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	7470A	483078
LB 240-483078/1-C	Method Blank	TCLP	Solid	7470A	483078
MB 240-483211/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-483211/3-A	Lab Control Sample	Total/NA	Solid	7470A	

Analysis Batch: 483437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	6010B	483208
LB 240-483078/1-B	Method Blank	TCLP	Solid	6010B	483208
MB 240-483208/2-A	Method Blank	Total/NA	Solid	6010B	483208
LCS 240-483208/3-A	Lab Control Sample	Total/NA	Solid	6010B	483208

Analysis Batch: 483586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-148075-3	D10	TCLP	Solid	7470A	483211
LB 240-483078/1-C	Method Blank	TCLP	Solid	7470A	483211
MB 240-483211/2-A	Method Blank	Total/NA	Solid	7470A	483211
LCS 240-483211/3-A	Lab Control Sample	Total/NA	Solid	7470A	483211

Lab Chronicle

Client: JA Solar
Project/Site: Solar Module TCLP

Job ID: 240-148075-3

Client Sample ID: D10

Date Collected: 04/22/21 00:00
Date Received: 04/23/21 10:20

Lab Sample ID: 240-148075-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Processed	Part Size Red			482994	04/27/21 10:20	POP	TAL CAN
TCLP	Leach	1311			483078	04/27/21 16:25	DRJ	TAL CAN
TCLP	Prep	3010A			483208	04/28/21 14:00	MRL	TAL CAN
TCLP	Analysis	6010B		1	483437	04/29/21 16:38	DSH	TAL CAN
TCLP	Processed	Part Size Red			482994	04/27/21 10:20	POP	TAL CAN
TCLP	Leach	1311			483078	04/27/21 16:25	DRJ	TAL CAN
TCLP	Prep	7470A			483211	04/28/21 14:00	MRL	TAL CAN
TCLP	Analysis	7470A		1	483586	04/30/21 11:02	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: JA Solar
Job ID: 240-148075-3
Project/Site: Solar Module TCLP

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22

15#15-1

Environment Testing America

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720

Tel: (330) 497-9396
Fax: (330) 497-0772
www.testamericainc.com

22, 2021

odor Galitev
JA Solar
2570 North First Street
Suite 360
San Jose, CA 95131
Teodor.galitev@jasolar.us
Tel: (408) 586-0000

240-148075 Chain of Custody

Subject: Analytical Services Proposal - Solar Modules TCLP Metals Testing
Eurofins TestAmerica Quotation Number 24026957

Dear Teodor Galitev:

We appreciate the opportunity to provide your company with a quotation for your Solar Modules TCLP Metals Testing project. Eurofins TestAmerica has a unique combination of full service capabilities, technical expertise, local service options, and online resources necessary to ensure successful project outcomes.

At Eurofins TestAmerica, quality is the hallmark of our business. To ensure your project's data quality objectives are met, we offer experienced personnel who are trained and committed to completing your analytical project on time, a fully documented QA/QC program, and state-of-the-art laboratory equipment and facilities. In addition to being a full service laboratory, we are part of the nation's largest environmental laboratory network. This provides access to an unparalleled spectrum of capabilities and turnaround time options, all through a single point of contact. Michael DelMonico has been assigned as your Project Manager for this work and can be reached by phone at 330 497-9396 or via email at Michael.DelMonico@Eurofinset.com.

- **Total Access**: a web portal offering you customizable, real time access to data. With 24 hour access you can perform data trending, compare data to industry or project limits, track CoCs, invoices, reports and much more.
- **Level IV Deliverables/Customizable EDDs**: high resolution, text searchable reports, available in virtually any format.
- **Extensive Experience**: Project Managers with in-depth knowledge of regulatory protocols and procedures.
- **Nationwide Logistical Support**: bringing you an extensive courier network, service centers and shipping options throughout the U.S. and abroad.
- **PFAS, Dioxins/Furans, Air, Radiochemistry, IH** and other specialty analyses are offered alongside routine soil and water methods with seamless reports and consolidated EDDs.

The following quotation includes a detailed price breakdown, as well as any notes and clarifications pertaining to your project, and is subject to Eurofins TestAmerica's Standard Terms and Conditions, unless otherwise agreed upon in writing.

We thank you for choosing Eurofins TestAmerica, and we look forward to working with you on this project.

Sincerely,

Gary Wood
Client Relations Manager
gary.wood@Eurofinset.com

cc: Michael DelMonico

4-23-21 1020

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720

Prepared for:
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Prepared by	Wood, Gary L
Date	3/22/2021
Expiration Date	6/20/2021
Est. Start Date	

Project: Solar Modules TCLP Metals Testing *Quote Number: 24026957 - 0*

Solar Module **TAT: 10_Days (Business Days)**

Matrix	Method	Test Description	Quantity	Unit Price	Extended Price
Solid	6010B	TCLP Metals	4	$ 55.00	$ 220.00
Solid	1311	TCLP Extraction	4	$ 30.00	$ 120.00
Solid	Part Size Red	Particle Size Reduction Preparation	4	$ 180.00	$ 720.00
Solid	7470A	TCLP Mercury	4	$ 22.00	$ 88.00
		Total Solar Module			**$ 1,148.00**

Quote Other Charges

Description		Quantity	Unit Price	Extended Price
Safe and Environmentally Responsible Waste Management (per sample)		4	$ 2.50	$ 10.00
Deliverables - Level II Report (%)	0.0% of Total	1	$ 0.00	$ 0.00
Total Other Charge				**$10.00**

Total Other Charges	**$ 10.00**
Total Analysis Charges	**$ 1,148.00**
Grand Total for Quote 24026957	**$ 1,158.00**

***Quoted charges do not include sales tax. Applicable sales tax will be added to invoices where required by law.*

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

Client JA Solar Site Name _____ Cooler unpacked by:

Cooler Received on 4-23-21 Opened on 4-23-21

FedEx: 1st Grd Exp (UPS) FAS Clipper Client Drop Off TestAmerica Courier Other _____

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-11 (CF +0.1 °C) Observed Cooler Temp. 15.0 °C Corrected Cooler Temp. 15.1 °C
   IR GUN #IR-12 (CF +0.2°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	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 (ID/Date/Time) be reconciled with the COC?	Yes (No)	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11. Sufficient quantity received to perform indicated analyses?	(Yes) No	
12. Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA)	pH Strip Lot# **HC022887**
14. Were VOAs on the COC?	Yes (No)	
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No (NA)	
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes (No)	
17. Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

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

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. 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)

20. 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: _____

WI-NC-099