

September 20, 2017

Via Federal Express/Electronic Mail

Todd Anthony Bianco, EFSB Coordinator
RI Energy Facilities Siting Board
89 Jefferson Blvd.
Warwick, RI 02888


Re: Invenergy Docket No. SB-2015-06

Dear Mr. Bianco:

On behalf of Invenergy Thermal Development LLC and the Clear River Energy Center Project ("Invenergy"), enclosed please find an original and three (3) copies of Invenergy's Responses to the Town of Burrillville's 36th Set of Data Requests.

Please let me know if you have any questions.

Very truly yours,



ALAN M. SHOER
ashoer@apslaw.com

Enclosures

cc: Service List

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE: Application of Invenergy Thermal
 Development LLC's Proposal for
 Clear River Energy Center

Docket No. SB-2015-06

**INVENERGY THERMAL DEVELOPMENT LLC'S RESPONSES TO
THE TOWN OF BURRILLVILLE'S 36th SET OF DATA REQUESTS**

Request 36-1 Please provide the details of all testing that has been performed for the installation of an onsite drinking water well and related appurtenances and provide the results of all drilling, soil sampling, or other testing performed in connection with the same.

Response 36-1 No drilling, soil sampling, or testing has been performed to date in support of the installation of the proposed on-site drinking water well and related appurtenances. Given the limited potable water demand for the Clear River Energy Center ("CREC"), no advanced testing of the property is warranted. The installation of the CREC drinking water well will be similar to the installation of a typical private residential water supply well. Any water quality or yield testing of the CREC drinking water well will be performed concurrently with the drilling and installation of the well, which will be completed during facility construction.

RESPONDENT: Jeffrey Hershberger, ESS Group, Inc.

DATE: September 20, 2017

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE: Application of Invenergy Thermal
 Development LLC's Proposal for
 Clear River Energy Center

Docket No. SB-2015-06

**INVENERGY THERMAL DEVELOPMENT LLC'S RESPONSES TO
THE TOWN OF BURRILLVILLE'S 36th SET OF DATA REQUESTS**

Request 36-2 Please provide the details of all testing that has been performed for the installation of an onsite septic system and related appurtenances and provide the results of all drilling, soil sampling, or other testing performed in connection with the same, including, but not limited to, percolation tests, if any.

Response 36-2 A program of test holes was performed in areas considered for the siting of the onsite wastewater treatment system ("OWTS") leach field, with a number of locations selected for further evaluation. Soil evaluations were then conducted at the site and witnessed by the Rhode Island Department of Environmental Management ("RIDEM"). The RIDEM-witnessed test holes were first performed on February 7, 2017 and leach field siting and design was performed as part of an OWTS Application submission. Since then, design modifications required that the leach field be relocated; as such, additional test holes were performed and witnessed by RIDEM on August 2, 2017 and September 14, 2017 to evaluate subsurface conditions at potential alternative leach field locations.

Site evaluation forms documenting the soil evaluations were submitted to RIDEM under OWTS Application No. 1703-0050. Copies of these forms are attached as **Exhibit A**. Note that in accordance with the RIDEM OWTS Regulations, dry weather soil evaluations were used to determine the seasonal high groundwater table and soil conditions for leach field sizing and design. Percolation testing was not performed, as allowed in the RIDEM OWTS Regulations.

RESPONDENT: Brandon M. Blanchard, P.E., Pare Corporation

DATE: September 20, 2017

INVENERGY THERMAL DEVELOPMENT LLC
By its Attorneys,

/s/ Alan M. Shoer

Alan M. Shoer, Esq. (#3248)
Richard R. Beretta, Jr. Esq. (#4313)
Nicole M. Verdi, Esq. (#9370)
ADLER POLLOCK & SHEEHAN, P.C.
One Citizens Plaza, 8th Floor
Providence, RI 02903-1345
Tel: 401-274-7200
Fax: 401-351-4607
Dated: September 20, 2017

CERTIFICATE OF SERVICE

I hereby certify that on September 20, 2017, I delivered a true copy of the foregoing responses to the Town of Burrillville's 36th Set of Data Requests via electronic mail to the parties on the attached service list.

/s/ Alan M. Shoer

EXHIBIT A



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A – Soil Profile Description

Application Number 1703-0050Property Owner: Invenergy Thermal Development, LLCProperty Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002Date of Test Hole: 02-07-2017Soil Evaluator: DiOrio, Alfred W.License Number: D4004Weather: RainShaded: Yes ☐ No ☒ Time: 08:30

TH <u>1</u> Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
A	0-3"	a	s	2.5Y2.5/1	None	None		ls	gr	fr	3
E	3-7"	g	s	10YR4/1	None	None		ls	gr	fr	3
Bw1	7-12"	g	s	7.5YR2.5/2	None	None		sl	1 sbk	fr	3
Bw2	12-17"	a	s	10YR3/4	None	None		sl	1 sbk	fr	3
C	17"-96"	--	--	2.5Y7/2	None	None		f ls	0m	fr	6
TH <u>2</u> Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
A	0-4"	a	s	7.5YR2.5/2	None	None		ls	gr	fr	3
Bw1	4-14"	g	s	10YR4/4	5YR4/4	C 2 P		f sl	1 sbk	fr	3
Bw2	14-23"	g	w	7.5YR4/4	5YR4/4	C 2 P		sl	1 sbk	fr	3
C	23"-96"	--	--	2.5Y7/2	Submerged	Submerged		f ls	0m	fr	6

TH 1 Soil Class B Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 18" SHWT 18" (og)

TH 2 Soil Class B Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 18" SHWT 18" (og)

Comments: Recommend the removal of all organic horizons [A and B] for OWTS design.

Part B

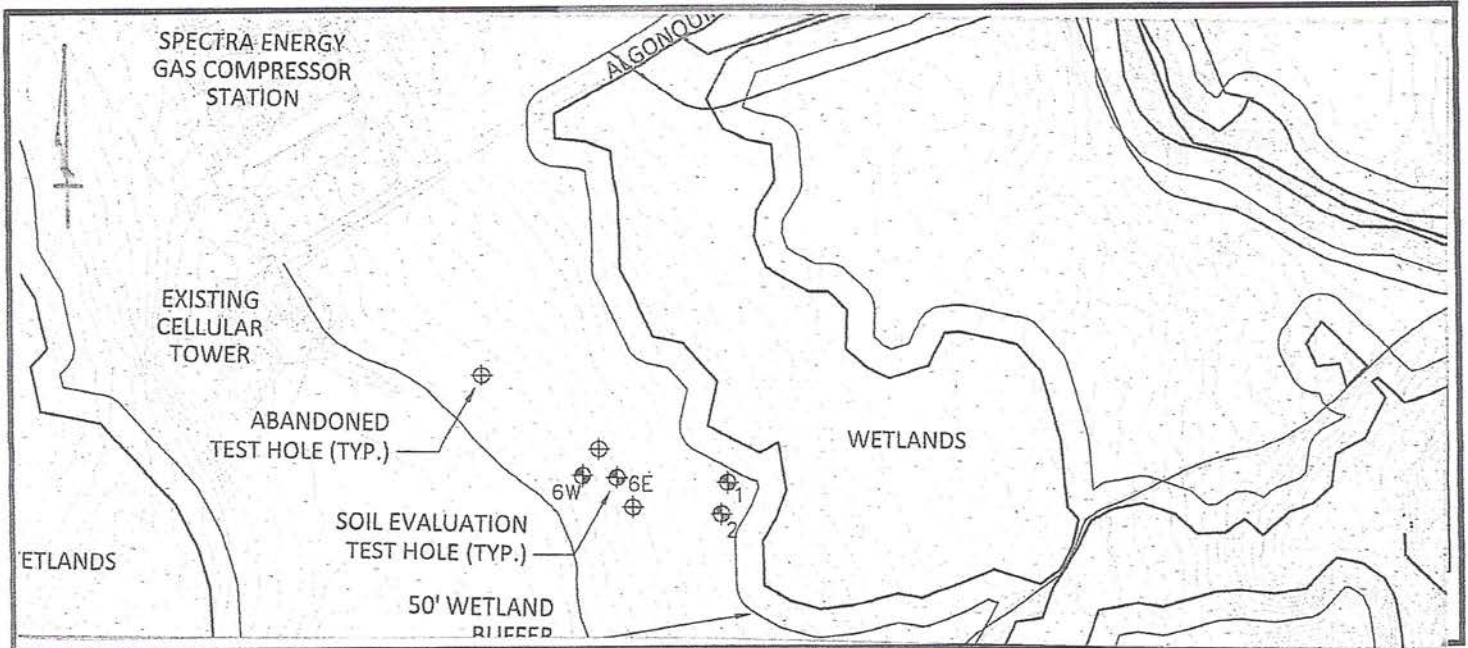
Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

***OFFSETS MUST BE SHOWN**

Key:	
	Approximate location of test holes
	Approximate location of bedrock test holes
	Estimated gradient and direction of slope
	Approximate direction of due north



1. Relief and Slope: Elevation = 560+/- NAVD88 (Google) Slope 0-8%

- | | | |
|---|--|---|
| 2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. | NO <input type="checkbox"/> | YES <input checked="" type="checkbox"/> |
| 3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 8. Site's potential for flooding or ponding: NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> SEVERE <input type="checkbox"/> | | |
| 9. Landscape position: <u>Back slope</u> | | |
| 10. Vegetation: <u>Specimen vegetation with moderate understory</u> | | |
| 11. Indicate approximate location of property lines and roadways. | | |
| 12. Additional comments, site constraints or additional information regarding site: <u>For use with OWTS design only.</u> | | |

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: <u>Alfred W. DiOrto</u>	<u>D4004</u>	Part B prepared by: <u>Alfred W. DiOrto</u>	<u>D4004</u>
Signature	License #	Signature	License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision:	Concur <input type="checkbox"/>	Inconclusive <input type="checkbox"/>	Disclaim <input type="checkbox"/>
Unwitnessed Soil Evaluations Decision:	Accept <input type="checkbox"/>	Inconclusive <input type="checkbox"/>	Disclaim <input type="checkbox"/>

Wet Season Determination required ☐ Additional Field Review Required ☐

Explanation: _____

Signature Authorized Agent _____ Date _____



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A – Soil Profile Description

Application Number 1703-0050Property Owner: Invenenergy Thermal Development, LLCProperty Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002Date of Test Hole: 02-07-2017Soil Evaluator: DiOrio, Alfred W.License Number: D4004Weather: RainShaded: Yes ☐ No ☒ Time: 08:30

TH <u>6E</u> Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-5"	a	s	10YR3/4	None	None		ls	1 sbk	fr	3
Bw1	5-24"	a	s	10YR4/6	None	None		ls	1 sbk	fr	3
Bw2	24-31"	g	w	2.5Y5/6	7.5YR4/6	C 2 P		sl	1 sbk	fr	3
C	31-96"	--	--	2.5Y6/2	7.5YR4/6	C 2 P		g sl	0m	fr	6m
TH _____ Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				

TH 6E Soil Class B Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 23" SHWT 23" (og)

TH _____ Soil Class _____ Total Depth _____ Impervious/Limiting Layer Depth _____ (og) GW Seepage Depth _____ SHWT _____ (og)

Comments: Recommend the removal of all organic horizons [A and B] for OWTS design.

Part B

Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

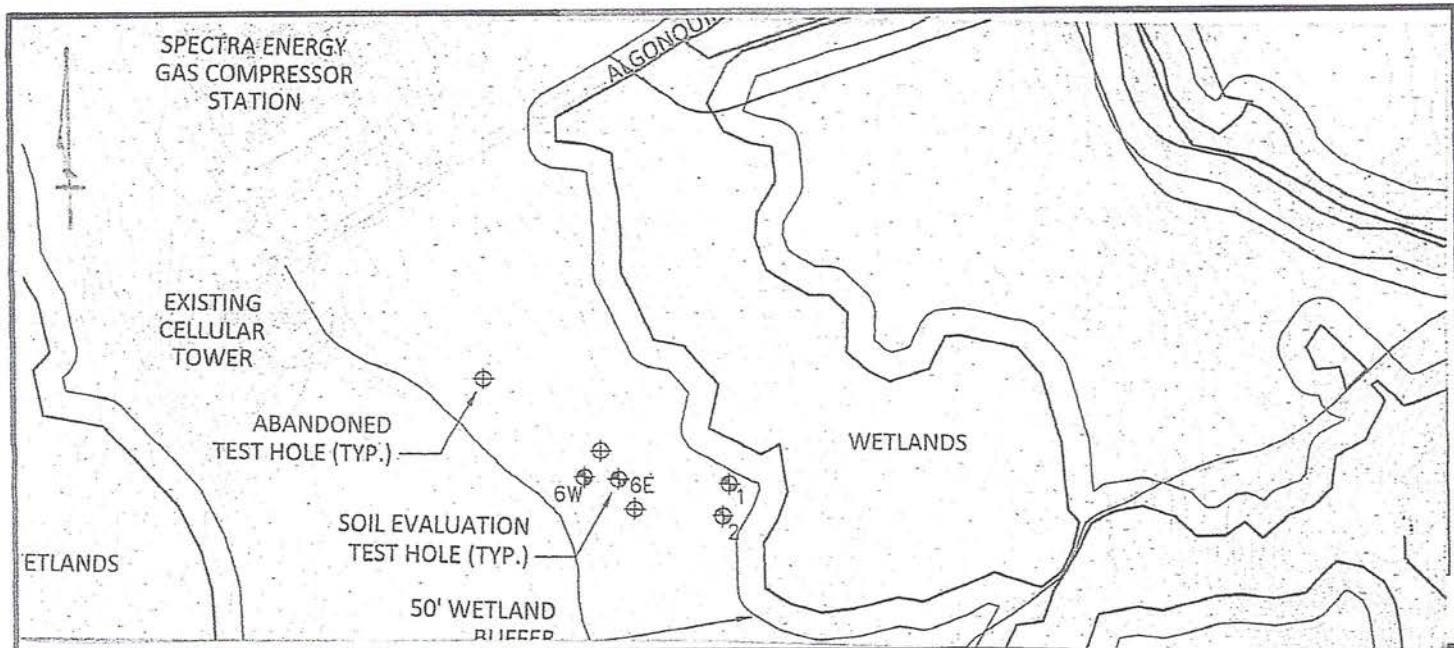
Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

*OFFSETS MUST BE SHOWN

Key:

- Approximate location of test holes
- Approximate location of bedrock test holes
- Estimated gradient and direction of slope
- Approximate direction of due north



1. Relief and Slope: Elevation = 560+/- NAVD88 (Google) Slope 0-8%

2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO ☐ YES ☒
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO ☒ YES ☐
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? NO ☒ YES ☐
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO ☒ YES ☐

8. Site's potential for flooding or ponding: NONE ☐ SLIGHT ☒ MODERATE ☐ SEVERE ☐

9. Landscape position: Back slope

10. Vegetation: Specimen vegetation with moderate understory

11. Indicate approximate location of property lines and roadways.

12. Additional comments, site constraints or additional information regarding site: For use with OWTS design only.

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: Alfred W. DiOrto
Signature

D4004
License #

Part B prepared by: Alfred W. DiOrto
Signature

D4004
License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision:

Concur ☐

Inconclusive ☐

Disclaim ☐

Unwitnessed Soil Evaluations Decision:

Accept ☐

Inconclusive ☐

Disclaim ☐

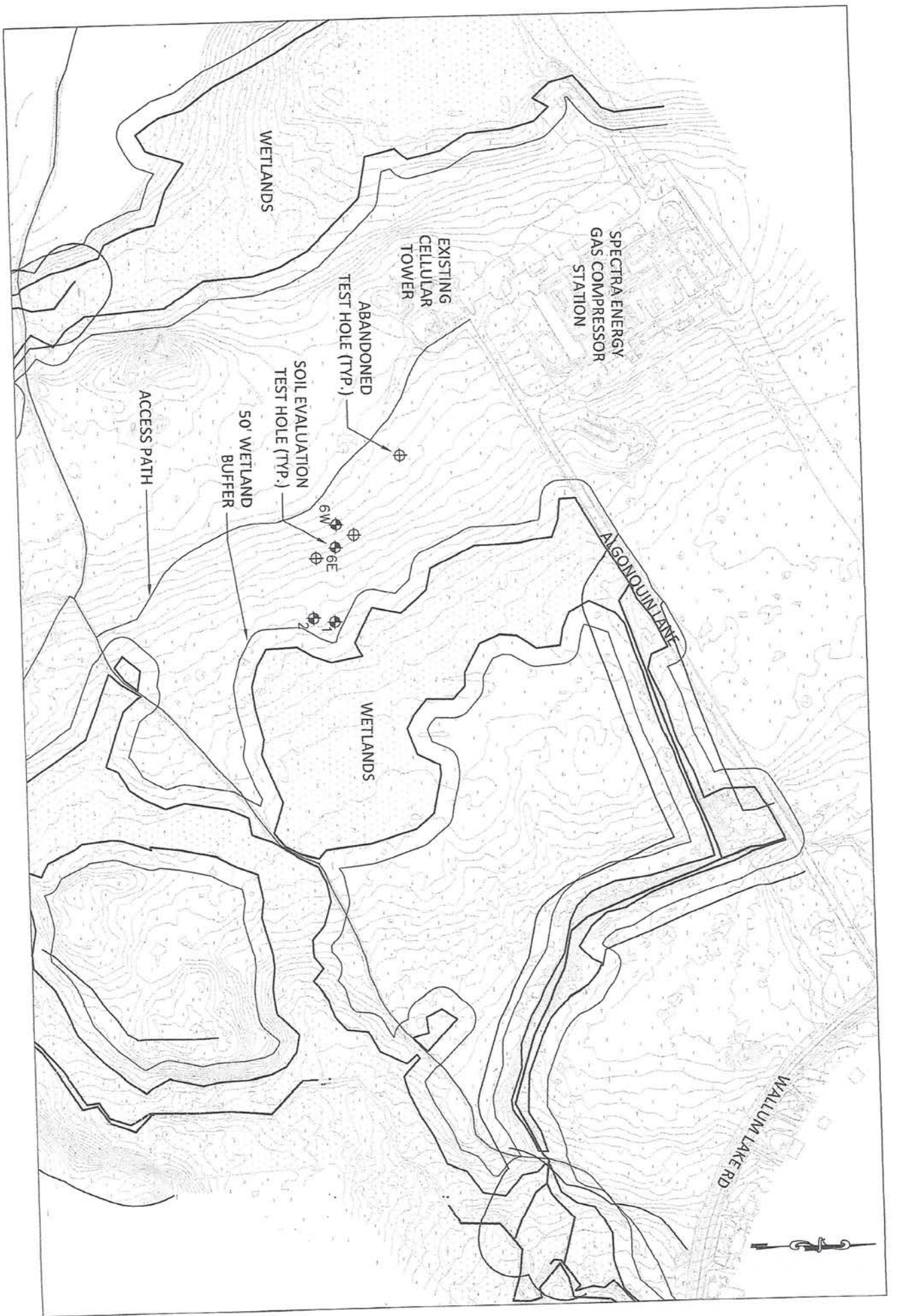
Wet Season Determination required ☐

Additional Field Review Required ☐

Explanation:

Signature Authorized Agent

Date





Rhode Island Department of Environmental Management
Onsite Wastewater Treatment System Program

Phone: 401-222-6820
Fax: 401-222-6177

INSPECTION REPORT

APPLICATION NUMBER:	1703-0050	INSPECTOR:	Pittman
STREET:	Route 100, Wallum Lake Road	INSPECTION DATE:	02/07/2017
CITY/TOWN:	Burrillville	ARRIVAL TIME:	12:15
PLAT/LOT:	137 002	WEATHER CONDITIONS:	
OWTS INSTALLER:	No Installer XXXXX	DESIGNER:	D310
PHONE NO:		INSPECTION NUMBER:	
TYPE OF INSPECTION:	On-site Inspection for Soil		

FINDINGS/COMMENTS

- ✓ CONCUR TH1 + TH2 18" w.t.
 - ✓ basal till d=96"
 - ✓ submit new SEV form w/ class IV designer information
 - ✓ Wetlands
 - ✓ CONCUR TH3 23" w.t. depth TBD 96"
 - ✓ CONCUR TH4 9" w.t. depth TBD
- TH 6W NOT WITNESS
- ABANDONED

RESULTS OF INSPECTION/ACTION REQUIRED

☐ CONSTRUCTION - DESIGNER MUST INSPECT/APPROVE PRIOR TO DEM INSPECTION

- ☐ Bottom inspected
- ☐ Cover inspected
- ☐ Correct items listed
- ☐ (RFA) Address items listed and call for re-inspection.
- ☐ (ASB) Designer must submit As-Built
- ☐ (RPREQ) Redesign required. Submit new application.
- ☐ (RFAD) Stop Construction. Contact OWTS office. DO NOT CONTINUE.
- ☐ (COC) Designer submit COC
- ☐ (O&M) O&M agreement and permit must be recorded in Land Evidence Records.
- ☐ (Fee) A \$100.00 fee is required before re-inspection.
- ☐ Inspection waived

Signature of Inspector

☒ SITE TESTING

- ☒ Soil Evaluation - Concur
- ☐ Soil Evaluation - Do not concur
- ☐ Soil Evaluation - Inconclusive
- ☐ Alteration Test Hole - Verified
- ☐ Alteration Test Hole - Unacceptable
- ☐ Ledge Test
- ☐ Fill Tests
- ☐ Repair Test Hole

For office use only
Application number _____

Application
Date _____

Amount _____

Ck.No. _____

Note _____



RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Onsite Wastewater Treatment Program

Office of Water Resources, Room 260

235 Promenade Street, Providence, RI 02908-5767



SOIL TESTING APPLICATION FORM

Test Hole (Fill in number of Test Holes Planned)

☒ Soil Evaluation _____ ☐ Soil Evaluation _____ ☐ Bedrock _____ ☐ HTM or Storm Deposited Sand (SDS) _____
NBC Alteration

☒ Individual Lot ☐ Subdivision-Number of Lots _____ ☐ Number of Days Required _____

Site Location (Town) (Address) (Zip Code) Pole Number
Burrillville Rt. 100, Wallum Lake Road 02859 95

Owner's Name (Last) (First) (Middle)
Invenergy Thermal Development, LLC

Mailing Address (Street) (City/Town) (Zip Code)
One S. Wacker Drive, Suite 1900 Chicago, IL 60606

Plat Number 137 Lot Number 002 Lot Size 66.72 Acs., m/l

Any Previous OWTS Application Number for this site? ☒ NO ☐ YES Application Number N/A Date N/A

COMPLETE THIS SECTION FOR SOIL EVALUATION REQUESTS ONLY (Instructions on Reverse Side)

SHWT in area of test hole(s) < 4' from surface? ☒ YES ☐ NO

Bedrock in area of test hole(s) < 6' from surface? ☐ YES ☒ NO

On-site well water supply? ☒ YES ☐ NO

Water bodies or streams within 200' of test hole(s)? ☒ YES ☐ NO

HTM or SDS apparent in area of test hole(s)? ☐ YES ☒ NO

Comments This Soil Evaluation will be utilized
to support an application for New Construction
at this site.

I have been authorized by the owners to conduct these subject field investigations and submit this request.

Designer/Soil Evaluator's Name and License Number Alfred W. DiOrio, D4004 Date 02-09-2017

Designer/Soil Evaluator's Signature _____ Telephone Number 401-377-8124

Do not write in this space.

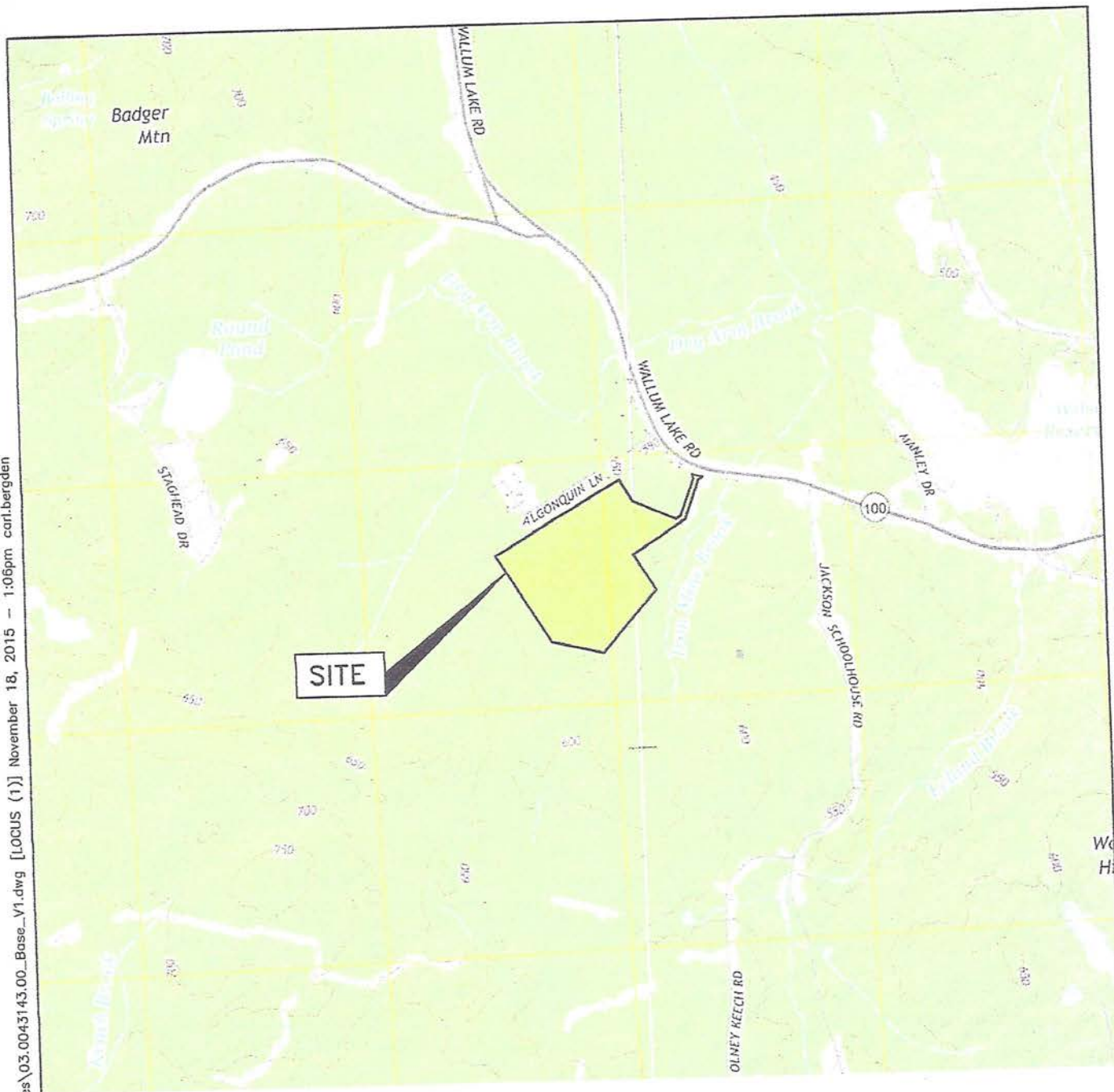
☐ DEM HAS ELECTED NOT TO WITNESS
☐ Notify DEM by telephone 24 hours prior to conducting soil test.
Date & time for test: _____

☐ YOUR TEST HOLE WILL BE WITNESSED:

DATE _____ TIME _____

Authorized Agent

ATTACH A LOCUS MAP, RELEVANT PAGE FROM THE SOIL SURVEY OF RHODE ISLAND AND CHECK (made out to the Rhode Island General Treasurer) TO THIS FORM AND SUBMIT TO RIDEM's OFFICE OF WATER RESOURCES, 235 PROMENADE STREET, ROOM 260, PROVIDENCE, RI 02908-5767.



0 1000' 2000' 4000'
SCALE IN FEET 1" = 2000'

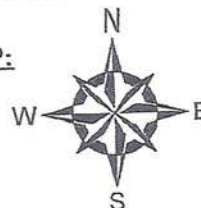
RHODE ISLAND



3
QUADRANGLE LOCATION

SOURCE:
BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
THOMPSON, CT-RI & CHEPACHET, RI (2015)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY US.GOV USGS MAPS
CONTOUR ELEVATIONS REFERENCE NAVD 88,
CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS



UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THIS DRAWING IS SOLELY FOR THE USE OF THE CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REPRODUCED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION, OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

PROPOSED RHODE ISLAND ENGERY CENTER
BURRILLVILLE, RHODE ISLAND

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
INVENERGY THERMAL DEVELOPMENT LLC
ONE SOUTH WACKER DRIVE, SUITE 1900
CHICAGO, ILLINOIS 60606

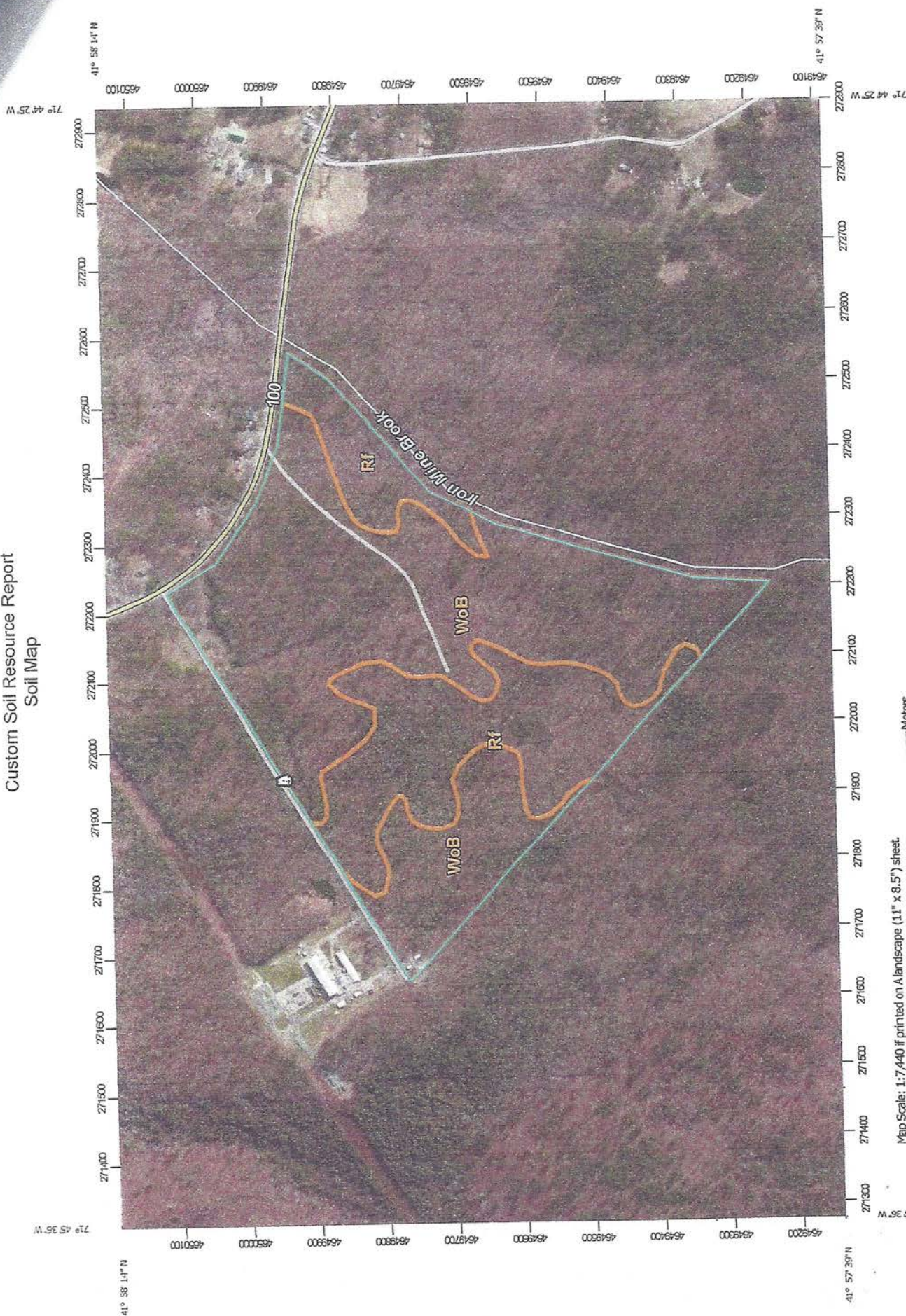
LOCUS

PROJ MGR: DYB
DESIGNED BY: TJB
DATE: NOVEMBER, 2015
REVIEWED BY: RJM
DRAWN BY: CRB
PROJECT NO. 03.0034143.00

CHECKED BY: MEA
SCALE: 1"=2000'
REVISION NO. 0

FIGURE
1
SHEET NO. 1 of 1

Custom Soil Resource Report Soil Map



Map Scale: 1:7,440 if printed on A landscape (11" x 8.5") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A - Soil Profile Description

Application Number 1703-0050

Property Owner: Invenergy Thermal Development, LLC

Property Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002

Date of Test Hole: 08-02-2017

Soil Evaluator: DiOrio, Alfred W.

License Number: D4004

Weather: Ptly. Cldy.

Shaded: Yes ☒ No ☐ Time: 11:00

TH <u>3</u> Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
A	0-4"	a	s	2.5Y2.5/1	None	None		l	gr	fr	3
E	4-10"	g	s	10YR4/1	None	None		ls	gr	fr	3
Bw	10-46"	g	s	2.5Y6/4	@15" 5YR4/4	C	2 P	sl	1 sbk	fr	3
CD	46-120"	--	--	2.5Y6/2	5YR4/4	C	2 P	cb ls	0m	fi	8
TH <u>4</u> Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
A	0-4"	a	s	10YR2/1	None	None		l	gr	fr	3
E	4-21"	g	s	2.5Y5/2	@15" 5YR4/4	C	2 P	ls	gr	fr	3
Bw	21-72"	g	s	2.5Y6/4	5YR4/4	C	2 P	ls	gr	fr	3
CD	72-120"	--	--	2.5Y6/2	5YR4/4	C	2 P	cb ls	0m	fi	8

TH 03 Soil Class A Total Depth 120" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 29" SHWT 15" (og)

TH 03 Soil Class A Total Depth 120" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 29" SHWT 15" (og)

Comments: Designer recommends removal of A/E horizons for OWTS design. Additionally, OWTS Designer should strive to maximize/increase separation distance to SHWT for OWTS design.

Reference Soil Evaluation on this site, dated 02-07-2017, in same general area where SHWT=18"

Part B





Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

***OFFSETS MUST BE SHOWN**

Key:

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north

Bedrock THs	
TH	Depth

1. Relief and Slope: Elevation=560+/- NAVD88 (Google) Slope=0-8%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO ☐ YES ☒
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO ☒ YES ☐
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? NO ☒ YES ☐
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO ☒ YES ☐
8. Site's potential for flooding or ponding: NONE ☐ SLIGHT ☒ MODERATE ☐ SEVERE ☐
9. Landscape position: Back slope
10. Vegetation: Specimen vegetation with moderate understory
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: For use with OWTS Design only.

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: Alfred W. DiOrio D4004 Part B prepared by: Alfred W. DiOrio D4004
Signature License # Signature License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision: Concur ☐ Inconclusive ☐ Disclaim ☐

Unwitnessed Soil Evaluations Decision: Accept ☐ Inconclusive ☐ Disclaim ☐

Wet Season Determination required ☐ Additional Field Review Required ☐

Explanation: _____

Signature Authorized Agent

Date



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A – Soil Profile Description

Application Number 1703-0050

Property Owner: Invenergy Thermal Development, LLC
 Property Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002
 Date of Test Hole: 09-14-2017
 Soil Evaluator: DiOrio, Alfred W. License Number: D4004
 Weather: Clr. /Ptly. Cldy. Shaded: Yes ☒ No ☐ Time: 11:00

TH 8A Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-5"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw1	5-20"	g	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw2	20-27"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	27-96"	-	-	10YR6/3	7.5YR5/8	C	2 P	g sl	0m	fi	8m
TH 8B Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-3"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw1	3-18"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw2	18-22"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	22-96"	-	-	10YR6/3	7.5YR5/8	C	2 P	g sl	0m	fi	8m

TH 8A Soil Class D/A Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth None SHWT 22" (og)
 TH 8B Soil Class D/A Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth 66" SHWT 19" (og)

Comments: _____

Part B


Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer


Please use the area below to locate:


1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*


***OFFSETS MUST BE SHOWN**

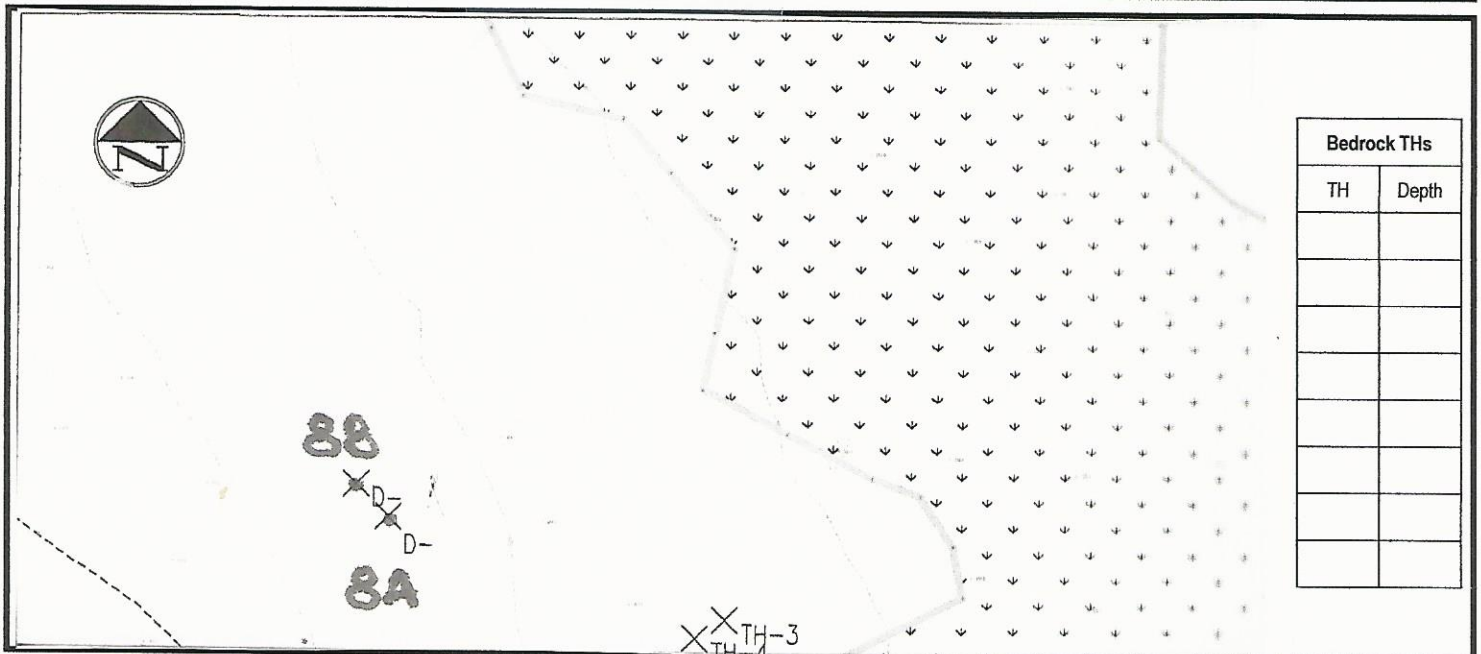
Key:

 Approximate location of test holes

 Approximate location of bedrock test holes

 Estimated gradient and direction of slope

 Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: Elev=567+/- (by others). Slope=0-5%

2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO ☐ YES ☒
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO ☒ YES ☐
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? NO ☒ YES ☐
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO ☒ YES ☐

8. Site's potential for flooding or ponding: NONE ☐ SLIGHT ☒ MODERATE ☐ SEVERE ☐

9. Landscape position: Backslope

10. Vegetation: Specimen vegetation w/moderate understory

11. Indicate approximate location of property lines and roadways.

12. Additional comments, site constraints or additional information regarding site: For use with OWTS only.

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: Alfred W. DiOrio D4004
Signature License #

Part B prepared by: Alfred W. DiOrio D4004
Signature License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision: Concur ☐ Inconclusive ☐ Disclaim ☐

Unwitnessed Soil Evaluations Decision: Accept ☐ Inconclusive ☐ Disclaim ☐

Wet Season Determination required ☐ Additional Field Review Required ☐

Explanation: _____

Signature Authorized Agent

Date



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A – Soil Profile Description

Application Number 1703-0050

Property Owner: Invenergy Thermal Development, LLC

Property Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002

Date of Test Hole: 09-14-2017

Soil Evaluator: DiOrio, Alfred W.

License Number: D4004

Weather: Clr./Ptly. Cldy.

Shaded: Yes ☒ No ☐ Time: 11:00

TH 15-1 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-3"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw1	3-17"	g	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw2	17-33"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	33-96"	-	-	10YR5/6	7.5YR5/8	C	2 P	g sl	0m	fi	8
TH 15-2 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-6"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw1	6-24"	g	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw2	24-50"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	50-96"	-	-	10YR5/6	7.5YR5/8	C	2 P	g sl	0m	fi	8

TH 15-1 Soil Class D/A Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth None SHWT 19" (og)

TH 15-2 Soil Class D/A Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth None SHWT 19" (og)

Comments:

Part B

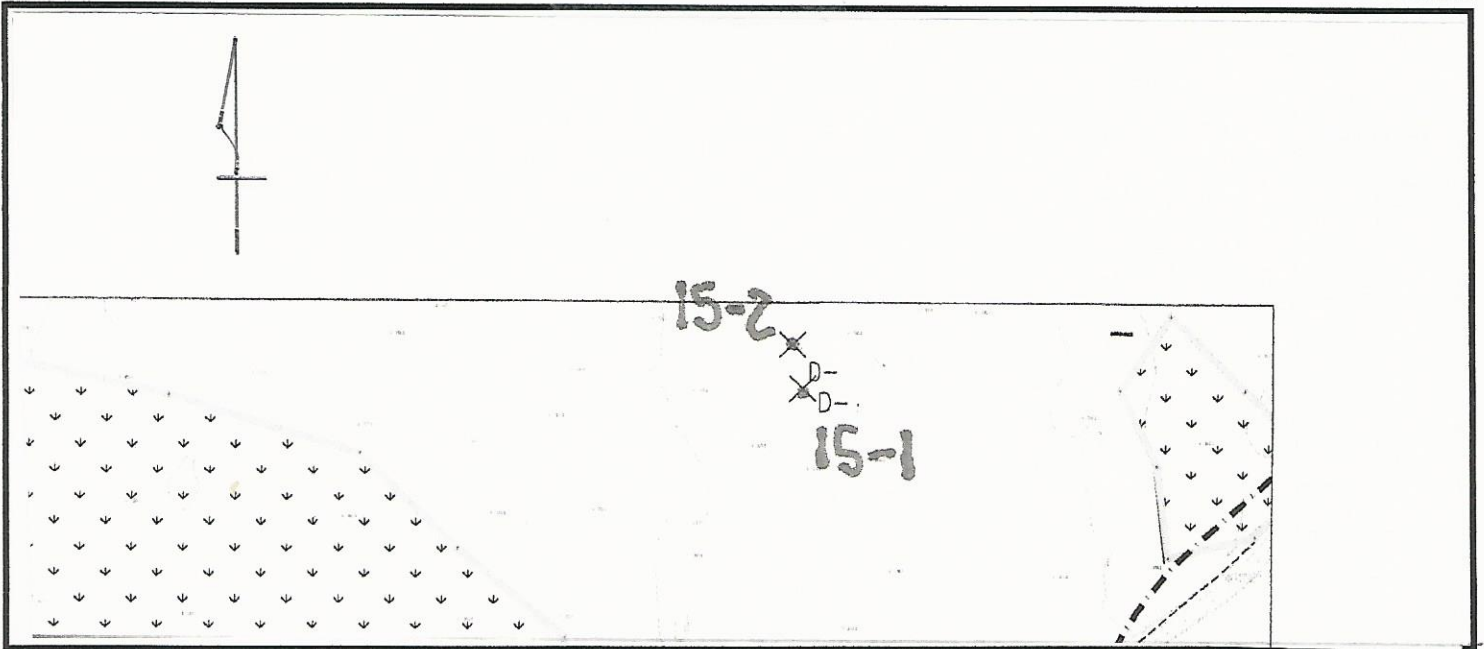
Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

***OFFSETS MUST BE SHOWN**

Key:	
	Approximate location of test holes
	Approximate location of bedrock test holes
	Estimated gradient and direction of slope
	Approximate direction of due north



1. Relief and Slope: Elev=547+/- Slope=0-5%

- | | | |
|--|--|---|
| 2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. | NO <input type="checkbox"/> | YES <input checked="" type="checkbox"/> |
| 3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |
| 7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. | NO <input checked="" type="checkbox"/> | YES <input type="checkbox"/> |

8. Site's potential for flooding or ponding: NONE ☐ SLIGHT ☒ MODERATE ☐ SEVERE ☐

9. Landscape position: Backslope

10. Vegetation: Specimen vegetation w/moderate understory

11. Indicate approximate location of property lines and roadways.

12. Additional comments, site constraints or additional information regarding site: For use with OWTS only.

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: <u>Alfred W. DiOrio</u>	<u>D4004</u>	Part B prepared by: <u>Alfred W. DiOrio</u>	<u>D4004</u>
Signature	License #	Signature	License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision:	Concur <input type="checkbox"/>	Inconclusive <input type="checkbox"/>	Disclaim <input type="checkbox"/>
Unwitnessed Soil Evaluations Decision:	Accept <input type="checkbox"/>	Inconclusive <input type="checkbox"/>	Disclaim <input type="checkbox"/>

Wet Season Determination required ☐ Additional Field Review Required ☐

Explanation: _____

Signature Authorized Agent _____ Date _____



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program



Site Evaluation Form

Part A - Soil Profile Description

Application Number 1703-0050

Property Owner: Invenergy Thermal Development, LLC

Property Location: Route 100, Wallum Lake Road, Burrillville, RI AP 137 Parcel 002

Date of Test Hole: 09-14-2017

Soil Evaluator: DiOrio, Alfred W.

License Number: D4004

Weather: Clr./Ptly. Cldy.

Shaded: Yes ☒ No ☐ Time: 11:00

TH 5-1 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-5"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw	5-44"	g	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	44-96"	-	-	10YR5/6	7.5YR5/8	C	2 P	g sl	0m	fi	8m
TH 5-2 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.				
Ap	0-4"	a	s	10YR3/4	None		None	sl	1 sbk	fr	3
Bw1	4-17"	g	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw2	17-26"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
Bw3	26-56"	a	s	10YR5/6	7.5YR5/8	C	2 P	f sl	1 sbk	fr	3
C	56-98"	-	-	10YR5/6	7.5YR5/8	C	2 P	g sl	0m	fi	8m

TH 5-1 Soil Class D/A Total Depth 96" Impervious/Limiting Layer Depth None (og) GW Seepage Depth None SHWT 22" (og)

TH 5-2 Soil Class D/A Total Depth 98" Impervious/Limiting Layer Depth None (og) GW Seepage Depth None SHWT 24" (og)

Comments:

Part B





Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

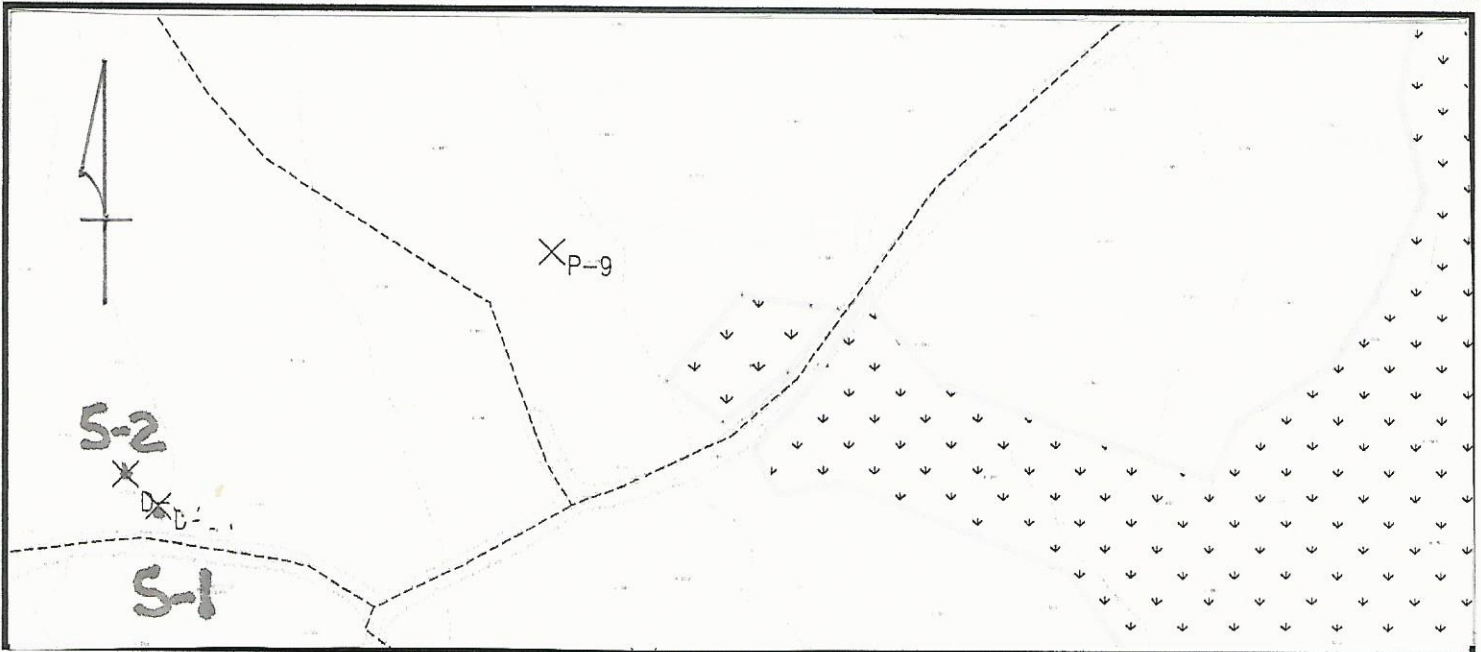
Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

***OFFSETS MUST BE SHOWN**

Key:

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



1. Relief and Slope: Elev=574+/- Slope=0-5%

2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO ☒ YES ☐
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO ☒ YES ☐
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 38? NO ☒ YES ☐
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO ☒ YES ☐

8. Site's potential for flooding or ponding: NONE ☐ SLIGHT ☒ MODERATE ☐ SEVERE ☐

9. Landscape position: Backslope

10. Vegetation: Specimen vegetation w/moderate understory

11. Indicate approximate location of property lines and roadways.

12. Additional comments, site constraints or additional information regarding site: For use with OWTS only.

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: Alfred W. DiOrio D4004
Signature License #

Part B prepared by: Alfred W. DiOrio D4004
Signature License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision: Concur ☐ Inconclusive ☐ Disclaim ☐

Unwitnessed Soil Evaluations Decision: Accept ☐ Inconclusive ☐ Disclaim ☐

Wet Season Determination required ☐ Additional Field Review Required ☐

Explanation: _____

Signature Authorized Agent

Date

15-2
15-1

88
8A

5-2
5-1



Xp-7

Xp-6

Xp-3

Xp-4

Xp-2

Xp-9

SCALE ADJUSTMENT GUIDE
0' 1"
BAR IS ONE INCH ON
ORIGINAL DRAWING

OWTS TEST PIT LOCATIONS
CLEAR RIVER ENERGY CENTER
BURRILLVILLE, RI
SCALE: 1"=100'





INSPECTION REPORT

APPLICATION NUMBER: 1703-0050		Pittman	
STREET: Burrillville		INSPECTOR: 09/14/2017	
CITY/TOWN: 137 002	95	INSPECTION DATE: /	
PLAT/LOT: No Installer XXXXX	POLE NO: Designer: D3101	ARRIVAL TIME: 1230	
OWTS INSTALLER: 0		WEATHER CONDITIONS: 2V	
PHONE NO:	INSPECTION NUMBER:		
TYPE OF INSPECTION: Inspection for Soil			
scheduled @ 12:00 PM			

FINDINGS/COMMENTS

- CONCUR TH P15-1 + P15-2 19" W.T. Basal till
- CONCUR TH P5-1 22" W.T. > Basal
- CONCUR TH P5-2 24" W.T. > Till
- CONCUR TH P8-A 22" W.T. > Basal
- CONCUR TH P8-B 19" W.T. > Till
- * Wetland

RESULTS OF INSPECTION/ACTION REQUIRED

☐ **CONSTRUCTION - DESIGNER MUST INSPECT/APPROVE PRIOR TO DEM INSPECTION**

- ☐ Bottom inspected
- ☐ Cover inspected
- ☐ Correct items listed
- ☐ (RFA) Address items listed and call for re-inspection.
- ☐ (ASB) Designer must submit As-Builts
- ☐ (RPREQ) Redesign required. Submit new application.
- ☐ (RFAD) Stop Construction. Contact OWTS office. DO NOT CONTINUE.
- ☐ (COC) Designer submit COC
- ☐ (O&M) O&M agreement and permit must be recorded in Land Evidence Records.
- ☐ (Fee) A \$100.00 fee is required before re-inspection.
- ☐ Inspection waived

☐ **SITE TESTING**

- ☐ Soil Evaluation - Concur
- ☐ Soil Evaluation - Do not concur
- ☐ Soil Evaluation - Inconclusive
- ☐ Alteration Test Hole - Verified
- ☐ Alteration Test Hole - Unacceptable
- ☐ Ledge Test
- ☐ Fill Tests
- ☐ Repair Test Hole

Signature of Inspector _____