STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Petitions of BNE Energy Inc. for a Declaratory Ruling for the Location, Construction and Operation of 4.8 MW Wind Renewable Generating Projects on Flagg Hill Road in Colebrook, Connecticut ("Wind Colebrook South") and Winsted-Norfolk Road in Colebrook, Connecticut ("Wind Colebrook North")	**Petition Nos. 983 and 984**
	March 15, 2011

PREFILED TESTIMONY OF CHARTER OAK ENVIRONMENTAL SERVICES, INC. BY MARK A. FRANSON, P.E.

Q1. Please state your name, position and business address.

A1. I am Mark A. Franson, P.E., President at Charter Oak Environmental Services, Inc (Charter Oak). My business address is 33 Ledgebrook Drive, Mansfield, Connecticut 06250.

Q2. Please state your educational background and work experience.

A2. As outlined in my professional resume attached as Charter Oak Exhibit 1, I have a Bachelors of Science Degree in Environmental Engineering from The Pennsylvania State University. My 27 years of professional work has been in the field of environmental engineering, science and regulatory compliance starting at the Connecticut Department of Environmental Protection and continuing as a consultant through the present. I am a principal owner of Charter Oak which business began in November of 1997. My professional work product routinely includes the use of graphics and tabular presentations of data.

Q3. Have you previously testified before the Connecticut Siting Council?

A3. No.

Q4. Have you offered other sworn testimony?

A4. Yes. I have been qualified as an expert and have testified cases in Connecticut Superior Court and in an American Arbitration Association case. These cases are listed in Charter Oak Exhibit 2.

Q5. Do you have any other qualifications or certifications that make you suited for testimony in this case?

A5. Yes. I am a Professional Engineer (P.E.) and a Licensed Environmental Professional (LEP) in Connecticut. My license numbers are presented in my resume attached as Charter Oak Exhibit 1.

Q6. What is the purpose of your testimony in this proceeding?

A6. The purpose of my testimony is to present a graphical display of building structures (primarily residential) within 1.25 miles of each of the six proposed wind turbines. Furthermore, the purpose of my testimony is to identify specific distances to the nearest wind turbine from each of the identified buildings. Additionally, the purpose of my testimony includes presenting the distances between the six proposed wind turbines.

Q7. Please summarize your testimony.

A7. My testimony consists of a map entitled: "Colebrook North and South Wind Turbines, Distance to Buildings and Beckley Bog" and a corresponding table that identifies the specific distances to the nearest wind turbine from the numbered buildings identified on the map. Both the map and the table are presented as Charter Oak Exhibit 3. The scaled map illustrates the locations of all six proposed wind turbines and displays a 1.25 mile radius circle around each of them. Buildings located within the 1.25 radius circles are identified with a symbol and are numbered on the map. The corresponding table lists each of the numbered buildings, identifies the street address of the building (when available) and presents the distance from each building to the nearest proposed wind turbine in feet.

My testimony also includes a table of distances in feet between the six proposed wind turbines as presented in Charter Oak Exhibit 4.

Q8. Please summarize your methods in developing the map and table that comprise your testimony.

A8. Charter Oak staff under my direct supervision developed the map and table using the methods summarized as follows:

A base map was projected onto an ArcMap (version 10) map consisting of the following source:

Layer	Source
Transportation • Road and Street Names CT Administrative Boundary • Town and State Lines Water body	ArcGIS Map Service Connection: Internet Server: http://ctecoapp2.uconn.edu/arcgis/services Name: maps/Base_Map Operations Allowed: Map (Display), Query (Identify), Data (Find) Map Service Type: Not Cached
Aerial Photo	Data Type: WMS Service WMS Server: http://www.ctecoapp2.uconn.edu/arcgis/services/images/ortho_2006_Color_NAIP/ImageServer/WMSServer? Service Name: Ortho_2006_Color_NAIP

The following coordinate system was used for the base map and additional layers were also projected on this coordinate system:

Geographic Coord Sys: GCS North American 1983

Datum: D North American 1983

Wind Turbine Layer

Northing/Eastings were obtained from BNE Petition Nos. 983 and 984 (Charter Oak Exhibit 5). The UTM coordinates were converted using ArcGIS Explorer. An X/Y table was created using the coordinates which was converted to a feature shape file in ArcGIS.

A 1.25 mile radius was created for each wind turbine utilizing the geoprocessing tool in ArcMap.

Building Layer

The building point shapefile was created in ArcGIS using Editor toolbox. The Ortho image was viewed at a scale of approximately 1:3,000 (1 inch = 250 feet) in ArcMap. Building roofs were observed, selected and added as point features to the shapefile. A total of 160 points were created within the 1.25 mile boundaries, based on the 2006 aerial photograph. Identified buildings were numbered on the map (1 – 160).

Distance to and Between Wind Turbines

The distance of buildings to the nearest wind turbine and between wind turbines was measured utilizing the Measure tool in ArcMap. The cursor snapped on each point allowing consistent measurements. These distance measurements were recorded in the applicable table. Building numbers on the map correspond to the same numbers in the table (Charter Oak Exhibit 3). Wind turbine labels on the map (Charter Oak Exhibit 3) match the wind turbine labels in the table summarizing distances between wind turbines (Charter Oak Exhibit 4).

Beckley Bog Layer

The approximate centroid of Beckley Bog was identified (as roughly the mid-point both north to south and east to west) and created as a point feature on the map. The distance from this approximate Beckley Bog centroid to the nearest wind turbine was also measured and recorded in the table (location number 161).

Street Addresses

Street addresses were identified for buildings where the information was available using a variety of means and sources. For Rock Hall Road, Flagg Hill Road, Greenwoods Turnpike, and portions of Route 44 and Stillman Hill Road, property boundaries were initially identified using

a tax map of the Town of Colebrook. Street addresses were identified in the field for these locations by Charter Oak personnel who observed building addresses from the roadway.

Certain other street addresses were obtained from GoogleMaps, Google Earth, and Online assessment database (http://data.visionappraisal.com/ColebrookCT/), but further confirmation of these addresses has not been made.

Where available, addresses were added to the GIS mapping files and recorded in the table.

In any event, the addresses are presented for additional identifying information only and these have no affect on the measured distances from any numbered building to the nearest wind turbine.

Q9. How many structures did you identify that are located within 1.25 miles of any of the six proposed wind turbines?

A9. A total of 160 structures were identified within 1.25 miles of any of the six proposed wind turbines.

Q10. Do you know what types of structures these are?

A10. Yes. The vast majority of these structures are residential.

Q11. Is Beckley Bog within 1.25 miles of any wind turbines?

A11. Yes. Beckley Bog is a geographic feature that is oriented north to south and is about 7,000 feet long in the north to south direction. The width of Beckley Bog varies from about 200 feet to about 1,250 feet. The approximate centroid of this feature was identified as the approximate mid-point north to south and then east to west. All of Beckley Bog is within 1.25 miles of at least one wind turbine. The approximate centroid is within 1.25 miles of four of the proposed wind turbines. This observation is illustrated on the map presented as Charter Oak Exhibit 3.

Q12. Does that conclude your testimony?

A12. Yes, it does.

The statements above are true and accurate to the best of my knowledge.

3/15/2011
Date

Mark A. Franson, P.E.

ATTACHMENTS

Charter Oak Exhibit 1:	Professional Resume of Mark A. Franson, P.E.
Charter Oak Exhibit 2:	List of Connecticut Superior Court and American Arbitration Association Cases
Charter Oak Exhibit 3:	Map: Colebrook North and South Wind Turbines, Distances to Buildings and Beckley Bog Table: Colebrook North and South Wind Turbine, Distances to Buildings and Beckley Bog
Charter Oak Exhibit 4:	Distances Between Wind Turbines
Charter Oak Exhibit 5:	BNE Petition Nos. 983 & 984 Wetlands Resources Maps Showing Wind Turbine Locations (coordinates)

Charter Oak Exhibit 1

Professional Resume of Mark A. Franson, P.E.

MARK A. FRANSON, P.E., LEP

PROFESSIONAL EXPERIENCE

CHARTER OAK ENVIRONMENTAL SERVICES, INC. — **Mansfield, CT**
President — **November 1997 to Present**

Principal of the firm; responsible for operations, technical services and business development for engineering, regulatory compliance, geologic, hydrogeologic and other environmental services performed by the company. Provide expert witness services for environmental compliance and site investigation and remediation projects. Manage multi-million dollar environmental remediation project in Utah as agent for a PRP Group. Provided senior review for RCRA Voluntary Corrective Action of a former explosives manufacturing facility in Colorado.

CONSULTING ENVIRONMENTAL ENGINEERS, INC. — **West Hartford, CT**
Vice President of Environmental Services — **July 1994 to October 1997**

Responsible for operations and business development for both engineering and geologic services groups. Manage multi-million dollar environmental project in Utah as agent for PRP Group.

DAMES & MOORE (by acquisition of Balsam) — **Colchester, CT**
Senior Engineer — **March 1994 to July 1994**

BALSAM ENVIRONMENTAL CONSULTANTS, INC. — **Wethersfield, CT**
Regional Manager, Environmental Engineering Services — **August 1993 to March 1994**

Responsible for environmental engineering and hydrogeologic services performed in Connecticut and eastern New York. Conduct marketing and business development efforts to expand the volume of business in Connecticut. Manage and/or perform engineering and hydrogeologic services provided from the Wethersfield Office. Report to the Vice President of Engineering at the company headquarters in Salem, New Hampshire.

CONSULTING ENVIRONMENTAL ENGINEERS, INC. — **West Hartford, CT**

Provided a diversity of environmental consulting services to industrial facilities, municipalities, developers and entrepreneurs.

Manager of Geologic Services — **June 1992 to August 1993**

Managed a staff of geologists, scientists and a geophysicist in all project and market development functions. Primary responsibilities included:

- Subsurface soil and groundwater investigations
- Groundwater monitor well network design and installation
- Groundwater flow and contaminant transport modeling
- Groundwater recovery system design and construction inspection
- Soil and groundwater sampling and analysis
- Phase I, II and III property site assessments
- Asbestos surveys
- Aquifer mapping
- Pump and slug testing

Senior Project Engineer/Project Engineer **February 1986 to June 1992**

Project management responsibilities included personally providing a critical link between engineering and hydrogeologic services within the firm. Accomplishments included:

- Development and implementation of waste, soil, water and groundwater sampling and analysis programs to determine appropriate management or remediation strategies
- Preparation of RCRA closure plans and cost estimates, groundwater monitoring reports, and compliance documents (contingency plans, personnel training programs and inspection logs)
- Preparation of a hazardous waste delisting petition
- Coordination of a response to an EPA Corrective Action Order
- Evaluation, recommendation, and implementation of remedial actions for site remediation involving the following technologies:

    - In-situ and above-ground biological remediations of soils and groundwater
    - Biological treatment of organics in air streams
    - Air stripping of volatile organics
    - Oil/Water separation
    - Carbon absorption
    - Solids filtration
    - Ultra violet light/oxidation of organics in groundwater
    - Iron removal from groundwater
    - Phosphorus removal from sanitary wastewater
    - Ion exchange metals removal from groundwater
    - Soil Venting

- Conducted industrial audits to determine compliance with state and federal regulations
- Prepared wastewater discharge permit applications and treatment plant plans and specifications
- Conducted and managed environmental site assessments to satisfy Connecticut's "Negative Declaration" and "Superlien" requirements

DEPARTMENT of ENVIRONMENTAL PROTECTION **Hartford, Connecticut**
Hazardous Waste Management Unit **January 1984 to February 1986**

Employed as a district lead enforcement engineer for Connecticut's hazardous waste management regulations. Supervised a field inspection staff, instituted enforcement actions, reviewed engineering plans and hazardous waste management programs. Approved plans for contaminated site remediation.

EDUCATION AND REGISTRATION

The Pennsylvania State University University Park, PA
B.S. Degree in Environmental Engineering May 1983
Emphasis: Water and Solid Waste

Professional Engineer: Connecticut License # 17640 August, 1992
Utah License # 96-321750-2202 June, 1996
Colorado License #32488 January, 1998

Connecticut Licensed Environmental Professional: LEP License # 138 August, 1997

PUBLICATIONS

"In Situ Bioremediation of Unleaded Gasoline Contaminated Groundwater, Plainfield, Connecticut, A Case Study." *Proceedings of the 1992 U.S. EPA/Air and Waste Management International Symposium.*

"Low Temperature Thermal Deactivation for Remediation of Energetic Materials in Soil." Franson, Mark; McGowan, Tom and Theriault, Philip. *Proceedings of the 2007 IT3 Conference, Phoenix, Arizona.*

PRESENTATIONS

"Investigating Explosive Compounds and their Degradation Products in the Subsurface: A Developing Practice." International Society of Environmental Forensics, Environmental Forensics: Advanced Techniques Workshop, September 23-24, 2002, Santa Fe, New Mexico.

"Low Temperature Thermal Deactivation for Remediation of Energetic Materials in Soil." IT3 Conference, May 14 – 17, Phoenix, Arizona.

Charter Oak Exhibit 2

List of Connecticut Superior Court and American Arbitration Association Cases

1. Sidney J. Holbrook, Commissioner of Environmental Protection v. The Birken Manufacturing Company et al.
   Docket No. CV 960566306S, 2000

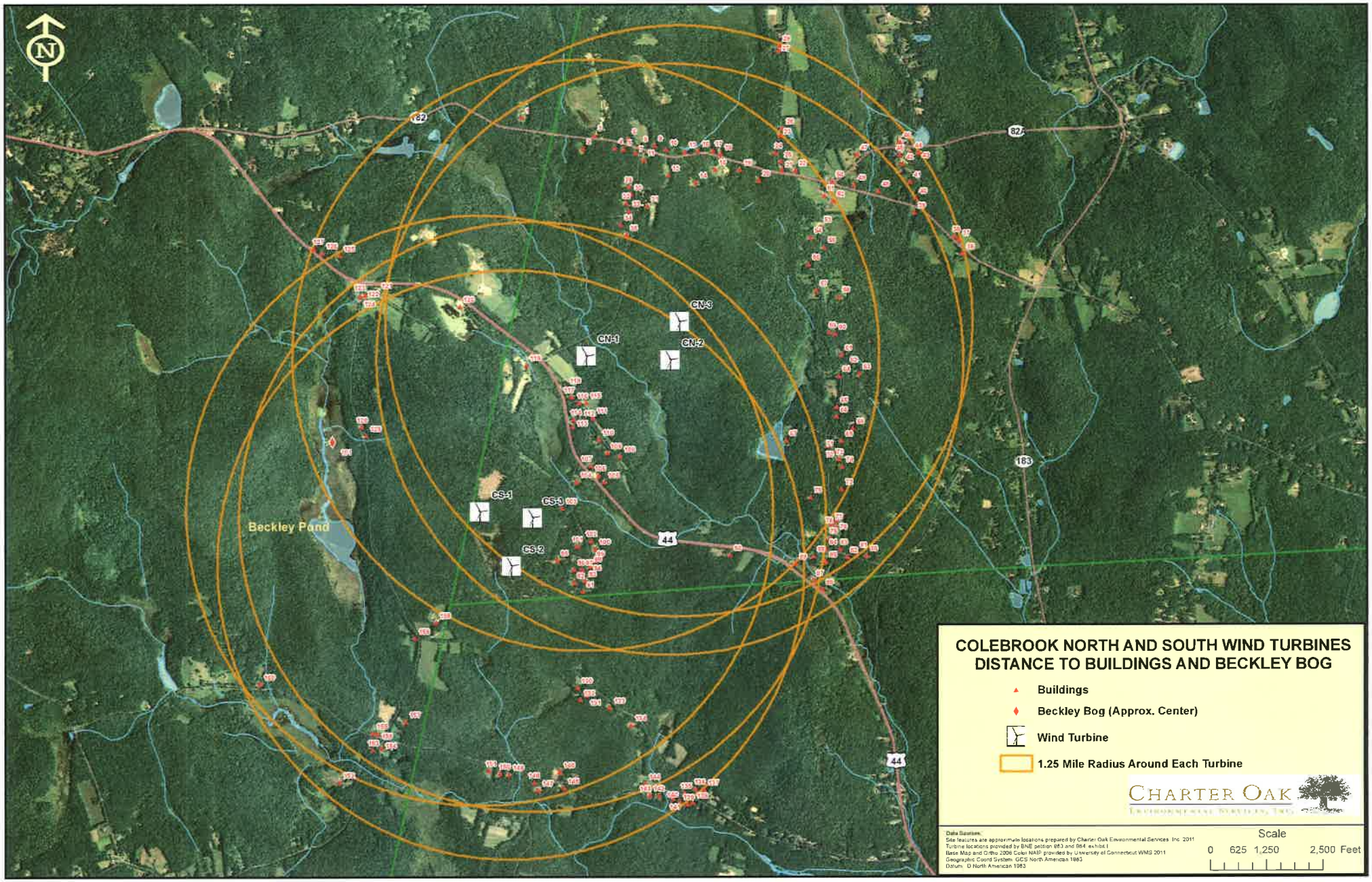
2. Arthur J. Rocque, Jr., Commissioner of Environmental Protection v. Michael Schiavone and Joseph A. Schiavone Corp.
   Docket No. CV 03-0825384-s, 2010

3. Metal Management Inc. and Metal Management Connecticut, Inc. And Michael Schiavone and Joseph A. Schiavone Corp., Inc.
   Re: 12 489 Y 00733 06, 2008

Charter Oak Exhibit 3

Map: Colebrook North and South Wind Turbines, Distances to Buildings and Beckley Bog

Table: Colebrook North and South Wind Turbines, Distances to Buildings and Beckley Bog


N
182
82
CN-3
CN-1
CN-2
183
CS-1
CS-3
CS-2
Beckley Pond
44
44
COLEBROOK NORTH AND SOUTH WIND TURBINES
DISTANCE TO BUILDINGS AND BECKLEY BOG
Buildings
Beckley Bog (Approx. Center)
Wind Turbine
1.25 Mile Radius Around Each Turbine
CHARTER OAK
Data Sources:
Site features are approximate locations prepared by Charter Oak Environmental Services Inc 2011
Turbine locations provided by BNE petition 863 and 864 exhibit I
Base Map and Ortho 2006 Color NAIP provided by University of Connecticut WMS 2011
Geographic Coord System: GCS North American 1983
Datum: D North American 1983
Scale
0 625 1,250 2,500 Feet

COLEBROOK NORTH AND SOUTH WIND TURBINES DISTANCE TO BUILDINGS AND BECKLEY BOG

MAP ID	Street Address	Nearest Turbine	Direction to Turbine	Distance to Turbine (ft)
	94 to 215 Stillman Hill Road			
1	Stillman Hill Road	CN-3	SE	4405
2	Stillman Hill Road	CN-3	SE	4405
3	Stillman Hill Road	CN-3	SE	4557
4	Stillman Hill Road	CN-3	SE	4108
5	Stillman Hill Road	CN-3	SE	4015
6	Stillman Hill Road	CN-3	SE	4221
7	Stillman Hill Road	CN-3	SE	3870
8	Stillman Hill Road	CN-3	SSE	3998
9	Stillman Hill Road	CN-3	SSE	3946
10	Stillman Hill Road	CN-3	S	3831
12	Stillman Hill Road	CN-3	S	3253
13	Stillman Hill Road	CN-3	S	3773
14	Stillman Hill Road	CN-3	S	3110
15	Stillman Hill Road	CN-3	S	3812
16	Stillman Hill Road	CN-3	S	3472
17	Stillman Hill Road	CN-3	S	3872
18	Stillman Hill Road	CN-3	S	3833
19	Stillman Hill Road	CN-3	SW	3638
20	Stillman Hill Road	CN-3	SW	3607
22	Stillman Hill Road	CN-3	SW	4257
36	Stillman Hill Road	CN-3	SW	6559
37	Stillman Hill Road	CN-3	W	6546
38	Stillman Hill Road	CN-3	W	6490
39	Stillman Hill Road	CN-3	SW	5824
48	Stillman Hill Road	CN-3	SW	5340
49	Stillman Hill Road	CN-3	SW	4985
50	Stillman Hill Road	CN-3	SW	4644
	Phelps Road (no specific addresses)			
21	Phelps Road	CN-3	SSW	4077
23	Phelps Road	CN-3	SSW	4727
24	Phelps Road	CN-3	SSW	4335
25	Phelps Road	CN-3	SSW	4226
26	Phelps Road	CN-3	SSW	4886
27	Phelps Road	CN-3	SSW	6438
28	Phelps Road	CN-3	SSW	6548

	Rock Hall Road			
11	3 Rock Hall Road	CN-3	SSE	3678
29	16 Rock Hall Road	CN-3	SE	3199
30	20 Rock Hall Road	CN-3	SE	3024
31	19 Rock Hall Road	CN-3	SE	2661
32	28 Rock Hall Road	CN-3	SE	2890
33	32 Rock Hall Road	CN-3	SE	2701
34	40 Rock Hall Road	CN-3	SE	2525
35	44 Rock Hall Road	CN-3	SE	2261
	Bunnel Street Ext (no specific addresses)			
40	Bunnel Street	CN-3	SW	5992
41	Bunnel Street	CN-3	SW	6058
42	Bunnel Street	CN-3	SW	6129
45	Bunnel Street	CN-3	SW	6196
	Rockwell Road-182A (no specific addresses)			
43	Rockwell Road	CN-3	SW	6563
44	Rockwell Road	CN-3	SW	6430
46	Rockwell Road	CN-3	SW	6369
47	Rockwell Road	CN-3	SW	5455

	3 to 169 Pinney Street			
51	Pinney Street	CN-3	W	4305
52	Pinney Street	CN-3	W	4380
53	Pinney Street	CN-3	W	3815
54	Pinney Street	CN-3	W	3497
55	Pinney Street	CN-3	W	3661
56	Pinney Street	CN-3	W	3181
57	Pinney Street	CN-3	W	3167
58	Pinney Street	CN-3	W	3640
59	Pinney Street	CN-3	W	3405
60	Pinney Street	CN-3	W	3527
61	Pinney Street	CN-3	W	3728
62	Pinney Street	CN-3	W	3907
63	Pinney Street	CN-3	W	4224
64	Pinney Street	CN-2	W	3820
65	Pinney Street	CN-2	W	3903
66	Pinney Street	CN-2	W	3959
67	Pinney Street	CN-2	WNW	3467
68	Pinney Street	CN-2	W	4401
69	Pinney Street	CN-2	W	4270
70	Pinney Street	CN-2	NW	4259
71	Pinney Street	CN-2	WNW	4047
72	Pinney Street	CN-2	NW	4830
73	Pinney Street	CN-2	NW	4404
74	Pinney Street	CN-2	NW	4556
75	Pinney Street	CN-2	NW	4416
76	Pinney Street	CN-2	NW	5305
77	Pinney Street	CN-2	NW	5169
78	Pinney Street	CN-2	NW	6842
79	Pinney Street	CN-2	NW	5376
85	Pinney Street	CN-2	NW	5715

	Millbrook Road (no specific addresses)			
80	Millbrook Road	CN-2	NW	6222
81	Millbrook Road	CN-2	NW	6005
82	Millbrook Road	CN-2	NW	5959
83	Millbrook Road	CN-2	NW	5708
84	Millbrook Road	CN-2	NW	5500
88	Millbrook Road	CN-2	NW	5458
89	Millbrook Road	CN-2	NW	5368
	Norfolk Road			
86	63 Norfolk Road	CN-2	NNW	6168
87	53 Norfolk Road	CN-2	NNW	5908
91	48 Flagg Hill Road	CS-2	W	1703
92	47 Flagg Hill Road	CS-2	W	1457
93	44 Flagg Hill Road	CS-2	W	1678
94	42 Flagg Hill Road	CS-2	W	1770
95	29A Flagg Hill Road	CS-2	W	1013
96	43 Flagg Hill Road	CS-2	W	1569
97	45 Flagg Hill Road	CS-2	W	1393
98	40 Flagg Hill Road	CS-3	NW	1683
99	36 Flagg Hill Road	CS-3	NW	1655
100	30 Flagg Hill Road	CS-3	NW	1562
101	33 Flagg Hill Road	CS-2	NW	1520
102	28 Flagg Hill Road	CS-3	WN	1404
103	17 Flagg Hill Road	CS-3	WSW	686
104	8 Flagg Hill Road	CS-3	SW	1267
	Winsted Norfolk Road - Route 44			
90	Winsted Norfolk Road - Route 44	CS-3	W	4521
105	110 Winsted Norfolk Road - Route 44	CS-3	SW	1790
106	114 Winsted Norfolk Road - Route 44	CS-3	SW	1748
107	120 Winsted Norfolk Road - Route 44	CS-3	SW	1734
116	150 Winsted Norfolk Road - Route 44	CN-1	N	1082
117	154 Winsted Norfolk Road - Route 44	CN-1	NNE	992
118	160 Winsted Norfolk Road - Route 44	CN-1	NE	851
119	177 Winsted Norfolk Road - Route 44	CN-1	E	1348
120	Winsted Norfolk Road - Route 44	CN-1	SE	3039
125	Winsted Norfolk Road - Route 44	CN-1	SE	5963
126	Winsted Norfolk Road - Route 44	CN-1	SE	6347
127	Winsted Norfolk Road - Route 44	CN01	SE	6561

	Greenwood Tpke			
108	32 Greenwood Tpke	CN-1	NW	2386
109	25 Greenwood Tpke	CS-3	SW	2213
110	17 Greenwood Tpke	CS-3	SW	2304
111	12B Greenwood Tpke	CN-1	N	1419
112	10 Greenwood Tpke	CN-1	N	1461
113	1 Greenwood Tpke	CN-1	N	1627
114	4 Greenwood Tpke	CN-1	N	1461
115	12A Greenwood Tpke	CN-1	N	1064
	Grantville Road			
155	129 Grantville Road	CS-2	NE	4814
156	133 Grantville Road	CS-2	NE	4867
160	171 Grantville Road	CS-2	NE	6231
	Tim Oconnor Road (no specific addresses)			
121	Tim Oconnor Road	CN-1	E	4894
	Beckley Road			
122	111 Beckley Road	CN-1	E	5102
123	5 Beckley Road	CN-1	E	5147
124	12 Beckley Road	CN-1	E	5245
128	123 Beckley Road	CN-1	NE	5301
129	131 Beckley Road	CN-1	NE	5260
157	393 Beckley Road	CS-2	SW	4226
158	324 Beckley Road	CS-2	SW	2704
159	319 Beckley Road	CS-2	SW	2111

	Skinner Road			
130	135 Skinner Road	CS-2	NW	3115
131	129 Skinner Road	CS-2	NW	3363
132	133 Skinner Road	CS-2	NW	3382
133	123 Skinner Road	CS-2	NW	3884
134	121 Skinner Road	CS-2	NW	4482
	100 to 206 Danbury Quarter Road			
135	Danbury Quarter Road	CS-2	NW	5746
136	Danbury Quarter Road	CS-2	NW	6021
137	Danbury Quarter Road	CS-2	NW	6134
138	Danbury Quarter Road	CS-2	NW	6368
139	Danbury Quarter Road	CS-2	NW	6513
140	Danbury Quarter Road	CS-2	NW	6420
141	Danbury Quarter Road	CS-2	NW	6501
142	Danbury Quarter Road	CS-2	NW	6637
143	Danbury Quarter Road	CS-2	NW	6667
144	Danbury Quarter Road	CS-2	NW	6711
145	Danbury Quarter Road	CS-2	N	5131
146	Danbury Quarter Road	CS-2	N	4756
148	Danbury Quarter Road	CS-2	N	4892
149	Danbury Quarter Road	CS-2	N	4687
150	Danbury Quarter Road	CS-2	N	4667
151	Danbury Quarter Road	CS-2	N	4627
	School House Road (no specific addresses)			
152	School House Road	CS-2	NE	6206
153	School House Road	CS-2	NE	5173
154	School House Road	CS-2	NE	5025
	Yates Road -Grantville (no specific addresses)			
147	Yates Road	CS-2	N	5081
161	Beckley Bog (Approximate Center)	CS-1	SE	3657

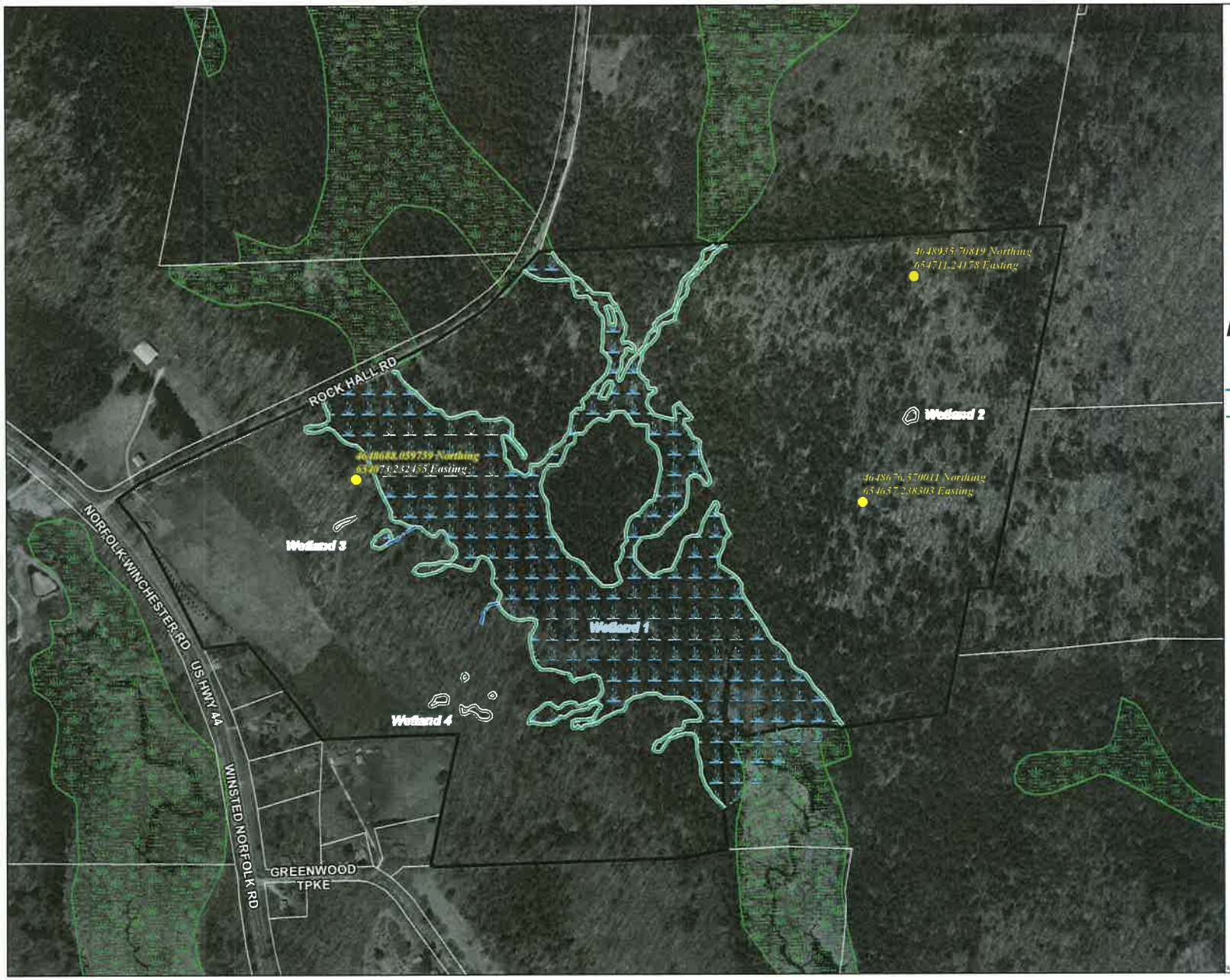
Charter Oak Exhibit 4

Distances Between Wind Turbines

COLEBROOK NORTH AND SOUTH WIND TURBINES DISTANCE BETWEEN CENTER POSTS OF WIND TURBINES (FT)						
	CN-1	CN-2	CN-3	CS-1	CS-2	CS-3
CN-1	---	1893	2229	4226	4997	3819
CN-2	1893	---	883	5461	5835	4695
CN-3	2229	883	---	6178	6649	5491
CS-1	4226	5461	6178	---	1407	1196
CS-2	4997	5835	6649	1407	---	1182
CS-3	3819	4695	5491	1196	1182	---

Charter Oak Exhibit 5

BNE Petition Nos. 983 and 984 Wetlands Resources Maps Showing Wind Turbine Locations (coordinates)



Wetland Resources Map

Wind Colebrook North
Route 44 & Rock Hall Road
Colebrook, Connecticut

Legend

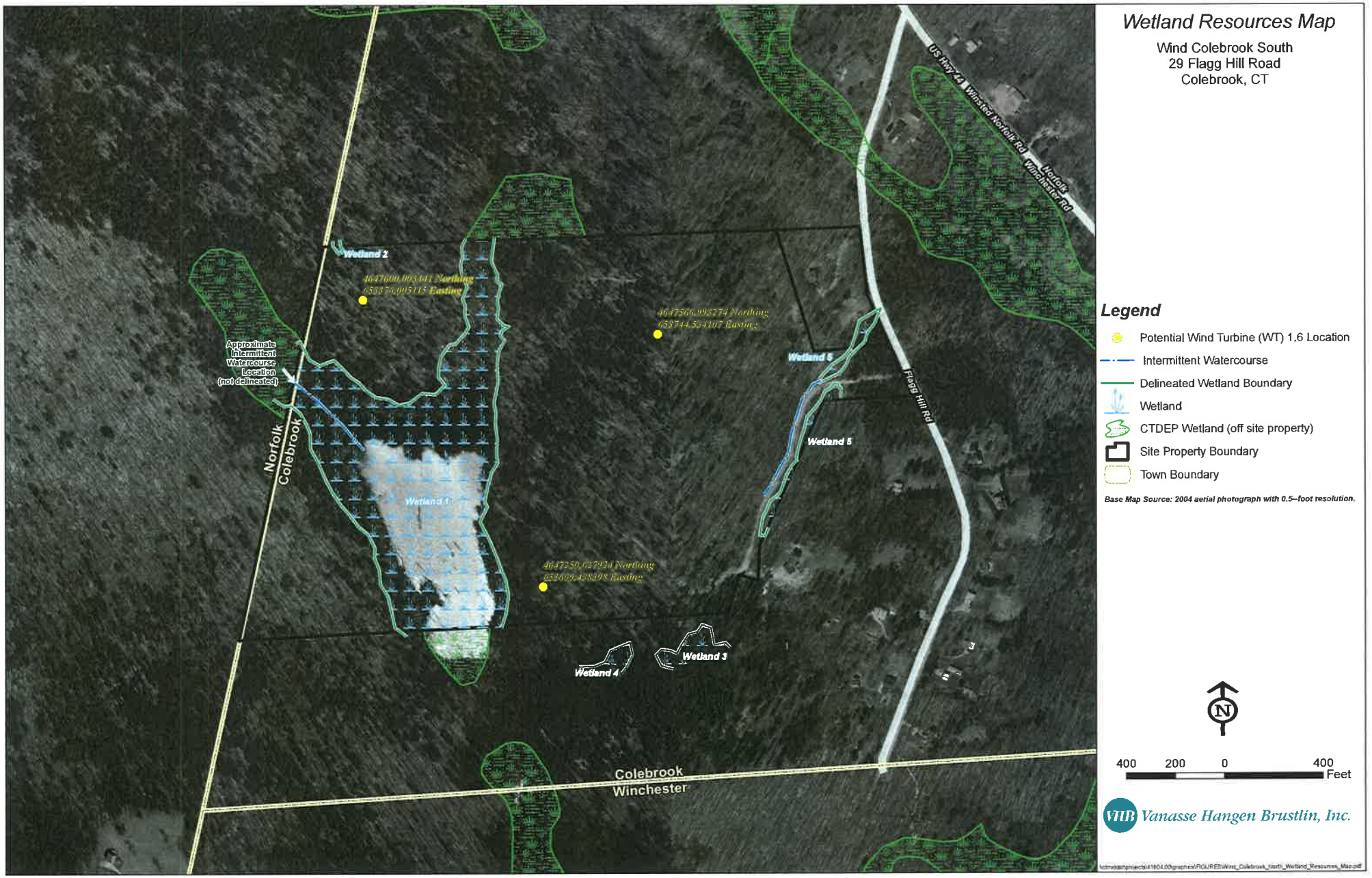
- WC North WT 1.6 Turbine Locations
- Delineated Intermittent Watercourse
- Delineated Wetland Boundary
- Wetland
- CTDEP Wetland (off site property)
- Approximate Site Parcel Boundary
- Assessor Parcel Boundary

Base Map Source: 2004 aerial photograph with 0.5–foot resolution.

N

400 200 0 400 Feet

VHB Vanasse Hangen Brustlin, Inc.



Wetland Resources Map

Wind Colebrook South
29 Flagg Hill Road
Colebrook, CT

Legend

- Potential Wind Turbine (WT) 1.6 Location
- Intermittent Watercourse
- Delineated Wetland Boundary
- Wetland
- CTDEP Wetland (off site property)
- Site Property Boundary
- Town Boundary

Base Map Source: 2004 aerial photograph with 0.5--foot resolution.

400 200 0 400 Feet

VHB Vanasse Hangen Brustlin, Inc.

CERTIFICATION

I hereby certify that a copy of the foregoing document was delivered by first-class mail and e-mail to the following service list on the 15th day of March, 2011:

Carrie L. Larson
Paul Corey
Jeffery and Mary Stauffer
Thomas D. McKeon
David M. Cusick
Richard T. Roznoy
David R. Lawrence and Jeannie Lemelin
Walter Zima and Brandy L. Grant
Eva Villanova

and sent via e-mail only to:

John R. Morissette
Christopher R. Bernard
Joaquina Borges King

Emily Gianquinto