

Department of Transportation  
Division of Finance & Management  
Office of Air, Rail & Transit  
700 East Broadway Avenue  
Pierre, South Dakota 57501-2586  
OFFICE: 605/773-3574  
FAX: 605/773-2804

TO: South Dakota Aeronautics Commission  
FROM: Jason Engbrecht, Office of Aeronautics  
DATE: December 9, 2015  
SUBJECT: Aeronautical Hazard Application

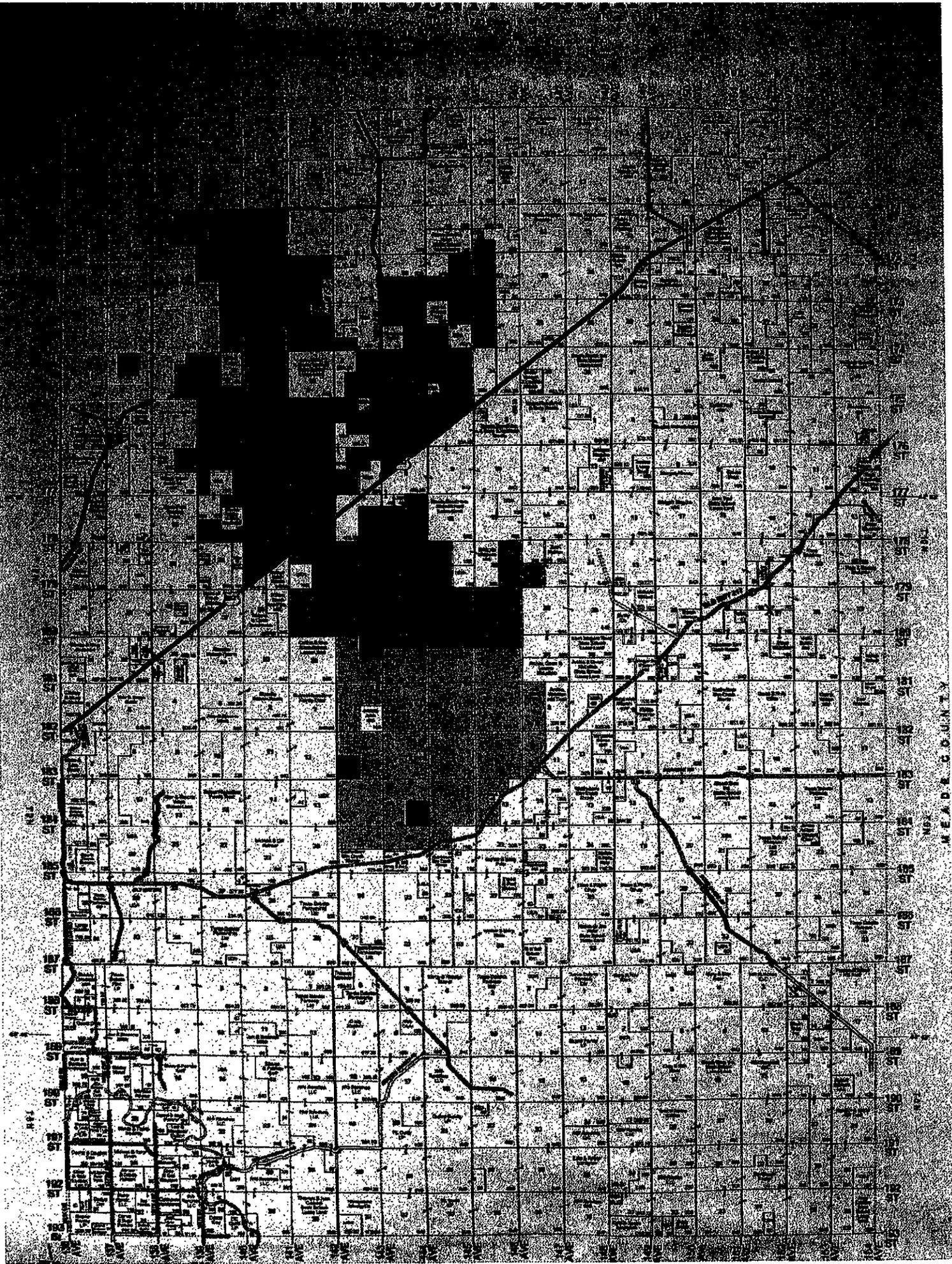
**Permit #2015-3920-3964 Newell, SD**  
FAA Aeronautical Study 2015-WTE-3920 to 3964 OE

Wind Quarry, LLC out of Montrose, Colorado is proposing 45 wind turbines (440') tall in SE Butte County, South Dakota approximately 10 miles NE of Newell, SD. All turbines are located on private ranch land. The nearest airport is Sturgis Municipal Airport which is approximately 20 miles away.

The FAA has determined:

- ◆ This proposal does not exceed FAA obstruction standards and would not be a hazard to air navigation.
- ◆ All turbines to be marked with white paint/synchronized red lights

The department is recommending Commission approval for all 45 turbines.



## WIND -000331644-15

ID	Latitude			Longitude			Ground elevation	
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Meters	Feet
1	44	52	36.58631	-103	17	54.75264	943	3094
2	44	55	15.72503	-103	15	0.14508	920	3018
3	44	54	48.08045	-103	15	10.65312	910	2986
4	44	53	28.14533	-103	14	41.982	920	3018
5	44	54	6.392772	-103	15	28.96992	910	2986
6	44	53	33.82022	-103	16	37.10964	930	3051
7	44	53	17.21076	-103	16	42.438	930	3051
8	44	52	59.66558	-103	18	29.99232	950	3117
9	44	53	44.3341	-103	18	30.73428	950	3117
10	44	53	23.08398	-103	13	30.33336	910	2986
11	44	53	11.94544	-103	13	53.92524	910	2986
12	44	53	47.48676	-103	16	23.61612	926	3038
13	44	53	0.423384	-103	15	0.10152	921	3022
14	44	52	13.0274	-103	17	22.3152	950	3117
15	44	51	46.24466	-103	10	35.18652	910	2986
16	44	51	29.3881	-103	10	34.89852	920	3018
17	44	50	48.96258	-103	10	21.91584	920	3018
18	44	51	7.41078	-103	10	34.59	920	3018
19	44	50	25.63836	-103	11	37.8564	940	3084
20	44	51	11.46614	-103	13	10.91532	940	3084
21	44	50	15.7533	-103	14	36.43944	940	3084
22	44	50	26.07652	-103	14	12.3486	950	3117
23	44	51	23.18558	-103	12	59.75568	944	3097
24	44	50	32.91187	-103	13	49.13652	947	3107
25	44	49	38.70048	-103	13	55.85088	950	3117
26	44	49	52.06058	-103	13	31.30464	950	3117
27	44	49	57.40122	-103	13	5.90952	950	3117
28	44	50	46.07138	-103	13	1.35696	950	3117
29	44	50	37.58554	-103	15	24.38064	940	3084
30	44	50	52.43582	-103	15	5.8014	946	3104
31	44	51	16.6478	-103	15	6.02532	940	3084
32	44	51	24.63332	-103	14	33.1152	940	3084
33	44	51	53.57657	-103	14	20.70528	920	3018
34	44	50	41.91425	-103	12	15.29388	950	3117
35	44	51	38.67113	-103	12	55.26756	914	2999
36	44	51	38.58584	-103	16	44.01156	940	3084
37	44	49	24.16537	-103	14	7.3608	923	3028
38	44	54	28.97842	-103	15	13.96836	902	2959
39	44	52	29.81388	-103	14	14.76852	920	3018
40	44	52	59.55658	-103	16	42.96468	930	3051
41	44	53	18.61544	-103	18	16.30728	950	3117
42	44	51	11.79475	-103	16	16.79052	940	3084
43	44	51	37.84518	-103	14	19.81788	927	3041
44	44	53	54.20335	-103	15	54.23364	915	3002
45	44	53	43.27386	-103	17	52.10196	947	3107

**Legend**

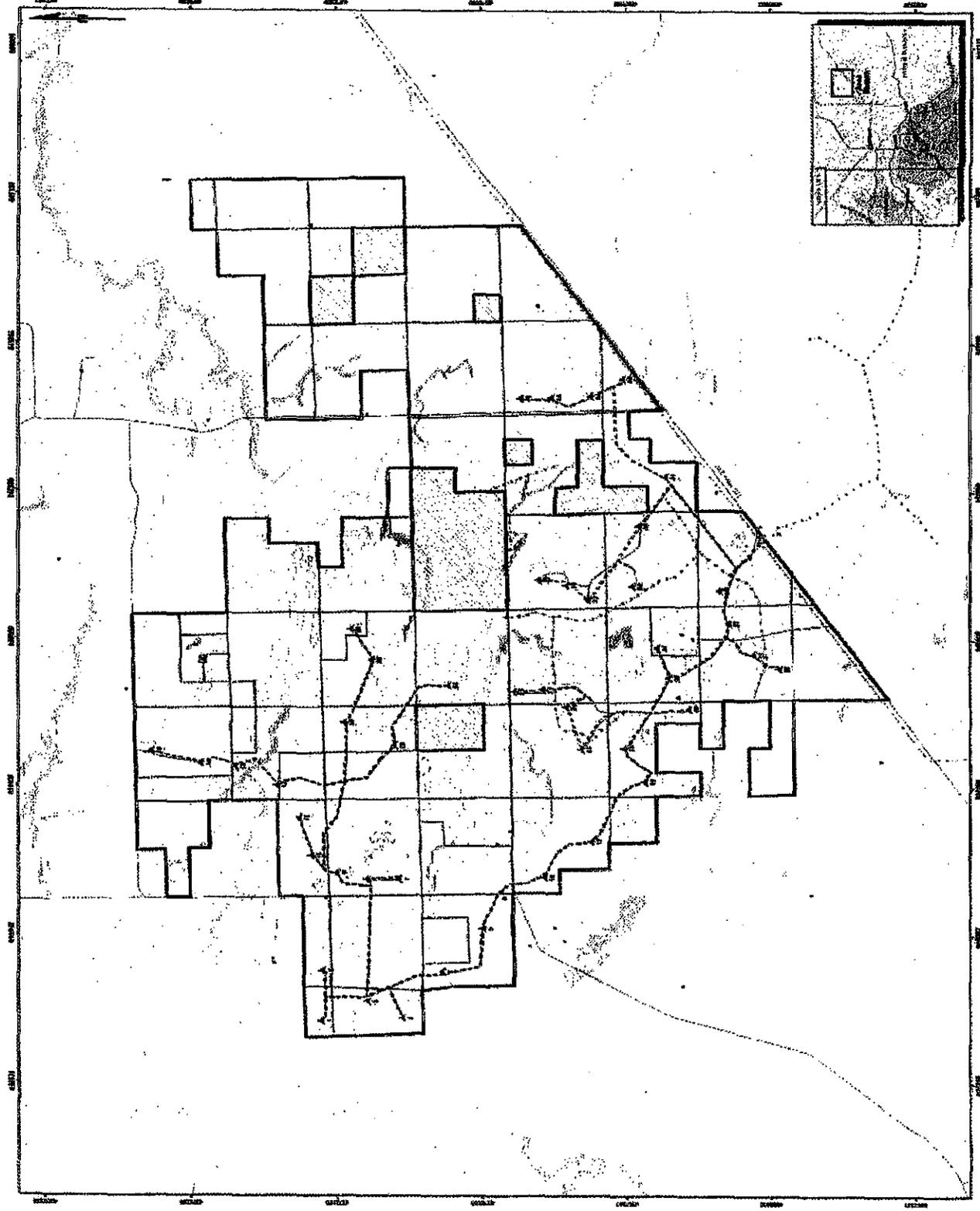
- Project Components
  - Wind Turbine (48 x 2.3 MW = 109.8 MW)
  - Project Area
  - Metereological Mast
  - Substation
  - OM Building
  - Access Road
  - Collector System
- Other Components
  - Dwelling
  - Fenced Area, Other Building & Ranch
  - Water Well
  - Dry Hole
  - Secondary Road
  - Local Road
  - Transmission Line
  - Water Pipeline
  - Intermittent Watercourse
  - Contour Interval: 10 m
  - Lake/Pond
  - Wetland
  - Flood Hazard Zone
  - Occasionally Flooded Zone
  - Prime Farm Land
  - Lot Line
  - Non-Leased Parcel



Wind Quarry LLC

PRELIMINARY LAYOUT  
44723 MW = 109.8 MW

DNV-GL  
July 1, 2013





Mail Processing Center  
 Federal Aviation Administration  
 Southwest Regional Office  
 Obstruction Evaluation Group  
 2601 Meacham Boulevard  
 Fort Worth, TX 76193

Aeronautical Study No.  
 2015-WTE-3920-OE

Issued Date: 07/31/2015

John OMeara  
 Wind Quarry, LLC  
 330 S 9th Street  
 Montrose, CO 81401

**\*\* 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: Wind Turbine WT1  
 Location: Newell, SD  
 Latitude: 44-52-36.58N NAD 83  
 Longitude: 103-17-54.75W  
 Heights: 3094 feet site elevation (SE)  
 440 feet above ground level (AGL)  
 3534 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:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

**See attachment for additional condition(s) or information.**

This determination expires on 01/31/2017 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.

**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.**

Additional wind turbines or met towers proposed in the future may cause a cumulative effect on the national airspace system. This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes in coordinates will void this determination. Any future construction or alteration requires separate notice to the FAA.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

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.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

If we can be of further assistance, please contact our office at (816) 329-2525. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2015-WTE-3920-OE.

**Signature Control No: 257746887-259341667**  
Donna O'Neill  
Specialist

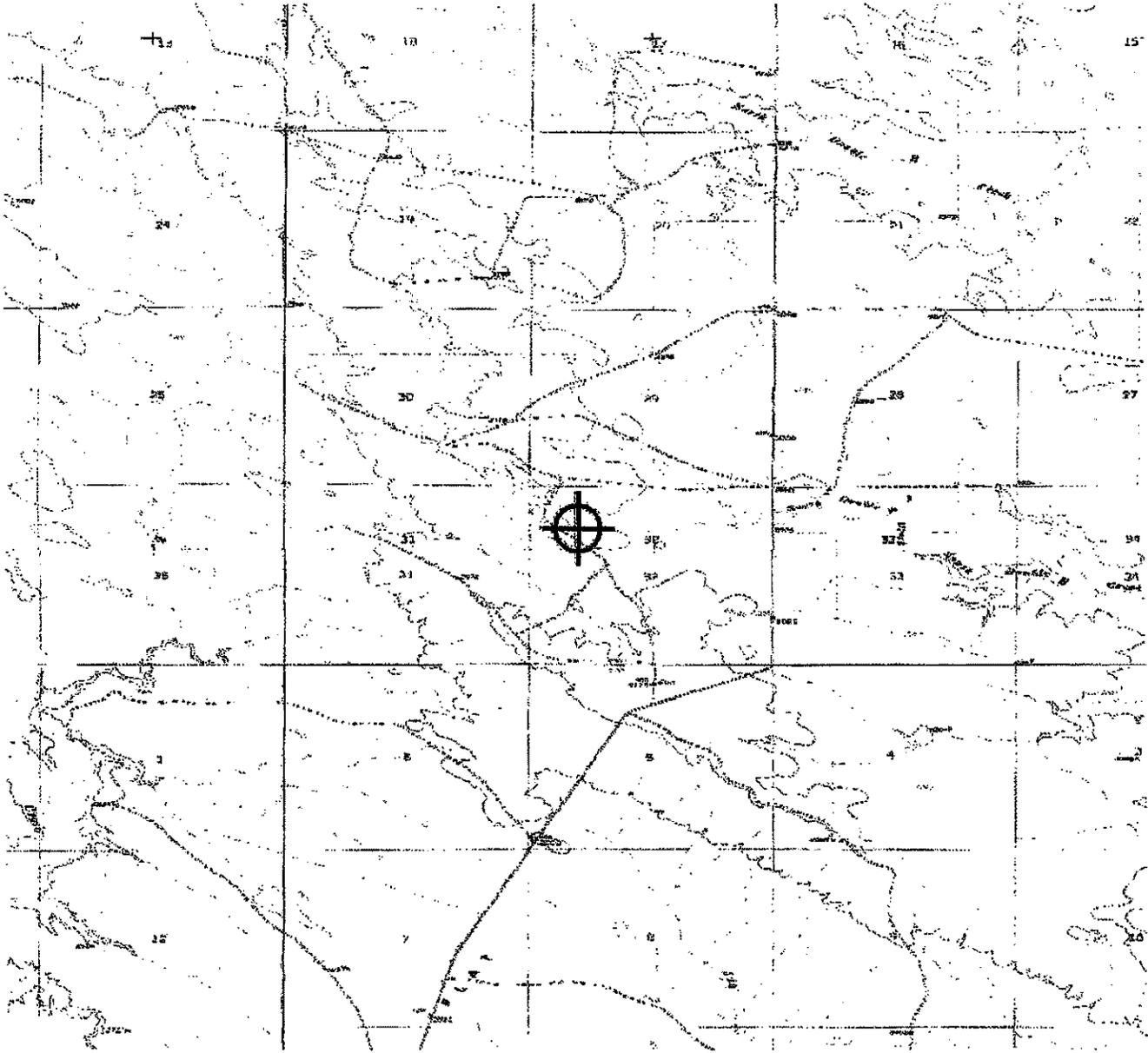
(DNE -WT)

**Attachment(s)  
Additional Information  
Map(s)**

**Additional Advisory Information**

A portion of the proposed turbines within this project may qualify for the removal of their lighting recommendation once written confirmation is received that turbines will be built on all locations with valid determinations, none of the locations will change, and that none of the sites are alternate locations. If you wish a re-evaluation of the lighting plan, please provide this confirmation along with your request. If not all of the turbines will be built, a re-evaluation of the lighting plan would be available once a decision on the final layout is made and the determinations for any unused turbine locations terminated.

TOPO Map for ASN 2015-WTE-3920-OE





Mail Processing Center  
 Federal Aviation Administration  
 Southwest Regional Office  
 Obstruction Evaluation Group  
 2601 Meacham Boulevard  
 Fort Worth, TX 76193

Aeronautical Study No.  
 2015-WTE-3964-OE

Issued Date: 07/31/2015

John OMeara  
 Wind Quarry, LLC  
 330 S 9th Street  
 Montrose, CO 81401

**\*\* 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: Wind Turbine WT45  
 Location: Newell, SD  
 Latitude: 44-53-43.27N NAD 83  
 Longitude: 103-17-52.10W  
 Heights: 3107 feet site elevation (SE)  
 440 feet above ground level (AGL)  
 3547 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:

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**Signature Control No: 257746957-259341777**

Donna O'Neill  
Specialist

(DNE -WT)

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