

EXHIBIT D

4910 - Dakota Range Wind - Codington & Grant Counties, SD
Shadow Flicker Analysis - Proposed Layout (180806)
Shadow Flicker Modeling Results Summary - Sorted by Expected Flicker

Details by Expected Flicker

Receptor ID	Coordinates		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year
	UTM NAD83 Zone 14N (meters)					(HH:MM/year)
	X	Y				
516	653456.51	5004343.87	Participating	Grant	House	54:09
392	654852.45	5000075.99	Participating	Codington	House	47:44
388	655103.41	5000902.29	Participating	Codington	House	45:02
754	657618.71	5009594.79	Participating	Grant	House	44:59
515	653600.45	5003245.37	Participating	Grant	House	44:00
862	658287.22	5009765.21	Participating	Grant	House	33:43
395	653692.68	5000273.03	Participating	Codington	House	32:57
642	653593.66	5006201.50	Non-Participating	Grant	House	29:30
814	650493.66	5008776.86	Non-Participating	Grant	House	27:37
687	653612.64	5006755.67	Participating	Grant	House	27:21
385	655170.00	5001262.14	Non-Participating	Codington	House	27:18
299	655368.87	4998297.41	Non-Participating	Codington	House	26:22
298	655253.74	4997956.71	Participating	Codington	House	25:05
769	653411.62	5009060.41	Participating	Grant	House	24:19
807	650503.26	5009033.74	Non-Participating	Grant	House	24:08
859	655074.36	5009886.86	Participating	Grant	House	21:44
520	651979.07	5003440.36	Participating	Grant	House	20:22
306	656685.45	4997836.26	Non-Participating	Codington	House	20:05
296	654384.51	4996687.82	Non-Participating	Codington	House	19:34
1083	653647.87	5003180.53	Participating	Grant	House	18:59
450	653530.94	5002924.70	Non-Participating	Grant	House	17:10
1058	650900.06	5006334.22	Non-Participating	Grant	House	16:18
750	657734.58	5008810.13	Participating	Grant	House	14:25
820	645720.53	5008021.46	Participating	Grant	House	13:46
759	655865.10	5008248.23	Participating	Grant	House	13:04
819	645708.61	5008004.25	Participating	Grant	House	12:55
451	653518.23	5002856.66	Non-Participating	Grant	House	11:48
797	650621.29	5009376.36	Non-Participating	Grant	House	10:16
569	648969.51	5006429.63	Non-Participating	Grant	House	10:12
318	656867.97	4998569.91	Non-Participating	Codington	House	9:51
595	650684.64	5006150.39	Non-Participating	Grant	House	9:39
821	645631.03	5008056.63	Participating	Grant	House	9:18
784	652821.24	5009387.00	Non-Participating	Grant	House	9:17
311	656976.54	4997093.04	Non-Participating	Codington	House	9:11
816	645840.98	5008574.90	Participating	Grant	House	8:35
383	658372.24	5001257.48	Non-Participating	Codington	House	8:04
606	650626.79	5005202.02	Participating	Grant	House	7:54
326	656815.87	4999863.27	Non-Participating	Codington	House	7:47
853	653709.32	5011041.66	Participating	Grant	House	7:40
822	645560.46	5008023.00	Participating	Grant	House	7:38
596	650837.63	5006168.70	Non-Participating	Grant	House	6:43
433	651107.55	5003102.46	Participating	Grant	House	6:23
289	653778.28	4996825.57	Non-Participating	Codington	House	6:22
554	648855.29	5004824.59	Non-Participating	Grant	House	6:19
838	646374.72	5009624.58	Participating	Grant	House	6:19
189	653838.26	4995578.48	Non-Participating	Codington	House	5:47
448	652660.85	5002765.85	Participating	Grant	House	5:40
965	651937.86	5001067.18	Participating	Codington	House	5:24
686	655202.17	5004865.99	Non-Participating	Grant	House	5:05
438	651909.87	5003057.90	Non-Participating	Grant	House	4:57
185	654917.16	4995237.31	Non-Participating	Codington	House	4:32
681	657770.35	5004970.01	Non-Participating	Grant	House	4:28
1064	651981.94	5003185.29	Non-Participating	Grant	Church	3:55
845	650458.09	5010135.55	Participating	Grant	House	3:54
563	649045.78	5006117.82	Participating	Grant	House	3:09
558	649090.23	5004809.12	Non-Participating	Grant	Business	3:01
548	647511.12	5006001.75	Non-Participating	Grant	House	2:49
285	653787.02	4998022.59	Non-Participating	Codington	House	2:14
556	648976.90	5004831.73	Non-Participating	Grant	House	2:08

EXHIBIT D

Receptor ID	Coordinates		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year
	UTM NAD83 Zone 14N (meters)					
	X	Y				(HH:MM/year)
586	648480.56	5007489.68	Participating	Grant	House	2:07
795	652045.23	5009239.11	Non-Participating	Grant	House	1:52
322	657770.19	4996904.04	Non-Participating	Codington	House	1:43
323	657792.58	4996940.40	Non-Participating	Codington	House	1:36
441	650832.97	5001658.43	Non-Participating	Grant	House	1:25
883	653705.48	5011488.76	Participating	Grant	House	1:04
881	653707.33	5011412.61	Participating	Grant	House	1:03
882	653706.52	5011445.93	Participating	Grant	House	1:03
496	657975.48	5004220.64	Non-Participating	Grant	House	0:59
429	650524.49	5003103.91	Participating	Grant	House	0:49
832	644920.93	5009426.30	Participating	Grant	House	0:34
7	652415.58	4988918.69	Non-Participating	Codington	House	0:00
13	654015.11	4988590.25	Non-Participating	Codington	House	0:00
35	657862.31	4991817.05	Non-Participating	Codington	House	0:00
82	652432.12	4989894.34	Non-Participating	Codington	House	0:00
90	651609.43	4990364.76	Non-Participating	Codington	House	0:00
98	650662.06	4989915.49	Non-Participating	Codington	House	0:00
99	650856.93	4990053.74	Non-Participating	Codington	House	0:00
104	650657.74	4990852.72	Non-Participating	Codington	House	0:00
111	650692.61	4992057.70	Non-Participating	Codington	House	0:00
121	652311.29	4992164.18	Non-Participating	Codington	House	0:00
138	655804.37	4993535.65	Non-Participating	Codington	House	0:00
141	656798.10	4994383.05	Non-Participating	Codington	House	0:00
147	657464.70	4995163.56	Non-Participating	Codington	House	0:00
155	658362.21	4995127.56	Non-Participating	Codington	House	0:00
156	658578.51	4995244.25	Non-Participating	Codington	House	0:00
165	656621.54	4995250.50	Non-Participating	Codington	House	0:00
176	655954.93	4995240.17	Non-Participating	Codington	House	0:00
191	652995.68	4995885.56	Non-Participating	Codington	House	0:00
196	650593.29	4996054.48	Non-Participating	Codington	House	0:00
197	650496.01	4995587.28	Non-Participating	Codington	House	0:00
200	650636.90	4995303.04	Non-Participating	Codington	House	0:00
215	650501.55	4994753.62	Non-Participating	Codington	House	0:00
236	647647.95	4997080.29	Non-Participating	Codington	House	0:00
240	647523.41	4997799.99	Non-Participating	Codington	House	0:00
248	649154.79	4997753.24	Non-Participating	Codington	House	0:00
260	650595.55	4997697.39	Non-Participating	Codington	House	0:00
267	647488.92	4998352.98	Non-Participating	Codington	House	0:00
276	651994.47	4999721.14	Non-Participating	Codington	House	0:00
346	647461.13	5000525.45	Non-Participating	Codington	House	0:00
347	647456.46	5000456.03	Non-Participating	Codington	House	0:00
360	648809.41	4999992.49	Non-Participating	Codington	House	0:00
363	649063.96	5001386.23	Non-Participating	Codington	House	0:00
400	645387.42	4999931.96	Non-Participating	Codington	House	0:00
401	646345.40	4999959.62	Non-Participating	Codington	House	0:00
422	649665.32	5003050.76	Non-Participating	Grant	House	0:00
430	650075.00	5002248.60	Non-Participating	Grant	House	0:00
486	664644.10	5004250.93	Non-Participating	Grant	House	0:00
489	663576.49	5004901.72	Non-Participating	Grant	House	0:00
505	658164.88	5003370.45	Non-Participating	Grant	House	0:00
509	655165.86	5002087.27	Non-Participating	Grant	House	0:00
538	648977.78	5004008.60	Non-Participating	Grant	House	0:00
539	647494.42	5004033.38	Non-Participating	Grant	House	0:00
571	646968.92	5006520.98	Non-Participating	Grant	House	0:00
609	661242.84	5005002.70	Non-Participating	Grant	House	0:00
619	659717.08	5002264.17	Non-Participating	Grant	House	0:00
621	658319.47	5004153.08	Non-Participating	Grant	House	0:00
623	650528.30	4993061.83	Non-Participating	Codington	House	0:00
675	663797.17	5005085.81	Non-Participating	Grant	House	0:00
842	648982.24	5010914.63	Non-Participating	Grant	House	0:00
844	648974.09	5010822.91	Non-Participating	Grant	House	0:00
917	649018.76	4991138.66	Non-Participating	Codington	House	0:00
941	649064.44	4992930.45	Non-Participating	Codington	House	0:00
949	649279.70	4993533.72	Non-Participating	Codington	House	0:00
950	649271.45	4993557.43	Non-Participating	Codington	House	0:00

EXHIBIT D

Receptor ID	Coordinates UTM NAD83 Zone 14N (meters)		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year
	X	Y				(HH:MM/year)
955	647627.18	4993444.66	Non-Participating	Codington	House	0:00
958	647698.06	4993969.91	Non-Participating	Codington	House	0:00
966	651457.46	4993586.61	Non-Participating	Codington	House	0:00
970	651076.00	4993539.97	Non-Participating	Codington	House	0:00
974	658654.33	4990392.79	Non-Participating	Codington	House	0:00
1025	643933.96	5009635.42	Non-Participating	Grant	House	0:00
1026	643946.39	5009641.33	Non-Participating	Grant	House	0:00
1028	644853.33	5009638.98	Non-Participating	Grant	House	0:00
1029	644862.14	5009641.30	Non-Participating	Grant	House	0:00
20	654681.58	4990406.38	Participating	Codington	House	0:00
21	655846.86	4989588.29	Participating	Codington	House	0:00
26	656834.67	4990400.04	Participating	Codington	House	0:00
71	653857.99	4990720.09	Participating	Codington	House	0:00
73	653950.59	4991543.64	Participating	Codington	House	0:00
77	653587.51	4991975.31	Participating	Codington	House	0:00
83	652413.64	4990050.68	Participating	Codington	House	0:00
112	650706.98	4992320.66	Participating	Codington	House	0:00
129	653394.86	4993505.03	Participating	Codington	House	0:00
192	652436.54	4996047.89	Participating	Codington	House	0:00
225	648375.40	4996645.46	Participating	Codington	House	0:00
254	650473.00	4996848.32	Participating	Codington	House	0:00
270	649340.75	4999049.86	Participating	Codington	House	0:00
350	648159.89	5000058.41	Participating	Codington	House	0:00
406	644356.98	5002651.43	Participating	Grant	House	0:00
410	647235.37	5001567.12	Participating	Grant	House	0:00
416	648970.50	5002809.01	Participating	Grant	House	0:00
468	661784.38	5001742.15	Participating	Grant	House	0:00
471	661126.69	5001722.46	Participating	Grant	House	0:00
529	649363.69	5003248.44	Participating	Grant	House	0:00
577	647303.97	5007251.04	Participating	Grant	House	0:00
608	661518.31	5004784.40	Participating	Grant	House	0:00
613	661599.97	5003749.29	Participating	Grant	House	0:00
625	649871.67	4991903.75	Participating	Codington	House	0:00
626	649921.89	4991917.62	Participating	Codington	House	0:00
841	647229.03	5010859.63	Participating	Grant	House	0:00
846	651399.84	5010537.19	Participating	Grant	House	0:00
920	648352.31	4991902.58	Participating	Codington	House	0:00
1018	643160.20	5007930.05	Participating	Grant	House	0:00