Arthur Doak

From: Jeremy D. Ruck <jeremy@jeremyruck.com>
Sent: Thursday, June 7, 2018 2:26 PM
To: Arthur Doak
Subject: WMYZ RFR
Attachments: ASRN 1230173 Satellite Image #1.jpg; WMYZ 6025 4 level 1 1 SS.75.pdf

Hi Art,

Good to speak with you on the telephone today.

With regard to the pending WMYZ application, I have looked into the AM station using the tower as its radiator. That station is WVLG with a maximum antenna power of 0.93 kW during daytime hours. The electrical height of the radiator for WVLG is 70.2 degrees. Using Appendix A of OET 65, I will make a worst case assumption that the tower is 0.1 lambda, and has an input power of 1.0 kW. That gives a minimum fence distance of 3 meters.

Based on satellite imagery of the site, it appears that the minimum fence distance is no less than 5.5 meters from the base of the tower. In reality, it is greater than that, but due to the angle of the satellite shot, it appears to be shorter. For your reference, I have attached a satellite image illustrating a radius of 5.5 meters using the tower location as the reference point. As indicated, this radius is contained within the fence surrounding the tower base. Thus, the AM station complies with the exposure limits for general public.

With regard to WMYZ, the power density from that antenna was addressed in the technical exhibit. The calculated power density by FM model was determined to be 186 uW/cm2, but that is based on a type-1 antenna since that the model is not specifically listed. In reality the power density is lower due to the vertical plane radiation characteristics. The vertical plane pattern of the WMYZ antenna is also attached.

Please let me know if you need additional information, or if this is sufficient.

Best,

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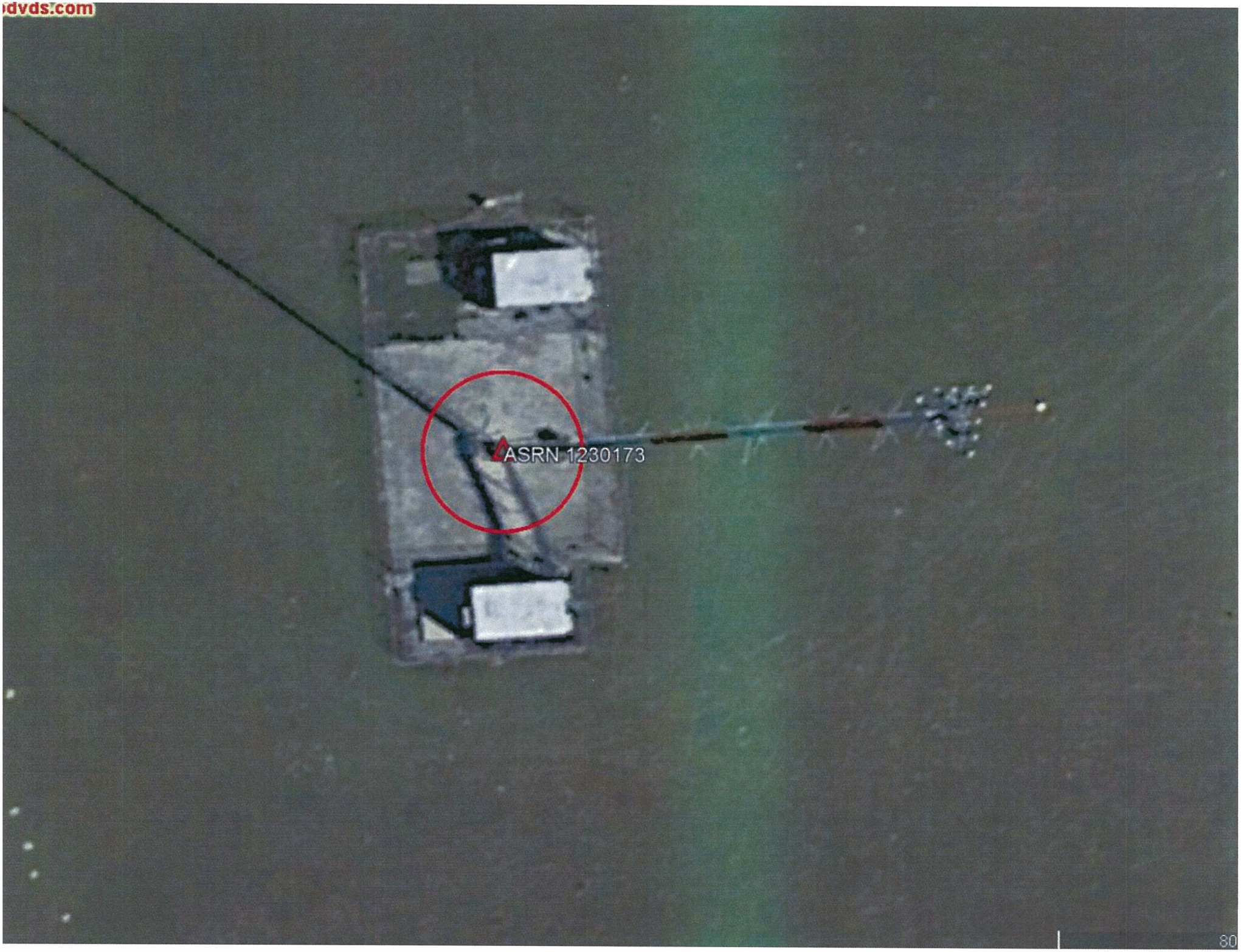
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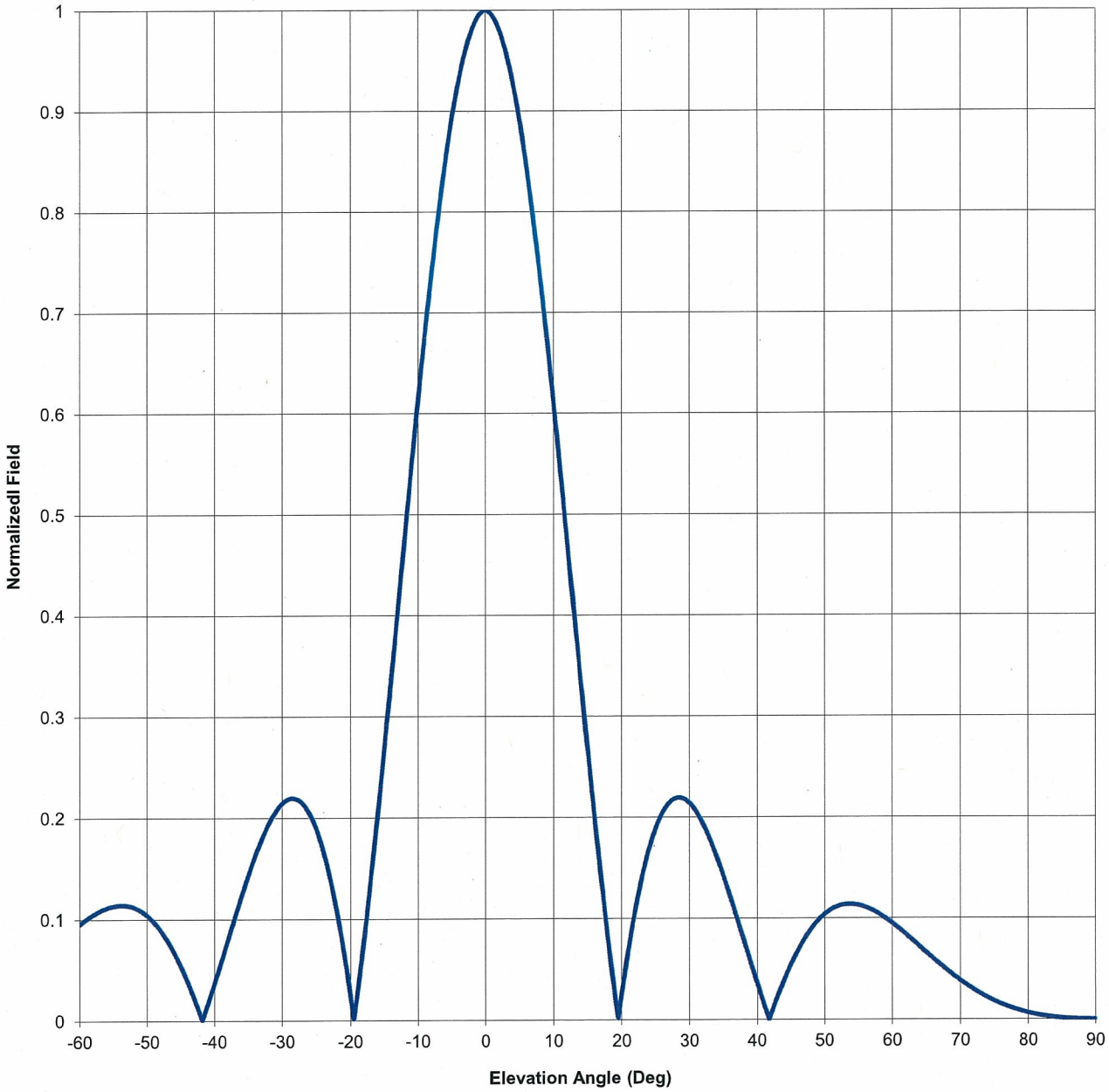
Antenna Mfg.: Shively Labs
Antenna Type: 6025-4-1/1 SS.75
Station: WMYZ
Frequency: 88.7
Channel #: 204
Figure: Figure 3

Date: 3/27/2018

Beam Tilt	0	
Gain (Max)	5.306	7.248 dB
Gain (Horizon)	5.306	7.248 dB



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Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.000	-44	0.039	0	1.000	46	0.067
-89	0.000	-43	0.022	1	0.995	47	0.079
-88	0.000	-42	0.004	2	0.981	48	0.089
-87	0.000	-41	0.016	3	0.959	49	0.097
-86	0.001	-40	0.036	4	0.929	50	0.104
-85	0.001	-39	0.058	5	0.892	51	0.108
-84	0.002	-38	0.079	6	0.846	52	0.112
-83	0.003	-37	0.101	7	0.794	53	0.113
-82	0.004	-36	0.122	8	0.737	54	0.114
-81	0.005	-35	0.143	9	0.676	55	0.113
-80	0.006	-34	0.162	10	0.611	56	0.111
-79	0.008	-33	0.179	11	0.543	57	0.108
-78	0.010	-32	0.194	12	0.473	58	0.104
-77	0.012	-31	0.206	13	0.403	59	0.100
-76	0.015	-30	0.214	14	0.334	60	0.095
-75	0.018	-29	0.219	15	0.266	61	0.089
-74	0.021	-28	0.219	16	0.200	62	0.084
-73	0.025	-27	0.214	17	0.137	63	0.078
-72	0.029	-26	0.204	18	0.078	64	0.072
-71	0.034	-25	0.189	19	0.024	65	0.066
-70	0.038	-24	0.168	20	0.026	66	0.060
-69	0.044	-23	0.141	21	0.070	67	0.054
-68	0.049	-22	0.108	22	0.108	68	0.049
-67	0.055	-21	0.070	23	0.141	69	0.043
-66	0.060	-20	0.026	24	0.168	70	0.038
-65	0.066	-19	0.024	25	0.189	71	0.034
-64	0.072	-18	0.078	26	0.204	72	0.029
-63	0.078	-17	0.137	27	0.214	73	0.025
-62	0.084	-16	0.200	28	0.218	74	0.021
-61	0.090	-15	0.266	29	0.218	75	0.018
-60	0.095	-14	0.334	30	0.214	76	0.015
-59	0.100	-13	0.404	31	0.205	77	0.012
-58	0.105	-12	0.473	32	0.193	78	0.010
-57	0.108	-11	0.543	33	0.179	79	0.008
-56	0.111	-10	0.611	34	0.161	80	0.006
-55	0.113	-9	0.676	35	0.142	81	0.005
-54	0.114	-8	0.737	36	0.122	82	0.004
-53	0.114	-7	0.794	37	0.101	83	0.003
-52	0.112	-6	0.846	38	0.079	84	0.002
-51	0.109	-5	0.892	39	0.058	85	0.001
-50	0.104	-4	0.929	40	0.036	86	0.001
-49	0.098	-3	0.959	41	0.016	87	0.000
-48	0.089	-2	0.981	42	0.004	88	0.000
-47	0.079	-1	0.995	43	0.022	89	0.000
-46	0.068	0	1.000	44	0.039	90	0.000
-45	0.054			45	0.054		