

Non-Interference Compliance

Regarding Facility id 143532

Channel 227

Description of Exhibit 13 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 6 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 8 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 9 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

Page 10 of this exhibit shows the 60 dBμ F(50,50) and 100 dBμ F(50,10) contours of the proposed amended short form for Logan, UT FAC# 143532, BNPFT-20030317ASN and the currently filed short form for Logan, UT FAC# 138556, BNPFT-20030311ALH.

Note: The interfering 100 dBμ contour of BNPFT-20030311ASLH is outside the protected 60 dBμ contour of the proposed BNPFT-20030317ASN so the proposal doesn't prevent BNPFT-20030311ALH from being built as specified.

Note: The tallest buildings within the zone of predicted interference are 20ft(6.1m) in height. This proposal provides 28.6m (93.8ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Both applications can be processed as expected singletons.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
	BNPFT20030311AL			
629057	H	NEW	69.6	69.6
974139	BLH20040129AJH	KBLQ-FM	94.5	93.6
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				69.6

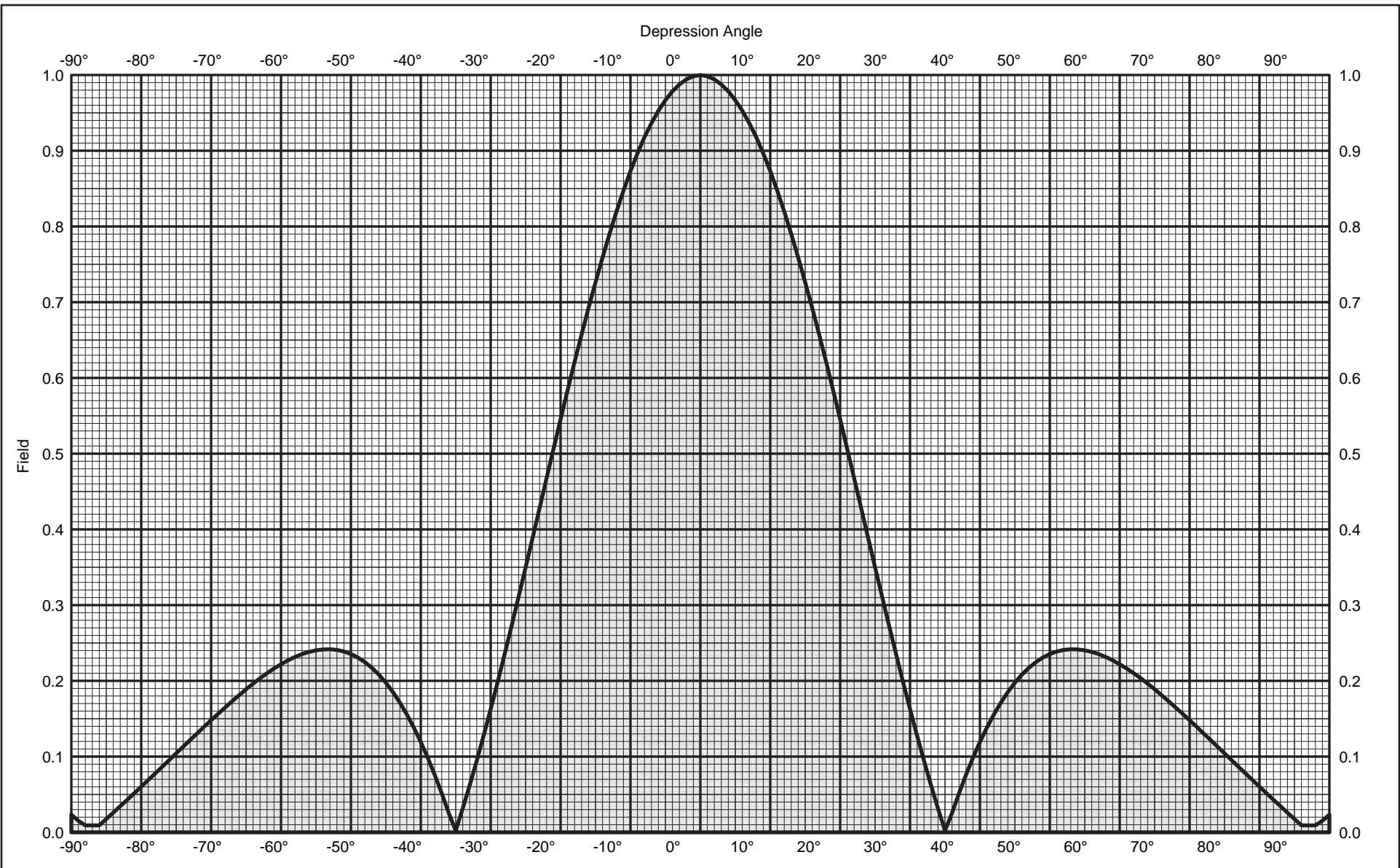
FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **69.6 dBμ**, this makes the proposed translator's worst-case interfering contour **109.6 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **231.1 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **28.6 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

Note: The tallest buildings within the zone of predicted interference are 20ft(6.1m) in height. This proposal provides 28.6m (93.8ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	SCA
Antenna Model:	FMV-2
CORAGL:	74 m
Maximum ERP:	0.099 kW
Interfering Contour:	109.6 dBμ
Max Int. Contour Distance:	231.1 m
Min Ground Clearance:	28.6 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.967	92.6	223.5	222.6	54.5
10	.873	75.5	201.8	198.7	39.0
15	.726	52.2	167.8	162.1	30.6
20	.545	29.4	126.0	118.4	30.9
25	.350	12.1	80.9	73.3	39.8
30	.163	2.6	37.7	32.6	55.2
35	.010	0.0	2.3	1.9	72.7
40	.119	1.4	27.5	21.1	56.3
45	.198	3.9	45.8	32.4	41.6
50	.235	5.5	54.3	34.9	32.4
55	.240	5.7	55.5	31.8	28.6
60	.222	4.9	51.3	25.7	29.6
65	.189	3.5	43.7	18.5	34.4
70	.148	2.2	34.2	11.7	41.9
75	.104	1.1	24.0	6.2	50.8
80	.060	0.4	13.9	2.4	60.3
85	.018	0.0	4.2	0.4	69.9
90	.023	0.1	5.3	0.0	68.7
Minimum Clearance above TGL:					28.6 m





KATHREIN
SCALA DIVISION

Post Office Box 4580 Phone:(541)779-6500
Medford, OR 97501 (USA) Fax:(541)779-3991
<http://www.kathrein-scala.com>

FMV-2 Dipole array
FM
Maximum gain: 3.5 dBd
Vertical polarization

Vertical radiation pattern
0 degree electrical downtilt



FMV-2 Dipole array

FM

Maximum gain: 3.5 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.023	-32.64	-29.14	0.00	-45	0.198	-14.09	-10.59	0.09
-89	0.015	-36.31	-32.81	0.00	-44	0.185	-14.64	-11.14	0.08
-88	0.010	-40.00	-36.50	0.00	-43	0.171	-15.32	-11.82	0.07
-87	0.010	-40.00	-36.50	0.00	-42	0.156	-16.15	-12.65	0.05
-86	0.010	-40.00	-36.50	0.00	-41	0.138	-17.18	-13.68	0.04
-85	0.018	-35.09	-31.59	0.00	-40	0.119	-18.47	-14.97	0.03
-84	0.026	-31.71	-28.21	0.00	-39	0.098	-20.14	-16.64	0.02
-83	0.035	-29.24	-25.74	0.00	-38	0.076	-22.41	-18.91	0.01
-82	0.043	-27.33	-23.83	0.00	-37	0.051	-25.78	-22.28	0.01
-81	0.052	-25.74	-22.24	0.01	-36	0.025	-31.91	-28.41	0.00
-80	0.060	-24.40	-20.90	0.01	-35	0.010	-40.00	-36.50	0.00
-79	0.069	-23.22	-19.72	0.01	-34	0.032	-30.02	-26.52	0.00
-78	0.078	-22.19	-18.69	0.01	-33	0.062	-24.11	-20.61	0.01
-77	0.087	-21.25	-17.75	0.02	-32	0.094	-20.49	-16.99	0.02
-76	0.095	-20.42	-16.92	0.02	-31	0.128	-17.86	-14.36	0.04
-75	0.104	-19.64	-16.14	0.02	-30	0.163	-15.77	-12.27	0.06
-74	0.113	-18.93	-15.43	0.03	-29	0.199	-14.04	-10.54	0.09
-73	0.122	-18.28	-14.78	0.03	-28	0.235	-12.56	-9.06	0.12
-72	0.131	-17.68	-14.18	0.04	-27	0.273	-11.28	-7.78	0.17
-71	0.139	-17.11	-13.61	0.04	-26	0.311	-10.14	-6.64	0.22
-70	0.148	-16.59	-13.09	0.05	-25	0.350	-9.12	-5.62	0.27
-69	0.157	-16.11	-12.61	0.05	-24	0.389	-8.20	-4.70	0.34
-68	0.165	-15.66	-12.16	0.06	-23	0.428	-7.36	-3.86	0.41
-67	0.173	-15.23	-11.73	0.07	-22	0.468	-6.60	-3.10	0.49
-66	0.181	-14.85	-11.35	0.07	-21	0.507	-5.91	-2.41	0.57
-65	0.189	-14.47	-10.97	0.08	-20	0.545	-5.26	-1.76	0.67
-64	0.196	-14.14	-10.64	0.09	-19	0.584	-4.68	-1.18	0.76
-63	0.204	-13.83	-10.33	0.09	-18	0.621	-4.14	-0.64	0.86
-62	0.210	-13.55	-10.05	0.10	-17	0.657	-3.65	-0.15	0.97
-61	0.216	-13.30	-9.80	0.10	-16	0.693	-3.19	0.31	1.07
-60	0.222	-13.08	-9.58	0.11	-15	0.726	-2.78	0.72	1.18
-59	0.227	-12.87	-9.37	0.12	-14	0.759	-2.40	1.10	1.29
-58	0.232	-12.71	-9.21	0.12	-13	0.790	-2.05	1.45	1.40
-57	0.235	-12.57	-9.07	0.12	-12	0.820	-1.73	1.77	1.50
-56	0.238	-12.46	-8.96	0.13	-11	0.847	-1.44	2.06	1.61
-55	0.240	-12.38	-8.88	0.13	-10	0.873	-1.18	2.32	1.71
-54	0.241	-12.34	-8.84	0.13	-9	0.896	-0.95	2.55	1.80
-53	0.242	-12.33	-8.83	0.13	-8	0.918	-0.74	2.76	1.89
-52	0.241	-12.37	-8.87	0.13	-7	0.936	-0.57	2.93	1.96
-51	0.239	-12.44	-8.94	0.13	-6	0.953	-0.42	3.08	2.03
-50	0.235	-12.56	-9.06	0.12	-5	0.967	-0.29	3.21	2.09
-49	0.231	-12.74	-9.24	0.12	-4	0.978	-0.19	3.31	2.14
-48	0.225	-12.97	-9.47	0.11	-3	0.988	-0.11	3.39	2.18
-47	0.217	-13.26	-9.76	0.11	-2	0.994	-0.05	3.45	2.21
-46	0.208	-13.63	-10.13	0.10	-1	0.998	-0.01	3.49	2.23
					0	1.000	0.00	3.50	2.24



FMV-2 Dipole array

FM

Maximum gain: 3.5 dBd

Vertical polarization

Vertical radiation pattern

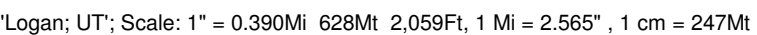
0 degree electrical downtilt

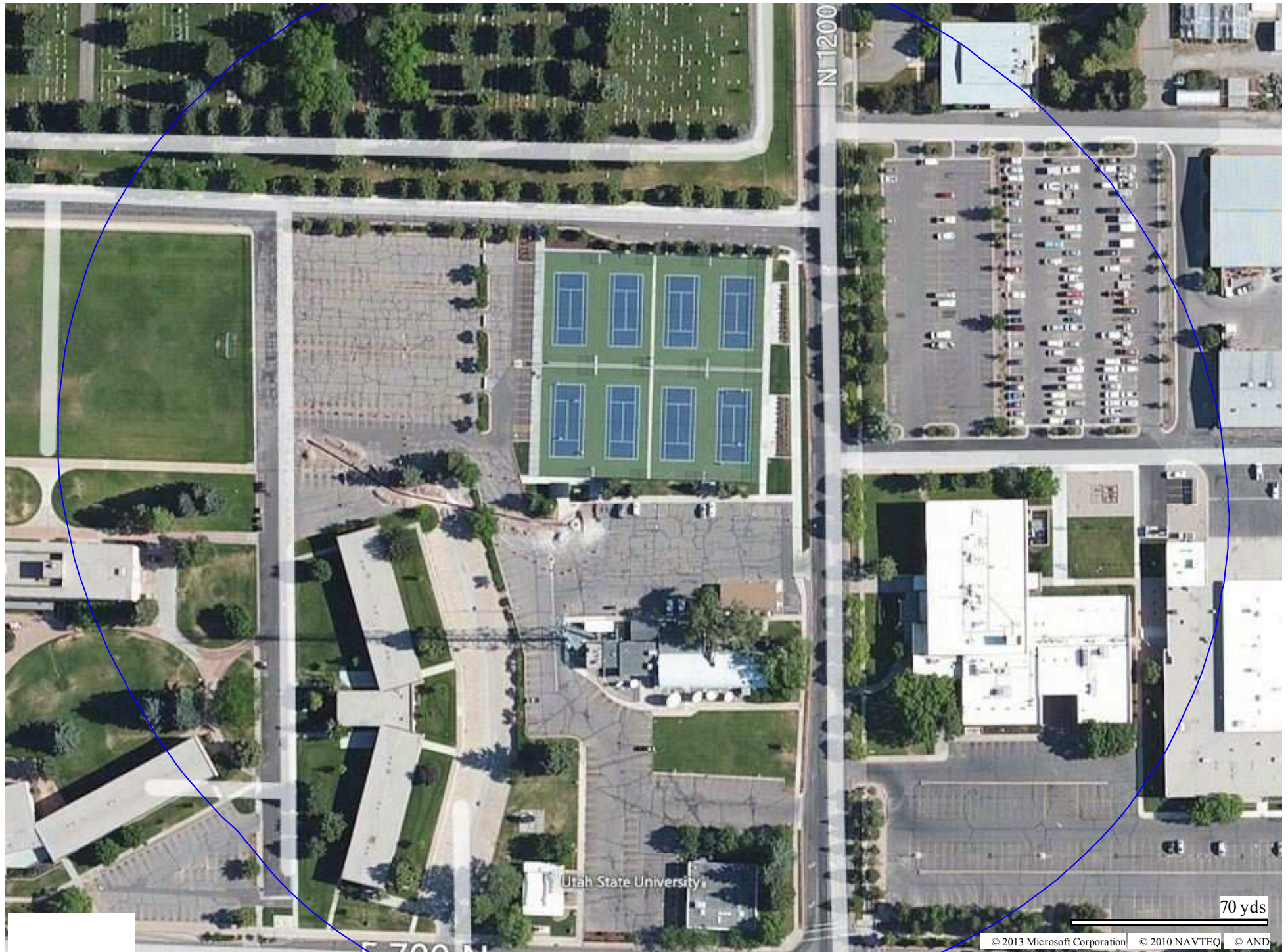
Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	3.50	2.24	45	0.198	-14.09	-10.59	0.09
1	0.998	-0.01	3.49	2.23	46	0.208	-13.63	-10.13	0.10
2	0.994	-0.05	3.45	2.21	47	0.217	-13.26	-9.76	0.11
3	0.988	-0.11	3.39	2.18	48	0.225	-12.97	-9.47	0.11
4	0.978	-0.19	3.31	2.14	49	0.231	-12.74	-9.24	0.12
5	0.967	-0.29	3.21	2.09	50	0.235	-12.56	-9.06	0.12
6	0.953	-0.42	3.08	2.03	51	0.239	-12.44	-8.94	0.13
7	0.936	-0.57	2.93	1.96	52	0.241	-12.37	-8.87	0.13
8	0.918	-0.74	2.76	1.89	53	0.242	-12.33	-8.83	0.13
9	0.896	-0.95	2.55	1.80	54	0.241	-12.34	-8.84	0.13
10	0.873	-1.18	2.32	1.71	55	0.240	-12.38	-8.88	0.13
11	0.847	-1.44	2.06	1.61	56	0.238	-12.46	-8.96	0.13
12	0.820	-1.73	1.77	1.50	57	0.235	-12.57	-9.07	0.12
13	0.790	-2.05	1.45	1.40	58	0.232	-12.71	-9.21	0.12
14	0.759	-2.40	1.10	1.29	59	0.227	-12.87	-9.37	0.12
15	0.726	-2.78	0.72	1.18	60	0.222	-13.08	-9.58	0.11
16	0.693	-3.19	0.31	1.07	61	0.216	-13.30	-9.80	0.10
17	0.657	-3.65	-0.15	0.97	62	0.210	-13.55	-10.05	0.10
18	0.621	-4.14	-0.64	0.86	63	0.204	-13.83	-10.33	0.09
19	0.584	-4.68	-1.18	0.76	64	0.196	-14.14	-10.64	0.09
20	0.545	-5.26	-1.76	0.67	65	0.189	-14.47	-10.97	0.08
21	0.507	-5.91	-2.41	0.57	66	0.181	-14.85	-11.35	0.07
22	0.468	-6.60	-3.10	0.49	67	0.173	-15.23	-11.73	0.07
23	0.428	-7.36	-3.86	0.41	68	0.165	-15.66	-12.16	0.06
24	0.389	-8.20	-4.70	0.34	69	0.157	-16.11	-12.61	0.05
25	0.350	-9.12	-5.62	0.27	70	0.148	-16.59	-13.09	0.05
26	0.311	-10.14	-6.64	0.22	71	0.139	-17.11	-13.61	0.04
27	0.273	-11.28	-7.78	0.17	72	0.131	-17.69	-14.19	0.04
28	0.235	-12.56	-9.06	0.12	73	0.122	-18.28	-14.78	0.03
29	0.199	-14.04	-10.54	0.09	74	0.113	-18.93	-15.43	0.03
30	0.163	-15.77	-12.27	0.06	75	0.104	-19.64	-16.14	0.02
31	0.128	-17.86	-14.36	0.04	76	0.095	-20.42	-16.92	0.02
32	0.095	-20.49	-16.99	0.02	77	0.087	-21.25	-17.75	0.02
33	0.062	-24.11	-20.61	0.01	78	0.078	-22.19	-18.69	0.01
34	0.032	-30.02	-26.52	0.00	79	0.069	-23.22	-19.72	0.01
35	0.010	-40.00	-36.50	0.00	80	0.060	-24.40	-20.90	0.01
36	0.025	-31.91	-28.41	0.00	81	0.052	-25.74	-22.24	0.01
37	0.051	-25.78	-22.28	0.01	82	0.043	-27.33	-23.83	0.00
38	0.076	-22.41	-18.91	0.01	83	0.035	-29.24	-25.74	0.00
39	0.098	-20.14	-16.64	0.02	84	0.026	-31.71	-28.21	0.00
40	0.119	-18.47	-14.97	0.03	85	0.018	-35.09	-31.59	0.00
41	0.138	-17.18	-13.68	0.04	86	0.010	-40.00	-36.50	0.00
42	0.156	-16.15	-12.65	0.05	87	0.010	-40.00	-36.50	0.00
43	0.171	-15.32	-11.82	0.07	88	0.010	-40.00	-36.50	0.00
44	0.185	-14.64	-11.14	0.08	89	0.015	-36.31	-32.81	0.00
					90	0.023	-32.64	-29.14	0.00

Adjacent Channel Study **For Station NEW, Facility_id: 143532**

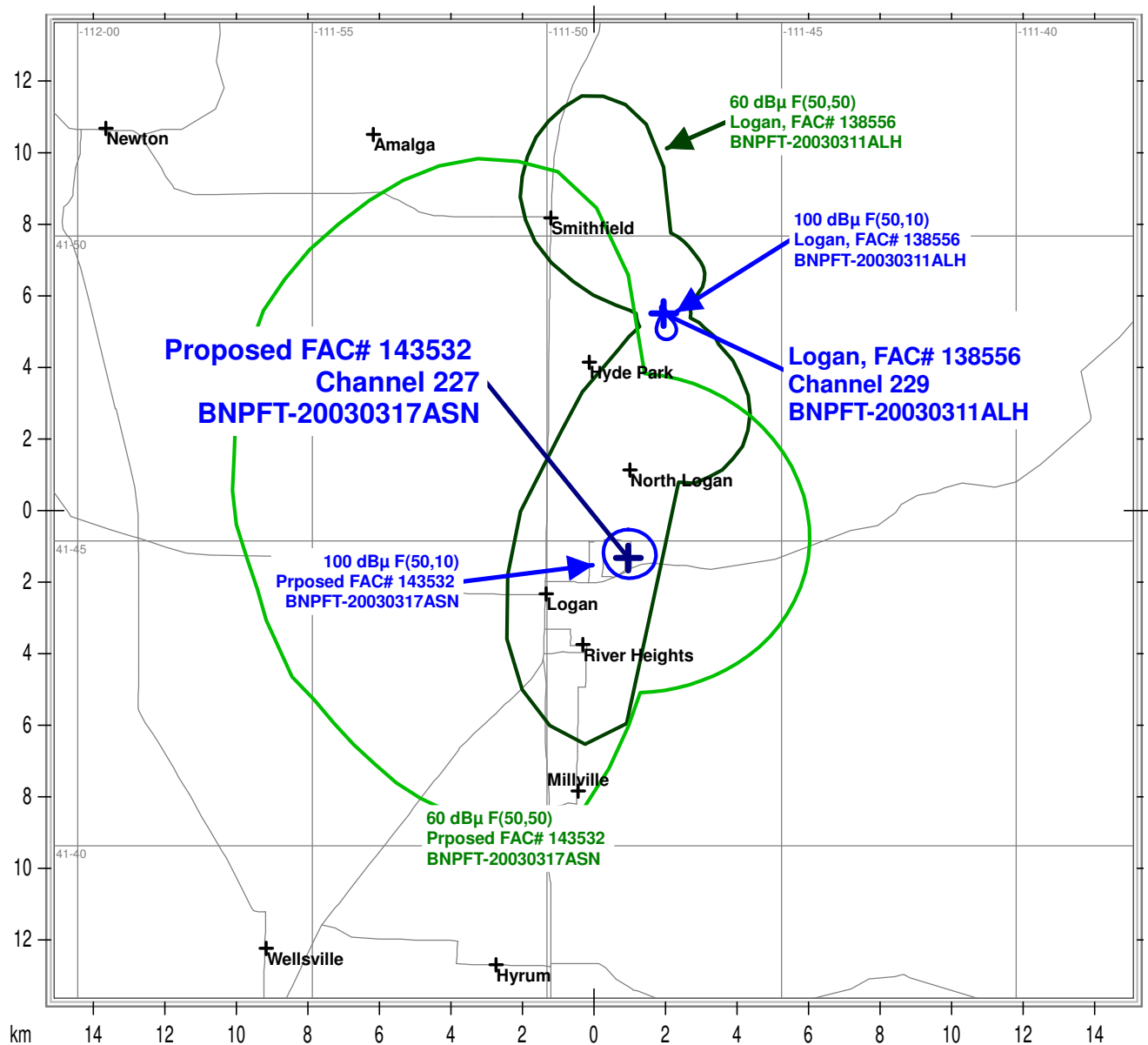
Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
629057	138556	BNPFT-20030311ALH	NEW	JERRÖLD T. LUNDQUIST	D	LOGAN	UT	APP	0.075	1660	229	2	7.5	0.3742
974139	63832	BLH-20040129AJH	KBLQ-FM	SUN VALLEY RADIO, INCORPORATED	C1	LOGAN	UT	LIC	100	1746	225	2	14	0.3742
1345684	123319	BLFTB-20091201AOZ	KBLQ-FM1	SUN VALLEY RADIO, INC.	D	TREMONTON	UT	LIC	11.4	1764	225	2	35	0
638979	146395	BNPFT-20030314ARO	NEW	SUN VALLEY RADIO, INC.	D	TREMONTON	UT	APP	0.25	1768	229	2	35	0
1206709	144752	BLFT-20070924ABK	K228EP	SUN VALLEY RADIO, INC.	D	LAKETOWN	UT	LIC	0.01	2300	228	1	46.9	0
641936	149098	BNPFT-20030317MJI	NEW	IDAHO WIRELESS CORPORATION	D	LAVA HOT SPRING	ID	APP	0.25	1647	227	0	98.2	0
619055	11238	BLH-20021203ACG	KUBL-FM	RADIO LICENSE HOLDING CBC, LLC	C	SALT LAKE CITY	UT	LIC	25	2803	227	0	125.2	0
1079709	28254	BMLH-20000616AAS	KZBQ	IDAHO WIRELESS CORPORATION	C	POCATELLO	ID	LIC	98	1821	229	2	137.5	0
1432386	42885	BPH-20110616ACJ	KZDX	LEE FAMILY BROADCASTING, INC.	C	BURLEY	ID	CP	27	2536	228	1	162.4	0





Proposed Amended Short Form BNPFT-20030317ASN & BNPFT-20030311ALH



ASR# 1252679, 74m, 99W, channel 227, FMV-2, Fill-In KUSU-FM