Engineering Statement

In the original Digital Table of Allotments, KTTM-DT was assigned Channel 22. During the channel election process, KTTM initially certified that it would operate with the maximized facilities for which it was authorized on Channel 22, which specified the use of a directional antenna. Later when selecting a channel for post transition operation, KTTM elected to return to Channel 12, where the present omni-directional analog operation is licensed. Because of these selections, a theoretical directional antenna pattern was assigned to KTTM-DT on Channel 12 in the new Digital Table of Allotments. This pattern was generated by using relative fields which would replicate the maximized digital pattern on Channel 22. However, KTTM now wishes to use its present omni-directional analog antenna for digital operation after transition is complete.

There are obvious cost savings for KTTM in using this approach. However, the present omni-directional analog antenna pattern does not match the Appendix B directional pattern listed in the New Digital Table of Allotments. ***Exhibit 44.1*** shows three contours. The contour generated by theoretical Appendix B pattern is shown with a blue line. The service contour produced by the proposed use of the analog antenna is shown with a red line, and the present analog service contour is shown with a green line. The power of the proposed digital facility was adjusted to produce a service contour (red line) that approximately matches the Appendix B pattern contour (blue line). On some bearings the Appendix B pattern extends slightly beyond the proposed contour while on other bearings the proposed contour extends slightly beyond the Appendix B pattern. Although this is an approximate match it does violate the current Commission freeze on extending service in any direction.

In order to strictly comply with the freeze, KTTM would need to reduce power until the omni-directional contour could be completely contained within the theoretical Appendix B contour. But this would greatly reduce service from the directional Appendix B contour, let alone the much larger analog service contour. In the recent *Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion To Digital Television*[1] the Commission recognized this could be a problem, especially for stations moving to a different channel for post-transition operation. Paragraph 151 and following sets forth a Filing Freeze Waiver Policy for stations such as KTTM. ***This application requests such a waiver of the Filing Freeze***.

The present application meets the requirements for such a waiver. As has already been demonstrated, a waiver of this policy would allow KTTM to use its existing analog antenna to "avoid a significant reduction in post-transition service from its analog service area."[2] Although it is noted that even with the waiver, the KTTM-DT service area will still be significantly reduced from the present KTTM (TV) analog service area. However, the waiver will minimize the magnitude of the reduction.

[1] Report and Order, FCC 07-228, Released December 31, 2007, in MB Docket 07-91
[2] Ibid. ¶ 151 (1).

The second requirement for a waiver of the freeze provides that the proposed service area will not be extended more than five miles (8.0 km) in any direction. ***Exhibit 44.2*** lists the distance to the Appendix B and proposed contours for each of the 36 radials on which a relative field value is specified in the Appendix B antenna pattern. The final column of the tabulation shows the distance by which the proposed post-transition pattern exceeds the Appendix B pattern. The cells in this column have been formatted to show the value in green if the distance is less than or equal to 8.0 km and red if the distance is greater than 8.0 km. Inspection of this column will show using the existing analog antenna at the proposed power level of 5.0 kW will comply with this waiver requirement.

The final waiver requirement is that the proposed expansion "…not cause impermissible interference, *i.e.,* more than 0.5 percent new interference, to other stations."[3] The proposed KTTM-DT digital operation was evaluated using the SunDTV™ software interface available from V-Soft Communications. This allows PC users to run the OET Bulletin No. 69 software on a computer platform equivalent to that used by the Commission. The interference study was based on the parameters set forth in the new §73.616 using a standard 2 km study grid and 1 km terrain increment. US 2000 Census data was used in conformance with the revised FCC policies for interference studies. A summary of the results is attached as ***Exhibit 44.3***. No impermissible interference will be given to any post-transition, full service station.

Therefore, KTTM meets the stated requirements for a waiver of the Filing Freeze. A waiver would allow KTTM-DT to use its present analog antenna and minimize the reduction in service from its presently authorized analog operation.

[3] Ibid. ¶ 151(3)

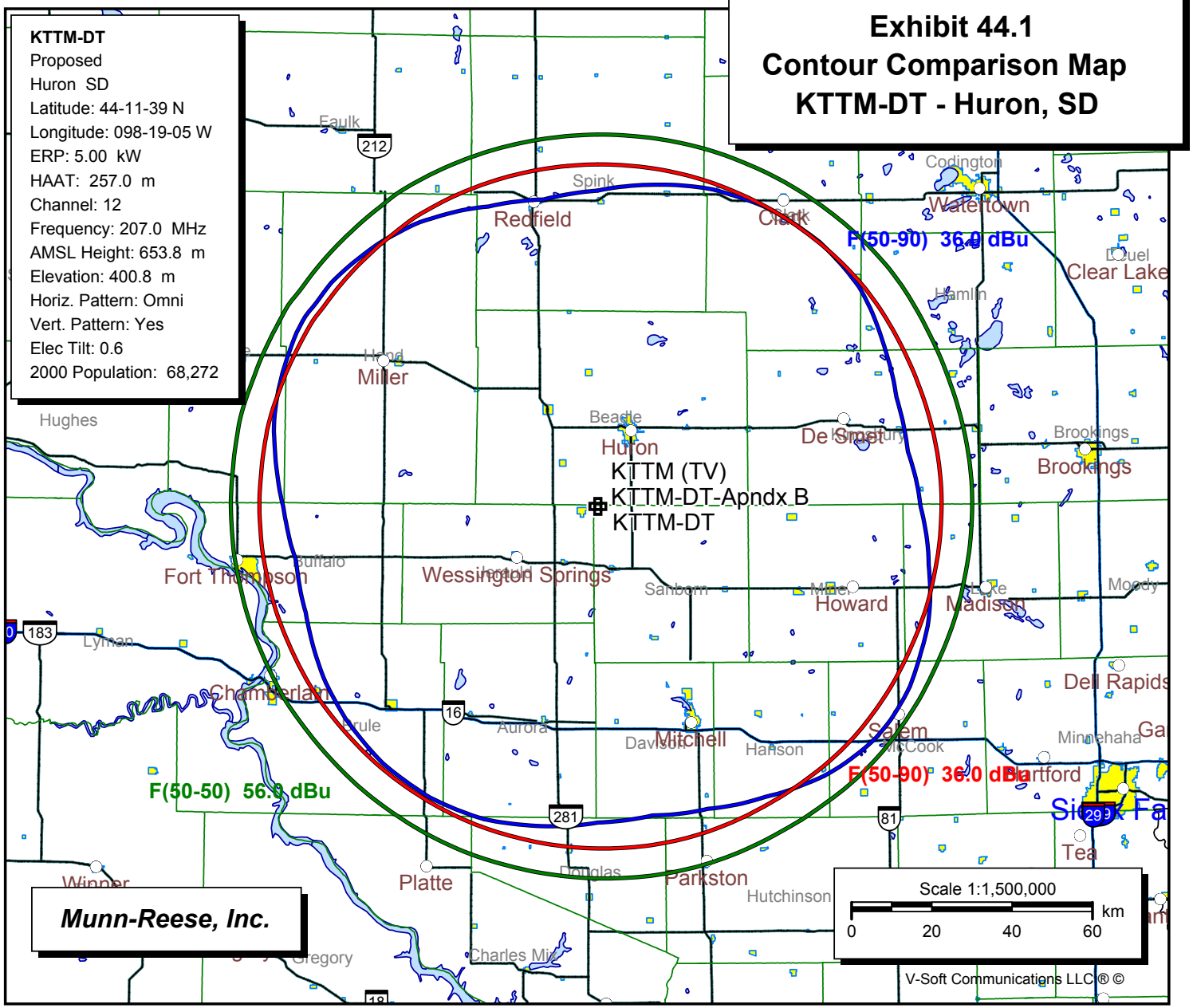
KTTM (TV)
BLCT19940523KE
Huron SD
Latitude: 44-11-39 N
Longitude: 098-19-05 W
ERP: 316.00 kW
HAAT: 257.0 m
Channel: 12+
Frequency: 207.5 MHz
AMSL Height: 653.8 m
Elevation: 400.8 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.6
2000 Population: 80,391

KTTM-DT-Apndx B
Appendix B
Huron SD
Latitude: 44-11-39 N
Longitude: 098-19-05 W
ERP: 11.80 kW
HAAT: 217.0 m
Channel: 12
Frequency: 207.0 MHz
AMSL Height: 613.8 m
Elevation: 400.8 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.0
2000 Population: 66,058
Appendix B: 64,000

KTTM (TV)
KTTM-DT-Apndx B
KTTM-DT

KTTM-DT
Proposed
Huron SD
Latitude: 44-11-39 N
Longitude: 098-19-05 W
ERP: 5.00 kW
HAAT: 257.0 m
Channel: 12
Frequency: 207.0 MHz
AMSL Height: 653.8 m
Elevation: 400.8 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.6
2000 Population: 68,272

Exhibit 44.1
Contour Comparison Map
KTTM-DT - Huron, SD



Munn-Reese, Inc.

Exhibit 44.2
Contour Comparison Tabulation
KTTM-DT - Huron, SD

	Appendix B	Post Transition at 5 kW	PT - Apndx B
Bearing (deg)	Distance (km)	Distance (km)	Distance (km)
0	78.6	85.1	6.5
10	81.2	85.2	4.0
20	83.9	85.4	1.5
30	85.5	85.5	0.0
40	85.9	85.7	-0.2
50	84.9	85.8	0.9
60	81.9	85.5	3.6
70	79.1	85.4	6.3
80	78.4	85.5	7.1
90	80.3	85.5	5.2
100	83.6	85.4	1.8
110	87.3	85.5	-1.8
120	89.7	85.6	-4.1
130	90.0	85.8	-4.2
140	87.6	85.6	-2.0
150	83.5	85.4	1.9
160	80.1	85.4	5.3
170	78.1	85.4	7.3
180	78.7	85.1	6.4
190	80.8	84.9	4.1
200	82.8	84.8	2.0
210	83.6	84.6	1.0
220	83.3	84.5	1.2
230	82.0	84.3	2.3
240	79.9	84.3	4.4
250	77.3	84.2	6.9
260	76.3	84.1	7.8
270	78.3	84.2	5.9
280	81.6	84.3	2.7
290	84.6	84.3	-0.3
300	86.5	84.5	-2.0
310	86.6	84.5	-2.1
320	85.2	84.7	-0.5
330	82.7	85.1	2.4
340	79.4	85.0	5.6
350	77.5	85.0	7.5

Exhibit 44.3

Summary Study

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 02-28-2008 Time: 13:01:13

Record Selected for Analysis

KTTM-DT USERRECORD-01 HURON SD US
Channel 12 ERP 5. kW HAAT 257. m RCAMSL 00654 m
Latitude 044-11-39 Longitude 0098-19-05
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	5.000	256.7	85.1
45.0	5.000	272.7	85.8
90.0	5.000	267.4	85.6
135.0	5.000	272.3	85.8
180.0	5.000	258.2	85.2
225.0	5.000	243.0	84.3
270.0	5.000	240.4	84.2
315.0	5.000	246.5	84.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Exhibit 44.3

SPACING VIOLATION FOUND BETWEEN STATION

KTTM-DT 12 HURON SD USERRECORD01

and station

SHORT TO: KPLO-TV 13 RELIANCE SD BLCDT 20030519AER
043-57-57 0099-36-11
Req. separation => 23.0 <= 110.0 Actual separation 106.0 Short 4.0(83.0) km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountian

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

****

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
12	KTTM-DT	HURON SD	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
11	KQSD-TV	LOWRY SD	178.2	CP	BDTV	-00000083
11	KELO-TV	SIOUX FALLS SD	161.4	LIC	BLCDT	-20030417AAE
12	KEYC-TV	MANKATO MN	313.4	CP MOD	BMPCDT	-20010223AAQ
12	KCCW-TV	WALKER MN	427.7	CP	BDTV	-00000097
12	KXMB-TV	BISMARCK ND	329.4	CP	BDTV	-00000099
12	KUON-TV	LINCOLN NE	372.2	CP	BDTV	-00000106
12	KRNE-TV	MERRIMAN NE	321.5	CP	BDTV	-00000095
13	KPLO-TV	RELIANCE SD	105.7	LIC	BLCDT	-20030519AER
13	KSFY-TV	SIOUX FALLS SD	161.4	CP	BDTV	-00000121

%%%

Study of this proposal found the following interference problem(s):

NONE.