

TECHNICAL EXHIBIT
APPLICATION FOR FM CONSTRUCTION PERMIT AND
PETITION FOR RULE MAKING
RADIO STATION KQMG-FM
SOLON, IOWA

JANUARY 17, 2007

CH 236A 6 KW 100 M

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Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for radio station KQMG-FM licensed to Independence, Iowa to relocate its facility to serve a new community of license, Solon, Iowa.

Summary of Proposal

- Reallocate KQMG-FM on Channel 237A from Independence, Iowa to Channel 236A at Solon, Iowa
- Class C0 Trigger for KGGO(FM) on Channel 235 assigned to Des Moines, Iowa.
- Order-to-Show Cause for KMAQ-FM assigned to Maquoketa, Iowa from Channel 236A to Channel 237A
- Reallocate vacant allotment of Channel *238A at Asbury, Iowa to Channel *254A at Asbury, Iowa
- Allocate a new Channel 238A at Mineral Point, WI.

This is a hybrid type of filing, with the first three components being proposed in this herein Form 301 application and the last two components being proposed in a contingently filed herein Rule Making proposal.

KQMG-FM Component

Proposed Transmitter Location

A map showing the transmitter site location is provided in Figure 1. A sketch showing the proposed antenna and supporting structure is shown on Figure 2. An FAA *Determination of No Aeronautical Hazard* is in the process of being sought.

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially less than 1 kilometer from the transmitting site. No interference is expected. However, the applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45-degree intervals were obtained from a N.G.D.C. 30-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

As can be calculated using the map, the FCC predicted 70 dBu coverage contour encompasses all of Solon, Iowa.

Allocation Study

Figure 4 is an allocation study for channel 236A at the proposed site. The figure contains a tabulation of actual and required separation distances from other pertinent stations and allotments. The proposed site meets the FCC's minimum separation requirements, specified in Section 73.207(b) of the Commission's Rules, to all assignments and stations except toward KMAQ-FM on Channel 236A assigned to Maquoketa, Iowa.

As discussed below, it is proposed as an Order to Show Cause to reallocate KMAQ-FM to Channel 237A with no facility modification. Beyond KMAQ-FM, there are no other allocation issues.

Community of License Change - Section 307(b)

1. Proposal

It is proposed to reallocate Channel 237A from Independence, Iowa to Channel 236A at Solon, Iowa.

2. City Populations and Local Service

Independence city has a 2000 U.S. Census population of 6,014 persons. Independence would have one aural service remaining, KQMG(AM) on 1220 kHz. Solon city has a U.S. Census population of 1,177 persons and has no local FM or AM service. Thus, the proposal will result in first local aural transmission service.

3. Urbanized Area Considerations

Solon is not located within the Cedar Rapids Urbanized area. The proposed 70 dBu contour for the allotment reference coordinates will encompass 55% of the Cedar Rapids Urbanized population and 62% of its area. The existing Channel 237A at Independence 70 dBu contour does not encompass any urbanized area.

4. 60 dBu Gain and Loss Areas and Available Aural Services

The Channel 237A Independence loss area contains 36,000 persons over 2,516 square kilometers. The Channel 236A Solon gain area contains 290,100 persons over 2,516 square kilometers. Area was calculated using a root mean square algorithm.

5. 70 dBu and 60 dBu Coverage

The following tabulates the area and population within the 70 dBu and 60 dBu contours depicted in Figure 3.

Contour	Population (2000 Census)	Area (sq. km)
70 dBu	99,200	808
60 dBu	289,600	2,480

Contour locations calculated in accordance with the provisions of Section 73.313. Population calculated using a computer program that utilizes the 2000 U.S. Census database of "population centroids".

6. Protected FM and AM Services Available

It has been determined that there are at least 8 protected FM services available to Independence and at least 12 to Solon as shown in Figure 6.

Radiofrequency Electromagnetic Field Exposure Analysis

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.¹ The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized ERP of 12 kilowatts is employed with a radiation center of 78 meters above ground level. A downward relative field value of 0.5 was assumed. It is calculated that the power density will not exceed 0.02 mW/cm² at ground level. This is ten percent of the Commission's guideline value for an uncontrolled environment for a FM radio station.² There are no other known high-powered emitters in the nearby vicinity.

Access to the transmitting site will be restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of

¹ OET Bulletin 65, Second Edition 97-01, August, 1997.

² The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm².

power if necessary, shall be taken to ensure that the human exposure to radiofrequency radiation will not exceed the FCC guidelines.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

KGGO(FM) Component

In order to propose Channel 236A at Solon, it is necessary to trigger KGGO(FM) on Channel 235C at Des Moines as a Class C0 facility. KGGO(FM) is effectively licensed for Class C0 facilities with an antenna height above average terrain of 325 meters an effective radiated power of 100 kilowatts.

An allocation search was completed on all the non-reserved allotment channels at the proposed site, to determine if an alternate fully-spaced channel is available for KQMG-FM that would not require the Class C0 trigger of KGGO(FM). No channel was identified.

KMAQ-FM Moaqueta, IA Component

In order to propose Channel 236A at Solon, it is necessary to reallocate Channel 236A at Maquoketa, Iowa to Channel 237A with no transmitter site change. Figure 7 is an allocation study for the proposed reallocation. As can be seen, the only short-spacing is to a vacant allotment on Channel 238A assigned to Asbury, Iowa. It is proposed to reallocate Asbury, Iowa to Channel 254A. Since there is no transmitter site modification to KMAQ-FM, there is no gain/loss area. Furthermore, coverage over its principal community will be maintained.

.....
Vacant Asbury, IA Allotment Component

In order to propose Channel 237A at Maquoketa, it is necessary to reallocate the vacant Channel *238A allotment at Asbury, Iowa to Channel *254A. The proposed new allotment reference coordinates for Channel *254A at Asbury, Iowa are:

42° 29' 23" North Latitude
90° 46' 56" West Longitude

This is a slight site change to the reference allotment for Asbury. However, community coverage over the city of Asbury is still predicted from this allotment.

.....
Proposed Mineral Point, WI Allotment Component

By Asbury migrating to Channel 254A, a new "drop-in" allotment on Channel 238A is possible at the city of Mineral Point, Wisconsin. The proposed new allotment reference coordinates for Channel 238A at Mineral Point, Wisconsin are:

42° 51' 36" North Latitude
90° 10' 47" West Longitude

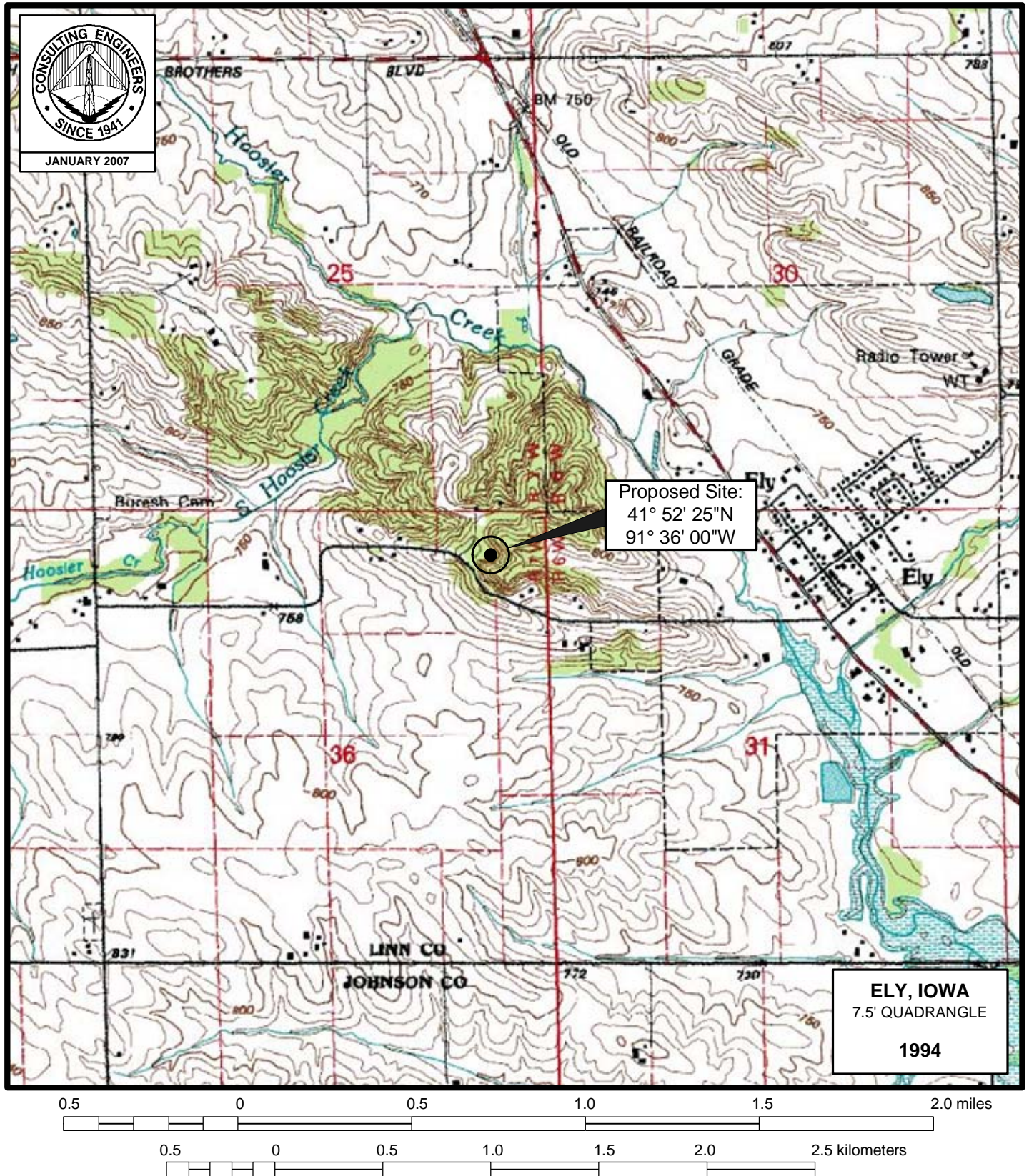
These coordinates are also the community reference point coordinates, so it is obvious that the principal community contour will encompass Mineral Point. The city has a population of 2,617 persons. Furthermore, there are no existing aural services assigned to Mineral Point.

Charles A. Cooper

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
941.329.6000

January 17, 2007

Figure 1

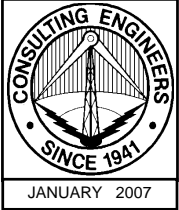


PROPOSED TRANSMITTER SITE

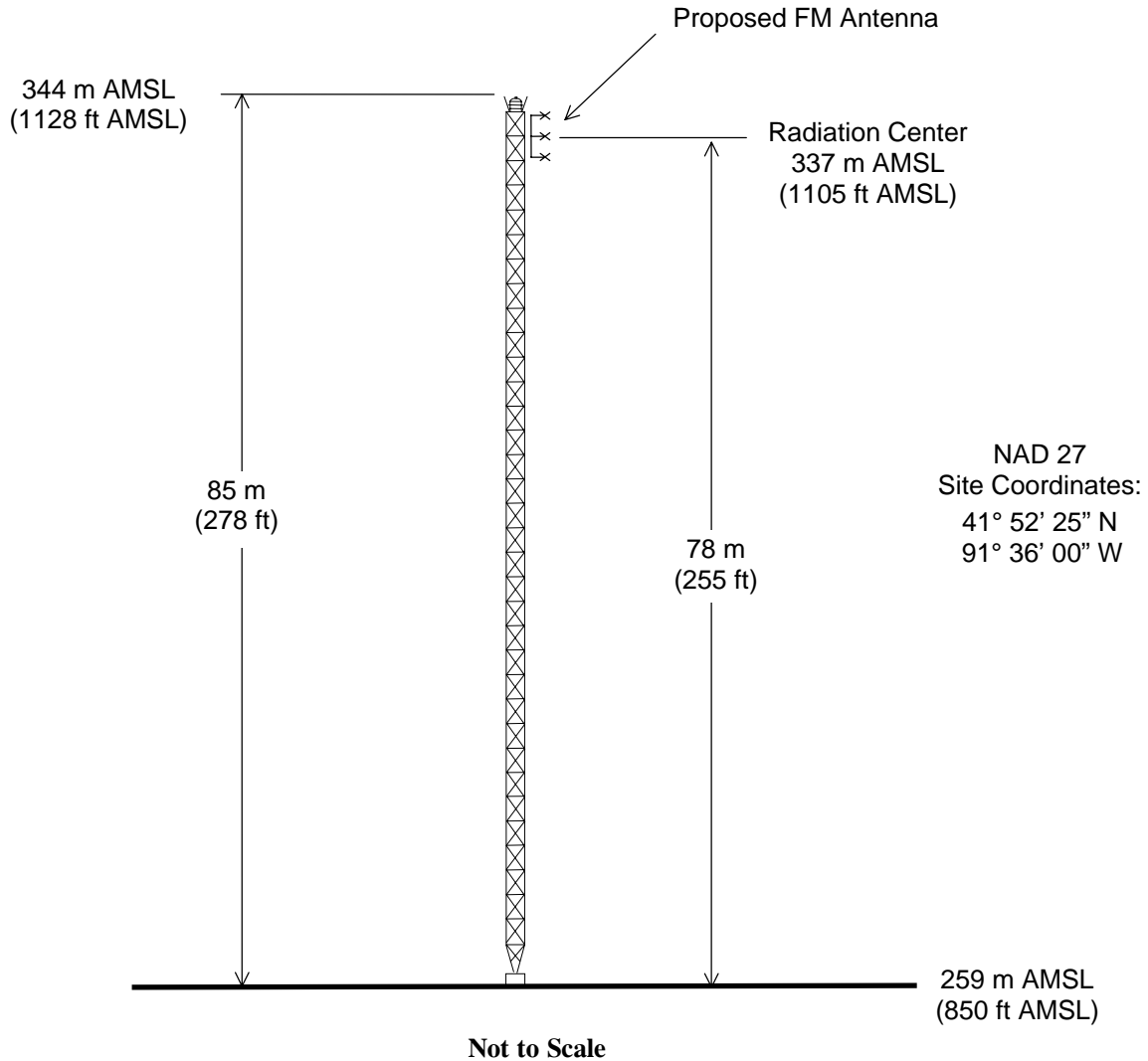
RADIO STATION KQMG-FM
SOLON, IOWA
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



ASRN: To Be Filed



ANTENNA AND SUPPORTING STRUCTURE

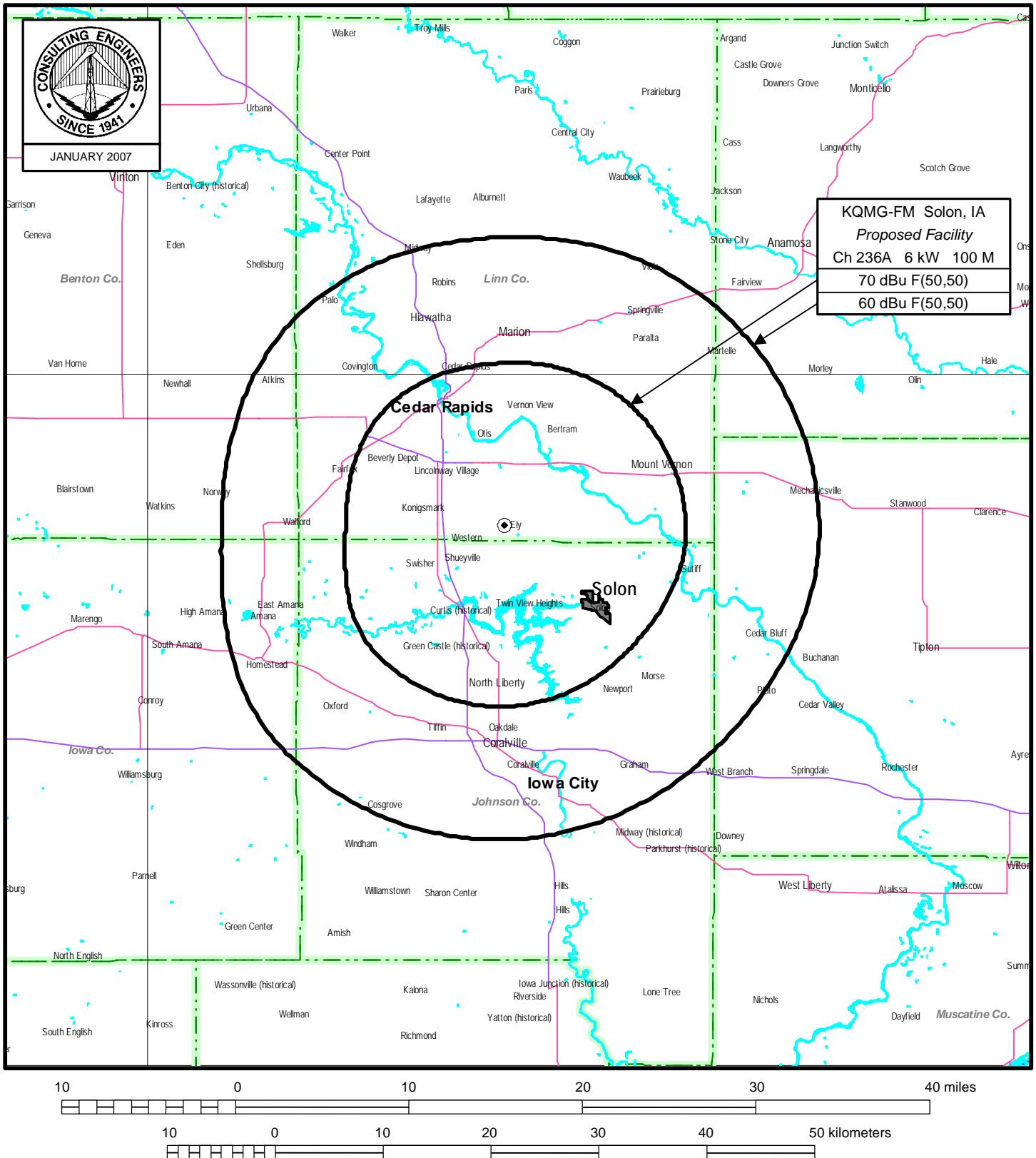
RADIO STATION KQMG-FM

OLON, IOWA

CH 236A 6 KW 100 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3

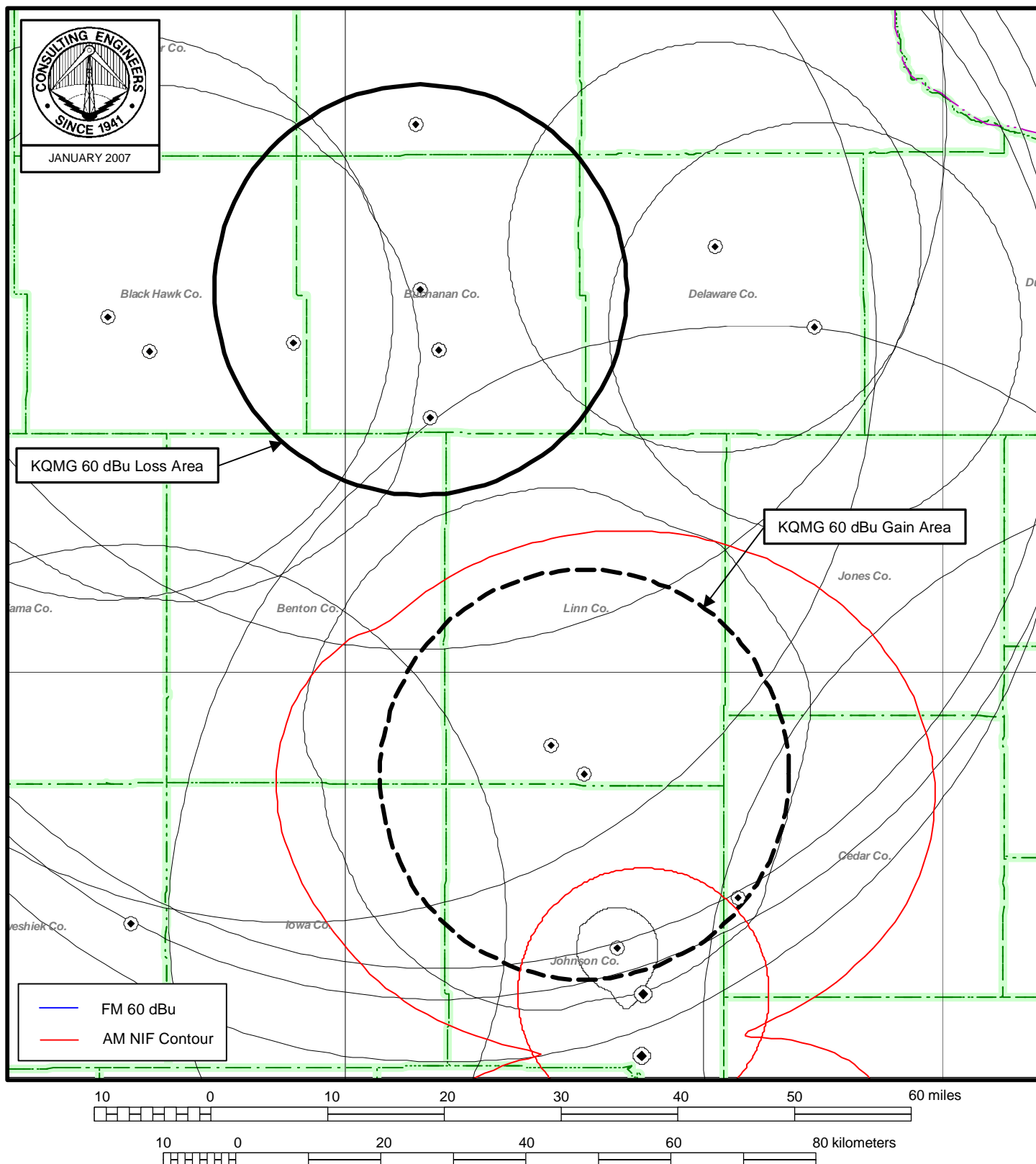


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Channel 236A Solon, Iowa Allocation Study

41° 52' 25" North Latitude
 91° 36' 00" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
KGGO 12965	DES MOINES IA	BLH LIC C	19840210AD	235C 94.9	100 325	N	41-37-54 093-27-24	N	260.7	156.75	165.0
<i>(Proposed C0 Trigger.)</i>											
KGGO 12965	DES MOINES IA	PROPOSED		235C0 94.9	100 325	N	41-37-54 093-27-24	N	260.7	156.75	152.0
<i>(C0 Trigger.)</i>											
KMAQ-FM 39857	MAQUOKETA IA	BLH LIC C	19990316KC	236A 95.1	6.000 100		42-05-26 090-37-43	N	73.0	84.03	115.0
<i>(Order to Show Cause to Channel 237A.)</i>											
KQMG-FM 42080	INDEPENDENC IA	BLH LIC C	19950605KB	237A 95.3	2.900 125	N	42-28-32 091-52-26	N	341.5	70.59	72.0
<i>(Applicant's existing facility.)</i>											
KQMG-FM 42080	INDEPENDENC IA	BPH APP C	20050906AAL	237A 95.3	1.750 186	N	42-23-55 091-45-32	N	347.4	59.78	72.0
<i>(Minor change application for applicant's existing facility, dismissal requested.)</i>											
KOKX-FM 70573	KEOKUK IA	BLH LIC C	19990412KB	237C1 95.3	100 245		40-24-01 091-35-09	N	179.6	163.63	133.0
NEW 162475	ANAMOSA IA	BNPH CP C	20050103AEJ	239A 95.7	6.000 100	N	42-08-19 091-27-38	N	21.3	31.62	31.0



GAIN - LOSS MAP
RADIO STATION KQMG
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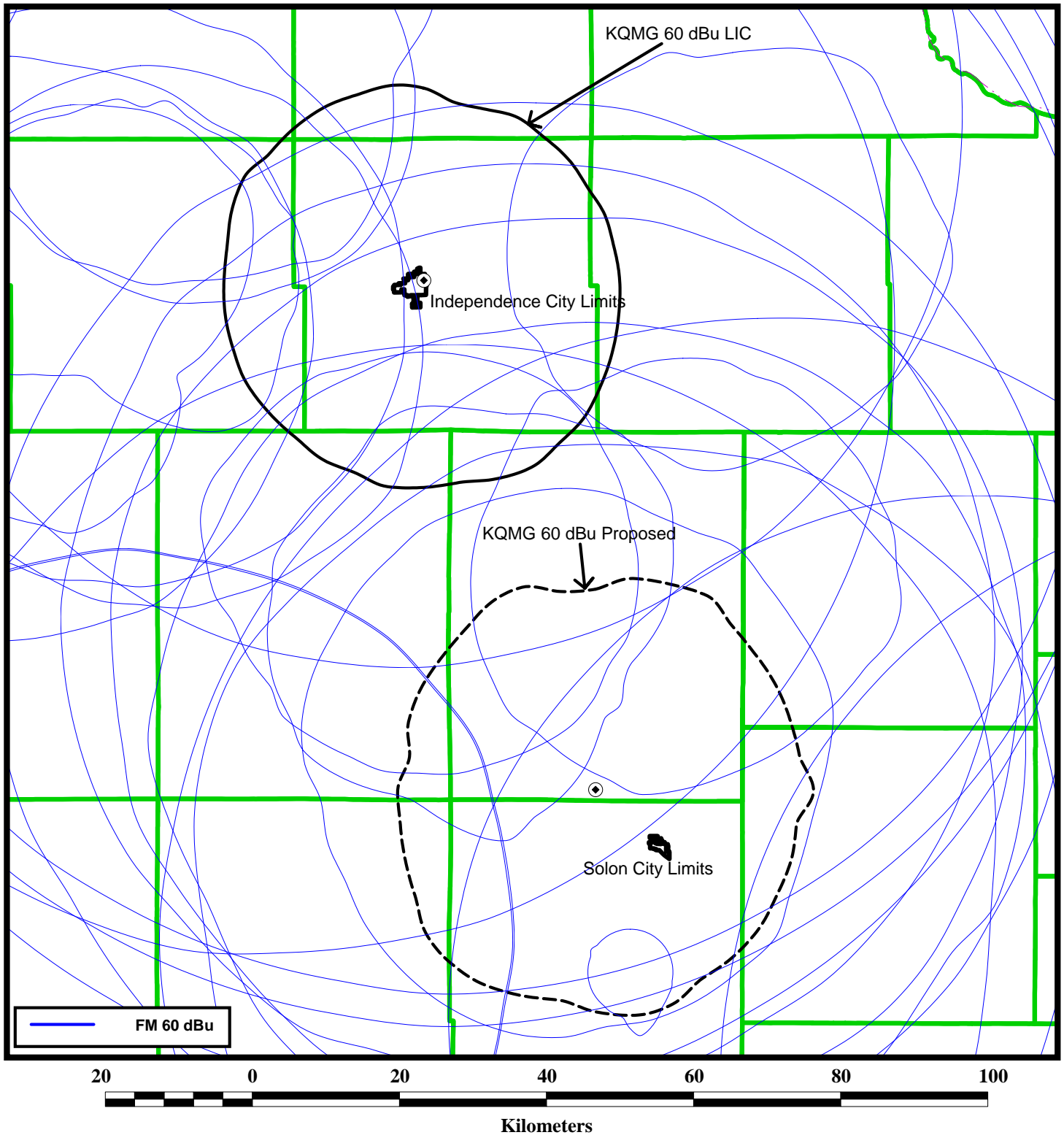
Tabulation of Other Stations Available to Gain - Loss Area

AM CONTOURS

<u>Call Sign</u>	<u>Community of License</u>	<u>State</u>	<u>Frequency (kHz)</u>
WSUI	IOWA CITY	IA	910
KCJJ	IOWA CITY	IA	1630

FM CONTOURS

<u>Call Sign</u>	<u>Community of License</u>	<u>State</u>	<u>Channel</u>
KSUI	IOWA CITY	IA	219
KCKK-F	CEDAR RAPIDS	IA	202
KHKE	CEDAR FALLS	IA	208
KUNI	CEDAR FALLS	IA	215
KRUI-F	IOWA CITY	IA	209
KQMG-F	INDEPENDENCE	IA	237
KDST	DYERSVILLE	IA	257
KMCH	MANCHESTER	IA	234
KFMW	WATERLOO	IA	300
WLLR-F	DAVENPORT	IA	279
KNWS-F	WATERLOO	IA	270
KKHQ-F	OELWEIN	IA	222
KOKZ	WATERLOO	IA	289
KXIA	MARSHALLTOWN	IA	266
KGRS	BURLINGTON	IA	297
KZIA	CEDAR RAPIDS	IA	275
KDAT	CEDAR RAPIDS	IA	283
KHAK	CEDAR RAPIDS	IA	251
WMT-FM	CEDAR RAPIDS	IA	243
KKRQ	IOWA CITY	IA	264
KMXG	CLINTON	IA	241
KCQQ	DAVENPORT	IA	293
KBEA-F	MUSCATINE	IA	259
KRNA	IOWA CITY	IA	231
KATF	DUBUQUE	IA	225
KSKB	BROOKLYN	IA	256
KOEL-F	CEDAR FALLS	IA	253
KCRR	GRUNDY CENTER	IA	249



OTHER FM PROTECTED SERVICES
AVAILABLE TO SOLON & INDEPENDENCE

FM STATION KQMG
SOLON, IOWA

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ENGINEERING EXHIBIT FM STATION KQMG

Tabulation of Other Protected Stations Available

FM CONTOURS

<u>Call Sign</u>	<u>Community of License</u>	<u>State</u>	<u>Channel</u>
KSKB	BROOKLYN	IA	256
KCVM	HUDSON	IA	241
KZIA	CEDAR RAPIDS	IA	275
KDAT	CEDAR RAPIDS	IA	283
KOEL-FM	CEDAR FALLS	IA	253
KHAK	CEDAR RAPIDS	IA	251
KCRR	GRUNDY CENTER	IA	249
KCOO	DUNKERTON	IA	280
KFMW	WATERLOO	IA	300
KSUI	IOWA CITY	IA	219
KWOF-FM	HIAWATHA	IA	206
KSKB	BROOKLYN	IA	256
KBBG	WATERLOO	IA	201
KCKK-FM	CEDAR RAPIDS	IA	202
KHKE	CEDAR FALLS	IA	208
KUNI	CEDAR FALLS	IA	215
KWVI	WAVERLY	IA	205
KRUI-FM	IOWA CITY	IA	209
NEW	ANAMOSA	IA	239
WMT-FM	CEDAR RAPIDS	IA	243
KKRQ	IOWA CITY	IA	264
WLLR-FM	DAVENPORT	IA	279
KNWS-FM	WATERLOO	IA	270
KBEA-FM	MUSCATINE	IA	259
KKHQ-FM	OELWEIN	IA	222
KRNA	IOWA CITY	IA	231
KRQN	VINTON	IA	296
KOKZ	WATERLOO	IA	289
KMCH	MANCHESTER	IA	234

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Channel 237A Maquoketa, IA Allocation Study

42° 05' 26" North Latitude
 90° 37' 43" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
KMCN 33054	CLINTON IA	LIC C	BLH 19980909KD	234A 94.7	3.0 100		41-54-34 090-13-28	N	121.0	39.06	31.0
KMAQ-FM 39857	MAQUOKETA IA	LIC C	BLH 19990316KC	236A 95.1	6.0 100	30561	42-05-26 090-37-43	N	93.6	0.00	49.0
<i>(Applicant's existing facility.)</i>											
KQMG-FM 42080	INDEPENDENC IA	LIC C	BLH 19950605KB	237A 95.3	2.9 125	N	42-28-32 091-52-26	N	293.1	111.26	115.0
<i>(KQMG-FM is proposed to be reallocated from Channel 237A Independence, IA to Channel 236A Solon, Iowa.)</i>											
KQMG-FM 42080	SOLON IA	PROPOSED		236A 95.1	6.0 100	N	41-52-25 091-36-00	N	107.0	107.0	72.0
<i>(KQMG-FM is proposed to be reallocated from Channel 237A Independence, IA to Channel 236A Solon, Iowa.)</i>											
WRTB 59620	WINNEBAGO IL	LIC C	BLH 19850108LQ	237A 95.3	1.25 156	N	42-17-26 089-09-51	N	79.1	122.99	115.0
KOKX-FM 70573	KEOKUK IA	LIC C	BLH 19990412KB	237C1 95.3	100 245		40-24-01 091-35-09	N	203.4	204.15	200.0
	ASBURY IA	RM VAC C	8924	238A 95.5		N	42-30-18 090-40-46	N	354.8	46.23	72.0
<i>(Proposed to reallocate vacant Channel 238A allotment at Asbury to Channel 254A.)</i>											

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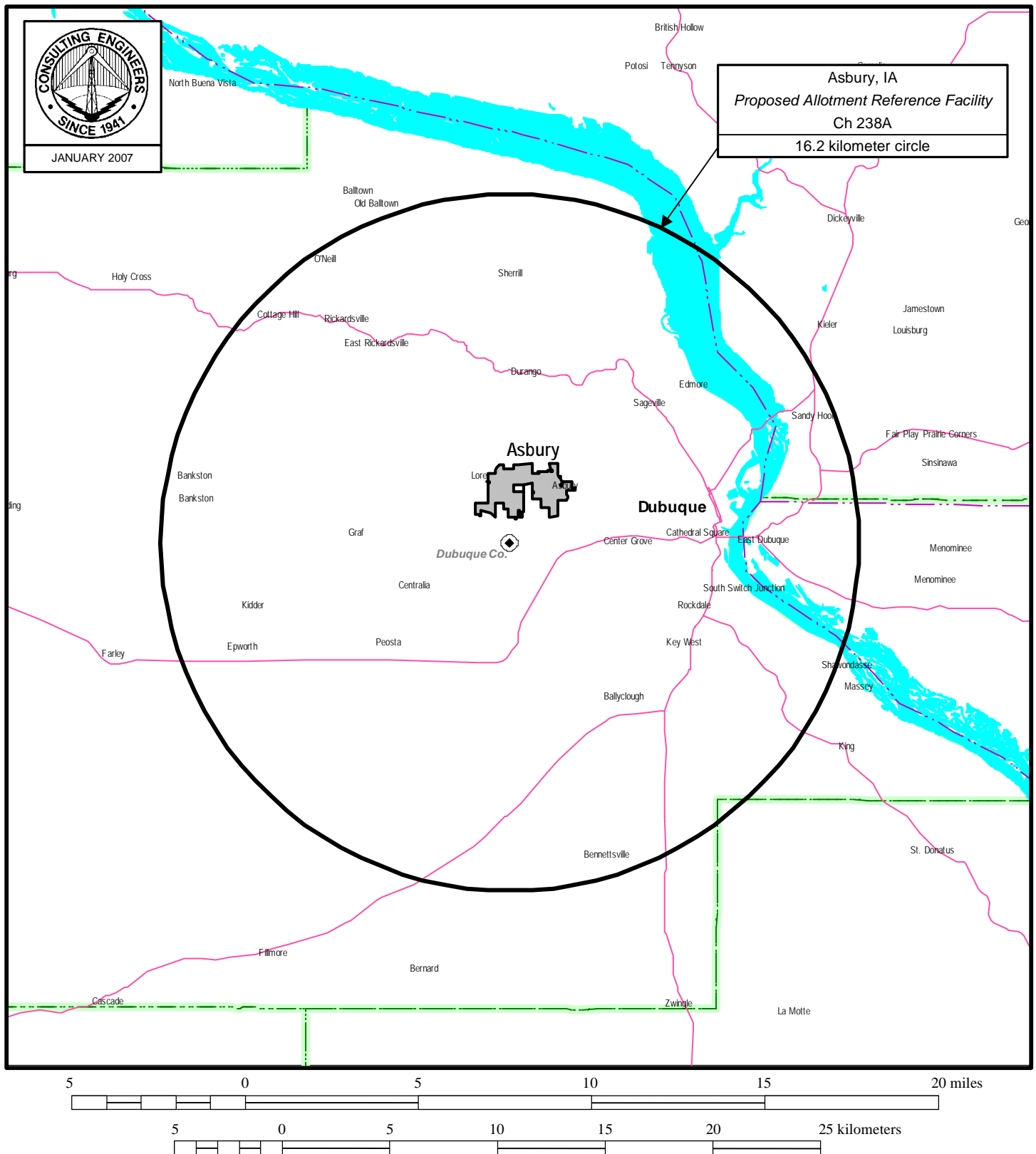
Vacant Channel 254A Asbury, IA Allocation Study

42° 29' 23" North Latitude

90° 46' 56" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
KHAK 54163	CEDAR RAPID IA	BLH LIC C	19790823AG	251C1 98.1	100 140	N	41-55-28 091-36-55	N	227.8	93.14	75.0
WXXQ 63137	FREEPORT IL	BLH LIC C	19990125KF	253B1 98.5	11.0 150	N	42-16-48 089-19-59	N	100.6	121.59	96.0
KMGO 35126	CENTERVILLE IA	BPH CP C	20060315ADN	254C0 98.7	94.0 458	N	41-02-22 093-00-32	N	229.6	245.42	215.0
WLKU 8590	ROCK ISLAND IL	BPED CP C	20060428AIW	255B 98.9	39.0 281	N	41-19-39 090-22-46	N	165.4	133.34	113.0
WLKU 8590	ROCK ISLAND IL	BLED LIC C	20051208ADJ	255B 98.9	39.0 281	N	41-19-39 090-22-46	N	165.4	133.34	113.0
WVCX 73061	TOMAH WI	BMLD LIC C	20020128ABE	255C0 98.9	100.0 300	N	43-51-10 090-27-36	N	9.7	153.68	152.0
KDST 16778	DYERSVILLE IA	BLH LIC C	19840919DR	257A 99.3	3.0 91	N	42-25-43 091-12-50	N	259.3	36.15	31.0

Figure 9



FCC PREDICTED COVERAGE CONTOURS

RADIO STATION KQMG

SOLON, IOWA

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Vacant Channel 238A Mineral Point, WI Allocation Study

42° 51' 36" North Latitude
 90° 10' 47" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
WOLX-FM 60236	BARABOO WI	LIC C	BLH 4952	235B 94.9	37.0 396	N	43-25-40 089-39-14	N	33.9	76.21	69.0
KMAQ-FM 39857	MAQUOKETA IA	PROPOSED		237A 95.1	6.0 100	30561	42-05-26 090-37-43	N	203.4	93.10	72.0
	ASBURY IA	RM VAC C	8924	238A 95.5			42-30-18 090-40-46	N	226.1	56.86	
<i>(Proposed to reallocate vacant Channel 238A allotment at Asbury to Channel 254A.)</i>											
WIFC 74102	WAUSAU WI	LIC C	BLH 20031021AEZ	238C 95.5	100.0 329	N	44-55-14 089-41-28	N	9.5	232.29	226.0
WRQT 36208	LA CROSSE WI	LIC C	BLH 19890213KF	239C2 95.7	50.0 150	N	43-37-58 091-17-06	N	314.2	124.21	106.0
KIYX 77326	SAGEVILLE IA	LIC C	BMLH 20020426AAX	291A 106.1	4.2 120	N	42-41-27 090-37-26	N	242.7	40.92	10.0