

SECTION V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. _____

SSB Referral Date _____

Referred By _____

Name of Applicant
Wartburg College

Call Letters (if issued)

Is this application being filed in response to an application
filing window?

☐ Yes

☒ No

If Yes, specify closing date: _____

Purpose of Application: (check appropriate boxes)

☒ Construct a new (main) facility

☐ Construct a new auxiliary backup facility

☐ Modify existing construction permit for main facility

☐ Modify existing construction permit for auxiliary backup
facility

☐ Modify licensed main facility

☐ Modify licensed auxiliary backup facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

☐ Antenna supporting structure height

☐ Effective radiated power

☐ Antenna height above average terrain

☐ Frequency

☐ Antenna location

☐ Class

☐ Main Studio location per 47 C.F.R. Section 73.1125(b)(2)

☐ One-Step processing

☐ Directional Antenna

☐ Other (summarize briefly)

File Number(s) _____

1. Allocation:

Channel No.	Principal community to be served:		
	County	City or Town	State
210	Waverly	Bremer	IA

Class (check only one box below)

☒ A ☐ B1 ☐ B ☐ C3

☐ C2 ☐ C1 ☐ C

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

Eight Street and First Avenue Northwest

Waverly, Iowa Bremer County

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. (The Commission requires coordinates based on NAD 27.)

Latitude	42 °	43 '	38 "	Longitude	92 °	28 '	51 "
----------	------	------	------	-----------	------	------	------

Section V-B - FM BROADCAST ENGINEERING DATA (Page 2)

3. Will the antenna be mounted on an antenna structure which has been registered with the Commission?

☐ Yes ☒ No

If Yes, provide the seven digit registration number and proceed to item 8.

4. Has the owner of the antenna structure filed an application for registration with the Commission?

☐ Yes ☒ No

If yes, provide the date FCC Form 854 was filed and proceed to item 8.

5. Applicant certifies that antenna structure meets 6.10 meter (20 feet) exception rule and therefore does not require registration. In other words, the overall height of the entire structure is not more than 6.10 meters (20 feet) above the ground or the antenna does not extend more than 6.10 meters (20 feet) above a man-made structure (structure built for a purpose other than mounting an antenna, i.e., building, water tank, silo, fire tower, etc.).

☐ Yes ☒ No

If yes, skip items 6 and 7.

6. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation.

☐ Yes ☒ No

If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 8.

Exhibit No.

7. Antenna structure does not meet FAA notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration.

☐ Yes ☒ No

8. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)?

☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both. KWAR

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

9. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	°	'	"	Longitude	°	'	"
----------	---	---	---	-----------	---	---	---

10. Has the FAA been notified of the proposed construction?

☒ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.
AE-1

Date 5-25-98 Office where filed Central Regional Office

11. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	<u>See Exhibit 3</u>		
(b)			

Section V-B - FM BROADCAST ENGINEERING DATA (Page 3)

12. (a) Elevation: (to the nearest meter)

(1) Of the site above mean sea level; 282 meters

(2) Of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 34 meters

(3) Of the top of supporting structure above mean sea level [(a)(1) + (a)(2)]. 315 meters

(b) Height of radiation center: (to the nearest meter) H = Horizontal; V = Vertical

(1) Above ground; 28 meters (H)

28 meters (V)

(2) Above mean sea level [(a)(1) + (b)(1)]; and 310 meters (H)

310 meters (V)

(3) Above average terrain. 16 meters (H)

16 meters (V)

13. Attach as an Exhibit sketch(es) of the supporting structure, labeling all elevations required in Question 12 above, except item 12(b)(3). If mounted on an AM directional array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.
E-1

14. Effective Radiated Power:

(a) ERP in the horizontal plane .100 kw (H*) .100 kw (V*)

Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevation plot of radiated field.

 kw (H*) kw (V*)

*Polarization

Exhibit No.
N/A

15. Is a directional antenna proposed?

☐ Yes ☒ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s), and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.
N/A

16. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

☒ Yes ☐ No

If No, attach as justification an Exhibit pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.
N/A

Section V-B - FM BROADCAST ENGINEERING DATA (Page 4)

17. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (*except citizens band or amateur*) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any protected or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☐ Yes ☒ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Section 73.315(b), 73.316(d) and 73.318.)

Exhibit No.
N/A

18. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
E-2

19. Attach as an Exhibit (name the source) a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
E-3

- (a) The proposed transmitter location, and the radials along with profile graphs have been prepared;
- (b) The 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and
- (c) The legal boundaries of the principal community to which the station is or will be licensed.

20. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 103.3 sq. km. Population 9,110

21. Attach as an Exhibit a map (*Sectional Aeronautical charts where obtainable*) showing the present and proposed 1 mV/m (60 dbu) contours.

Enter the following from Exhibit above:

Gain Area _____ sq. km.
Loss Area _____ sq. km.
Present Area _____ sq. km.

Percent change (gain area plus loss area as divided by present area times 100%) _____

If 50% or more, this constitutes a major change. Indicate in question 2(c), Section 1, accordingly. See 47 C.F.R. Section 73.3573(a)(1).)

Section V-B - FM BROADCAST ENGINEERING DATA (Page 5)

22. For an application involving an auxiliary backup facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) which shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
N/A

- (a) the proposed auxiliary 1 mv/m contour; and
- (b) the 1 mv/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675.

File No. _____

23. Terrain and coverage data (*to be calculated in accordance with 47 C.F.R. Section 73.313*)

Source of terrain data: (*check only one box below*)

- ☒ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: N.G.D.C.)

- ☐ Linearly interpolated 3-second database ☐ Other (summarize)

Are more than eight radials being used to calculate HAAT?

☐ Yes ☒ No

If Yes, specify how many radials are being used. Please note the radials must be evenly spaced and start with the 0 degree radial. _____

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)	If operating on Commercial Channel 3.16 mv/m contour (kilometers)
0	See Exhibit 3		
45			
90			
135			
180			
225			
270			
315			

Allocation Studies

(*See Subpart C of 47 C.F.R. Part 73*)

24. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No.
N/A

Section V-B - FM BROADCAST ENGINEERING DATA (Page 6)

25. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under the Canada-United States FM Agreement of 1947.

Exhibit No.
N/A

26. If the proposed operation is for a full service or Class D facility for a channel in the range from Channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a Class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.
E-4

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths;
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused;
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received;
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference;
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities;
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof;
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified; and
- (h) The name of the map(s) used in the Exhibit(s).

27. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz), attach as an Exhibit information required in 1/ (separation requirements involving intermediate frequency (i.f.) interference).

Exhibit No.
E-4

28. (a) Is the proposed operation on Channel 218, 219 or 220?

☐ Yes ☒ No

- (b) If the answer to (a) is Yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☒ No

- (c) If the answer to (b) is Yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.
N/A

- (d) If the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.
N/A

1/ A showing that the proposed operation meets the minimum distance separation requirements of 47 C.F.R. Section 73.507. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna

Section V-B - FM BROADCAST ENGINEERING DATA (Page 7)

- (e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360 degrees), for the proposed operation;
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location;
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur;
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). (Sufficient lines should be shown so that the location of the sites may be verified.); and
- (5) The official title(s) of the map(s) used in the Exhibit(s).

29. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

☒ Yes ☐ No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.
E-5

30. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1 through 107.9 MHz)?

☐ Yes ☒ No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.
N/A

31. Environmental Statement. (See 47 C.F.R. Section 1.1301 et seq.)

- (a) Would a Commission grant of this application come within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact?

☐ Yes ☒ No

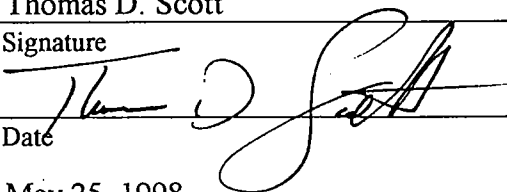
If you answer Yes, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1.1311.

Exhibit No.
N/A

- (b) If No, explain briefly why not.
Wartburg College's application will not have any significant environmental impact and will comply with Section 1.1307 of the FCC rules. (See Exhibit 6)
- (c) Pursuant to OST/OET Bulletin No. 65, the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radiofrequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all stations.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) Thomas D. Scott	Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer
Signature 	Address (include ZIP Code) P O Box 3702 Tupelo, MS 38803
Date May 25, 1998	Telephone No. (include Area Code) 601-844-8888

Federal Aviation Administration
Federal Aviation Administration

Failure to provide all requested information may delay processing of your notice

1. Nature of Proposal

A. Type

- ☐ New Construction
☒ Alteration*

B. Class

- ☒ Permanent
☐ Temporary (Duration _____ months)

C. Work Schedule Dates

Beginning upon approval
End W/in 60 days

2. Complete Description of Structure

Please describe the proposed construction or alteration.

- A. For proposals involving transmitting stations, include effective radiated power (ERP) and assigned frequency. If not known, give frequency band and maximum ERP.
B. For proposals involving overhead wire, transmission lines, etc., include the size and the configuration of the wires and their supporting structures.
C. For buildings, include site orientation, dimensions, and construction materials.
D. **Optional** - Describe the type of obstruction marking and lighting system desired. The FAA will consider this in their study.

* If Alteration, provide previous FAA Aeronautical Study Number, if available:

3A. Name, address, and telephone number of individual, company, corporation, etc. proposing the construction or alteration. (Number, Street, City, State, and Zip Code)

Wartburg College
Eight Street and First Avenue, NW
Waverly, IA 50677
319-352-8200
Area Code Telephone Number

3B. Name, address and telephone number of proponent's representative, if different than 3A. above.

Area Code Telephone Number

4. Location Of Structure

A. Coordinates (to hundredths of seconds, if known)

Latitude 42 43 38.
Longitude 92 28 51.

4D. Source for item 4A data.

- ☒ USGS 7.5' Quad Chart ☐ Survey ☐ Other Specify

Indicate the reference datum.

- ☒ NAD 27 ☐ NAD 83 ☐ Other Specify

B. Nearest City or Town and State

Waverly, IA

(1). Distance to 4B

0

(2). Direction to 4B

0

C. Nearest public or military airport, heliport, flightpark, or seaplane base

Waverly Muni C25

(1). Distance from structure to nearest point of nearest runway

1.7 miles

(2). Direction from structure to airport

306.7 degrees

5. Height and Elevation (to nearest foot)

A. Elevation of ground above mean sea level.

925

B. Height of structure including all appurtenances and lighting above ground or water.

112

C. Overall height above mean sea level

1,037

4E. Description of site location with respect to highways, street, airports, prominent terrain, features, existing structures, etc. Please attach a U.S. Geological Survey Map (or equivalent) showing the construction site. If available, attach a copy of a documented site survey with the surveyor's certification.

Notice is required by Part 77 of the Federal Aviation Regulations (14 C.F.R. Part 77) pursuant to Section 1101 of the Federal Aviation Act of 1958, as amended (49 U.S.C. app. § 1501). Persons who knowingly and willfully violate the Notice requirements of Part 77 are subject to a civil penalty of \$1,000 per day until the notice is received, pursuant to Section 901(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. app. § 1471(a)) as well as the fine (criminal penalty) of not more than \$500 for the first offense and not more than \$2,000 for subsequent offenses, pursuant to Section 902(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. app. § 1472(a)).

I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to obstruction mark and/or light the structure in accordance with established marking & lighting standards as necessary.

Date
5-20-98

Typed or Printed Name and Title of Person Filing Notice

Thomas D. Scott, Consulting Engineer

Signature

Thomas D. Scott

FOR FAA USE ONLY

FAA will either return this form or issue a separate acknowledgment.

The Proposal

- ☐ Does not require a notice to FAA.
☐ Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation.
☐ Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation.
☐ Should be obstruction ☐ marked ☐ lighted per FAA Advisory Circular 70/7490-1, Chapters _____
☐ Obstruction marking and lighting are not necessary.

Supplemental Notice of Construction, FAA Form 7480-2, is required any time the project is abandoned, or

- ☐ At least 48 hours before the start of construction.
☐ Within five days after the construction reaches its greatest height.

This determination expires on _____ unless:

- (a) extended, revised or terminated by the issuing office;
(b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit is made to the FCC on or before the above expiration date. In such cases the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application.

NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date.

If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that agency.

Remarks

NAD 83 Coordinates (Use these coordinates for any future correspondence with the FAA)

Latitude

Longitude

Issued in

Signature

Date

2. COMPLETE DESCRIPTION OF STRUCTURE

A. .100kw , 89.9 MHz (Channel 210)

B. 1/2" COAX, 4 BAY ANTENNA SIDE MOUNTED ON EXISTING TOWER

C. DOES NOT APPLY

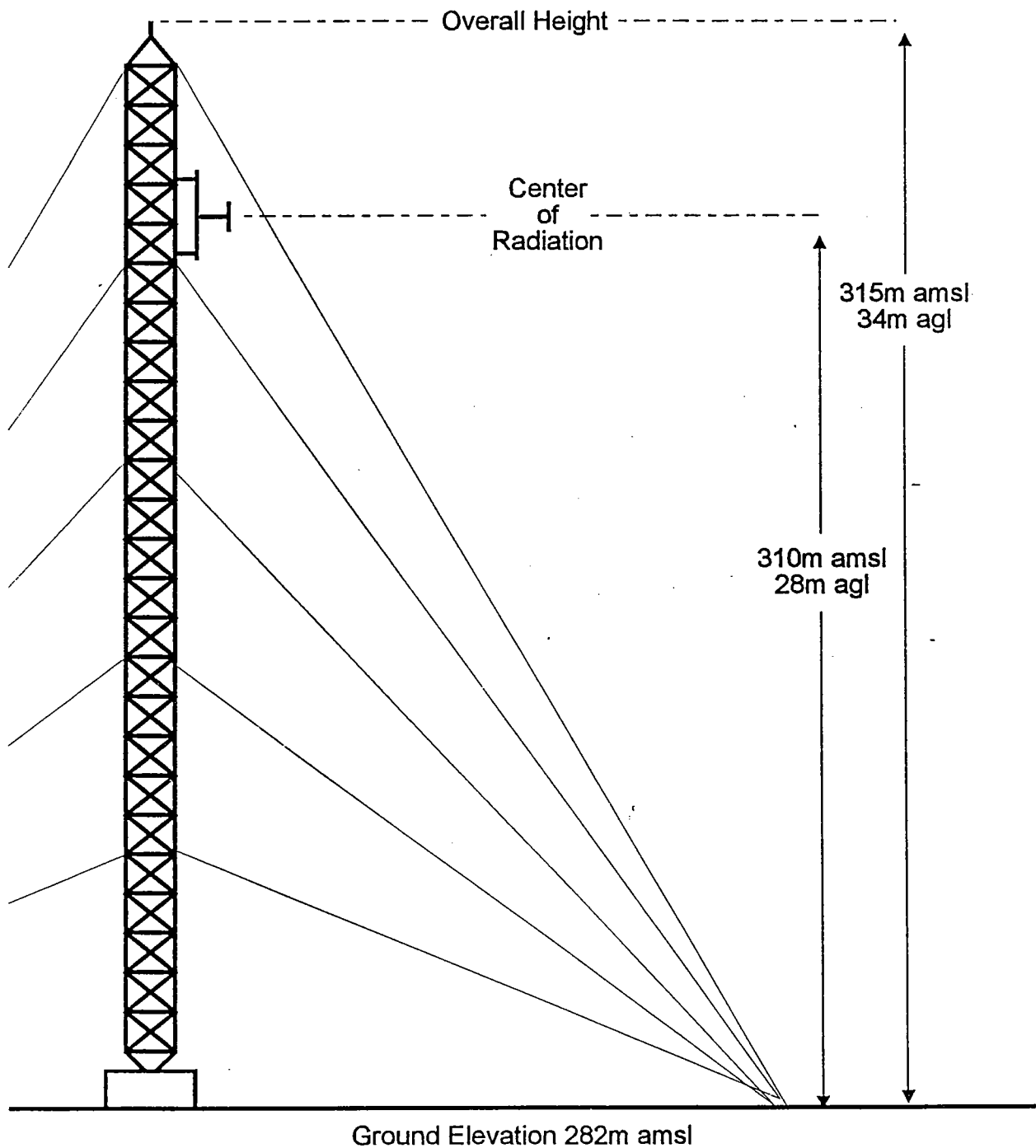
****THE PURPOSE OF THIS STUDY IS TO NOTIFY THE FAA OF THE USE OF AN ADDITIONAL FREQUENCY AND WHAT POWER WE WILL USE. WE ARE NOT PROPOSING TO ALTER THE TOWER IN ANY WAY. THIS ANTENNA WILL BE SIDE MOUNTED.**

Exhibit 1--Height Depiction

May 1998

Scott Engineering	Proposed Site: Waverly, IA	Channel 210 .100kw ERP 16m HAAT
----------------------	-------------------------------	---------------------------------------

Existing Tower



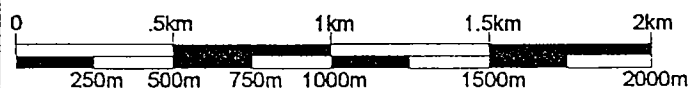
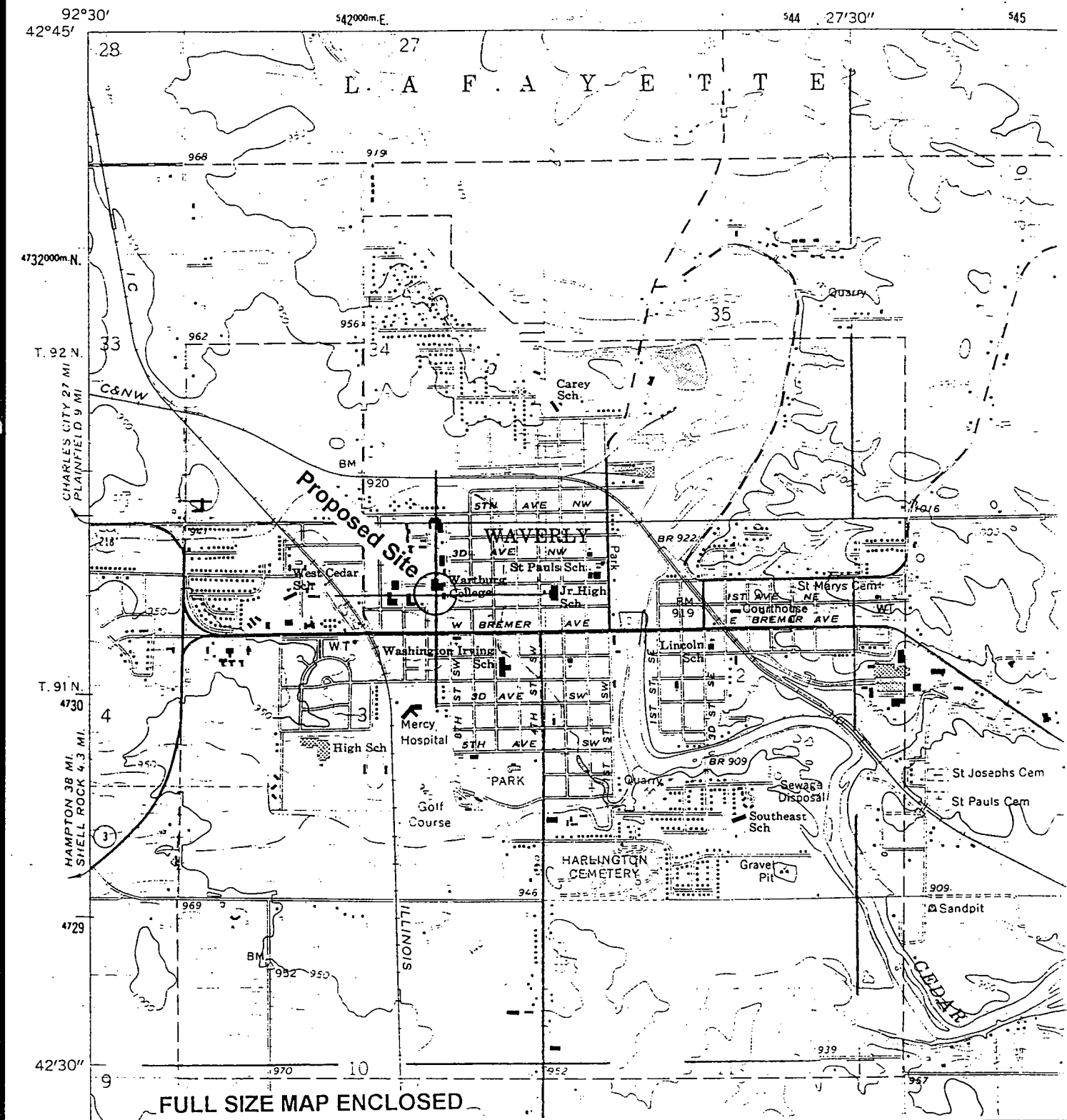
Not to Scale

Exhibit 2

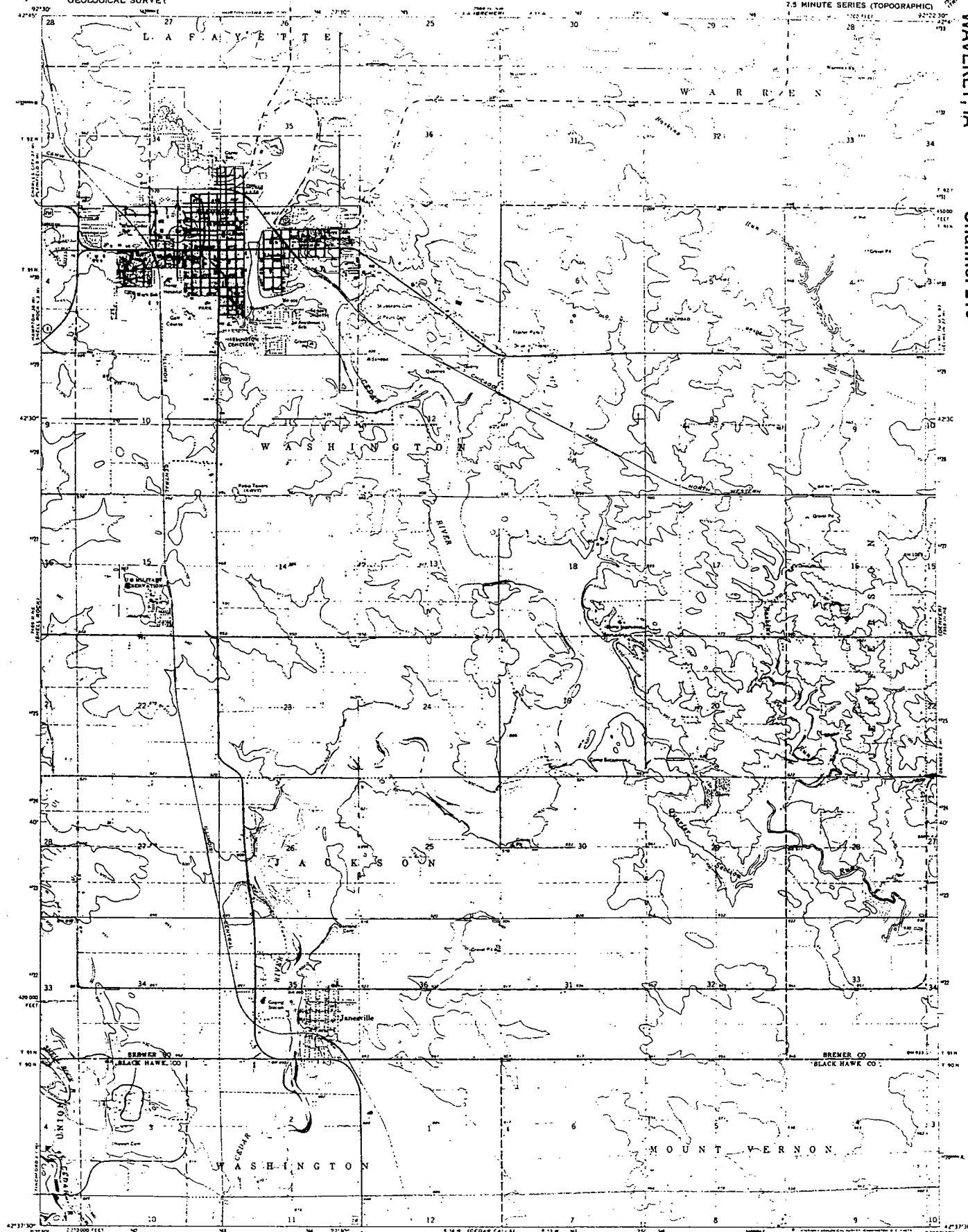
Scott
Engineering

Proposed Site:
Waverly, IA
Channel 210

Site Coordinates:
Latitude: 42° 43' 38"
Longitude: 92° 28' 51"



Waverly Quadrangle
Iowa
7.5 Minute Series (Topographic)



Map made, edited, and published by the Geological Survey

Copyright by 1965 and USC & OS

Topography by photogrammetric methods from aerial photographs taken 1958. Field checked 1963.

Photometric projection. 1927 North American Datum. 10,000 foot grid. Based on Iowa coordinate system, north zone. 1983-meter Universal Transverse Mercator grid. Zone 12, shown in blue.

Red line indicates areas in which only the north buildings are shown.

SCALE 1:25,000

CONTOUR INTERVAL 10 FEET

NOTED: LINES REPRESENT 1000' CONTOURS

DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Main dwt

Light dwt

Medium dwt

Unimproved dwt

U.S. Route

State Route

Channel 210

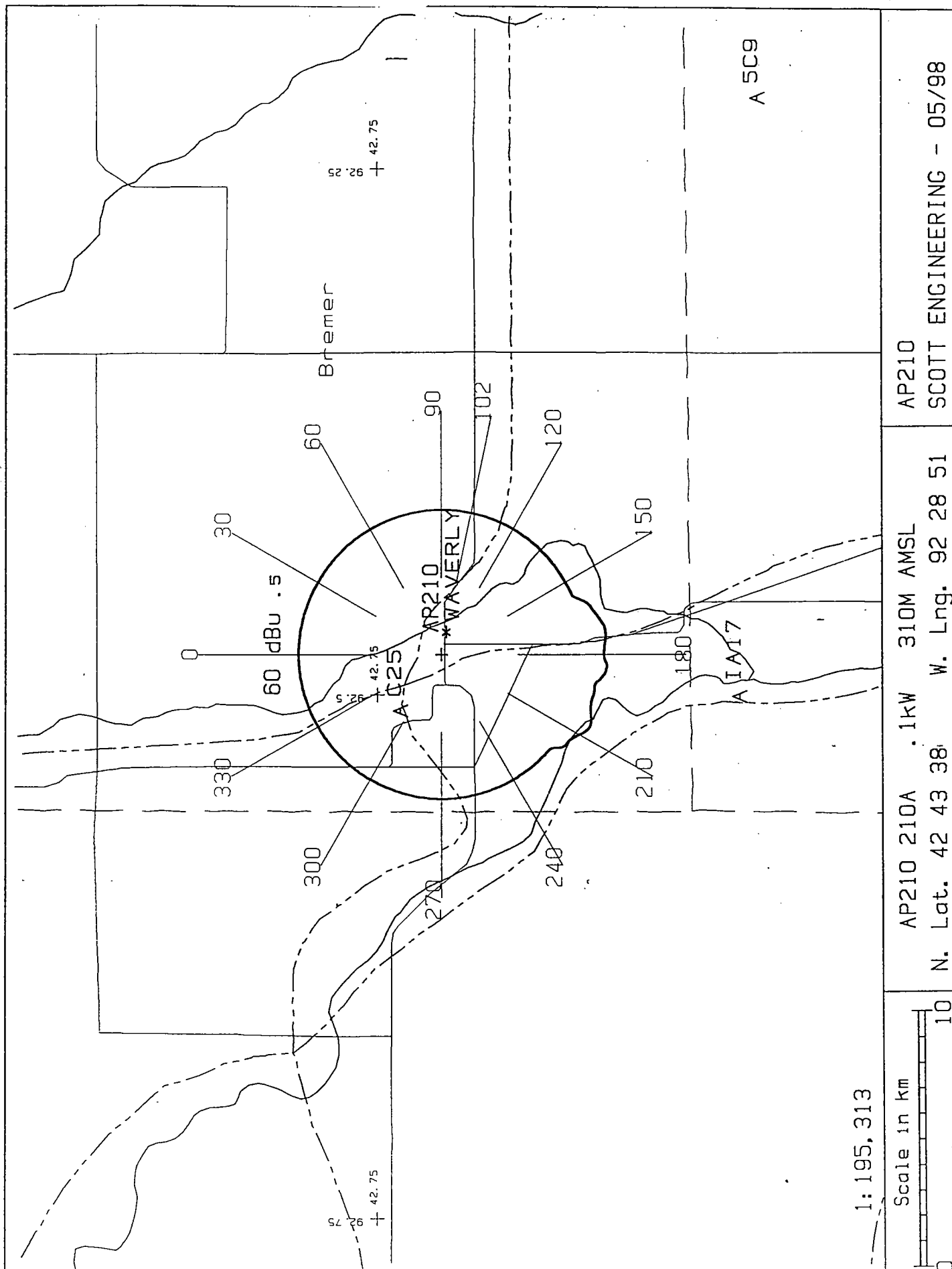


EXHIBIT 3

SCOTT ENGINEERING

WAVERLY, IA

Channel 210

Airport Study at N. Lat 42 43 38 W. Lng. 92 28 51 Search Distance = 16 km

Dist-KM	Bear	Sta.	City	Name	ID	Type
	Lat		Lng			

002.8	306.7	IA	WAVERLY	WAVERLY MUNI	A	C25	PU
		N. Lat.	42 44 31	W. Lng.	92 30 28		
011.7	188.2	IA	JANESVILLE	BLUEBIRD	A	IA17	PR
		N. Lat.	42 37 23	W. Lng.	92 30 04		

TERRAIN AND CONTOUR DATA
AP210 60 dBu SERVICE CONTOUR
WAVERLY, IOWA

ERP = .1 kW
FM - 2-6 Tables 30 Sec

Azimuth Deg T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 60 dBu Contour km
0	295.8	14.2	-10.000	5.6
45	316.2	-6.2	-10.000	5.6
90	306.4	3.6	-10.000	5.6
135	283.1	26.9	-10.000	5.6
180	270.9	39.1	-10.000	6.4
225	284.7	25.3	-10.000	5.6
270	290.5	19.5	-10.000	5.6
315	303.3	6.7	-10.000	5.6

Ave. = 293.9 M 16.1 M

Antenna Radiation Center AMSL = 310.0 M

Geographic Coordinates:

North latitude: 42 43 38
West longitude: 92 28 51

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA Channel 210

05-18-1998

SCOTT ENGINEERING

601 844-8888

CH# 210A - 89.9 MHz

ALLOCATION STUDY: WAVERLY, IOWA

INTERFERENCE CHECKS WITH AP210, WAVERLY, IA at N. LAT. 42 43 38 W. LNG. 92 28 51

PWR = .1 kW H.A.A.T. = 16 M C.O.R. = 310 M AMSL

Protected F(50-50) 60 dBu = 5.65 km

F(50-10) 40 dBu = 18.91 54 dBu = 8.05 80 dBu = 1.87 100 dBu = .71

CH#	CALL	TYPE	* IN *	* OUT *	BEARING	DISTANCE	LAT.	PWR (kW)	INT (km)	PRO (km)
CITY	STATE	LICENSEE			<---		LNG.	HAAT (M)	COR (M)	FILE #
208A	KLCD	LI CN	78.1	76.8	40.5	86.36 km	43 18 56	0.10	2.57	7.64
Decorah	IA	Minnesota Public Radio, In			220.5	53.66 Mi	91 47 18	55.0	387	BLED811023AJ
208C3	KHKE *	LI CN	20.6	0.8	160.2	38.71 km	42 23 58	10.00	12.07	35.87
Cedar Falls	IA	University of Northern Iow			340.2	24.05 Mi	92 19 15	132.8*	401	BLED791029AU
> Reference HAAT at 160.2 degrees = 34.8 M, Pwr.= .1 kW, Pro. Dist. = 6.02 km, Int. Dist. = 2.03 km										
208C3	KHKE *	LI CN	20.6	0.9	160.8	38.65 km	42 23 55	10.00	12.01	35.70
Cedar Falls	IA	University of Northern Iow			340.8	24.02 Mi	92 19 34	131.3*	402	BLED971014KH
> Reference HAAT at 160.8 degrees = 35.4 M, Pwr.= .1 kW, Pro. Dist. = 6.07 km, Int. Dist. = 2.04 km										
209C3	AP209	AP VN	95.2	111.3	91.0	153.88 km	42 41 20	9.90	53.06	34.58
Cuba City	WI	Positive Programming Found			271.0	95.62 Mi	90 36 12	122.0	379	BPED970807ML
FCC Comment > Vertical Polarization Only										
209C3	AP209	AP VN	95.2	111.3	91.0	153.88 km	42 41 20	9.90	53.06	34.58
Cuba City	WI	American Family Associatio			271.0	95.62 Mi	90 36 12	122.0	379	BPED970211MB
210A	KRPR	LI CN	71.9	105.1	4.4	146.54 km	44 02 32	1.00	68.96	22.55
Rochester	MN	Rochester Community Colleg			184.4	91.06 Mi	92 20 26	152.0	502	BLED810325AB
210A	AP210	AP CN	18.2	48.8	137.1	86.91 km	42 09 09	1.25	63.09	19.22
Marion	IA	American Family Associatio			317.1	54.00 Mi	91 45 51	100.0	354	BPED970505MC
210A	AP210	AP CN	21.8	50.6	142.4	87.72 km	42 06 03	1.00	60.29	18.17
Marion	IA	Broadcasting for the Chall			322.4	54.51 Mi	91 49 55	100.0	349	BPED971114ME
210A	AP210	AP CN	34.7	60.0	136.9	94.17 km	42 06 24	1.10	53.77	15.30
Marion	IA	University of Northern Iow			316.9	58.51 Mi	91 42 05	66.0	318	BPED971110MC
210A	AP210	AP CN	13.9	47.3	137.3	86.52 km	42 09 13	1.90	66.98	20.29
Center Point	IA	Florida Public Radio, Inc.			317.3	53.76 Mi	91 46 10	91.0	345	BPED971030MN
211C	WOIFM *	LI CN	7.4	46.0	222.8	138.39 km	41 48 33	100.00	125.38	84.39
Ames	IA	Iowa State Univ of Science			42.8	85.99 Mi	93 36 53	462.7*	745	BLED978
> Reference HAAT at 222.8 degrees = 27.1 M, Pwr.= .1 kW, Pro. Dist. = 5.65 km, Int. Dist. = 8.05 km										
212C	WHLA	LI CY	110.5	75.3	36.6	149.96 km	43 48 17	100.00	33.86	72.82
La Crosse	WI	State of Wi.-Educ. Communi			216.6	93.18 Mi	91 22 06	307.0	574	BMLED970521KB

I.F. RELATIONSHIPS:

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA

Channel 210

PAGE# 2

CH#	CALL	TYPE	* IN *	* OUT *	BEARING	DISTANCE	LAT.	PWR (kW)	INT (km)	PRO (km)
CITY		STATE	LICENSEE		<---		LNG.	HAAT (M)	COR (M)	FILE #
263C2	KDECFM	LI	CN	15.0 R	72.3 M	40.2	87.30 km	43 19 28	30.00	5.20 47.60
Decorah		IA	Decorah Radio, Inc.			220.2	54.25 Mi	91 47 05	150.0	474 BLH910809KC

Nearest CH 6 Grade B =KAAL at 8.92 km, Distance= 114.07 Azimuth = 331.7 Deg. T.

* Uses actual antenna radial HAAT and power toward reference

EXHIBIT 4

SCOTT ENGINEERING

WAVERLY, IA

Channel 210

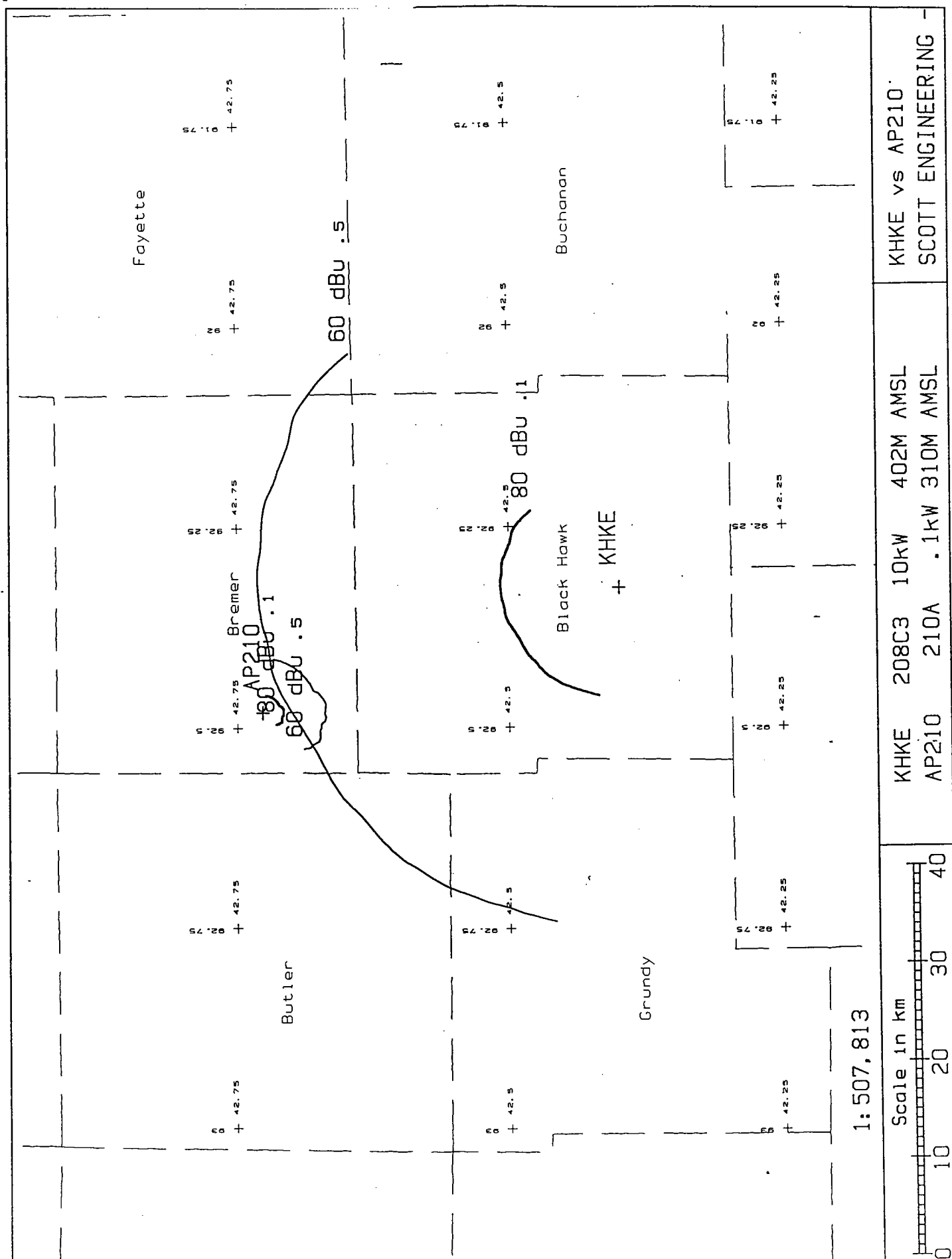


EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

KHKE BLED971014KH
Channel = 208C3
Max ERP = 10 kW
RCAMSL = 402 M
N. Lat = 42 23 55
W. Lng = 92 19 34

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Protected
60 dBu

Interfering
80 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
321.0	010.0000	0125.8	035.4	226.5	000.1000	0024.9	013.1	45.4
322.0	010.0000	0126.4	035.4	226.7	000.1000	0024.9	012.5	46.2
323.0	010.0000	0126.8	035.5	226.7	000.1000	0024.9	011.9	47.1
324.0	010.0000	0126.7	035.5	226.2	000.1000	0025.0	011.3	48.1
325.0	010.0000	0126.5	035.5	225.6	000.1000	0025.1	010.7	49.1
326.0	010.0000	0126.2	035.4	224.8	000.1000	0025.4	010.1	50.1
327.0	010.0000	0125.9	035.4	223.9	000.1000	0026.1	009.5	51.2
328.0	010.0000	0125.5	035.3	222.7	000.1000	0027.2	008.9	52.3
329.0	010.0000	0125.2	035.3	221.3	000.1000	0028.8	008.3	53.3
330.0	010.0000	0124.9	035.3	219.6	000.1000	0031.0	007.8	54.7
331.0	010.0000	0124.7	035.2	217.7	000.1000	0033.6	007.2	56.6
332.0	010.0000	0124.8	035.3	215.7	000.1000	0034.9	006.6	58.4
333.0	010.0000	0125.2	035.3	213.4	000.1000	0035.1	006.1	60.0
334.0	010.0000	0125.8	035.4	210.9	000.1000	0036.7	005.5	62.1
335.0	010.0000	0126.4	035.4	207.6	000.1000	0039.7	005.0	64.6
336.0	010.0000	0127.0	035.5	203.4	000.1000	0039.4	004.4	66.4
337.0	010.0000	0127.5	035.6	197.9	000.1000	0036.6	004.0	67.7
338.0	010.0000	0128.3	035.7	191.2	000.1000	0036.2	003.5	69.7
339.0	010.0000	0129.3	035.8	182.7	000.1000	0040.0	003.1	72.7
340.0	010.0000	0130.4	035.9	171.9	000.1000	0040.6	002.8	74.8
341.0	010.0000	0131.5	036.0	158.9	000.1000	0033.2	002.6	74.3
342.0	010.0000	0132.7	036.2	144.6	000.1000	0025.3	002.6	73.7
343.0	010.0000	0133.6	036.3	131.2	000.1000	0024.9	002.7	72.5
344.0	010.0000	0134.4	036.4	120.1	000.1000	0016.6	003.1	70.5
345.0	010.0000	0135.1	036.5	111.6	000.1000	0013.7	003.5	68.2
346.0	010.0000	0135.5	036.5	105.7	000.1000	0010.3	004.0	65.8
347.0	010.0000	0135.7	036.5	101.5	000.1000	0009.6	004.5	63.6
348.0	010.0000	0135.4	036.5	098.9	000.1000	0008.6	005.1	61.5
349.0	010.0000	0135.0	036.5	097.2	000.1000	0007.4	005.8	59.6
350.0	010.0000	0134.8	036.4	095.6	000.1000	0006.3	006.4	57.8
351.0	010.0000	0134.8	036.4	094.3	000.1000	0005.4	007.0	56.3
352.0	010.0000	0135.0	036.5	093.0	000.1000	0004.8	007.6	54.8
353.0	010.0000	0135.7	036.5	091.6	000.1000	0004.2	008.2	53.5
354.0	010.0000	0136.9	036.7	090.1	000.1000	0003.6	008.8	52.4
355.0	010.0000	0137.7	036.8	089.1	000.1000	0003.2	009.5	51.2
356.0	010.0000	0138.0	036.8	088.7	000.1000	0003.0	010.1	50.1
357.0	010.0000	0138.4	036.9	088.3	000.1000	0002.9	010.7	49.0
358.0	010.0000	0138.7	036.9	088.1	000.1000	0002.8	011.4	47.9
359.0	010.0000	0139.0	036.9	087.9	000.1000	0002.7	012.0	46.9
000.0	010.0000	0139.4	037.0	087.8	000.1000	0002.6	012.7	46.0
001.0	010.0000	0139.6	037.0	087.8	000.1000	0002.6	013.3	45.1

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

KHKE BLED971014KH
Channel = 208C3
Max ERP = 10 kW
RCAMSL = 402 M
N. Lat = 42 23 55
W. Lng = 92 19 34

Protected
60 dBu

Interfering
80 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
141.0	000.1000	0026.3	005.6	344.2	010.0000	0134.5	033.4	63.2
142.0	000.1000	0026.0	005.6	344.0	010.0000	0134.4	033.4	63.2
143.0	000.1000	0025.7	005.6	343.9	010.0000	0134.3	033.3	63.2
144.0	000.1000	0025.4	005.6	343.7	010.0000	0134.2	033.3	63.2
145.0	000.1000	0025.3	005.6	343.5	010.0000	0134.0	033.3	63.2
146.0	000.1000	0025.5	005.6	343.4	010.0000	0133.9	033.2	63.2
147.0	000.1000	0025.9	005.6	343.2	010.0000	0133.8	033.2	63.2
148.0	000.1000	0026.2	005.6	343.1	010.0000	0133.7	033.2	63.3
149.0	000.1000	0026.6	005.6	342.9	010.0000	0133.5	033.2	63.3
150.0	000.1000	0026.8	005.6	342.7	010.0000	0133.4	033.1	63.3
151.0	000.1000	0027.0	005.6	342.6	010.0000	0133.2	033.1	63.3
152.0	000.1000	0027.2	005.6	342.4	010.0000	0133.1	033.1	63.3
153.0	000.1000	0027.6	005.6	342.2	010.0000	0132.9	033.1	63.3
154.0	000.1000	0028.1	005.6	342.1	010.0000	0132.7	033.1	63.3
155.0	000.1000	0028.7	005.6	341.9	010.0000	0132.5	033.0	63.2
156.0	000.1000	0029.6	005.6	341.7	010.0000	0132.4	033.0	63.2
157.0	000.1000	0030.8	005.7	341.6	010.0000	0132.2	033.0	63.3
158.0	000.1000	0032.1	005.8	341.4	010.0000	0132.0	032.9	63.3
159.0	000.1000	0033.4	005.9	341.2	010.0000	0131.8	032.7	63.4
160.0	000.1000	0034.6	006.0	341.1	010.0000	0131.6	032.6	63.4
161.0	000.1000	0035.5	006.1	340.9	010.0000	0131.4	032.6	63.4
162.0	000.1000	0036.1	006.1	340.7	010.0000	0131.2	032.5	63.4
163.0	000.1000	0036.5	006.2	340.5	010.0000	0130.9	032.5	63.4
164.0	000.1000	0036.9	006.2	340.3	010.0000	0130.7	032.5	63.4
165.0	000.1000	0037.5	006.2	340.1	010.0000	0130.5	032.4	63.4
166.0	000.1000	0038.1	006.3	339.9	010.0000	0130.3	032.4	63.4
167.0	000.1000	0038.6	006.3	339.7	010.0000	0130.1	032.4	63.4
168.0	000.1000	0039.1	006.4	339.5	010.0000	0129.8	032.3	63.4
169.0	000.1000	0039.7	006.4	339.3	010.0000	0129.6	032.3	63.4
170.0	000.1000	0040.3	006.5	339.1	010.0000	0129.4	032.3	63.4
171.0	000.1000	0040.5	006.5	338.9	010.0000	0129.1	032.3	63.4
172.0	000.1000	0040.6	006.5	338.7	010.0000	0128.9	032.3	63.4
173.0	000.1000	0040.6	006.5	338.5	010.0000	0128.7	032.3	63.4
174.0	000.1000	0040.3	006.5	338.3	010.0000	0128.5	032.4	63.3
175.0	000.1000	0040.1	006.5	338.1	010.0000	0128.4	032.4	63.3
176.0	000.1000	0039.8	006.4	337.9	010.0000	0128.2	032.5	63.3
177.0	000.1000	0039.5	006.4	337.8	010.0000	0128.1	032.5	63.2
178.0	000.1000	0039.3	006.4	337.6	010.0000	0127.9	032.6	63.2
179.0	000.1000	0039.2	006.4	337.4	010.0000	0127.8	032.6	63.1
180.0	000.1000	0039.1	006.4	337.3	010.0000	0127.7	032.7	63.1
181.0	000.1000	0039.1	006.4	337.1	010.0000	0127.6	032.7	63.1

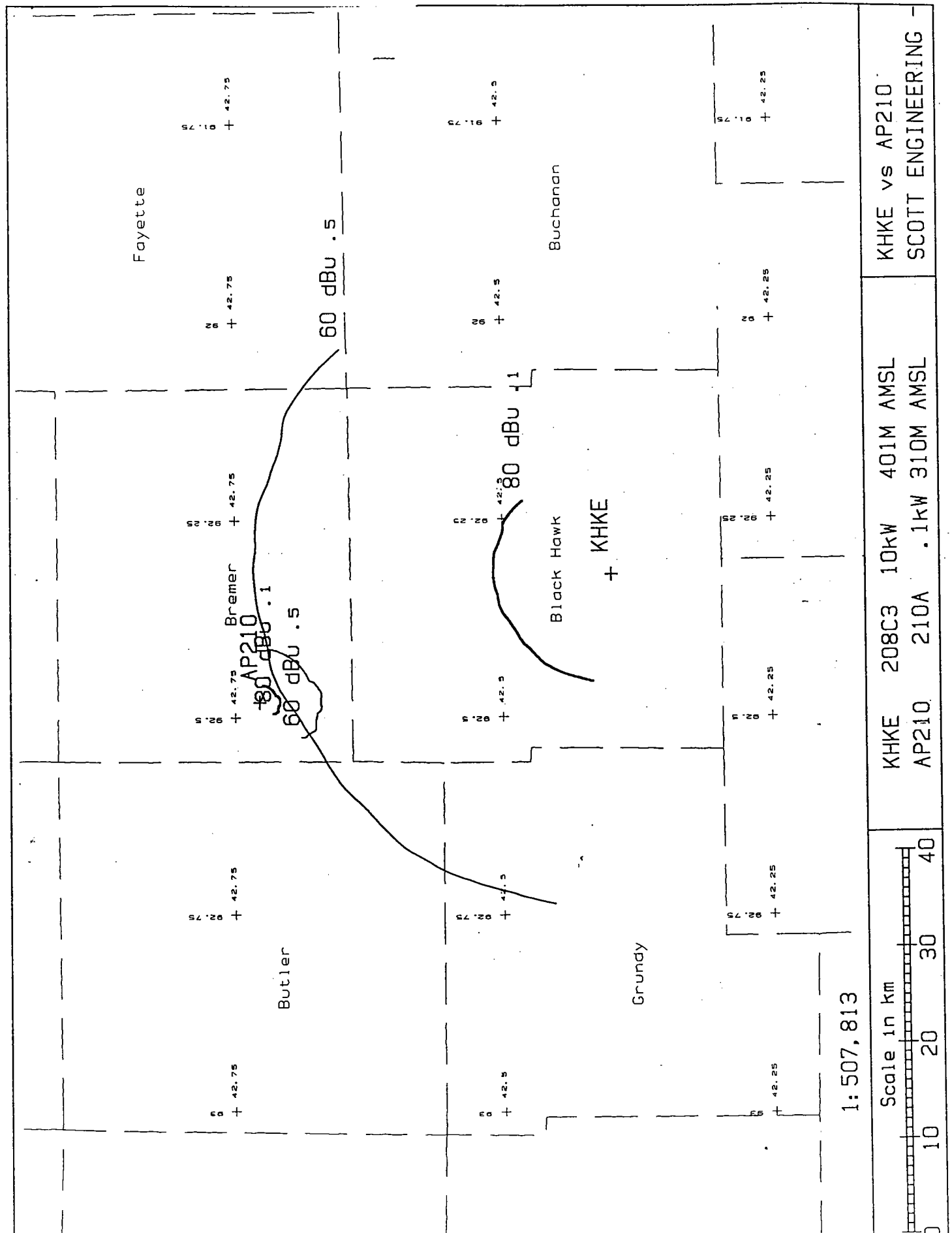


EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

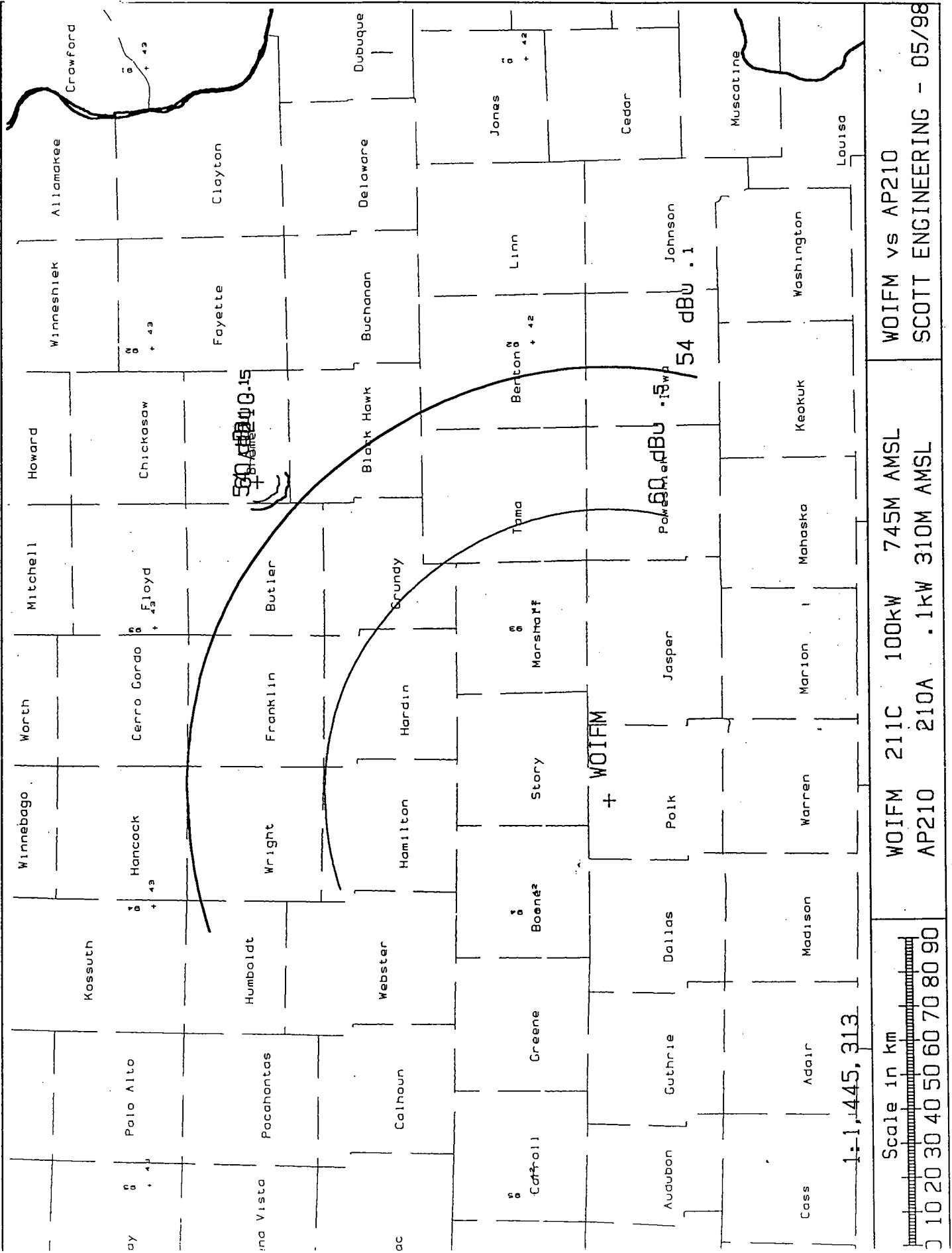
KHKE BLED791029AU
Channel = 208C3
Max ERP = 10 kW
RCAMSL = 401 M
N. Lat = 42 23 58
W. Lng = 92 19 15

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Protected
60 dBu

Interfering
80 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
320.0	010.0000	0124.9	035.3	225.3	000.1000	0025.2	013.4	45.0
321.0	010.0000	0125.4	035.3	225.4	000.1000	0025.2	012.8	45.8
322.0	010.0000	0125.5	035.3	225.2	000.1000	0025.2	012.2	46.7
323.0	010.0000	0125.5	035.3	224.8	000.1000	0025.4	011.6	47.7
324.0	010.0000	0125.3	035.3	224.2	000.1000	0025.8	011.0	48.7
325.0	010.0000	0125.1	035.3	223.4	000.1000	0026.4	010.4	49.7
326.0	010.0000	0124.8	035.3	222.5	000.1000	0027.4	009.8	50.7
327.0	010.0000	0124.5	035.2	221.4	000.1000	0028.7	009.2	51.8
328.0	010.0000	0124.2	035.2	220.0	000.1000	0030.5	008.6	53.0
329.0	010.0000	0124.2	035.2	218.6	000.1000	0032.4	008.0	54.5
330.0	010.0000	0124.3	035.2	217.0	000.1000	0034.3	007.4	56.2
331.0	010.0000	0124.7	035.2	215.3	000.1000	0034.9	006.9	57.8
332.0	010.0000	0125.2	035.3	213.3	000.1000	0035.1	006.3	59.3
333.0	010.0000	0125.8	035.4	211.0	000.1000	0036.7	005.7	61.4
334.0	010.0000	0126.3	035.4	207.8	000.1000	0039.5	005.2	63.8
335.0	010.0000	0126.8	035.5	203.9	000.1000	0039.7	004.7	65.6
336.0	010.0000	0127.5	035.6	199.0	000.1000	0036.9	004.1	66.9
337.0	010.0000	0128.6	035.7	193.3	000.1000	0036.5	003.7	69.1
338.0	010.0000	0130.0	035.9	185.9	000.1000	0040.4	003.2	72.4
339.0	010.0000	0131.4	036.0	176.0	000.1000	0039.8	002.8	74.7
340.0	010.0000	0132.6	036.2	163.1	000.1000	0036.6	002.5	75.7
341.0	010.0000	0133.6	036.3	148.5	000.1000	0026.4	002.5	74.5
342.0	010.0000	0134.3	036.4	134.4	000.1000	0026.7	002.6	73.5
343.0	010.0000	0134.9	036.4	122.6	000.1000	0017.5	002.9	71.4
344.0	010.0000	0135.4	036.5	113.5	000.1000	0014.5	003.3	69.0
345.0	010.0000	0135.5	036.5	107.4	000.1000	0011.4	003.8	66.5
346.0	010.0000	0135.2	036.5	103.4	000.1000	0009.9	004.4	64.1
347.0	010.0000	0134.6	036.4	100.8	000.1000	0009.3	005.0	62.0
348.0	010.0000	0134.3	036.4	098.6	000.1000	0008.4	005.6	60.1
349.0	010.0000	0134.2	036.4	096.7	000.1000	0007.0	006.2	58.3
350.0	010.0000	0134.2	036.4	095.1	000.1000	0005.9	006.8	56.7
351.0	010.0000	0134.5	036.4	093.6	000.1000	0005.1	007.4	55.2
352.0	010.0000	0135.6	036.5	091.7	000.1000	0004.2	008.0	53.9
353.0	010.0000	0136.6	036.6	090.2	000.1000	0003.7	008.6	52.8
354.0	010.0000	0137.4	036.7	089.2	000.1000	0003.2	009.3	51.6
355.0	010.0000	0137.8	036.8	088.6	000.1000	0003.0	009.9	50.5
356.0	010.0000	0138.1	036.8	088.2	000.1000	0002.8	010.5	49.3
357.0	010.0000	0138.5	036.9	087.8	000.1000	0002.7	011.2	48.3
358.0	010.0000	0138.9	036.9	087.6	000.1000	0002.6	011.8	47.3
359.0	010.0000	0139.4	037.0	087.3	000.1000	0002.4	012.5	46.3
000.0	010.0000	0139.6	037.0	087.3	000.1000	0002.4	013.1	45.4



WOIFM vs AP210
SCOTT ENGINEERING - 05/98

WOIFM 211C 100kW 745M AMSL
AP210 210A .1kW 310M AMSL

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

WOIFM BLED978
Channel = 211C
Max ERP = 100 kW
RCAMSL = 745 M
N. Lat = 41 48 33
W. Lng = 93 36 53

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Protected
60 dBu

Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
022.0	100.0000	0457.7	084.0	248.9	000.1000	0023.6	066.3	22.6
023.0	100.0000	0458.6	084.1	247.9	000.1000	0023.8	065.0	22.8
024.0	100.0000	0459.5	084.1	247.0	000.1000	0024.3	064.0	23.0
025.0	100.0000	0460.0	084.1	246.1	000.1000	0025.2	063.0	23.2
026.0	100.0000	0460.4	084.2	245.0	000.1000	0026.3	062.0	23.4
027.0	100.0000	0460.8	084.2	244.0	000.1000	0027.4	061.1	23.6
028.0	100.0000	0461.2	084.2	242.8	000.1000	0027.9	060.2	23.8
029.0	100.0000	0461.5	084.3	241.7	000.1000	0028.0	059.4	23.9
030.0	100.0000	0461.7	084.3	240.5	000.1000	0028.1	058.6	24.1
031.0	100.0000	0461.9	084.3	239.2	000.1000	0027.8	057.9	24.2
032.0	100.0000	0461.9	084.3	237.9	000.1000	0027.3	057.2	24.4
033.0	100.0000	0461.6	084.3	236.5	000.1000	0026.9	056.6	24.5
034.0	100.0000	0461.2	084.2	235.1	000.1000	0026.3	056.1	24.6
035.0	100.0000	0460.9	084.2	233.7	000.1000	0025.4	055.6	24.7
036.0	100.0000	0460.8	084.2	232.2	000.1000	0024.4	055.2	24.8
037.0	100.0000	0460.8	084.2	230.8	000.1000	0023.9	054.8	24.9
038.0	100.0000	0460.8	084.2	229.3	000.1000	0024.1	054.5	25.0
039.0	100.0000	0461.0	084.2	227.7	000.1000	0024.7	054.3	25.0
040.0	100.0000	0461.4	084.2	226.2	000.1000	0025.0	054.0	25.1
041.0	100.0000	0461.9	084.3	224.6	000.1000	0025.5	053.9	25.1
042.0	100.0000	0462.4	084.3	223.1	000.1000	0026.8	053.8	25.1
043.0	100.0000	0462.7	084.3	221.5	000.1000	0028.5	053.8	25.1
044.0	100.0000	0463.1	084.4	219.9	000.1000	0030.6	053.8	25.2
045.0	100.0000	0463.3	084.4	218.4	000.1000	0032.7	054.0	25.5
046.0	100.0000	0463.6	084.4	216.8	000.1000	0034.4	054.1	25.7
047.0	100.0000	0463.8	084.4	215.3	000.1000	0034.9	054.4	25.7
048.0	100.0000	0463.9	084.4	213.8	000.1000	0035.0	054.7	25.7
049.0	100.0000	0463.9	084.4	212.3	000.1000	0035.7	055.1	25.7
050.0	100.0000	0463.8	084.4	210.9	000.1000	0036.7	055.6	25.7
051.0	100.0000	0463.7	084.4	209.5	000.1000	0038.0	056.1	25.8
052.0	100.0000	0463.8	084.4	208.1	000.1000	0039.3	056.7	25.8
053.0	100.0000	0464.0	084.4	206.8	000.1000	0040.1	057.3	25.8
054.0	100.0000	0464.3	084.4	205.5	000.1000	0040.3	058.0	25.6
055.0	100.0000	0464.5	084.5	204.2	000.1000	0039.9	058.7	25.4
056.0	100.0000	0464.7	084.5	203.0	000.1000	0039.1	059.5	25.1
057.0	100.0000	0465.0	084.5	201.8	000.1000	0038.3	060.3	24.8
058.0	100.0000	0465.2	084.5	200.7	000.1000	0037.8	061.1	24.5
059.0	100.0000	0465.1	084.5	199.6	000.1000	0037.2	062.1	24.3
060.0	100.0000	0465.1	084.5	198.6	000.1000	0036.7	063.0	24.0
061.0	100.0000	0465.4	084.5	197.6	000.1000	0036.5	064.0	23.8
062.0	100.0000	0466.0	084.6	196.7	000.1000	0036.4	065.0	23.5

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

WOIFM BLED978
Channel = 211C
Max ERP = 100 kW
RCAMSL = 745 M
N. Lat = 41 48 33
W. Lng = 93 36 53

Protected
60 dBu

Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
203.0	000.1000	0039.1	006.4	043.0	100.0000	0462.7	132.4	52.2
204.0	000.1000	0039.8	006.4	043.0	100.0000	0462.7	132.3	52.2
205.0	000.1000	0040.2	006.5	042.9	100.0000	0462.7	132.3	52.3
206.0	000.1000	0040.3	006.5	042.9	100.0000	0462.7	132.2	52.3
207.0	000.1000	0040.0	006.4	042.8	100.0000	0462.7	132.2	52.3
208.0	000.1000	0039.4	006.4	042.8	100.0000	0462.7	132.2	52.3
209.0	000.1000	0038.5	006.3	042.7	100.0000	0462.6	132.3	52.3
210.0	000.1000	0037.5	006.2	042.7	100.0000	0462.6	132.3	52.2
211.0	000.1000	0036.6	006.2	042.6	100.0000	0462.6	132.4	52.2
212.0	000.1000	0035.9	006.1	042.6	100.0000	0462.6	132.4	52.2
213.0	000.1000	0035.3	006.1	042.5	100.0000	0462.6	132.4	52.2
214.0	000.1000	0034.9	006.0	042.5	100.0000	0462.5	132.4	52.2
215.0	000.1000	0034.9	006.0	042.4	100.0000	0462.5	132.4	52.2
216.0	000.1000	0034.8	006.0	042.4	100.0000	0462.5	132.4	52.2
217.0	000.1000	0034.3	006.0	042.3	100.0000	0462.5	132.5	52.2
218.0	000.1000	0033.2	005.9	042.3	100.0000	0462.5	132.5	52.2
219.0	000.1000	0031.9	005.8	042.2	100.0000	0462.4	132.6	52.2
220.0	000.1000	0030.5	005.7	042.2	100.0000	0462.4	132.7	52.1
221.0	000.1000	0029.2	005.6	042.1	100.0000	0462.4	132.8	52.1
222.0	000.1000	0027.9	005.6	042.1	100.0000	0462.4	132.8	52.1
223.0	000.1000	0026.9	005.6	042.1	100.0000	0462.4	132.8	52.1
224.0	000.1000	0026.0	005.6	042.0	100.0000	0462.4	132.8	52.1
225.0	000.1000	0025.3	005.6	042.0	100.0000	0462.3	132.8	52.1
226.0	000.1000	0025.0	005.6	041.9	100.0000	0462.3	132.8	52.1
227.0	000.1000	0024.8	005.6	041.9	100.0000	0462.3	132.8	52.1
228.0	000.1000	0024.6	005.6	041.8	100.0000	0462.3	132.8	52.1
229.0	000.1000	0024.2	005.6	041.8	100.0000	0462.3	132.8	52.1
230.0	000.1000	0023.9	005.6	041.8	100.0000	0462.2	132.8	52.1
231.0	000.1000	0023.9	005.6	041.7	100.0000	0462.2	132.8	52.1
232.0	000.1000	0024.3	005.6	041.7	100.0000	0462.2	132.8	52.1
233.0	000.1000	0024.9	005.6	041.6	100.0000	0462.2	132.9	52.1
234.0	000.1000	0025.6	005.6	041.6	100.0000	0462.2	132.9	52.1
235.0	000.1000	0026.3	005.6	041.5	100.0000	0462.1	132.9	52.1
236.0	000.1000	0026.7	005.6	041.5	100.0000	0462.1	132.9	52.1
237.0	000.1000	0027.0	005.6	041.5	100.0000	0462.1	132.9	52.1
238.0	000.1000	0027.3	005.6	041.4	100.0000	0462.1	133.0	52.1
239.0	000.1000	0027.7	005.6	041.4	100.0000	0462.1	133.0	52.0
240.0	000.1000	0028.0	005.6	041.3	100.0000	0462.1	133.0	52.0
241.0	000.1000	0028.1	005.6	041.3	100.0000	0462.0	133.1	52.0
242.0	000.1000	0028.0	005.6	041.3	100.0000	0462.0	133.1	52.0
243.0	000.1000	0027.8	005.6	041.2	100.0000	0462.0	133.1	52.0

Channel 210

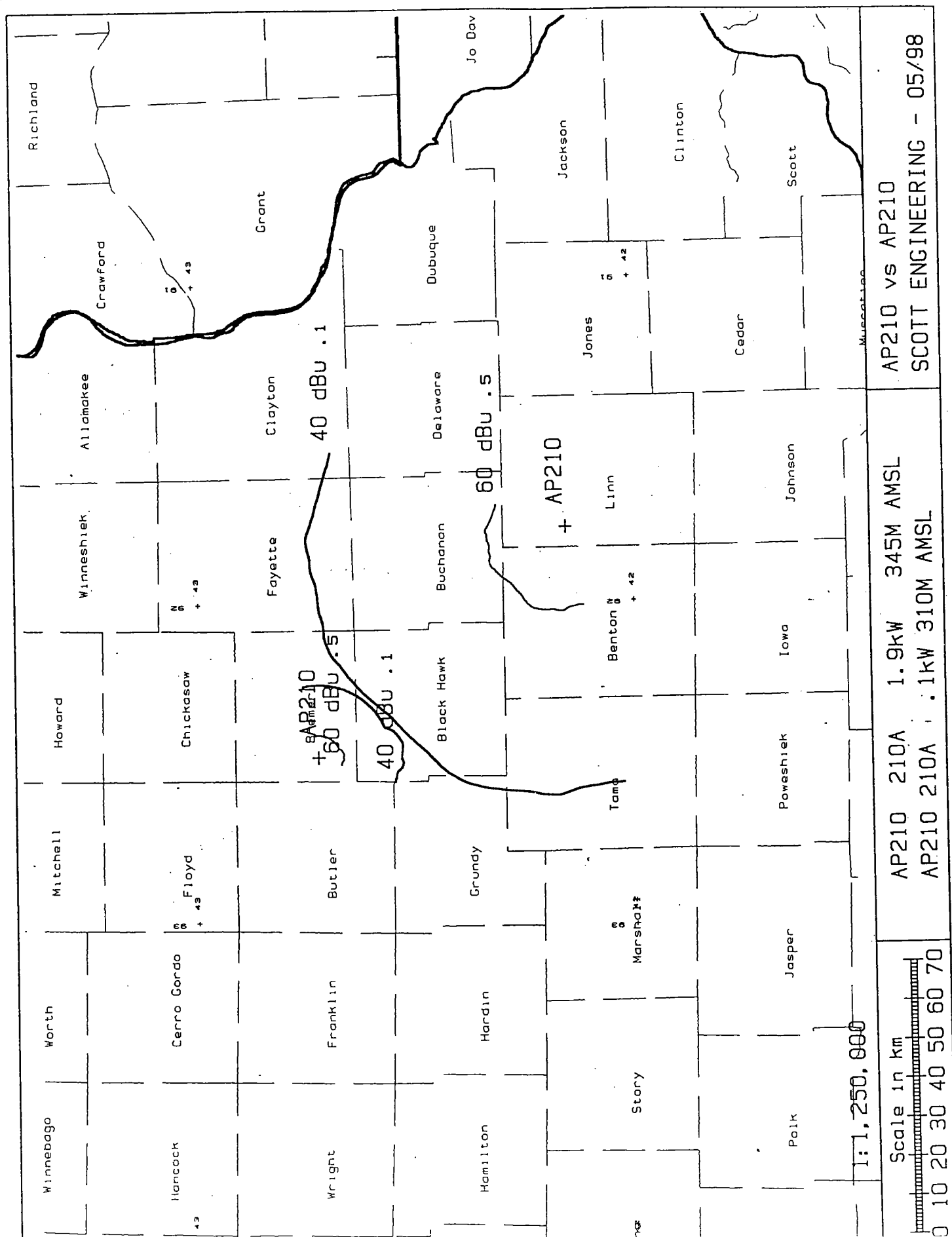


EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

AP210 BPED971030MN
Channel = 210A
Max ERP = 1.9 kW
RCAMSL = 345 M
N. Lat = 42 09 13
W. Lng = 91 46 10

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Protected
60 dBu

Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
298.0	001.9000	0100.2	021.8	143.7	000.1000	0025.5	066.3	22.6
299.0	001.9000	0098.5	021.6	143.3	000.1000	0025.6	066.3	22.6
300.0	001.9000	0096.7	021.4	142.9	000.1000	0025.7	066.4	22.6
301.0	001.9000	0095.0	021.2	142.6	000.1000	0025.8	066.4	22.6
302.0	001.9000	0093.6	021.1	142.2	000.1000	0025.9	066.4	22.6
303.0	001.9000	0092.5	021.0	141.9	000.1000	0026.0	066.4	22.6
304.0	001.9000	0091.5	020.8	141.6	000.1000	0026.1	066.4	22.6
305.0	001.9000	0090.6	020.7	141.2	000.1000	0026.2	066.4	22.6
306.0	001.9000	0089.8	020.6	140.9	000.1000	0026.3	066.4	22.6
307.0	001.9000	0089.3	020.6	140.6	000.1000	0026.4	066.4	22.6
308.0	001.9000	0088.8	020.5	140.3	000.1000	0026.5	066.3	22.6
309.0	001.9000	0088.3	020.5	140.0	000.1000	0026.6	066.3	22.6
310.0	001.9000	0087.5	020.4	139.7	000.1000	0026.7	066.3	22.6
311.0	001.9000	0086.7	020.3	139.4	000.1000	0026.8	066.4	22.6
312.0	001.9000	0086.0	020.2	139.0	000.1000	0026.9	066.4	22.6
313.0	001.9000	0085.7	020.1	138.7	000.1000	0026.9	066.4	22.6
314.0	001.9000	0085.7	020.1	138.4	000.1000	0027.0	066.4	22.6
315.0	001.9000	0086.1	020.2	138.1	000.1000	0027.0	066.3	22.6
316.0	001.9000	0086.7	020.3	137.8	000.1000	0027.1	066.2	22.6
317.0	001.9000	0087.3	020.3	137.5	000.1000	0027.1	066.1	22.6
318.0	001.9000	0087.7	020.4	137.2	000.1000	0027.1	066.1	22.6
319.0	001.9000	0088.3	020.5	136.9	000.1000	0027.1	066.0	22.6
320.0	001.9000	0089.1	020.6	136.6	000.1000	0027.1	065.9	22.7
321.0	001.9000	0089.8	020.6	136.3	000.1000	0027.1	065.9	22.7
322.0	001.9000	0090.4	020.7	136.0	000.1000	0027.1	065.8	22.7
323.0	001.9000	0090.8	020.8	135.6	000.1000	0027.0	065.8	22.7
324.0	001.9000	0091.3	020.8	135.3	000.1000	0026.9	065.8	22.7
325.0	001.9000	0091.8	020.9	135.0	000.1000	0026.9	065.8	22.7
326.0	001.9000	0092.4	020.9	134.7	000.1000	0026.8	065.8	22.7
327.0	001.9000	0092.9	021.0	134.3	000.1000	0026.6	065.9	22.7
328.0	001.9000	0093.2	021.0	134.0	000.1000	0026.5	065.9	22.7
329.0	001.9000	0093.7	021.1	133.7	000.1000	0026.4	065.9	22.7
330.0	001.9000	0094.9	021.2	133.4	000.1000	0026.2	065.9	22.7
331.0	001.9000	0096.2	021.4	133.0	000.1000	0026.0	065.9	22.7
332.0	001.9000	0096.9	021.5	132.7	000.1000	0025.8	065.9	22.7
333.0	001.9000	0096.6	021.4	132.4	000.1000	0025.7	066.1	22.6
334.0	001.9000	0096.2	021.4	132.1	000.1000	0025.5	066.3	22.6
335.0	001.9000	0095.7	021.3	131.8	000.1000	0025.3	066.4	22.6
336.0	001.9000	0094.4	021.2	131.6	000.1000	0025.2	066.7	22.5
337.0	001.9000	0092.4	020.9	131.4	000.1000	0025.0	067.1	22.4
338.0	001.9000	0090.4	020.7	131.2	000.1000	0024.9	067.5	22.4

EXHIBIT 4
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Protected
60 dBu

AP210 BPED971030MN
Channel = 210A
Max ERP = 1.9 kW
RCAMSL = 345 M
N. Lat = 42 09 13
W. Lng = 91 46 10

Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
117.0	000.1000	0015.6	005.6	319.1	001.9000	0088.4	081.3	35.9
118.0	000.1000	0015.9	005.6	319.1	001.9000	0088.4	081.2	35.9
119.0	000.1000	0016.3	005.6	319.0	001.9000	0088.3	081.2	35.9
120.0	000.1000	0016.6	005.6	318.9	001.9000	0088.3	081.2	35.9
121.0	000.1000	0016.8	005.6	318.9	001.9000	0088.2	081.1	36.0
122.0	000.1000	0017.2	005.6	318.8	001.9000	0088.2	081.1	36.0
123.0	000.1000	0017.8	005.6	318.7	001.9000	0088.1	081.1	36.0
124.0	000.1000	0018.6	005.6	318.7	001.9000	0088.1	081.1	36.0
125.0	000.1000	0019.5	005.6	318.6	001.9000	0088.1	081.0	36.0
126.0	000.1000	0020.6	005.6	318.5	001.9000	0088.0	081.0	36.0
127.0	000.1000	0021.8	005.6	318.5	001.9000	0088.0	081.0	36.0
128.0	000.1000	0022.8	005.6	318.4	001.9000	0087.9	081.0	36.0
129.0	000.1000	0023.6	005.6	318.3	001.9000	0087.9	081.0	36.0
130.0	000.1000	0024.2	005.6	318.3	001.9000	0087.9	080.9	36.0
131.0	000.1000	0024.8	005.6	318.2	001.9000	0087.8	080.9	36.0
132.0	000.1000	0025.4	005.6	318.1	001.9000	0087.8	080.9	36.0
133.0	000.1000	0026.0	005.6	318.1	001.9000	0087.8	080.9	36.0
134.0	000.1000	0026.5	005.6	318.0	001.9000	0087.7	080.9	36.0
135.0	000.1000	0026.9	005.6	317.9	001.9000	0087.7	080.9	36.0
136.0	000.1000	0027.1	005.6	317.8	001.9000	0087.7	080.9	36.0
137.0	000.1000	0027.1	005.6	317.8	001.9000	0087.6	080.9	36.0
138.0	000.1000	0027.1	005.6	317.7	001.9000	0087.6	080.9	36.0
139.0	000.1000	0026.9	005.6	317.6	001.9000	0087.6	080.9	36.0
140.0	000.1000	0026.6	005.6	317.6	001.9000	0087.5	080.9	36.0
141.0	000.1000	0026.3	005.6	317.5	001.9000	0087.5	080.9	36.0
142.0	000.1000	0026.0	005.6	317.4	001.9000	0087.5	080.9	36.0
143.0	000.1000	0025.7	005.6	317.4	001.9000	0087.4	080.9	36.0
144.0	000.1000	0025.4	005.6	317.3	001.9000	0087.4	080.9	36.0
145.0	000.1000	0025.3	005.6	317.2	001.9000	0087.4	081.0	36.0
146.0	000.1000	0025.5	005.6	317.2	001.9000	0087.3	081.0	36.0
147.0	000.1000	0025.9	005.6	317.1	001.9000	0087.3	081.0	35.9
148.0	000.1000	0026.2	005.6	317.0	001.9000	0087.3	081.0	35.9
149.0	000.1000	0026.6	005.6	317.0	001.9000	0087.2	081.0	35.9
150.0	000.1000	0026.8	005.6	316.9	001.9000	0087.2	081.0	35.9
151.0	000.1000	0027.0	005.6	316.8	001.9000	0087.2	081.1	35.9
152.0	000.1000	0027.2	005.6	316.8	001.9000	0087.1	081.1	35.9
153.0	000.1000	0027.6	005.6	316.7	001.9000	0087.1	081.1	35.9
154.0	000.1000	0028.1	005.6	316.6	001.9000	0087.1	081.1	35.9
155.0	000.1000	0028.7	005.6	316.6	001.9000	0087.0	081.2	35.9
156.0	000.1000	0029.6	005.6	316.5	001.9000	0087.0	081.2	35.9
157.0	000.1000	0030.8	005.7	316.4	001.9000	0086.9	081.2	35.9

May 13, 1998

Exhibit 5

SCOTT ENGINEERING
Tupelo, MS
EDUCATIONAL FM/TV 6 INTERFERENCE STUDY
FOR PROPOSED

KAAL TV6 AUSTIN, MN
ANTENNA: 696m C.O.R. AMSL
E.R.P. 100 kw
COORDINATES: 43-37-42 93-09-12

AP210 WAVERLY, IA
ANTENNA: 310 C.O.R. AMSL
E.R.P. .100 kw
COORDINATES: 42-43-38 92-28-51

KAAL TV6 AUSTIN, MN
AP210 WAVERLY, IA

REL. CONTOUR: 47 dBu
REL. CONTOUR: 67.3 dBu(50,10)

THE REQUIRED U/D RATIO HAS BEEN MET ACCORDING TO THE COMMISSION'S
RULES AS STATED IN C.F.R. §73.525. NO OVERLAP OF RELEVANT CONTOURS
OCCURS.

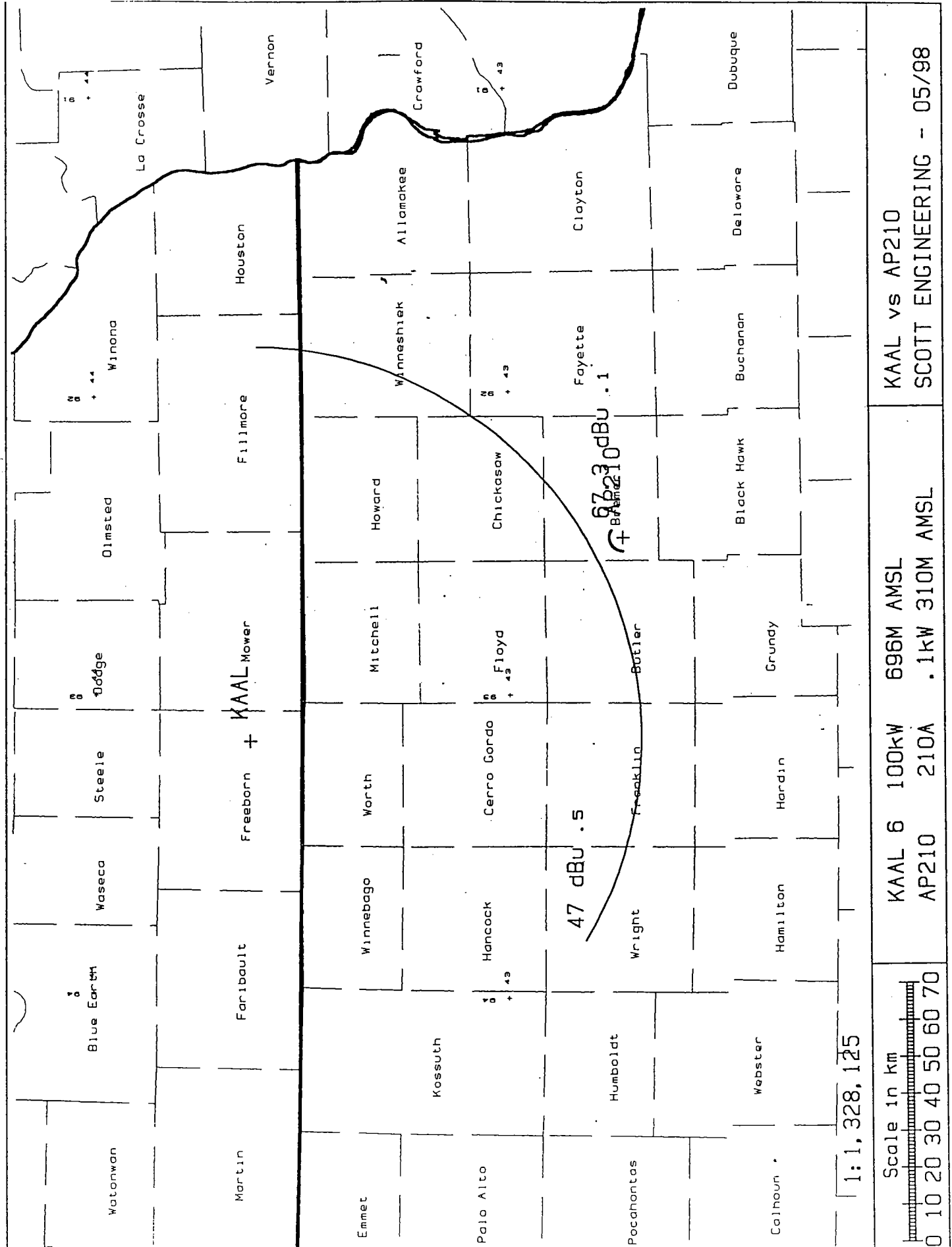


EXHIBIT 5
SCOTT ENGINEERING
WAVERLY, IA **Channel 210**

KAAL BLED978
Channel = 6
Max ERP = 100 kW
RCAMSL = 696 M
N. Lat = 433742
W. Lng = 930912

Protected
47 dBu

AP210
Channel = 210A
Max ERP = .1 kW
RCAMSL = 310 M
N. Lat = 42 43 38
W. Lng = 92 28 51

Interfering
67.3 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
131.0	100.0000	0327.5	105.7	039.1	000.1000	-0006.0	039.8	28.6
132.0	100.0000	0327.1	105.7	038.5	000.1000	-0006.0	037.7	29.3
133.0	100.0000	0326.5	105.6	038.2	000.1000	-0005.9	035.8	29.9
134.0	100.0000	0325.8	105.6	037.9	000.1000	-0005.9	034.0	30.6
135.0	100.0000	0325.2	105.5	037.4	000.1000	-0005.9	032.2	31.3
136.0	100.0000	0324.8	105.5	036.9	000.1000	-0005.8	030.4	32.1
137.0	100.0000	0324.7	105.5	036.3	000.1000	-0005.8	028.5	33.0
138.0	100.0000	0325.0	105.5	035.6	000.1000	-0005.8	026.7	34.1
139.0	100.0000	0325.4	105.5	034.7	000.1000	-0006.0	024.9	35.2
140.0	100.0000	0325.9	105.6	033.6	000.1000	-0006.2	023.1	36.5
141.0	100.0000	0326.0	105.6	032.2	000.1000	-0006.3	021.4	37.8
142.0	100.0000	0325.8	105.6	030.4	000.1000	-0006.2	019.6	39.1
143.0	100.0000	0325.2	105.5	028.1	000.1000	-0006.2	018.0	40.5
144.0	100.0000	0324.7	105.5	025.2	000.1000	-0007.0	016.3	41.9
145.0	100.0000	0324.5	105.5	021.7	000.1000	-0005.5	014.8	43.3
146.0	100.0000	0324.4	105.5	017.2	000.1000	-0002.0	013.3	45.2
147.0	100.0000	0324.2	105.4	011.6	000.1000	0003.4	011.9	47.1
148.0	100.0000	0323.9	105.4	004.4	000.1000	0012.1	010.7	49.0
149.0	100.0000	0323.3	105.4	355.6	000.1000	0018.6	009.8	50.6
150.0	100.0000	0322.6	105.3	345.1	000.1000	0021.4	009.2	51.7
151.0	100.0000	0321.9	105.3	333.6	000.1000	0012.4	009.0	52.1
152.0	100.0000	0321.6	105.3	322.0	000.1000	0006.7	009.1	51.9
153.0	100.0000	0321.5	105.2	311.2	000.1000	0008.0	009.6	50.9
154.0	100.0000	0321.5	105.2	301.8	000.1000	0012.9	010.5	49.4
155.0	100.0000	0321.5	105.2	294.1	000.1000	0016.6	011.6	47.6
156.0	100.0000	0321.3	105.2	288.0	000.1000	0020.0	012.9	45.7
157.0	100.0000	0320.7	105.2	283.3	000.1000	0019.8	014.3	43.8
158.0	100.0000	0320.2	105.2	279.5	000.1000	0017.9	015.9	42.2
159.0	100.0000	0319.9	105.1	276.5	000.1000	0017.4	017.5	40.9
160.0	100.0000	0319.7	105.1	274.1	000.1000	0017.3	019.2	39.5
161.0	100.0000	0319.4	105.1	272.1	000.1000	0018.0	020.9	38.2
162.0	100.0000	0318.9	105.1	270.6	000.1000	0019.1	022.6	36.8
163.0	100.0000	0318.4	105.0	269.3	000.1000	0020.0	024.4	35.6
164.0	100.0000	0318.1	105.0	268.3	000.1000	0020.5	026.2	34.4
165.0	100.0000	0318.0	105.0	267.4	000.1000	0020.7	027.9	33.3
166.0	100.0000	0318.0	105.0	266.7	000.1000	0020.6	029.7	32.4
167.0	100.0000	0318.1	105.0	266.1	000.1000	0020.5	031.5	31.5
168.0	100.0000	0318.3	105.0	265.6	000.1000	0020.5	033.4	30.8
169.0	100.0000	0318.4	105.0	265.3	000.1000	0020.4	035.2	30.2
170.0	100.0000	0318.5	105.0	265.0	000.1000	0020.3	037.0	29.5
171.0	100.0000	0318.5	105.0	264.8	000.1000	0020.4	038.8	28.9

AMERICAN FAMILY ASSOCIATION
EXHIBIT 6
WAVERLY, IOWA
R.F. HAZARD STUDY

The proposed antenna will be energized such that it produces .100kw horizontally polarized from a center of radiation of 28 meters above ground.

By using the formulas expressed in OST Bulletin, NO. 65, Oct. 1985, "Evaluating Compliance with F.C.C. Specified Guidelines for Human Exposure to Radio Frequency Radiation", published by the Federal Communication Commission's Office of Science and Technology and then by applying a combination of the element and array pattern as defined in E.P.A. study PB85-245868 ("**Engineering Assessment of the Potential Impact of the Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services**") using a Shively 4-Bay type horizontally polarized, it can be shown that the proposed antenna generates a maximum of .074 micro watts per square centimeter at a distance of 3 meters from the tower base and 6 feet above the ground. This value amounts to .0074 percent of the maximum of 1000 microwatts/centimeter squared.

The FM station will be in compliance with the Commission's rules regarding exposure to workers or the general public to levels of radio frequency radiation in excess of the American National Standard Safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 KHz to 100 GHz. (ANSI 95.1-1982)

In regard to protecting workers at the tower site; should tower workers be required to work at the site where exposure would result in a non-ionization radiation level greater than the maximum A.N.S.I. standard, the applicant and all other multi-users of the proposed site are in agreement to cease radiating or will lower the power until the workers clear the area.

EXHIBIT 6

SCOTT ENGINEERING

WAVERLY, IA

Channel 210

Environment = Controlled, Maximum = 1000 $\mu\text{W}/\text{sq cm}$

HORZ. DISTANCE FROM FM RADIATOR Vs POWER DENSITY (Microwatt/Square cm)

Shively 6800, 4 Spc.= 1 W, Pwr H.=.100 Pwr V.=0 COR= 26M

Dist (Meters) PD (H) PD (V) Total (uW/cm2) Percent Max.

	0.03	0.00	0.03	0.0
1	0.04	0.00	0.04	0.0
2	0.05	0.00	0.05	0.0
3	0.07	0.00	0.07	0.0
4	0.11	0.00	0.11	0.0
5	0.16	0.00	0.16	0.0
6	0.19	0.00	0.19	0.0
7	0.22	0.00	0.22	0.0
8	0.25	0.00	0.25	0.0
9	0.28	0.00	0.28	0.0
10	0.31	0.00	0.31	0.0
11	0.34	0.00	0.34	0.0
12	0.36	0.00	0.36	0.0
13	0.35	0.00	0.35	0.0
14	0.32	0.00	0.32	0.0
15	0.27	0.00	0.27	0.0
16	0.23	0.00	0.23	0.0
17	0.18	0.00	0.18	0.0
18	0.13	0.00	0.13	0.0
19	0.08	0.00	0.08	0.0
20	0.04	0.00	0.04	0.0
21	0.02	0.00	0.02	0.0
22	0.00	0.00	0.00	0.0
23	0.00	0.00	0.00	0.0
24	0.00	0.00	0.00	0.0
25	0.01	0.00	0.01	0.0
26	0.03	0.00	0.03	0.0
27	0.04	0.00	0.04	0.0
28	0.06	0.00	0.06	0.0
29	0.07	0.00	0.07	0.0
30	0.07	0.00	0.07	0.0
31	0.08	0.00	0.08	0.0
32	0.08	0.00	0.08	0.0
33	0.07	0.00	0.07	0.0
34	0.07	0.00	0.07	0.0
35	0.06	0.00	0.06	0.0
36	0.05	0.00	0.05	0.0
37	0.04	0.00	0.04	0.0
38	0.03	0.00	0.03	0.0
39	0.02	0.00	0.02	0.0
40	0.02	0.00	0.02	0.0
41	0.01	0.00	0.01	0.0
42	0.01	0.00	0.01	0.0
43	0.00	0.00	0.00	0.0
44	0.00	0.00	0.00	0.0
45	0.00	0.00	0.00	0.0
46	0.00	0.00	0.00	0.0
47	0.00	0.00	0.00	0.0

EXHIBIT 6

SCOTT ENGINEERING

WAVERLY, IA

Channel 211

PAGE # 2

Dist (M)	Total (μ W/cm2)		Percent of Max	
48	0.00	0.00	0.00	0.0
49	0.01	0.00	0.01	0.0
50	0.01	0.00	0.01	0.0
51	0.01	0.00	0.01	0.0
52	0.02	0.00	0.02	0.0
53	0.02	0.00	0.02	0.0
54	0.02	0.00	0.02	0.0
55	0.03	0.00	0.03	0.0
56	0.03	0.00	0.03	0.0
57	0.03	0.00	0.03	0.0
58	0.04	0.00	0.04	0.0
59	0.04	0.00	0.04	0.0
60	0.04	0.00	0.04	0.0
61	0.04	0.00	0.04	0.0
62	0.04	0.00	0.04	0.0
63	0.04	0.00	0.04	0.0
64	0.04	0.00	0.04	0.0
65	0.04	0.00	0.04	0.0
66	0.04	0.00	0.04	0.0
67	0.04	0.00	0.04	0.0
68	0.04	0.00	0.04	0.0
69	0.04	0.00	0.04	0.0
70	0.03	0.00	0.03	0.0
71	0.03	0.00	0.03	0.0
72	0.03	0.00	0.03	0.0
73	0.03	0.00	0.03	0.0
74	0.03	0.00	0.03	0.0
75	0.03	0.00	0.03	0.0
76	0.02	0.00	0.02	0.0
77	0.02	0.00	0.02	0.0
78	0.02	0.00	0.02	0.0
79	0.02	0.00	0.02	0.0
80	0.02	0.00	0.02	0.0
81	0.02	0.00	0.02	0.0
82	0.01	0.00	0.01	0.0
83	0.01	0.00	0.01	0.0
84	0.01	0.00	0.01	0.0
85	0.01	0.00	0.01	0.0
86	0.01	0.00	0.01	0.0
87	0.01	0.00	0.01	0.0
88	0.01	0.00	0.01	0.0
89	0.01	0.00	0.01	0.0
90	0.00	0.00	0.00	0.0
91	0.00	0.00	0.00	0.0
92	0.00	0.00	0.00	0.0
93	0.00	0.00	0.00	0.0
94	0.00	0.00	0.00	0.0
95	0.00	0.00	0.00	0.0
96	0.00	0.00	0.00	0.0
97	0.00	0.00	0.00	0.0
98	0.00	0.00	0.00	0.0
99	0.00	0.00	0.00	0.0
100	0.00	0.00	0.00	0.0

CERTIFICATION

I, Thomas D. Scott, do hereby certify under penalty of perjury that:

I am the holder of a valid Restricted Radio Telephone Operator's Permit, granted in September, 1987;

I have been a certified member of the Society of broadcast Engineers since 1989,

I am president of Scott Engineering and Communication, of Tupelo, Mississippi, specializing in technical matters relating to the broadcast industry and the associated RF transmission systems; and

I am the individual responsible for preparation of the accompanying application. My work is on record before the Commission, and that all presented herein is true and correct to the best of my knowledge, information and belief.


Thomas D. Scott
June 12, 1998