

ENGINEERING STATEMENT
IN SUPPORT OF A
SPECIAL TEMPORARY AUTHORIZATION (STA)
FOR THE PROPOSED DIGITAL TV OPERATION OF
KWNB-DT, HAYES CENTER, NEBRASKA
FEBRUARY 2009

This engineering statement has been prepared on behalf of Pappas Telecasting of Central Nebraska, L.P., (“Pappas”), licensee of television station KWNB-TV, Hayes Center, Nebraska in support of an application for a Special Temporary Authorization (STA) for the station’s digital TV (DTV) operation on Channel 6.

At present KWNB-TV, Facility ID Number 21162, is authorized to operate its analog TV facilities on Channel 6 (82-88 MHz) with 100 kW effective radiated power (ERP) and 221 meters antenna height above average terrain (HAAT) using a non-directional TV antenna. In MB Docket 08-193, RM-11489, the Commission has substituted TV Channel 6 for its assigned Channel 18 at Hayes Center, Nebraska. The allotted Channel 6 DTV operation is with 3 kW ERP and 221 meters HAAT from the station’s licensed site. Pappas is requesting a Special Temporary Authorization (STA) on Channel 6 with 3 kW ERP and 221 meters HAAT.

The following information provides pertinent data for the proposed KWNB-DT operation.

Name of the Licensee:	Pappas Telecasting of Central Nebraska, L.P.
Station Location:	NE-Hayes Center
Channel:	6
Hours of Operation:	Unlimited
Transmitter:	Type Accepted
Antenna Type:	GE, TY-60-F
Beam Tilt:	None

The attached map shows the proposed KWNB-DT 35 dBu contour will encompass the allotted principal community of Hayes Center, Nebraska (see Figure 1).

The proposed KWNB-DT facility complies with Section 73.1030 of the Commission's rules; therefore, notification to radio astronomy installations, radio receiving installations and FCC monitoring stations is not required.

KWNB-DT would be operating from the existing tower which is registered (ASR No. 1026527) by the Commission and no changes are proposed to require a change in the registration.

Table I

Census data selected 2000

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 01-30-2009 Time: 09:54:22

Record Selected for Analysis

KWNB-TV USERRECORD-01 HAYES CENTER NE US
 Channel 06 ERP 3. kW HAAT 221. m RCAMSL 01160 m
 Latitude 040-37-32 Longitude 0101-01-45
 Status APP Zone 2 Border
 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)	28.0 dBu F(50,90) (km)
0.0	3.000	220.6	89.1
45.0	3.000	231.8	90.0
90.0	3.000	242.0	90.8
135.0	3.000	251.7	91.6
180.0	3.000	237.6	90.4
225.0	3.000	214.9	88.7
270.0	3.000	190.8	86.8
315.0	3.000	180.7	86.0

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KWNB-TV 06 HAYES CENTER NE USERRECORD01

and station

SHORT TO: KWNB-TV 06 HAYES CENTER NE BLCT 20000828AHT
 040-37-32 0101-01-45
 Req. separation 273.6 Actual separation 0.0 Short 273.6 km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

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

	Proposed Station			
Channel	Call	City/State		ARN
06	KWNB-TV	HAYES CENTER NE		USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	KHAS-TV	HASTINGS NE	223.1	LIC	BLCT	-2417
06	KRMA-TV	DENVER CO	371.1	CP	BPET	-19990107KE
06	KRMA-TV	DENVER CO	372.0	APP	BSTA	-20090105AHL
06	KRMA-TV	DENVER CO	372.0	LIC	BLET	-19950504KE
06	KBSD-TV	ENSIGN KS	336.9	LIC	BMLCT	-20040826AAG
06	NEW	HUTCHINSON KS	380.2	APP	BPRM	-20011009AEG
06	WOWT-TV	OMAHA NE	426.6	LIC	BLCT	-19831024KI
06	KPLO-TV	RELIANCE SD	389.3	LIC	BLCT	-1436

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Analysis of Interference to Affected Station 1

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
05	KHASTV	HASTINGS NE	DTVPLN	-NPLN0364

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	WOITV	AMES IA	418.9	PLN	DTVPLN	-NPLN0349
05	KBSD-DT	ENSIGN KS	374.8	PLN	DTVPLN	-DTVP0020
05	KCTV	KANSAS CITY MO	368.9	PLN	DTVPLN	-NPLN0358
05	KDLT	MITCHELL SD	341.6	PLN	DTVPLN	-NPLN0378
06	KWNBTV	HAYES CENTER NE	223.4	PLN	DTVPLN	-NPLN0427
06	WOWT	OMAHA NE	211.0	PLN	DTVPLN	-NPLN0428

Results for:	5N NE HASTINGS	DTVPLN	NPLN0364	PLN
		POPULATION	AREA (sq km)	
	within Noise Limited Contour	230175	28847.4	
	not affected by terrain losses	229283	28375.8	
	lost to NTSC IX	6576	2014.0	
	lost to additional IX by ATV	381	175.8	
	lost to all IX	6957	2189.8	

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
05	KHAS-TV	HASTINGS NE	BLCT	-2417

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	WOI-TV	AMES IA	418.9	LIC	BLCT	-2151
05	KBSD-DT	ENSIGN KS	374.8	PLN	DTVPLN	-DTVP0020
05	KCTV	KANSAS CITY MO	368.9	LIC	BMLCT	-19951020KE
05	KDLV-TV	MITCHELL SD	345.4	LIC	BLCT	-20020501AAL
06	KWNB-TV	HAYES CENTER NE	223.1	LIC	BLCT	-20000828AHT
06	WOWT-TV	OMAHA NE	211.0	LIC	BLCT	-19831024KI
06	KWNB-TV	HAYES CENTER NE	223.1	APP	USERRECORD-01	

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Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 2

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
06	KRMATV	DENVER CO	DTVPLN	-NPLN0400

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	KOAA-TV	PUEBLO CO	162.2	PLN	DTVPLN	-NPLN0343
05	KGWNTV	CHEYENNE WY	153.7	PLN	DTVPLN	-NPLN0390
06	KREZTV	DURANGO CO	358.3	PLN	DTVPLN	-NPLN0401
06	KWNBTV	HAYES CENTER NE	371.6	PLN	DTVPLN	-NPLN0427
06	NEW	VERNAL UT	338.6	PLN	DTVPLN	-NPLN0447
06	NEW	CASPER WY	347.2	PLN	DTVPLN	-NPLN0453

Results for:	6N CO DENVER	DTVPLN	NPLN0400	PLN
		POPULATION	AREA (sq km)	
	within Noise Limited Contour	3184940	32522.3	
	not affected by terrain losses	3004687	29627.6	
	lost to NTSC IX	151088	2471.0	
	lost to additional IX by ATV	0	0.0	
	lost to all IX	151088	2471.0	

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
06	KRMA-TV	DENVER CO	BPET	-19990107KE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	KOAA-TV	PUEBLO CO	155.3	LIC	BLCT	-19850314KG
05	KGWN-TV	CHEYENNE WY	159.6	LIC	BLCT	-1639
06	KREZ-TV	DURANGO CO	355.4	LIC	BLCT	-19851107KJ
06	KWNB-TV	HAYES CENTER NE	371.1	LIC	BLCT	-20000828AHT
06	NEW	DES MOINES NM	344.2	APP	BPRM	-20011009AEH
06	KBCJ	VERNAL UT	342.8	CP MOD	BPCT	-20050915ADU
06	KPTW	CASPER WY	354.0	LIC	BLET	-20070228ABK
06	KWNB-TV	HAYES CENTER NE	371.1	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for:	6N CO DENVER	BPET	19990107KE	CP
		POPULATION	AREA (sq km)	
	within Noise Limited Contour	2947657	25092.2	
	not affected by terrain losses	2919572	23484.7	
	lost to NTSC IX	229311	2199.3	
	lost to additional IX by ATV	0	0.0	
	lost to all IX	229311	2199.3	

Potential Interfering Stations Included in above Scenario 1

5N CO PUEBLO	BLCT	19850314KG	LIC
5N WY CHEYENNE	BLCT	1639	LIC
6N NE HAYES CENTER	BLCT	20000828AHT	LIC

After Analysis

Results for:	6N CO DENVER	BPET	19990107KE	CP
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	POPULATION	AREA (sq km)
within Noise Limited Contour	2947657	25092.2
not affected by terrain losses	2919572	23484.7
lost to NTSC IX	228860	1483.5
lost to additional IX by ATV	134	203.9
lost to all IX	228994	1687.5

Potential Interfering Stations Included in above Scenario 1

5N CO PUEBLO	BLCT	19850314KG	LIC
5N WY CHEYENNE	BLCT	1639	LIC
6A NE HAYES CENTER	USERRECORD01		APP

Percent new IX = 0.0045%

Worst case new IX 0.0045% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
06	KRMA-TV	DENVER CO	BSTA	-20090105AHL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	KOAA-TV	PUEBLO CO	162.2	LIC	BLCT	-19850314KG
05	KGWN-TV	CHEYENNE WY	153.7	LIC	BLCT	-1639
06	KREZ-TV	DURANGO CO	358.2	LIC	BLCT	-19851107KJ
06	KWNB-TV	HAYES CENTER NE	372.0	LIC	BLCT	-20000828AHT
06	NEW	DES MOINES NM	351.1	APP	BPRM	-20011009AEH
06	KBCJ	VERNAL UT	338.6	CP MOD	BPCT	-20050915ADU
06	KPTW	CASPER WY	347.2	LIC	BLET	-20070228ABK
06	KWNB-TV	HAYES CENTER NE	372.0	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
06	KRMA-TV	DENVER CO	BLET	-19950504KE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
05	KOAA-TV	PUEBLO CO	162.2	LIC	BLCT	-19850314KG
05	KGWN-TV	CHEYENNE WY	153.7	LIC	BLCT	-1639
06	KREZ-TV	DURANGO CO	358.2	LIC	BLCT	-19851107KJ
06	KWNB-TV	HAYES CENTER NE	372.0	LIC	BLCT	-20000828AHT
06	NEW	DES MOINES NM	351.1	APP	BPRM	-20011009AEH
06	KBCJ	VERNAL UT	338.6	CP MOD	BPCT	-20050915ADU
06	KPTW	CASPER WY	347.2	LIC	BLET	-20070228ABK
06	KWNB-TV	HAYES CENTER NE	372.0	APP	USERRECORD-01	

Total scenarios = 1

Result key: 2
 Scenario 1 Affected station 4
 Before Analysis

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06	KWNB-TV	HAYES CENTER NE	389.3	LIC	BLCT	-20000828AHT
06	WOWT-TV	OMAHA NE	415.3	LIC	BLCT	-19831024KI
06	KWNB-TV	HAYES CENTER NE	389.3	APP	USERRECORD-01	

Total scenarios = 1

Result key: 4
 Scenario 1 Affected station 8
 Before Analysis

Results for: 6N SD RELIANCE	BLCT	1436	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	59775	35578.4	
not affected by terrain losses	59349	34342.3	
lost to NTSC IX	9598	5831.4	
lost to additional IX by ATV	0	0.0	
lost to all IX	9598	5831.4	

Potential Interfering Stations Included in above Scenario 1

5N SD MITCHELL	BLCT	20020501AAL	LIC
6N ND FARGO	BMLCT	624	LIC
6N NE HAYES CENTER	BLCT	20000828AHT	LIC

After Analysis

Results for: 6N SD RELIANCE	BLCT	1436	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	59775	35578.4	
not affected by terrain losses	59349	34342.3	
lost to NTSC IX	9358	5474.2	
lost to additional IX by ATV	2	12.0	
lost to all IX	9360	5486.3	

Potential Interfering Stations Included in above Scenario 1

5N SD MITCHELL	BLCT	20020501AAL	LIC
6N ND FARGO	BMLCT	624	LIC
6A NE HAYES CENTER	USERRECORD01		APP

Percent new IX = 0.0033%

Worst case new IX 0.0033% Scenario 1

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Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application Ref. No.
06	KWNB-TV	HAYES CENTER NE	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
05	KHAS-TV	HASTINGS NE	223.1	LIC	BLCT -2417
06	KRMA-TV	DENVER CO	371.1	CP	BPET -19990107KE
06	KBSD-TV	ENSIGN KS	336.9	LIC	BMLCT -20040826AAG
06	NEW	HUTCHINSON KS	380.2	APP	BPRM -20011009AEG
06	WOWT-TV	OMAHA NE	426.6	LIC	BLCT -19831024KI
06	KPLO-TV	RELIANCE SD	389.3	LIC	BLCT -1436

Total scenarios = 1

Result key: 5
 Scenario 1 Affected station 9
 Before Analysis

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Results for: 6A NE HAYES CENTER USERRECORD01 APP
 HAAT 221.0 m, ATV ERP 3.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	77072	24985.9
not affected by terrain losses	76774	24758.1
lost to NTSC IX	419	91.9
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	419	91.9

Potential Interfering Stations Included in above Scenario 1

6N KS ENSIGN BMLCT 20040826AAG LIC

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ENVIRONMENTAL PROTECTION ACT

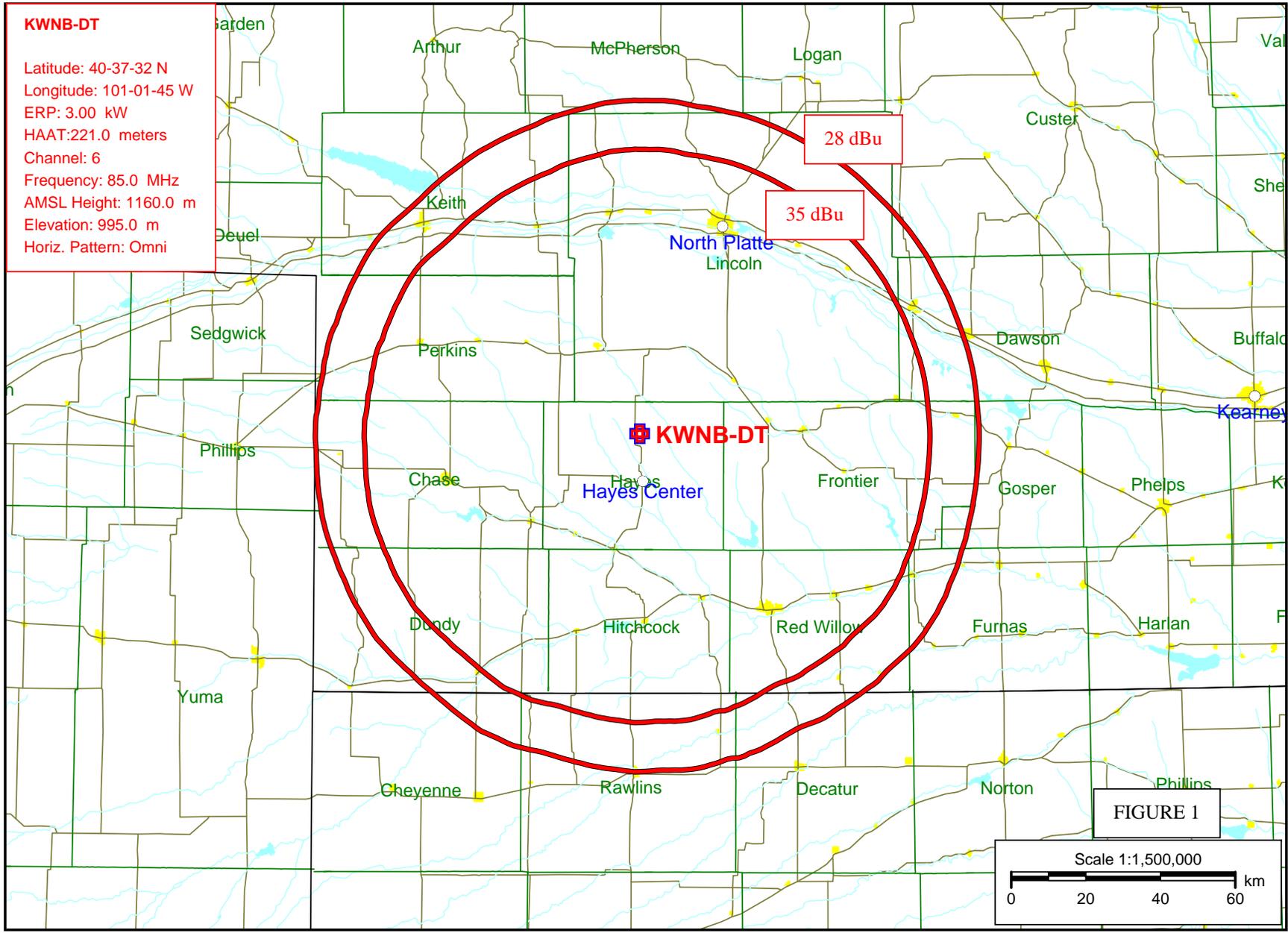
Since KWNB-DT will be using its currently licensed tower (ASR No. 1026527), for the DTV operation the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 3 kW and a radiation center of 165 meters above ground level, the proposed Channel 6 DTV operation would have less than 1 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.5 in the downward direction.

The Commission's guidelines for Channel 6 are 1,000 $\mu\text{W}/\text{cm}^2$ for the occupational/controlled, and 200 $\mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the KWNB-DT tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, KWNB-DT will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.



COMPUTED CONTOURS FOR THE PROPOSED CH. 6 DTV OPERATION OF KWNB-DT, HAYES CENTER, NEBRASKA