

ENGINEERING STATEMENT  
TECHNICAL INFORMATION IN SUPPORT  
OF A DIGITAL CONSTRUCTION PERMIT FOR  
AN EXISTING TELEVISION TRANSLATOR  
K20DY-D, BELGRADE, MONTANA  
CHANNEL 20 0.15 KW MAX ERP 1737.5 METERS RCAMSL

NOVEMBER 2006

COHEN, DIPPELL AND EVERIST, P.C.  
CONSULTING ENGINEERS  
RADIO AND TELEVISION  
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington            )  
  ) ss  
District of Columbia        )


Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

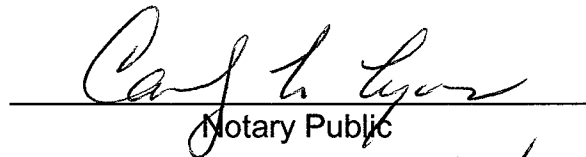
That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

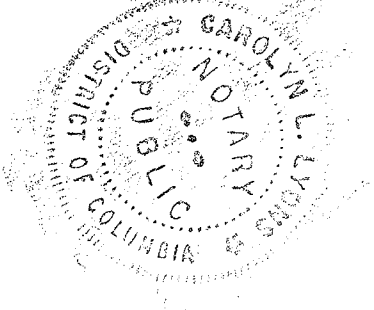


Donald G. Everist  
District of Columbia  
Professional Engineer  
Registration No. 5714

Subscribed and sworn to before me this 17<sup>th</sup> day of November, 2006.

  
Notary Public

My Commission Expires: 2/28/2008



COHEN, DIPPELL AND EVERIST, P. C.

City of Washington                    )  
  ) ss  
District of Columbia                )

Martin R. Doczkat being duly sworn upon his oath, deposes and states that:

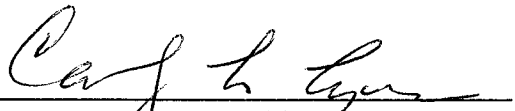
He is a graduate electrical engineer of the Pennsylvania State University, and is a staff engineer at Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That the attached engineering report was prepared by him or under his supervision and direction and

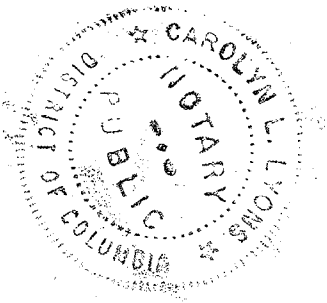
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

  
Martin R. Doczkat

Subscribed and sworn to before me this 17<sup>th</sup> day of November, 2006.

  
Notary Public

My Commission Expires: 2/28/2008



### Introduction

This engineering statement has been prepared on behalf of Montana State University, licensee of TV translator facility K20DY, Belgrade, Montana (Facility ID #33758). This statement supports the licensee's request to convert to DTV operation on the currently licensed in-core analog Channel 20, commonly referred to as "flash-cut" with a DTV effective radiated power ("ERP") of 0.15 kW at a radiation center above mean sea level ("RCAMSL") of 1737.5 meters.

### Transmitter Site

The currently licensed antenna is mounted to the existing tower where the authorized K20DY facility is currently located. The tower is located 4.5 miles southwest of Four Corners Junction where State Highways 191, 291, and 289 intersect. This location can be found on United States Geological Survey quadrangle map, Anceney, Montana. Tower registration is not required. There are no airports within 8 kilometers (5 miles) of the tower site and the overall height of the existing tower above ground level is less than 200 feet. The geographic coordinates of the site are as follows:

North Latitude: 45° 38' 15"

West Longitude: 111° 16' 01"

NAD-27

### Elevation Data

Elevation of site above mean sea level	1706.5 meters 5598.8 feet
Overall height above ground of the existing antenna structure (including appurtenances)	31.5 meters 103.3 feet
Overall height above mean sea level of the existing antenna structure (including appurtenances)	1738 meters 5702.1 feet

Center of radiation of antenna above ground level	30.5 meters 100.1 feet
Center of radiation of antenna above mean sea level	1737 meters 5698.8 feet

#### Equipment Data

Transmitter:	Type-Approved
Emission Mask:	Stringent
Transmission Line:	Andrew Type HJ7-50A, 1-5/8", 40.0 meters with 86.5% efficiency
Antenna:	Scala, 4DR-8-2HW with maximum gain of 7.08 (8.5 dB) and no beam tilt

#### Power Data

Transmitter Power Output	0.024 kW	-16.11 dBk
Transmission Line Efficiency/Loss	86.5%	0.63 dB
Input Power to the Antenna	0.021 kW	-16.74 dBk
Antenna Power Gain Maximum	7.08	8.5 dB
Effective Radiated Power Maximum	0.15 kW	-8.24 dBk

As indicated above, the transmitter with typical power output of 0.024 kW will deliver 0.021 kW to the input of the antenna. The antenna, having a maximum gain of 7.08, will produce maximum ERP of 0.15 kW at a bearing of N 15° E. A coverage map of the proposed facility has been included as Exhibit E-1 of this report. The antenna azimuth pattern should be on file at the Commission as the currently licensed directional "off-the-shelf" antenna for K20DY with no alterations has been proposed.

### Other Broadcast Facilities

A brief analysis was completed to determine the presence of stations in the vicinity of the K20DY tower using the October 4, 2006, data contained within the Commission's Consolidated Database System. Two authorized full-service FM radio stations and an FM translator station were found within 500 meters of the tower. Also, one authorized low-power television station and a Class A station were also found within 500 meters in addition to the applicant's currently licensed K20DY facility. The search did not return any AM stations within 5 km of the proposed site. Although no adverse effects are expected due to the proposed changes to K20DY, the applicant will install filters or take other measures necessary to resolve any problems provided they are related to the changes proposed in this application.

### Interference Analysis

A study of predicted interference caused by the proposed K20DY low-power digital operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at [http://www.fcc.gov/oet/dtv/dtv\\_apps.html](http://www.fcc.gov/oet/dtv/dtv_apps.html). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Microsoft Windows XP/Intel platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 1990 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. A Longley-Rice study was performed with the proposed K20DY low-power digital facilities and all relevant stations listed in the FCC database as of November 17, 2006. The study results and the included stations are listed in Exhibit E-2.

### Environmental Statement

An evaluation has been made to determine compliance with the FCC specified standards for human exposure to radio frequency field (“RFF”) as set forth in the OET Bulletin No. 65, Edition 97-01, August 1997. A proposed maximum effective radiated power of 0.15 kW, antenna radiation center of 30.5 meters above ground level, and a downward radiation factor of 0.2 will cause less than  $0.3 \mu\text{W}/\text{cm}^2$  near the base of the tower. This is less than 0.1% of the maximum allowed uncontrolled exposure value of  $339.3 \mu\text{W}/\text{cm}^2$  on Channel 20. K20DY is predicted to cause less than 5% of its maximum allowed uncontrolled exposure value and is therefore not responsible for identifying other potential RFF contributors in order to ensure compliance with FCC guidelines for maximum permissible exposure.

With respect to work performed near the radiating elements, the licensee will establish procedures in coordination with other operating stations to ensure that the workers are not exposed to levels of radio frequency radiation levels exceeding current FCC guidelines for controlled exposure.

### Environmental Assessment

An environmental assessment (“EA”) is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.

- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.



EXHIBIT E-1  
COMPARISON  
OF THE CURRENTLY LICENSED  
ANALOG PROTECTED CONTOUR  
AND THE PROPOSED DLPTV PROTECTED CONTOUR  
USING THE LICENSED  
HEIGHT, COORDINATES AND CHANNEL 20 ANTENNA  
FOR  
**K20DY, BELGRADE, ETC., MONTANA**  
CHANNEL 20 0.15kW ERP DA 1737.5 METERS RCMSL  
NOVEMBER 2006

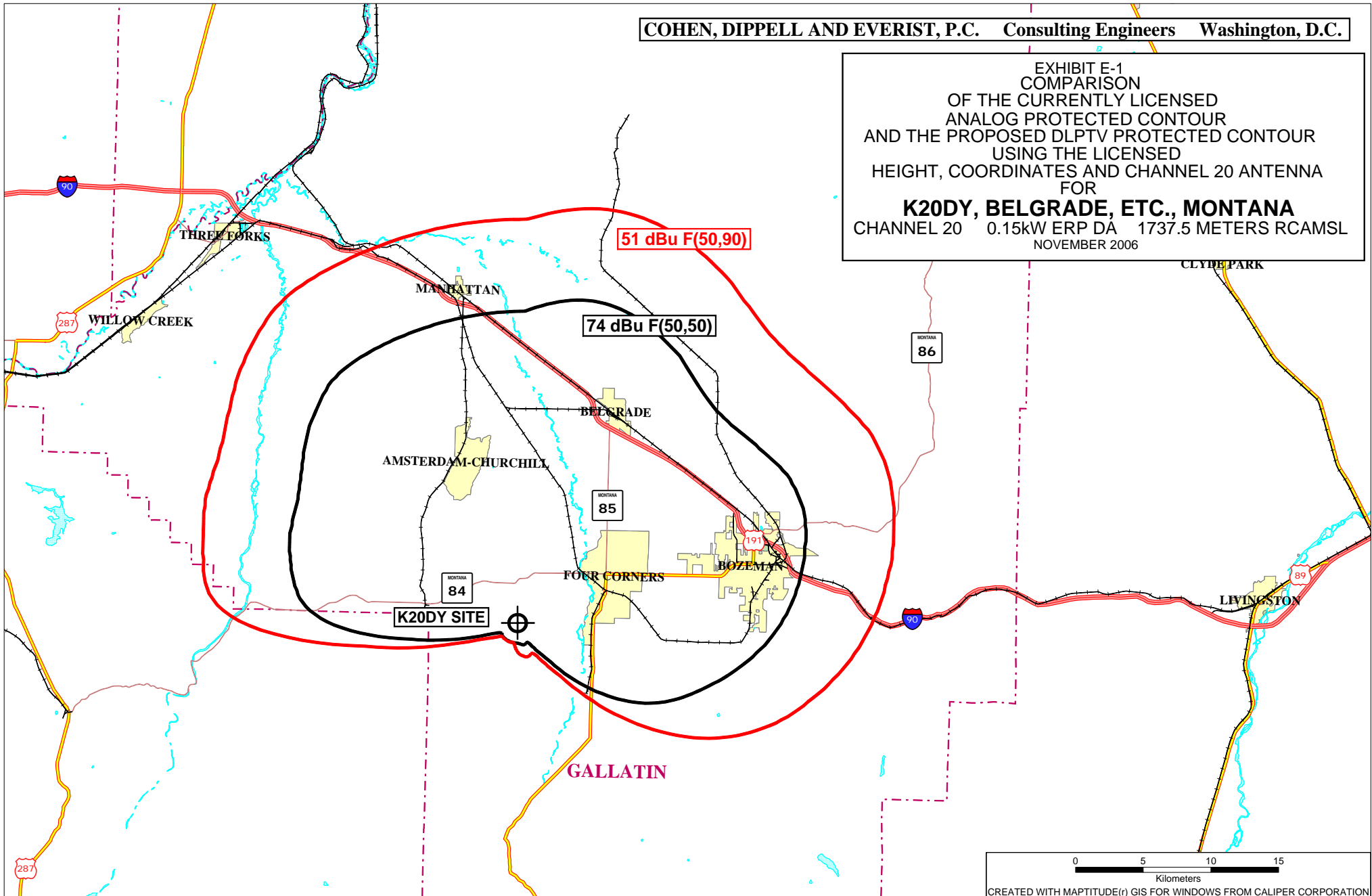


EXHIBIT E-2

DLPTV ANALYSIS RESULTS

FOR THE PROPOSED DIGITAL “FLASH-CUT”

OPERATION OF

K20DY-D, BELGRADE, MONTANA

## DLPTV Results - K20DY

1990 Census data selected  
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 11-17-2006 Time: 16:57:16

Record Selected for Analysis

K20DY TGL -2384TGL BELGRADE, ETC. MT US  
Channel 20 ERP 0.15 kW HAAT 182 m RCAMSL 1737 m  
Latitude 45 -38-15 Longitude 111 -16-1  
Status LIC Zone 2 Border DT Mask Stringent  
Dir Antenna Make CDB Model 00000000001060 Beam tilt N Ref Azimuth 15  
Last update Cutoff date 18991231 Docket  
Comments  
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50, 90) (km)
0.0	0.119	321.6	29.7
45.0	0.093	314.3	28.3
90.0	0.114	226.2	25.9
135.0	0.003	122.3	7.7
180.0	0.000	59.6	2.4
225.0	0.000	33.0	1.8
270.0	0.036	253.6	21.2
315.0	0.143	263.9	28.8

## Contour Overlap to Proposed Station

Station  
K19DQ 19 MONTPELIER ID BLTT19980626JF

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station  
K19CY 19 ROCKLAND ID BLTT19920827JD

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station  
KMBA-LP 19 ONTARIO OR BLTTL19950403ID

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station  
K20DY 20 BELGRADE, ETC. MT BLTT20050505AB0

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station

K20BP 20 PHILLIPS COUNTY DLPTV Results - K20DY  
MT BLTT19890313IR

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station  
K21CE 21 MONTPELIER ID BLTT19980709JI

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Station  
KHBB-LP 21 HELENA MT BLTT19930108JL

Station inside contour of Digital LPTV station  
K20DY 20 BELGRADE, ETC. MT TGL 2384TGL

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance  
Distance to border = 373.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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# Start of Interference Analysis

Channel	Call	Proposed Station City/State	ARN
20	K20DY	BELGRADE, ETC. MT	TGL 2384TGL

## Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
16	K16EN	SANDPOINT ID	508.7	APP	BMPTT -20040615AAC
16	K16EN	SANDPOINT ID	508.7	LIC	BLTT -20030811AGS
16	K16AZ	GLASGOW MT	452.8	LIC	BLTTL -19880401NV
17	K17BT	LIVINGSTON MT	56.2	LIC	BLTTL -19880316ID
18	KWYB	BUTTE MT	99.8	LIC	BLCT -19961010KF
19	NEW	LEADORE ID	191.2	APP	BDCCDTT -20061030ABR
19	KWYB	BUTTE MT	99.8	CP	BPCDT -19991101AJX
19	K19CO	EMIGRANT MT	56.2	LIC	BLTT -19911118JH
20	950306KF	IDAHO FALLS ID	215.5	CP	BPCT -19950306KF
20	KSVT-LP	KETCHUM ID	332.2	LIC	BLTTL -19960911JE
20	K20HW	MCCALL ID	386.0	LIC	BLTTL -20060913ABJ
20	NEW	PRESTON ID	392.5	APP	BDCCDTL -20061026AFU
20	K20DY	BELGRADE, ETC. MT	0.0	LIC	BLTT -20050505ABO
20	K20HB	BILLINGS MT	218.5	LIC	BLTT -20041123AKE
20	K20CP	ELMO MT	329.6	LIC	BLTT -19911029JI
20	NEW	LIVINGSTON, ETC. MT	56.2	APP	BSFDTL -20060630BDX
20	K20BP	PHILLIPS COUNTY MT	329.1	LIC	BLTT -19890313IR
21	K52CO	MALAD CITY ID	402.5	CP	BDISTT -20051116AEZ
21	K21CE	MONTPELIER ID	361.1	LIC	BLTT -19980709JI
21	K21HU	BUTTE MT	107.5	CP	BNPTTL -20000830BCV
21	NEW	EMIGRANT MT	56.2	APP	BSFDTT -20060630CWX
21	KHBB-LP	HELENA MT	138.7	CP	BDFCDTL -20060331BNR
21	KHBB-LP	HELENA MT	138.7	LIC	BLTT -19930108JL
22	K22HD	BUTTE MT	111.0	CP	BNPTTL -20000831BOI
22	NEW	GREAT FALLS MT	197.7	APP	BNPTTL -20000830BDC
23	NEW	BOZEMAN MT	10.7	APP	BNPTTL -20000807AAO

## DLPTV Results - K20DY

23	NEW	BOZEMAN MT	16.6	APP	BNPTTL	-20000831CJY
23	NEW	HELENA MT	136.4	APP	BNPTTL	-20000829AJY
24	KBTZ	BUTTE MT	99.8	LIC	BLCT	-20030502ABB
27	K27CD	BOULDER MT	97.3	LIC	BLTTL	-19910322IA
27	K27DL	EMI GRANT MT	56.2	LIC	BLTT	-19901226IX
28	KWYB-LP	BOZEMAN MT	31.2	LIC	BLTTL	-19971008JB
28	K28AZ	WEST YELLOWSTONE MT	98.5	LIC	BLTT	-19880426IB

%%%

## Analysis of Interference to Affected Station 1

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
16	K16EN	SANDPOINT ID	BMPTT	-20040615AAC

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KHQ-DT	SPOKANE WA	94.7	PLN	DTVPLN	-DTVP0192
15	KHQ-TV	SPOKANE WA	94.7	CP MOD	BMPCDT	-20050902ABX
15	KHQ-TV	SPOKANE WA	94.7	LIC	BLCDT	-20050630AAE
16	NEW	COEUR D'ALENE ID	66.7	APP	BSFDTL	-20060630COK
16	NEW	KALISPELL MT	176.1	APP	BNPTT	-20000803ABH
20	K20DY	BELGRADE, ETC. MT	508.7	LIC	TGL	-2384TGL
24	KQUP	PULLMAN WA	94.9	APP	BMPCDT	-20030903AAQ

Proposed station is beyond the site to  
nearest cell evaluation distance

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## Analysis of Interference to Affected Station 2

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
16	K16EN	SANDPOINT ID	BLTT	-20030811AGS

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KHQ-DT	SPOKANE WA	94.7	PLN	DTVPLN	-DTVP0192
15	KHQ-TV	SPOKANE WA	94.7	CP MOD	BMPCDT	-20050902ABX
15	KHQ-TV	SPOKANE WA	94.7	LIC	BLCDT	-20050630AAE
16	NEW	COEUR D'ALENE ID	66.7	APP	BSFDTL	-20060630COK
16	NEW	KALISPELL MT	176.1	APP	BNPTT	-20000803ABH
20	K20DY	BELGRADE, ETC. MT	508.7	LIC	TGL	-2384TGL
24	KQUP	PULLMAN WA	94.9	APP	BMPCDT	-20030903AAQ

Proposed station is beyond the site to  
nearest cell evaluation distance

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## Analysis of Interference to Affected Station 3

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
16	K16AZ	GLASGOW MT	BLTTL	-19880401NV

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	NEW	BILLINGS MT	304.0	APP	BNPEDT	-20060809AJ0

DLPTV Results - K20DY

16	KTGF	GREAT FALLS MT	358.2	CP	BPCT	-20041119ADZ
20	K20DY	BELGRADE, ETC. MT	452.8	LIC	TGL	-2384TGL

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.
17	K17BT	LIVINGSTON MT	BLTTL	-198803161D

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KCTZ-DT	BOZEMAN MT	26.4	PLN	DTVPLN	-DTVP0219del
17	KISU-DT	POCATELLO ID	287.0	PLN	DTVPLN	-DTVP0246
17	KISU-TV	POCATELLO ID	287.0	LIC	BLDT	-20030131AHZ
17	KTVQ-DT	BILLINGS MT	163.2	PLN	DTVPLN	-DTVP0257
17	KMMF	MISSOULA MT	295.6	LIC	BLCT	-20021219AAW
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	TGL	-2384TGL
32	KBTZ-LP	BOZEMAN MT	26.4	LIC	BLTTL	-19990811JJ

Proposed station is beyond the site to  
nearest cell evaluation distance

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#### Analysis of Interference to Affected Station 5

##### NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
18	KWYB	BUTTE MT	DTVPLN	-NPLN0864

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH-DT	HELENA MT	107.0	PLN	DTVPLN	-DTVP0130
15	KXLF-DT	BUTTE MT	0.1	PLN	DTVPLN	-DTVP0167
16	KCTZ-DT	BOZEMAN MT	127.4	PLN	DTVPLN	-DTVP0219del
17	NEW	MISSOULA MT	147.6	PLN	DTVPLN	-NPLN0958
18	KBGH-DT	FILER ID	396.5	PLN	DTVPLN	-DTVP0287
18	KSVI-DT	BILLINGS MT	317.9	PLN	DTVPLN	-DTVP0298
19	KWYB-DT	BUTTE MT	0.0	PLN	DTVPLN	-DTVP0343

Results for: 18N MT BUTTE	DTVPLN	NPLN0864	PLN
	POPULATION	AREA (sq km)	
within Noise Limited Contour	74416	24340.9	
not affected by terrain losses	56008	13644.2	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	0	32.9	
lost to all IX	0	32.9	

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
18	KWYB	BUTTE MT	BLCT	-19961010KF

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH	HELENA MT	107.0	APP	BMPCDT	-20060628ACX
14	KTVH	HELENA MT	107.0	CP	BPCDT	-19991029AAX
14	KTVH-DT	HELENA MT	107.0	PLN	DTVPLN	-DTVP0130
15	KXLF-DT	BUTTE MT	0.1	PLN	DTVPLN	-DTVP0167

DLPTV Results - K20DY

16	KCTZ-DT	BOZEMAN MT	127.4	PLN	DTVPLN	-DTVP0219del
17	KMMF	MISSOULA MT	146.9	LIC	BLCT	-20021219AAW
18	KBGH-DT	FILER ID	396.5	PLN	DTVPLN	-DTVP0287
18	KSVI	BILLINGS MT	317.9	CP	BPCDT	-19991029ACI
18	KSVI-DT	BILLINGS MT	317.9	PLN	DTVPLN	-DTVP0298
19	KWYB	BUTTE MT	0.0	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	0.0	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	99.8	LIC	TGL	-2384TGL

Proposal causes no interference

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#### Analysis of Interference to Affected Station 6

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
19	NEW	LEADORE ID	BDCCDTT	-20061030ABR

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KBGH	FILER ID	237.0	LIC	BLET	-19940921KE
19	KWYB	BUTTE MT	159.6	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	159.6	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	191.2	LIC	TGL	-2384TGL

Proposed station is beyond the site to nearest cell evaluation distance

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#### Analysis of Interference to Affected Station 7

##### DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
19	KWYB-DT	BUTTE MT	DTVPLN	-DTVP0343

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
18	KWYB	BUTTE MT	0.0	PLN	DTVPLN	-NPLN0864
19	KBGH	FILER ID	396.5	PLN	DTVPLN	-NPLN0452

Results for: 19A MT BUTTE DTVPLN DTVP0343 PLN

HAAT 585.0 m, ATV ERP 111.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	74568	24364.9
not affected by terrain losses	57613	14874.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

##### NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
18	KWYB	BUTTE MT	DTVPLN	-NPLN0864

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH-DT	HELENA MT	107.0	PLN	DTVPLN	-DTVP0130
15	KXLF-DT	BUTTE MT	0.1	PLN	DTVPLN	-DTVP0167
16	KCTZ-DT	BOZEMAN MT	127.4	PLN	DTVPLN	-DTVP0219del
17	NEW	MISSOULA MT	147.6	PLN	DTVPLN	-NPLN0958
18	KBGH-DT	FILER ID	396.5	PLN	DTVPLN	-DTVP0287
18	KSVI-DT	BILLINGS MT	317.9	PLN	DTVPLN	-DTVP0298

DLPTV Results - K20DY  
 19 KWB-DT BUTTE MT 0.0 PLN DTVPLN -DTVPO343

Results for: 18N MT BUTTE DTVPLN NPLN0864 PLN  
 POPULATION AREA (sq km)  
 within Noise Limited Contour 74416 24340.9  
 not affected by terrain losses 56008 13644.2  
 lost to NTSC IX 0 0.0  
 lost to additional IX by ATV 0 32.9  
 lost to all IX 0 32.9

Analysis of current record  
 Channel Call City/State Application Ref. No.  
 19 KWB BUTTE MT BPCDT -19991101AJX

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
18	KWB	BUTTE MT	0.0	LIC	BLCT	-19961010KF
19	KBGH	FILER ID	396.5	LIC	BLET	-19940921KE
20	K20DY	BELGRADE, ETC. MT	99.8	LIC	TGL	-2384TGL

Total scenarios = 1

Result key: 1  
 Scenario 1 Affected station 7  
 Before Analysis

Results for: 19A MT BUTTE BPCDT 19991101AJX CP  
 HAAT 585.0 m, ATV ERP 125.0 kW  
 POPULATION AREA (sq km)  
 within Noise Limited Contour 75196 25424.1  
 not affected by terrain losses 61030 15582.5  
 lost to NTSC IX 0 0.0  
 lost to additional IX by ATV 0 0.0  
 lost to ATV IX only 0 0.0  
 lost to all IX 0 0.0

Potential Interfering Stations Included in above Scenario 1

#### After Analysis

Results for: 19A MT BUTTE BPCDT 19991101AJX CP  
 HAAT 585.0 m, ATV ERP 125.0 kW  
 POPULATION AREA (sq km)  
 within Noise Limited Contour 75196 25424.1  
 not affected by terrain losses 61030 15582.5  
 lost to NTSC IX 0 0.0  
 lost to additional IX by ATV 288 75.7  
 lost to ATV IX only 288 75.7  
 lost to all IX 288 75.7

Potential Interfering Stations Included in above Scenario 1

20A MT BELGRADE, ETC. TGL 2384TGL LIC

#####

#### Analysis of Interference to Affected Station 8

Analysis of current record  
 Channel Call City/State Application Ref. No.  
 19 K19CO EMI GRANT MT BLTT -19911118JH

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
Page 6						



DLPTV Results - K20DY

16	KCTZ-DT	BOZEMAN MT	40.0	PLN	DTVPLN	-DTVP0219del
19	KWYB	BUTTE MT	155.2	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	155.2	PLN	DTVPLN	-DTVP0343
19	NEW	JACKSON WY	208.3	APP	BNPTTL	-20000830BKS
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	TGL	-2384TGL

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 9

##### NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
20	NEW	IDAHO FALLS ID	DTVPLN	-NPLN0455

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	KISU-DT	POCATELLO ID	0.2	PLN	DTVPLN	-DTVP0246
19	KBGH	FILER ID	166.0	PLN	DTVPLN	-NPLN0452
20	NEW	SALT LAKE CITY UT	318.1	PLN	DTVPLN	-NPLN1559
23	KPVI -DT	POCATELLO ID	69.4	PLN	DTVPLN	-DTVP0492
35	KXTF	TWIN FALLS ID	165.9	PLN	DTVPLN	-NPLN0478

Results for:	20N ID IDAHO FALLS	DTVPLN	NPLN0455	PLN
	POPULATION	AREA (sq km)		
within Noise Limited Contour	221331	23275.9		
not affected by terrain losses	219231	21089.7		
lost to NTSC IX	10	335.1		
lost to additional IX by ATV	106	19.9		
lost to all IX	116	355.1		

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	950306KF	IDAHO FALLS ID	BPCT	-19950306KF

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	KISU-DT	POCATELLO ID	63.5	PLN	DTVPLN	-DTVP0246
17	KISU-TV	POCATELLO ID	63.6	LIC	BLEDT	-20030131AHZ
20	K20DY	BELGRADE, ETC. MT	215.5	LIC	TGL	-2384TGL
20	KTMW	SALT LAKE CITY UT	346.1	CP MOD	BMPCT	-19990308KF
23	KPVI	POCATELLO ID	98.7	LIC	BLCDT	-20060706AEF
23	KPVI -DT	POCATELLO ID	98.6	PLN	DTVPLN	-DTVP0492
35	KXTF	TWIN FALLS ID	229.5	LIC	BLCT	-19890131KI

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 10

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	KSVT-LP	KETCHUM ID	BLTTL	-19960911JE

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KMVT-DT	TWIN FALLS ID	101.5	PLN	DTVPLN	-DTVP0205
17	KISU-DT	POCATELLO ID	140.8	PLN	DTVPLN	-DTVP0246
17	KISU-TV	POCATELLO ID	140.7	LIC	BLEDT	-20030131AHZ
18	KBGH-DT	FILER ID	101.6	PLN	DTVPLN	-DTVP0287
19	KBGH	FILER ID	101.6	LIC	BLET	-19940921KE
20	KITL-LP	BOISE ID	140.3	LIC	BLTTL	-20060303ABS
20	950306KF	IDAHO FALLS ID	196.4	CP	BPCT	-19950306KF

DLPTV Results - K20DY

20	NEW	TWIN FALLS ID	101.5	APP	BSFDTL	-20060630ALD
20	K20DY	BELGRADE, ETC. MT	332.2	LIC	TGL	-2384TGL
20	KTMW	SALT LAKE CITY UT	378.4	CP MOD	BMPCT	-19990308KF
22	KIPT-DT	TWIN FALLS ID	101.6	PLN	DTVPLN	-DTVP0452
24	KIVI	NAMPA ID	137.3	LIC	BLCDT	-20060724ADJ
24	KIVI-DT	NAMPA ID	137.3	PLN	DTVPLN	-DTVP0531
34	KXTF-DT	TWIN FALLS ID	101.7	PLN	DTVPLN	-DTVP0882
35	KXTF	TWIN FALLS ID	101.7	LIC	BLCT	-19890131KI

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 11

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	K20HW	MCCALL ID	BLTTL	-20060913ABJ

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	KITL-LP	BOISE ID	130.2	LIC	BLTTL	-20060303ABS
20	950306KF	IDAHO FALLS ID	352.7	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	386.0	LIC	TGL	-2384TGL
24	KIVI	NAMPA ID	128.4	LIC	BLCDT	-20060724ADJ
24	KIVI-DT	NAMPA ID	128.4	PLN	DTVPLN	-DTVP0531

Proposed station is beyond the site to nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 12

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	NEW	PRESTON ID	BDCCDTL	-20061026AFU

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	K19EW	PRESTON ID	0.0	LIC	BLTT	-20030624AAH
20	950306KF	IDAHO FALLS ID	182.6	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	392.5	LIC	TGL	-2384TGL
20	KTMW	SALT LAKE CITY UT	167.4	CP MOD	BMPCT	-19990308KF
20	K20ER	TOOELE UT	166.8	LIC	BLTT	-19950710IE
21	K21HH	PRESTON ID	0.0	LIC	BLTT	-20040503AFI

Proposed station is beyond the site to nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 13

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	K20DY	BELGRADE, ETC. MT	BLTT	-20050505ABO

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KCTZ-DT	BOZEMAN MT	31.3	PLN	DTVPLN	-DTVP0219del
19	KWYB	BUTTE MT	99.8	CP	BPCDT	-19991101AJX

DLPTV Results - K20DY

19	KWYB-DT	BUTTE MT	99.8	PLN	DTVPLN	-DTVP0343
20	950306KF	IDAHO FALLS ID	215.5	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	0.0	LIC	TGL	-2384TGL
20	NEW	LIVINGSTON, ETC. MT	56.2	APP	BSFDTL	-20060630BDX

Total scenarios = 1

Result key: 2  
 Scenario 1 Affected station 13  
 Before Analysis

Results for: 20N MT BELGRADE, ETC. BLTT 20050505AB0 LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	40929	985.5
not affected by terrain losses	40885	939.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 20N MT BELGRADE, ETC. BLTT 20050505AB0 LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	40929	985.5
not affected by terrain losses	40885	939.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	40810	879.7
lost to all IX	40810	879.7

Potential Interfering Stations Included in above Scenario 1

20A MT BELGRADE, ETC. TGL 2384TGL LIC

The following station failed the de minimis interference criteria.

20D MT BELGRADE, ETC. TGL 2384TGL  
 ERP 0.15 kW HAAT 182.0 m RCAMSL 1737.0 m  
 Antenna CDB 00000000001060

Due to interference to the following station and scenario: 1

20N MT BELGRADE, ETC. BLTT 20050505AB0  
 ERP 6.85 kW HAAT 182.0 m RCAMSL 1737.0 m  
 Antenna CDB 000000000069198

Percent new DTV interference without proposal:	0.0	BLTT	20050505AB0
Percent new DTV interference with proposal:	99.7	BLTT	20050505AB0

#####

#### Analysis of Interference to Affected Station 14

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	K20HB	BILLINGS MT	BLTT	-20041123AKE

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	NEW	BILLINGS MT	0.3	APP	BNPEDT	-20060809AJ0
17	KTVQ-DT	BILLINGS MT	0.0	PLN	DTVPLN	-DTVP0257
18	KSVI	BILLINGS MT	10.1	CP	BPCDT	-19991029ACI
18	KSVI -DT	BILLINGS MT	10.1	PLN	DTVPLN	-DTVP0298
20	950306KF	IDAHO FALLS ID	354.9	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	218.5	LIC	TGL	-2384TGL

DLPTV Results - K20DY

20	KFNB	CASPER WY	377.0	LIC	BLCT	-19950928KF
22	KHMT	HARDIN MT	24.9	CP	BPCDT	-19991101AKB
22	KHMT-DT	HARDIN MT	24.9	PLN	DTVPLN	-DTVPO463

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 15

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	K20CP	ELMO MT	BLTT	-19911029JI

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	K19GD	KALISPELL MT	27.3	LIC	BLTT	-20051220ASF
20	K20DY	BELGRADE, ETC. MT	329.6	LIC	TGL	-2384TGL
27	KUFM-DT	MISSOULA MT	110.2	PLN	DTVPLN	-DTVPO636
27	KUFM-TV	MISSOULA MT	110.2	CP MOD	BMPEDT	-20060620AAW
35	KPAX-DT	MISSOULA MT	86.1	PLN	DTVPLN	-DTVPO928del

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 16

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	NEW	LIVINGSTON, ETC. MT	BSFDTL	-20060630BDX

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	950306KF	IDAHO FALLS ID	232.6	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	TGL	-2384TGL
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	BLTT	-20050505ABO
21	NEW	EMIGRANT MT	31.3	APP	BSFDTT	-20060630CWX

Total scenarios = 3

Result key: 3  
 Scenario 1 Affected station 16  
 Before Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3
not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	3666	132.4

Potential Interfering Stations Included in above Scenario 1

20N MT BELGRADE, ETC. BLTT 20050505ABO LIC

After Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3

DLPTV Results - K20DY

not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	0	0.0
lost to ATV IX only	3493	119.7
lost to all IX	3666	132.4

Potential Interfering Stations Included in above Scenario 1

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
20A MT BELGRADE, ETC.	TGL	2384TGL	LIC

Result key: 4  
 Scenario 2 Affected station 16  
 Before Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3
not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	11	93.2
lost to ATV IX only	11	93.2
lost to all IX	3677	225.7

Potential Interfering Stations Included in above Scenario 2

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
21A MT EMIGRANT	BSFDTT	20060630CWX	APP

After Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3
not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	11	93.2
lost to ATV IX only	3504	212.9
lost to all IX	3677	225.7

Potential Interfering Stations Included in above Scenario 2

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
21A MT EMIGRANT	BSFDTT	20060630CWX	APP
20A MT BELGRADE, ETC.	TGL	2384TGL	LIC

Result key: 5  
 Scenario 3 Affected station 16  
 Before Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3
not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	3666	132.4

Potential Interfering Stations Included in above Scenario 3

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
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After Analysis

Results for: 20A MT LIVINGSTON, ETC. BSFDTL 20060630BDX APP  
 HAAT 259.0 m, ATV ERP 15.0 kW

	DLPTV Results - K20DY	
	POPULATION	AREA (sq km)
within Noise Limited Contour	53477	10049.3
not affected by terrain losses	44591	8149.9
lost to NTSC IX	3666	132.4
lost to additional IX by ATV	0	0.0
lost to ATV IX only	3493	119.7
lost to all IX	3666	132.4

Potential Interfering Stations Included in above Scenario 3

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
20A MT BELGRADE, ETC.	TGL	2384TGL	LIC

#####

#### Analysis of Interference to Affected Station 17

##### Analysis of current record

Channel	Call	City/State	Application Ref. No.
20	K20BP	PHILLIPS COUNTY MT	BLTT -19890313IR

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	329.1	LIC	TGL -2384TGL

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 18

##### Analysis of current record

Channel	Call	City/State	Application Ref. No.
21	K52CO	MALAD CITY ID	BDISTT -20051116AEZ

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	402.5	LIC	TGL -2384TGL
21	K21CE	MONTPELIER ID	76.0	LIC	BLTT -19980709JI
21	NEW	POCATELLO ID	84.9	APP	BDCCDTT -20061030ABU
21	K21HH	PRESTON ID	36.1	LIC	BLTT -20040503AFI
21	NEW	EVANSTON WY	111.6	APP	BNPTTL -20000831EHB
21	NEW	JACKSON WY	194.1	APP	BNPTTL -20000830BKT
23	KPVI	POCATELLO ID	94.0	LIC	BLCDT -20060706AEF
23	KPVI -DT	POCATELLO ID	94.1	PLN	DTVPLN -DTVPO492

Proposed station is beyond the site to nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 19

##### Analysis of current record

Channel	Call	City/State	Application Ref. No.
21	K21CE	MONTPELIER ID	BLTT -19980709JI

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KJWY	JACKSON WY	129.8	CP	BPCDT -19991029AED
14	KJWY-DT	JACKSON WY	129.8	PLN	DTVPLN -DTVPO149
20	K20DY	BELGRADE, ETC. MT	361.1	LIC	TGL -2384TGL

## DLPTV Results - K20DY

21	K52CO	MALAD CITY ID	76.0	CP	BDI STT	-20051116AEZ
21	NEW	POCATELLO ID	97.9	APP	BDCCDTT	-20061030ABU
21	K21HH	PRESTON ID	43.5	LIC	BLTT	-20040503AFI
21	NEW	EVANSTON WY	39.8	APP	BNPTTL	-20000831EHB
21	NEW	JACKSON WY	129.8	APP	BNPTTL	-20000830BKT
23	KPVI	POCATELLO ID	98.3	LIC	BLCDT	-20060706AEF
23	KPVI-DT	POCATELLO ID	98.3	PLN	DTVPLN	-DTVPO492

Proposed station is beyond the site to  
nearest cell evaluation distance

#####

## Analysis of Interference to Affected Station 20

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
21	K21HU	BUTTE MT	BNPTTL -20000830BCV

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KTVH	HELENA MT	115.6	APP	BMPCDT -20060628ACX
14	KTVH	HELENA MT	115.6	CP	BPCDT -19991029AAX
14	KTVH-DT	HELENA MT	115.6	PLN	DTVPLN -DTVPO130
19	KWYB	BUTTE MT	10.6	CP	BPCDT -19991101AJX
19	KWYB-DT	BUTTE MT	10.6	PLN	DTVPLN -DTVPO343
20	K20DY	BELGRADE, ETC. MT	107.5	LIC	TGL -2384TGL
21	NEW	GREAT FALLS MT	199.5	APP	BNPEDT -20060809AJP
21	KHBB-LP	HELENA MT	98.1	CP	BDFCDTL -20060331BNR
21	KHBB-LP	HELENA MT	98.1	LIC	BLTT -19930108JL
29	KAQR-DT	HELENA MT	72.5	PLN	DTVPLN -DTVPO705
29	KMTF	HELENA MT	115.6	CP MOD	BMPCDT -20041101AHP
36	K36HC	BOZEMAN MT	10.5	CP	BNPTTL -20000807AAN

Proposal causes no interference

#####

## Analysis of Interference to Affected Station 21

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
21	NEW	EMI GRANT MT	BSFDDT -20060630CWX

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	TGL -2384TGL
21	NEW	GREAT FALLS MT	248.8	APP	BNPEDT -20060809AJP
21	KSGW-DT	SHERIDAN WY	291.9	PLN	DTVPLN -DTVPO441del

Proposal causes no interference

#####

## Analysis of Interference to Affected Station 22

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
21	KHBB-LP	HELENA MT	BDFCDTL -20060331BNR

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	138.7	LIC	TGL -2384TGL

DLPTV Results - K20DY  
 21 NEW GREAT FALLS MT 101.8 APP BNPEDT -20060809AJP  
 22 K22HD BUTTE MT 52.2 CP BNPTTL -20000831B0I  
 Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 23

Analysis of current record  
 Channel Call City/State Application Ref. No.  
 21 KHBB-LP HELENA MT BLTT -19930108JL

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH	HELENA MT	24.7	APP	BMPCDT	-20060628ACX
14	KTVH	HELENA MT	24.7	CP	BPCDT	-19991029AAX
14	KTVH-DT	HELENA MT	24.7	PLN	DTVPLN	-DTVP0130
19	KWYB	BUTTE MT	90.7	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	90.7	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	138.7	LIC	TGL	-2384TGL
21	NEW	GREAT FALLS MT	101.8	APP	BNPEDT	-20060809AJP
22	K22HD	BUTTE MT	52.2	CP	BNPTTL	-20000831B0I
29	KAQR-DT	HELENA MT	28.4	PLN	DTVPLN	-DTVP0705
29	KMTF	HELENA MT	24.7	CP MOD	BMPCDT	-20041101AHP
36	K36CX	CLANCY MT	29.7	LIC	BLTTL	-19921002JF

Proposal causes no interference

#####

#### Analysis of Interference to Affected Station 24

Analysis of current record  
 Channel Call City/State Application Ref. No.  
 22 K22HD BUTTE MT BNPTTL -20000831B0I

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH	HELENA MT	70.2	APP	BMPCDT	-20060628ACX
14	KTVH	HELENA MT	70.2	CP	BPCDT	-19991029AAX
14	KTVH-DT	HELENA MT	70.2	PLN	DTVPLN	-DTVP0130
15	KXLF-DT	BUTTE MT	38.5	PLN	DTVPLN	-DTVP0167
19	KWYB	BUTTE MT	38.6	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	38.6	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	111.0	LIC	TGL	-2384TGL
21	K21HU	BUTTE MT	46.0	CP	BNPTTL	-20000830BCV
21	KHBB-LP	HELENA MT	52.2	CP	BDFCDTL	-20060331BNR
21	KHBB-LP	HELENA MT	52.2	LIC	BLTT	-19930108JL
22	NEW	GREAT FALLS MT	153.5	APP	BNPTTL	-20000831CDV
22	KHMT	HARDIN MT	327.2	CP	BPCDT	-19991101AKB
22	KHMT-DT	HARDIN MT	327.2	PLN	DTVPLN	-DTVP0463
23	NEW	HELENA MT	36.3	APP	BDCCDTL	-20061030AGQ
24	KBTZ	BUTTE MT	38.6	LIC	BLCT	-20030502ABB
29	KAQR-DT	HELENA MT	28.7	PLN	DTVPLN	-DTVP0705
29	KMTF	HELENA MT	70.2	CP MOD	BMPCDT	-20041101AHP

Proposed station is beyond the site to  
 nearest cell evaluation distance

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#### Analysis of Interference to Affected Station 25



## DLPTV Results - K20DY

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
22	NEW	GREAT FALLS MT	BNPTTL	-20000830BDC

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KTVH	HELENA MT	71.7	APP	BMPCDT	-20060628ACX
14	KTVH	HELENA MT	71.7	CP	BPCDT	-19991029AAX
14	KTVH-DT	HELENA MT	71.7	PLN	DTVPLN	-DTVP0130
20	K20DY	BELGRADE, ETC. MT	197.7	LIC	TGL	-2384TGL
21	NEW	GREAT FALLS MT	13.7	APP	BNPEDT	-20060809AJP
21	NEW	GREAT FALLS MT	13.4	APP	BNPTTL	-20000829AHI
22	K22HD	BUTTE MT	140.6	CP	BNPTTL	-20000831B0I
22	NEW	GREAT FALLS MT	13.7	APP	BNPTTL	-20000831CDV
22	KHMT	HARDIN MT	306.4	CP	BPCDT	-19991101AKB
22	KHMT-DT	HARDIN MT	306.2	PLN	DTVPLN	-DTVP0463
23	NEW	GREAT FALLS MT	13.7	APP	BNPTTL	-20000824ADN
29	KAQR-DT	HELENA MT	117.2	PLN	DTVPLN	-DTVP0705
29	KMTF	HELENA MT	71.7	CP MOD	BMPCDT	-20041101AHP

Proposed station is beyond the site to  
nearest cell evaluation distance

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## Analysis of Interference to Affected Station 26

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	NEW	BOZEMAN MT	BNPTTL	-20000807AAO

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KXLF-DT	BUTTE MT	107.2	PLN	DTVPLN	-DTVP0167
16	KCTZ-DT	BOZEMAN MT	21.3	PLN	DTVPLN	-DTVP0219del
19	KWYB	BUTTE MT	107.2	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	107.2	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	10.7	LIC	TGL	-2384TGL
23	KPVI	POCATELLO ID	320.9	LIC	BLCDT	-20060706AEF
23	KPVI -DT	POCATELLO ID	320.8	PLN	DTVPLN	-DTVP0492
23	NEW	BOZEMAN MT	9.1	APP	BDCCDTT	-20061030AIF
23	NEW	BOZEMAN MT	6.9	APP	BNPTTL	-20000831CJY
23	NEW	EMIGRANT, ETC. MT	51.7	APP	BDCCDTT	-20061030ASK
23	NEW	HELENA MT	135.1	APP	BNPTTL	-20000829AJY
23	KTMF	MISSOULA MT	266.1	LIC	BLCT	-19901227KE
24	KBTZ	BUTTE MT	107.2	LIC	BLCT	-20030502ABB

Proposal causes no interference

#####

## Analysis of Interference to Affected Station 27

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	NEW	BOZEMAN MT	BNPTTL	-20000831CJY

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KXLF-DT	BUTTE MT	114.1	PLN	DTVPLN	-DTVP0167
16	KCTZ-DT	BOZEMAN MT	14.8	PLN	DTVPLN	-DTVP0219del
19	KWYB	BUTTE MT	114.0	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	114.0	PLN	DTVPLN	-DTVP0343
20	K20DY	BELGRADE, ETC. MT	16.6	LIC	TGL	-2384TGL

DLPTV Results - K20DY

23	KPVI	POCATELLO ID	321.2	LIC	BLCDT	-20060706AEF
23	KPVI -DT	POCATELLO ID	321.2	PLN	DTVPLN	-DTVP0492
23	NEW	BOZEMAN MT	6.9	APP	BNPTTL	-20000807AAO
23	KTMF	MISSOULA MT	272.6	LIC	BLCT	-19901227KE
24	KBTZ	BUTTE MT	114.0	LIC	BLCT	-20030502ABB

Proposal causes no interference

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#### Analysis of Interference to Affected Station 28

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
23	NEW	HELENA MT	BNPTTL	-20000829AJY	

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
15	KXLF-DT	BUTTE MT	106.9	PLN	DTVPLN -DTVP0167
16	KCTZ-DT	BOZEMAN MT	143.6	PLN	DTVPLN -DTVP0219del
16	KTGF	GREAT FALLS MT	90.7	CP	BPCT -20041119ADZ
19	KWYB	BUTTE MT	107.0	CP	BPCDT -19991101AJX
19	KWYB-DT	BUTTE MT	107.0	PLN	DTVPLN -DTVP0343
20	K20DY	BELGRADE, ETC. MT	136.4	LIC	TGL -2384TGL
21	NEW	GREAT FALLS MT	85.1	APP	BNPEDT -20060809AJP
23	NEW	BOZEMAN MT	135.1	APP	BNPTTL -20000807AAO
23	NEW	GREAT FALLS MT	85.1	APP	BNPTTL -20000824ADN
23	NEW	HELENA MT	34.1	APP	BDCCDTL -20061030AGQ
23	KTMF	MISSOULA MT	176.2	LIC	BLCT -19901227KE
24	KBTZ	BUTTE MT	107.0	LIC	BLCT -20030502ABB

Proposed station is beyond the site to  
nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 29

NTSC Baseline Analysis					
Channel	Call	City/State	Application Ref. No.		
24	NEW	BUTTE MT	DTVPLN	-NPLN0875	

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
16	KCTZ-DT	BOZEMAN MT	127.4	PLN	DTVPLN -DTVP0219del
17	NEW	MISSOULA MT	147.6	PLN	DTVPLN -NPLN0958
23	KTMF	MISSOULA MT	164.6	PLN	DTVPLN -NPLN0971
24	KIVI-DT	NAMPA ID	381.5	PLN	DTVPLN -DTVP0531
24	NEW	PULLMAN WA	355.7	PLN	DTVPLN -NPLN1653

Results for: 24N MT BUTTE	DTVPLN	NPLN0875	PLN
	POPULATION	AREA (sq km)	
within Noise Limited Contour	64274	19455.4	
not affected by terrain losses	50786	10747.9	
lost to NTSC IX	0	2.0	
lost to additional IX by ATV	0	0.0	
lost to all IX	0	2.0	

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
24	KBTZ	BUTTE MT	BLCT	-20030502ABB	

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Page 16

DLPTV Results - K20DY

16	KCTZ-DT	BOZEMAN MT	127.4	PLN	DTVPLN	-DTVP0219del
17	KMMF	MISSOULA MT	146.9	LIC	BLCT	-20021219AAW
20	K20DY	BELGRADE, ETC. MT	99.8	LIC	TGL	-2384TGL
23	KTMF	MISSOULA MT	164.7	LIC	BLCT	-19901227KE
24	KIVI	NAMPA ID	381.4	LIC	BLCDT	-20060724ADJ
24	KIVI-DT	NAMPA ID	381.4	PLN	DTVPLN	-DTVP0531
24	KQUP	PULLMAN WA	374.6	LIC	BLCT	-20040520AJL

Proposal causes no interference

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#### Analysis of Interference to Affected Station 30

Analysis of current record

Channel	Call	City/State	Application Ref. No.
27	K27CD	BOULDER MT	BLTTL -199103221A

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
19	KWYB	BUTTE MT	35.9	CP	BPCDT -19991101AJX
19	KWYB-DT	BUTTE MT	35.9	PLN	DTVPLN -DTVP0343
20	K20DY	BELGRADE, ETC. MT	97.3	LIC	TGL -2384TGL
27	KUFM-DT	MISSOULA MT	151.7	PLN	DTVPLN -DTVP0636
27	KUFM-TV	MISSOULA MT	151.7	CP MOD	BMPEDT -20060620AAW
29	KAQR-DT	HELENA MT	39.0	PLN	DTVPLN -DTVP0705
29	KMTF	HELENA MT	71.5	CP MOD	BMPCDT -20041101AHP

Proposed station is beyond the site to nearest cell evaluation distance

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#### Analysis of Interference to Affected Station 31

Analysis of current record

Channel	Call	City/State	Application Ref. No.
27	K27DL	EMIGRANT MT	BLTT -199012261X

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	56.2	LIC	TGL -2384TGL
27	KUFM-DT	MISSOULA MT	301.1	PLN	DTVPLN -DTVP0636
27	KUFM-TV	MISSOULA MT	301.1	CP MOD	BMPEDT -20060620AAW
27	K27HQ	CODY WY	152.8	CP	BNPTTL -20000831BKA

Proposed station is beyond the site to nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 32

Analysis of current record

Channel	Call	City/State	Application Ref. No.
28	KWYB-LP	BOZEMAN MT	BLTTL -19971008JB

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	K20DY	BELGRADE, ETC. MT	31.2	LIC	TGL -2384TGL
28	K28II	IDAHO FALLS ID	229.2	CP	BNPTTL -20000831ANP
28	NEW	BRIDGER, ETC. MT	156.8	APP	BDCCDTT -20061030ARZ

## DLPTV Results - K20DY

Proposal causes no interference

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## Analysis of Interference to Affected Station 33

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
28	K28AZ	WEST YELLOWSTONE MT	BLTT	-198804261B

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	K20DY	BELGRADE, ETC. MT	98.5	LIC	TGL	-2384TGL
28	K28II	IDAHO FALLS ID	125.6	CP	BNPTTL	-20000831ANP
28	KWYB-LP	BOZEMAN MT	105.5	CP	BDFCDTL	-20060331BIG
28	KWYB-LP	BOZEMAN MT	105.5	LIC	BLTTL	-19971008JB

Proposed station is beyond the site to  
nearest cell evaluation distance

#####

## Analysis of Interference to Affected Station 34

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
20	K20DY	BELGRADE, ETC. MT	TGL	-2384TGL

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KWYB	BUTTE MT	99.8	CP	BPCDT	-19991101AJX
19	KWYB-DT	BUTTE MT	99.8	PLN	DTVPLN	-DTVP0343
20	950306KF	IDAHO FALLS ID	215.5	CP	BPCT	-19950306KF
20	K20DY	BELGRADE, ETC. MT	0.0	LIC	BLTT	-20050505ABO
20	NEW	LIVINGSTON, ETC. MT	56.2	APP	BSFDTL	-20060630BDX

Total scenarios = 3

## Result key:

Scenario 1 Affected station 34  
Before Analysis

Results for: 20A MT BELGRADE, ETC. TGL 2384TGL LIC  
HAAT 182.0 m, ATV ERP 0.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	44653	1684.4
not affected by terrain losses	44522	1580.6
lost to NTSC IX	44308	1452.3
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	44308	1452.3

Potential Interfering Stations Included in above Scenario 1

20N MT BELGRADE, ETC. BLTT 20050505ABO LIC

## Result key:

Scenario 2 Affected station 34  
Before Analysis

Results for: 20A MT BELGRADE, ETC. TGL 2384TGL LIC  
HAAT 182.0 m, ATV ERP 0.2 kW

	POPULATION	AREA (sq km)
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				DLPTV Results - K20DY	
within Noise Limited Contour	44653	1684.4			
not affected by terrain losses	44522	1580.6			
lost to NTSC IX	44308	1452.3			
lost to additional IX by ATV	0	0.0			
lost to ATV IX only	5	34.3			
lost to all IX	44308	1452.3			

Potential Interfering Stations Included in above Scenario 2

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
20A MT LIVINGSTON, ETC.	BSFDTL	20060630BDX	APP

Result key: 8  
Scenario 3 Affected station 34  
Before Analysis

Results for: 20A MT BELGRADE, ETC. TGL 2384TGL LIC  
HAAT 182.0 m, ATV ERP 0.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	44653	1684.4
not affected by terrain losses	44522	1580.6
lost to NTSC IX	44308	1452.3
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	44308	1452.3

Potential Interfering Stations Included in above Scenario 3

20N MT BELGRADE, ETC.	BLTT	20050505AB0	LIC
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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

### Section III - Engineering (Digital)

#### TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

#### TECH BOX

1. Channel: \_\_\_\_\_
2. Translator Input Channel No. \_\_\_\_\_
3. Station proposed to be rebroadcast:

Call Sign	City	State	Channel
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4. Antenna Location Coordinates: (NAD 27)

\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ N ☐ S Latitude  
\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ E ☐ W Longitude

5. Antenna Structure Registration Number: \_\_\_\_\_

☐ Not applicable ☐ See Explanation in Exhibit No. ☐ FAA Notification Filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: \_\_\_\_\_ meters
7. Overall Tower Height Above Ground Level: \_\_\_\_\_ meters
8. Height of Radiation Center Above Ground Level: \_\_\_\_\_ meters
9. Maximum Effective Radiated Power (ERP): \_\_\_\_\_ kW
10. Transmitter Output Power: \_\_\_\_\_ kW
11. a. Transmitting Antenna: ☐ Nondirectional ☐ Directional ☐ Directional composite

Manufacturer	Model
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- b. Electrical Beam Tilt: \_\_\_\_\_ degrees ☐ Not applicable

c. Directional Antenna Relative Field Values:

Rotation: \_\_\_\_\_ ° ☐ No rotation ☐ N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

**NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.**

12. **Out-of-Channel Emission Mask:** Simple ☐ Stringent ☐

**CERTIFICATION**

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. ☐ Yes ☐ No 

See Explanation in Exhibit No.

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. An **Exhibit is required.** ☐ Yes ☐ No 

See Explanation in Exhibit No.

Exhibit No.

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

☐ The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.


☐ Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

**PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.**

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

- ☐ Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees,
- ☐ Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.
- ☐ Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

I certify that I have prepared Section III (Engineering Data) 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 Martin R. Doczkat		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature 		Date November 17, 2006	
Mailing Address Cohen, Dippell and Everist, P.C., 1300 L Street, NW, Suite 1100			
City Washington	State or Country (if foreign address) DC		ZIP Code 20005
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001),  
AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)),  
AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).