

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

FM STATION KDZN
GLENDIVE, MONTANA
FACILITY ID: 39610

MAGIC AIR COMMUNICATIONS

JULY, 2015

© 2015 JEREMY RUCK & ASSOCIATES, INC.

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

7.31.2015

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

The following engineering statement and attached exhibits have been prepared for **Magic Air Communications** ("Magic"), licensee of FM broadcast station KDZN at Glendive, Montana, and are in support of their request for Special Temporary Authority.¹

On the evening of Monday, July 27, 2015 severe thunderstorms plagued the area in and around Glendive, Montana. At approximately 18:45 MDT, the tower that supports the antenna for KDZN collapsed due to the effects of the storms in the region. As a result of the collapse of this tower, Magic seeks a special temporary authority to operate KDZN with an emergency antenna from the studios of KXGN(TV) in Glendive.

At present, Magic is cleaning up the destroyed tower, working with the insurance company, and soliciting bids for replacement of the structure. Since replacement of the structure will be an involved process, Magic respectfully requests that this STA be granted for a term of no less than 180 days. Although Magic will work diligently to restore operation under the licensed parameters, it is likely that an extension of the STA will be required.

The STA facilities would operate from the broadcast auxiliary tower located adjacent to the KXGN(TV) studios. Specifically the temporary facility would operate with an effective radiated power of 140 Watts at a center of radiation 649 meters AMSL. This corresponds to an elevation of 15.8 meters AGL, or 49.5 meters below average terrain. The overall height of the tower is 18.3 meters AGL. A non-directional antenna would be utilized by the temporary facility.

¹ The Facility ID for KDZN(FM) at Glendive, Montana is 39610.

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

Exhibit E-1 illustrates the predicted 60 dBu service contour for the licensed facility as well as the 60 dBu service contour for the STA facility. This map demonstrates that the 60 dBu contour resulting from the proposed temporary technical parameters would be wholly contained within the 60 dBu contour of the licensed facility. Additionally, the STA facilities will cover nearly all of the community of license with a signal level of at least 70 dBu.

A grant of this special temporary authority would not result in a significant environmental impact, and is exempt from environmental processing. The antenna would be located on an existing tower at the studio building, and the temporary addition of this antenna to the tower would not increase the existing environmental impact already present. Additionally, the facility would not constitute a radio frequency radiation hazard.

The antenna to be utilized by the STA facility is a single bay Nicom BKG77 model antenna. Although it is similar in construction to a Jampro double-vee style antenna, its vertical pattern is not contained in *FM Model*. Therefore, an analysis of the facility with that program utilizing a ring-stub style antenna was performed. *FM Model* predicts a maximum power density of 29.5 meters at ground level. This value is less than the upper limit permitted under the uncontrolled environment condition.

Magic certifies that it will coordinate with all users of the site to ensure that workers and other personnel are not exposed to levels or radiofrequency radiation in excess of the applicable safety standards. Such coordination will include, but is not necessarily limited to, a further

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

reduction in the effective radiated power during maintenance activities, or temporary cessation of operation.

The preceding statement has been prepared by me, or under my direction, and is true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2015

Jeremy D. Ruck, PE
July 31, 2015

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

KDZN
BLH19830330AA
Latitude: 47-05-15 N
Longitude: 104-48-04 W
ERP: 90.00 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 866.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KDZN.STA
BLH19830330AA
Latitude: 47-06-15.40 N
Longitude: 104-42-59 W
ERP: 0.14 kW
Channel: 243
Frequency: 96.5 MHz
AMSL Height: 648.9 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit E-1
Service Contour Comparison
KDZN - Glendive, Montana
Magic Air Communications
July, 2015

Jeremy Ruck & Associates, Inc.

STA 60 dBu
Service Contour

Licensed 60 dBu
Service Contour

