

surrounded by mountains. The County seat is Kingman, the population of which was approximately 28,068 according to the 2010 census.

Given the remoteness of many of the communities and Indian reservations in the County, and the lack of regular television service (there is only one station operating in the County, KMOH-TV in Kingman), the Board of Supervisors determined many years ago to provide a means for residents to receive over-the-air television. This was deemed especially important since many residents are on fixed incomes (e.g. retirees), and not able to afford cable television or satellite TV. The system evolved to include 47 TV translators re-broadcasting distant full-service television stations to communities like Chloride, Peach Springs, and Oatman.

TV translator relay and private microwave stations are used to deliver distant Phoenix television signals to the County. Several of these stations are located on Smith Peak, about 75 miles from Phoenix. These stations pick up Phoenix signals and transmit them to another mountain-top site near Kingman, about 180 miles from Phoenix. From this point the signals are further relayed to the translators.

DISCUSSION

The input channel of TV translators located within the protected contour of the primary station being re-broadcast, or within 80 km of that contour, are protected if registered in the Commission's database.¹ Rule 15.712 (c) also provides in the case of Broadcast Auxiliary Stations, such as TV translator relays, that protection is provided within 80 km of the location of the receive site without regard to proximity to a protected contour. With respect to translators receiving their input signal from another translator, it is understood that the protected contour

¹ *Second Memorandum Opinion and Order* in ET Docket No. 04-186, 25 FCC Rcd 18661 (2010) (hereinafter cited as the "*Order*") at ¶ 38.

rule applies, i.e. the input channels of translators located within 80 km of the protected contour of the station from which the signal is derived – in this instance, another translator – are protected.

The County's consulting engineer, Robert DuTreil, Jr., has analyzed its translator system in light of the above standards. Mr. DuTreil has determined that none of the County's translators is beyond 80 km from the station being re-broadcast, either a distant full-service station, a TV translator relay station, or another translator. However, he has also determined that WQHE-250, which feeds multiple translators with Phoenix network programming, is beyond 80 km from the protected contour of the station it re-broadcasts. Many County residents depend upon the feed from WQHE-250 for national and State-wide news, information, and entertainment which they have been receiving for years from the State capital and, as previously mentioned, numerous such residents are on fixed incomes (e.g. retirees), and not able to afford cable television or satellite TV.

Accordingly, based on Mr. DuTreil's analysis, and the public interest factors recited above, WQHE-250 is entitled to a waiver so as to allow registration in the database and, hence, protection from interference.

In the course of preparing these comments, another, arguably larger issue has come to light that requires the Commission's attention: The County is concerned about protection for microwave stations afforded by the proposed registration in the Commission's ULS Engineering Database as the ULS database does not contain a field listing off-the-air TV channel inputs. Without such a field, there is no means of protecting any over-the-air input channels for TV translator relay(or private microwave) stations, much less the multiple channels that require protection for the County's relays. Accordingly, the County requests that the Commission

implement corrections or improvements to its ULS database system to protect microwave relay stations' off-the-air input channels, including those that may employ multiple input channels.

There is one other situation which should be addressed. The County is licensed for several private operational microwave stations, one of which, WNTJ911, is used to feed translators in the vicinity of Black Rock. Microwave stations like this are not expressly covered by the terms of the *Order* or Rule 15.712. Under the circumstances presented, however, a waiver is requested pursuant to Rule 1.3. Such is clearly warranted so that the input channel for this translator, as well as the inputs of the stations it feeds, are protected, WNTJ911 being the sole source of free, over-the-air television available to many retired and fixed income residents in that area.

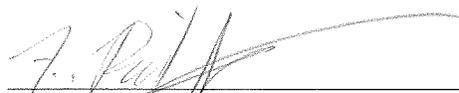
Attached hereto is a Technical Statement by Mr. DuTreil, a diagram showing the overall layout of the County's translator system, and an Appendix including the microwave station licenses with a reference added by Mr. DuTreil showing the off-the-air input channels for these stations. It is requested that this information be included in the Commission's records.

CONCLUSION

Accordingly, for the reasons stated in its Waiver request, in the Technical Statement, and herein, Waiver should be granted for compelling reasons of law and policy.

Respectfully submitted,

MOHAVE COUNTY
BOARD OF SUPERVISORS



William K. Keane
F. Reid Avett

Duane Morris LLP
505 9th Street NW, Ste. 1000
Washington, DC 20004
Phone: (202) 776-5243
Fax: (202) 776-7801
Email: kkeane@duanemorris.com

Its Counsel

January 27, 2012

TECHNICAL STATEMENT
IN SUPPORT OF COMMENTS IN ET DOCKET NO. 04-186
MOHAVE COUNTY BOARD OF SUPERVISORS
MOHAVE COUNTY, ARIZONA

This Technical Statement was prepared on behalf of the Mohave County Board of Supervisors (“Mohave”), licensee and permittee of numerous television translator stations and microwave relay stations in Mohave County, Arizona. The Mohave County system is employed to re-transmit various television stations originating from the Phoenix and Las Vegas markets. Microwave stations are employed within its system of TV translators to distribute the programming received from the Phoenix market. Pursuant to the *Public Notice* in ET Docket No. 04-186, Mohave is providing these comments to ensure that its microwave relays, which receive input program streams via over-the-air television stations, are fully protected from the operation of unlicensed TV band ‘white spaces’ devices under Section 15.712 of the FCC Rules.* In addition, Mohave would like to ensure that, not just a single input channel, but ALL of the television channels received over-the-air by its microwave relay systems are protected.†

In Appendix A of the *Public Notice*, the FCC indicates that the Mohave microwave station WQHE250 qualifies for a waiver to receive protection under the terms of Section 15.712 of the FCC Rules. Mohave agrees with the FCC finding in regard to WQHE250. Since WQHE250 uses the over-the-air reception of KAZT-CD for its programming input, I have confirmed that the KAZT-CD protected contour plus the

* See *Public Notice*, ET Docket No. 04-186, “Office of Engineering and Technology Seeks Comment on Requests for Waiver of Section 15.712(b) to Register Certain TV Receive Sites in the TV Bands Database,” DA 11-2086, Released: December 28, 2011.

† It is understood that all of the Mohave County translator station input facilities fall within the criteria of Section 15.712(b) of the FCC Rules and are, therefore, protected by means of the input channel listed in the FCC CDBS Engineering Database.

80 km buffer falls short of reaching the Smith Peak receive location for WQHE250. Therefore, the WQHE250 receive location at Smith Peak qualifies for consideration of a waiver for protection.

In addition to the protection of the WQHE250 reception of KAZT-CD, there is a larger issue that was discovered in the evaluation of this matter. Specifically, the Mohave County system employs the Smith Peak location as a primary 'headend' to receive ALL of its program streams from the Phoenix market, and this location must be protected from interference or it will affect service throughout the entire Mohave system. Interference occurring at the Smith Peak headend location could affect an estimated population of 131,000 that are served within Mohave County. This is over 65% of the population of the County.

The off-the-air television channels that are received at Smith Peak are relayed into the County for broadcast and distribution on its translator and microwave relay system. Including WQHE250, there are three broadcast auxiliary microwave relay stations located at Smith Peak, which employ the 7 GHz microwave band to relay the programming to a Hayden Peak receive location. From the Hayden Peak location, the programming is broadcast via a series of translators and microwave relay systems located throughout the County. The system includes a microwave relay station at Patterson Slope, which receives an over-the-air television signal and relays the programming in the 6.5 MHz microwave band.[‡]

The attached Figure 1 is a map that provides an overview of the Mohave County translator system. The primary receive point, or 'headend', for the Phoenix TV stations at Smith Peak is indicated in Figure 1. The microwave stations WQHE248, WQHE249 and WQHE250 retransmit the signals received off the air from nine of the Phoenix stations, with each microwave station carrying three of the stations. As

[‡] The Patterson Slope relay is licensed in the FCC Universal Licensing Systems in the Microwave Industrial/Business Service Pool (The FCC Code for this service is 'MG').

indicated in Figure 1, the stations received at Smith Peak are sent via microwave to Hayden Peak, where they are re-broadcast on various translators and intermediate microwave relays.

In addition to the primary receive location at Smith Peak, one of the intermediate microwave relay stations employed in the Mohave system receives an off-the-air signal from a Mohave translator station. This microwave relay station is WNTJ911; and it receives a signal from K48AY on Channel 48 at Patterson Slope for relay to the Black Rock location. This is indicated on the attached Figure 1 as well.

The TV Translator Relay stations in the Mohave County systems that require receiver input protection under Section 15.712 of the FCC Rules are as follows: WNTJ911, WQHE248, WQHE249 and WQHE250. The input channels for these stations are protected pursuant to Section 15.712(c) of the FCC Rules.[§] The table below is a list of the input channels that require protection and that should be in the FCC's

[§] Section 15.712(c) of the FCC Rules states as follows:

“For permanent BAS receive sites appearing in the Commission's Universal Licensing System or temporary BAS receive sites registered in the TV bands database, TVBDs may not operate within an arc of ± 30 degrees from a line between the BAS receive site and its associated permanent transmitter within a distance of 80 km from the receive site for co-channel operation and 20 km for adjacent channel operation. Outside this ± 30 degree arc, TVBDs may not operate within 8 km from the receive site for co-channel operation and 2 km from the receive site for adjacent channel operation.

While WNTJ911 is not strictly in the broadcast auxiliary service (BAS), its function is identical to the microwave stations that operate in the BAS service. Therefore, Mohave requests that WNTJ911 receive protection as would any BAS microwave relay station.

database of protected receive sites:

Call Sign	Site Name	N. Latitude (NAD 83)	W. Longitude (NAD 83)	Input Station	Input Channel to be Protected
WNTJ911	Patterson Slope	35-51-48	114-05-49	K48AY	48
WQHE248	Smith Peak	34-04-02	113-21-21	KSAZ	10
WQHE248	Smith Peak	34-04-02	113-21-21	KPNX	12
WQHE248	Smith Peak	34-04-02	113-21-21	KNXV	15
WQHE249	Smith Peak	34-04-02	113-21-21	KTVK	24
WQHE249	Smith Peak	34-04-02	113-21-21	KPHO	17
WQHE249	Smith Peak	34-04-02	113-21-21	KAET	8
WQHE250	Smith Peak	34-04-02	113-21-21	KAZT-CD	36
WQHE250	Smith Peak	34-04-02	113-21-21	KUTP	26
WQHE250	Smith Peak	34-04-02	113-21-21	KASW	49

It is noted that stations WQHE248, WQHE249 and WQHE250 all require protection of THREE different TV input channels. Reference copies of the FCC licenses for all of the above are attached hereto.

It is understood that the FCC plans to employ its CDBS Engineering Database and its ULS Engineering Database to administer the TV input receive channel protection requirements outlined in Section 15.712 of the FCC Rules. It is also known that the FCC ULS database contains no field that lists an off-the-air TV channel input that could be used to meet the protection requirements of Section 15.712(c) of the FCC Rules. Therefore, not only is there no way for the FCC to store the multiple channels that require protection for the Mohave microwave stations, there is, at present, NO means for protection of ANY the over-the-air TV input channels for microwave stations.

Mohave requests that the FCC implement corrections or improvements to its database systems as necessary to protect its microwave relay stations' off-the-air input channels, including those that may employ multiple input channels. In addition, it is requested that the FCC explicitly declare the off-the-air TV input channel of

microwave station WNTJ911, which is licensed in the Microwave Industrial/Business Pool, and such situated stations, should be protected under the requirements of Section 15.712 of the FCC Rules, where they are utilized as WNTJ911 is here.

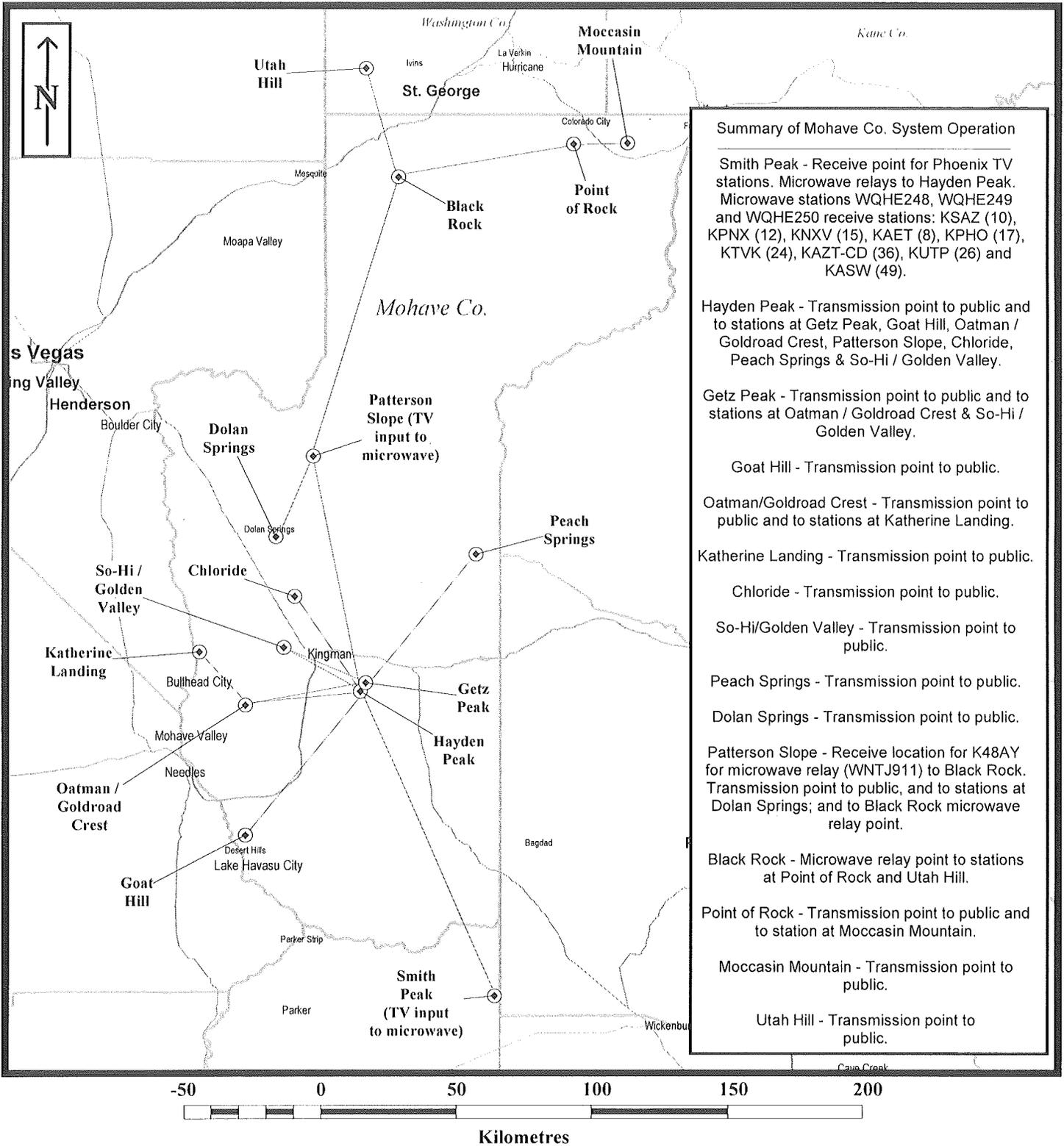


Louis R. du Treil, Jr.

du Treil, Lundin & Rackley, Inc.
201 Fletcher Ave.
Sarasota, Florida 34237-6019

Phone: 941-329-6004

January 24, 2012



OVERVIEW OF MOHAVE COUNTY TRANSLATOR SERVICE SYSTEM

duTreil, Lundin & Rackley, Inc. Sarasota, Florida

TECHNICAL STATEMENT
IN SUPPORT OF COMMENTS IN ET DOCKET NO. 04-186
MOHAVE COUNTY BOARD OF SUPERVISORS
MOHAVE COUNTY, ARIZONA

Mohave County Microwave Licenses with Off-the-Air Input Channels

(four pages follow)

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: Mohave County

This station receives TV Channel 48 off-the air.

ATTN: RON WALKER
MOHAVE COUNTY
PO BOX 7000
KINGMAN, AZ 86402-7000

Call Sign WNTJ911	
File Number 0005016810	
Radio Service MG - Microwave Industrial/Business Pool	
SMSA	Station Class FXO

FCC Registration Number (FRN): 0001591460

Grant Date 01-06-2012	Effective Date 01-06-2012	Expiration Date 01-17-2022	Print Date 01-06-2012
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LOCATION

Fixed Location Address or Area of Operation:

PATTERSON SLOPE APPROX 2 MI E OF
City: MEADVIEW County: MOHAVE State: AZ

Loc No.	Location Name	Latitude	Longitude	Elevation	Antenna Structure Registration No.
001	STATION	35-51-47.9 N	114-05-48.8 W	1304.5	
002	1686	35-04-52.0 N	113-54-15.8 W	2557.3	
003	0166	36-47-35.9 N	113-45-06.8 W	2225.0	

FREQUENCY PATHS

Frequency (MHz)	Tol (%)	Emission Desig	EIRP (dBm)	Constr Date	Path No	Seg	Emit Loc No	Ant Hgt (m)	Gain (dBi)	Beam (deg)	POL	AZIM (deg)	Rec Loc No	Rec Call Sign
6595.0	0.00500	20M0F9W	75.600		001	1	001	4.9	45.6	1.2	V	168.6	002	WHJ519
6635.0	0.00500	20M0F9W	75.600		002	1	001	4.9	45.6	1.2	H	16.6	003	WNTJ912

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: MOHAVE COUNTY BOARD OF SUPERVISORS

This station receives TV Channels 10, 12 & 15 off-the air.

MOHAVE COUNTY BOARD OF SUPERVISORS
PO BOX 7000
KINGMAN, AZ 86402-7000

Call Sign WQHE248	
File Number	
Radio Service TT - TV Translator Relay	
SMSA	Station Class FXO

FCC Registration Number (FRN): 0001591460

Grant Date 07-10-2007	Effective Date 07-10-2007	Expiration Date 10-01-2014	Print Date
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LOCATION

Fixed Location Address or Area of Operation:

SMITH PEAK 8 MILES NORTH

City: AGUILA County: YAVAPAI State: AZ

Loc No.	Location Name	Latitude	Longitude	Elevation	Antenna Structure Registration No.
001	SMITH PEAK	34-04-02.1 N	113-21-20.7 W	1597.2	
002	HAYDEN PEAK	35-04-52.0 N	113-54-17.8 W	2511.6	

FREQUENCY PATHS

Frequency (MHz)	Tol (%)	Emission Desig	EIRP (dBm)	Constr Date	Path No	Seg	Emit Loc No	Ant Hgt (m)	Gain (dBi)	Beam (deg)	POL	AZIM (deg)	Rec Loc No	Rec Call Sign
7062.5	0.00050	25M0D7W	71.900	09-30-2009	001	1	001	5.8	43.9	1.0	H	336.0	002	

Waivers/Conditions:

The Facility ID of the Associated Broadcast Parent Station for this license is 43379.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

This station receives TV Channels 8, 17 & 24 off-the air.

LICENSEE: MOHAVE COUNTY BOARD OF SUPERVISORS

MOHAVE COUNTY BOARD OF SUPERVISORS
PO BOX 7000
KINGMAN, AZ 86402-7000

Call Sign WQHE249	
File Number	
Radio Service TT - TV Translator Relay	
SMSA	Station Class FXO

FCC Registration Number (FRN): 0001591460

Grant Date 07-10-2007	Effective Date 07-10-2007	Expiration Date 10-01-2014	Print Date
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LOCATION

Fixed Location Address or Area of Operation:

SMITH PEAK 8 MILES NORTH
City: AGUILA County: YAVAPAI State: AZ

Loc No.	Location Name	Latitude	Longitude	Elevation	Antenna Structure Registration No.
001	SMITH PEAK	34-04-02.1 N	113-21-20.7 W	1597.2	
002	HAYDEN PEAK	35-04-52.0 N	113-54-17.8 W	2511.6	

FREQUENCY PATHS

Frequency (MHz)	Tol (%)	Emission Desig	EIRP (dBm)	Constr Date	Path No	Seg	Emit Loc No	Ant Hgt (m)	Gain (dBi)	Beam (deg)	POL	AZIM (deg)	Rec Loc No	Rec Call Sign
7112.5	0.00050	25M0D7W	71.900	09-30-2009	001	1	001	5.8	43.9	1.0	H	336.0	002	

Waivers/Conditions:

The Facility ID of the Associated Broadcast Parent Station for this license is 43401.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

REFERENCE COPY

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: MOHAVE COUNTY BOARD OF SUPERVISORS

This station receives TV Channels 26, 36 & 49 off-the air.

MOHAVE COUNTY BOARD OF SUPERVISORS
PO BOX 7000
KINGMAN, AZ 86402-7000

Call Sign WQHE250	
File Number	
Radio Service TT - TV Translator Relay	
SMSA	Station Class FXO

FCC Registration Number (FRN): 0001591460

Grant Date 07-10-2007	Effective Date 07-10-2007	Expiration Date 10-01-2014	Print Date
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LOCATION

Fixed Location Address or Area of Operation:

SMITH PEAK 8 MILES NORTH
City: AGUILA County: YAVAPAI State: AZ

Loc No.	Location Name	Latitude	Longitude	Elevation	Antenna Structure Registration No.
001	SMITH PEAK	34-04-02.1 N	113-21-20.7 W	1597.2	
002	HAYDEN PEAK	35-04-52.0 N	113-54-17.8 W	2511.6	

FREQUENCY PATHS

Frequency (MHz)	Tol (%)	Emission Desig	EIRP (dBm)	Constr Date	Path No	Seg	Emit Loc No	Ant Hgt (m)	Gain (dBi)	Beam (deg)	POL	AZIM (deg)	Rec Loc No	Rec Call Sign
7012.5	0.00050	25M0D7W	71.900	09-30-2009	001	1	001	5.8	43.9	1.0	H	336.0	002	

Waivers/Conditions:

The Facility ID of the Associated Broadcast Parent Station for this license is 43386.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.