



**STATEMENT OF JOHN E. HIDLE, JR.  
IN RESPONSE TO AN FCC LETTER  
AND IN SUPPORT OF AN APPLICATION TO AMEND  
A PENDING APPLICATION FOR CONSTRUCTION PERMIT  
BPCDT-19991028ACK  
WSMH-DT - FLINT, MICHIGAN  
DTV - CH. 16, 895 kW, 287 M HAAT**

**Prepared for: WSMH LICENSEE, LLC.**

**OCTOBER, 2007**

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Prepared for: WSMH LICENSEE, LLC.

I am an Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission.

**GENERAL**

WSMH LICENSEE, LLC. licensee of WSMH(TV), Channel 66, Flint, Michigan, and applicant for construction permit for the paired Digital Television Allotment for WSMH-DT, Channel 16, has authorized this office to prepare this statement, FCC Form 301, Sections III and III-D and associated exhibits to be made a part of the applicant's response to a letter received from the Federal Communications Commission, dated April 24, 2007 post-marked June 7, 2007, stating the results of the Commission's technical review of the subject application, BPCDT-19991028ACK.

## **PROCESSING AND EVALUATION BY INDUSTRY CANADA**

The April 24, 2007 letter from the FCC stated that the WSMH-DT Application for Construction Permit “cannot be granted because it fails to adequately protect the co-channel NTSC station CHWI-TV at Wheatley, Ontario. This is in violation of the *Letter of Understanding (LOU) between the Commission and Industry Canada, Released September 29, 2000 ...*”. “Accordingly, you must within 30 days of the date of this letter, amend your application so that it will meet with the requirements of the LOU.”

In an effort to understand the present details of Industry Canada’s interference requirements, and to expedite a resolution of this long-standing matter, the applicant engaged a Canadian engineering consultant, David George of Azcar Technologies Inc. to determine a technical solution for WSMH-DT that will be acceptable to Industry Canada.

The applicant’s Canadian engineering consultant, Mr. George, has determined that Industry Canada will consider WSMH-DT’s pending Application For Construction Permit acceptable under the terms of the Letter of Understanding provided the Effective Radiated Power is reduced from 1000 kW to not more than 897 kW, while maintaining all other technical parameters unchanged. See attached e-mail message to Mr. David George from Industry Canada in Exhibit 1.

## **ANALYSIS**

As recommended in the April 24<sup>th</sup> letter, I have conducted a complete technical analysis of the pending application, as modified by the reduction of ERP to 895 kW, to determine its continued compliance with Commission interference requirements. All other technical parameters of the proposed WSMH-DT facility remain as indicated in the outstanding

Application for Construction Permit, FCC File Number: BPCDT-19991028ACK.

### **PROPOSED TECHNICAL FACILITIES**

It is proposed to make only one change in the pending Application for Construction Permit; the ERP is to be reduced from 1000 kW to 895 kW. The antenna is proposed to be top-mounted on the antenna support structure, FCC antenna structure registration number 1002081, with the centerline at 295 meters above ground level (AGL).

### **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.625 of the FCC's Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699), power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, the antenna site elevation and coordinates were determined from those reflected in FCC antenna structure registration number 1002081. As shown in Exhibit 3, the predicted 48 dBu, (F50,90) principal community contour completely encompasses the principal community of license as required by the Commission's rules. The predicted 41 dBu (F 50,90) "protected coverage contour" is also shown in Exhibit 3. Exhibit 2 shows a comparison of the 41 dBu F(50,90) coverage contour of the proposed facility at 895 kW with the protected coverage contour (41 dBu F 50,90) of the proposed 1000 kW facility in the outstanding Application for Construction Permit, as certified to the Commission and reflected in the recently adopted DTV Table of Allotments in the Seventh Report and Order and

Eighth Further NPRM (MB Docket 87-268). The coverage area of the instant proposed facility that would comply with the processing requirements of Industry Canada has a coverage area that encompasses 97.2% of the population covered by the outstanding Application for Construction Permit as certified by the applicant and reflected in the recently adopted DTV Table of Allotments.

### **ALLOCATION CONSIDERATIONS**

The Seventh Report and Order and Eighth Further NPRM (MB Docket 87-268) includes the recently adopted DTV Table of Allotments, that identifies the specific technical facilities at which the Commission has proposed to allow DTV stations to operate after the DTV transition. The facilities included in the DTV Table of Allotments are those for which broadcasters were required by the Commission to certify a specific coverage area based upon their ability to “build out” to the level of checklist or maximized facilities as reflected in their FCC authorizations, or their outstanding requests for authorization in cases where a grant was forthcoming pending Canadian processing of maximization requests within close proximity to the U.S./Canadian border. WSMH Licensee, LLC understands its obligations under the Commission’s policy that broadcasters’ final facilities must cover their certified coverage area as approved by the Commission. The new DTV Table of Allotments as adopted in the Seventh Report and Order contains the WSMH-DT facility as reflected in its Application for Construction Permit, FCC File Number BPCDT-19991028ACK. Therefore,

WSMH-DT is obligated to implement this facility, pending the outcome of Canadian processing and a possible reduction in the proposed facility as a result thereof. In this instance, it has been indicated that a reduction in ERP from the proposed 1000 kW to 897 kW would meet the requirements of the Canadian authorities in regards to alleviating potential interference concerns. Therefore, an interference study was performed using the Commission's application analysis program, "TV-Process," to ensure that the proposed DTV facility is in compliance with the Commission's *de minimis* interference requirement contained in Section 73.623(c)(2) of the Commission's rules.

The TV-Process study was evaluated to determine if the proposed modification of WSMH-DT is predicted to cause any level of new prohibited interference to authorized DTV facilities, including DTV stations, DTV expansion construction permits, DTV allotments or pending DTV applications. The TV-Process study results indicate that the instant proposal is predicted to cause no unacceptable level of new interference to the populations served by any relevant DTV facility as compared to its facility as reflected in the recently adopted DTV Table of Allotments. While the results show the instant proposal does result in interference to WDCQ-DT channel 15, Bad Axe, Michigan, this is actually a slight reduction in the level of predicted interference as compared to the WSMH-DT facility as listed in the new DTV Table of Allotments. The predicted interference to WDCQ-DT is indicated by TV-Process as a "failure" in regards to the WSMH-DT facility as reflected in the original DTV Table of Allotments in Appendix B of the Second Memorandum Opinion and Order on Reconsideration of the Fifth

Report and Orders that constitutes the baseline comparison in the TV-Process program. However, this outcome in TV-Process is irrelevant for two reasons. First, this interference is the result of WDCQ-DT's maximization application that post-dated WSMH-DT's pending Application for Construction Permit that became the basis of its facility as reflected in the recently adopted DTV Table of Allotments. The WDCQ-DT facility was granted based upon its explicit acceptance of interference from WSMH-DT caused by its own proposal. Second, the instant proposal requests nothing more than to reduce ERP, and the impact on WDCQ-DT is nothing more than a reduction in the existing level of interference WDCQ-DT has already accepted. By including the WSMH-DT facility as reflected in its outstanding Application for Construction Permit for 1000 kW ERP in the recently adopted DTV Table of Allotments, the Commission has previously indicated the higher level of interference to WDCQ-DT to be acceptable(ed), and has recognized the right of WSMH-DT to operate the facility as reflected in the Table, or a facility that approximates it as closely as possible based on the outcome of processing by Industry Canada. The instant proposed reduction of ERP from 1000 kW to 895 kW is therefore in compliance with the *de minimis* interference criteria contained in Section 73.623(c)(2) of the Commission's Rules, and the Commission should ignore the TV-Process result as to WDCQ-DT in processing this request for reduction in ERP that was necessitated by the outcome of required coordination with the Canadian authorities.

### **Class A Television Allocation Considerations**

As required in Section 73.613 of the FCC's Rules, as established in the Report and Order establishing Class A Television Service, a study of interference contour overlap was performed, based on the WSMH-DT facility proposed herein, to establish compliance with the protection requirements contained therein. The study shows that, as a result of the changes proposed herein, no increase in prohibited contour overlap is predicted to occur with any LPTV stations which have obtained Class A status.

### **BLANKETING AND INTERMODULATION INTERFERENCE**

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed WSMH-DT transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference created by this proposal in accordance with applicable Rules.

### **ENVIRONMENTAL CONSIDERATIONS**

#### **RADIO FREQUENCY IMPACT**

Effective October 15, 1997, the FCC adopted guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986), and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992

(IEEE C95.1-1991). The guidelines provide a maximum permissible exposure (MPE) level for occupational or "controlled" situations that apply in cases that affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The FCC's Maximum Permitted Exposure (MPE) level for "uncontrolled" environments is 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) when applied to broadcast facilities operating between 30 MHz and 300 MHz, and for broadcast facilities operating between 300 MHz and 1500 MHz, primarily UHF TV stations, is derived from the formula,  $(\text{frequency}/1500)$ . The MPE level for "controlled" environments is 1.0 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for operations between 30 MHz and 300 MHz, and for broadcast stations operating between 300 MHz and 1500 MHz in a "controlled" environment is derived from the formula,  $(\text{frequency}/300)$ .

The predicted emissions of WSMH-DT channel 16 must be considered, along with the predicted emissions of the authorized facility of WSMH-DT channel 66, also located at the authorized site. For WSMH-DT, which will operate on channel 16 (485 MHz), the MPE level for

“uncontrolled” environments is  $0.323 \text{ mW/cm}^2$ , and for “controlled” environments is  $1.615 \text{ mW/cm}^2$ .

The proposed WSMH-DT facility, channel 16, will operate with a maximum ERP of 895 kW from a horizontally polarized directional transmitting antenna with a centerline height of 295.0 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WSMH-DT facility produces a predicted power density at two meters above ground level of  $0.03134 \text{ mW/cm}^2$ , which is 9.69% of the FCC guideline value for “uncontrolled” environments, and 1.938% of the FCC guideline value for “controlled” environments.

As shown in Appendix A, the total predicted percentage of the MPE value at WSMH’s site, considering the cumulative predicted radiation of all broadcast facilities at the site, is only 24.06% of the limit for “uncontrolled” environments, and 4.812% of the limit for “controlled” environments. The site is therefore in compliance with the FCC’s Maximum Permitted Exposure guidelines.

### **OCCUPATIONAL SAFETY**

The permittee of WSMH-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WSMH-DT antenna. The applicant is committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, when necessary, to ensure protection to personnel. In light of the

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above, the proposed modification of the WSMH-DT facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

**SUMMARY**

It is submitted that the proposal described herein complies with the Rules and Regulations of the Federal Communications Commission. This statement, FCC Form 301, Sections III and III-D, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

**Dated: October 3, 2007**

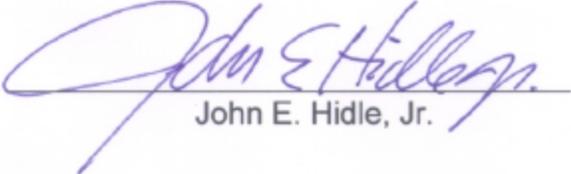
  
John E. Hidle, Jr.

EXHIBIT 1

From: Lê, Khiem: DGRB [mailto:Le.Khiem@ic.gc.ca]  
Sent: Wednesday, September 19, 2007 10:46 AM  
To: David.George@azcar.com  
Cc: Dumas, Martin: DGRB  
Subject: WSMH-DT Flint, MI

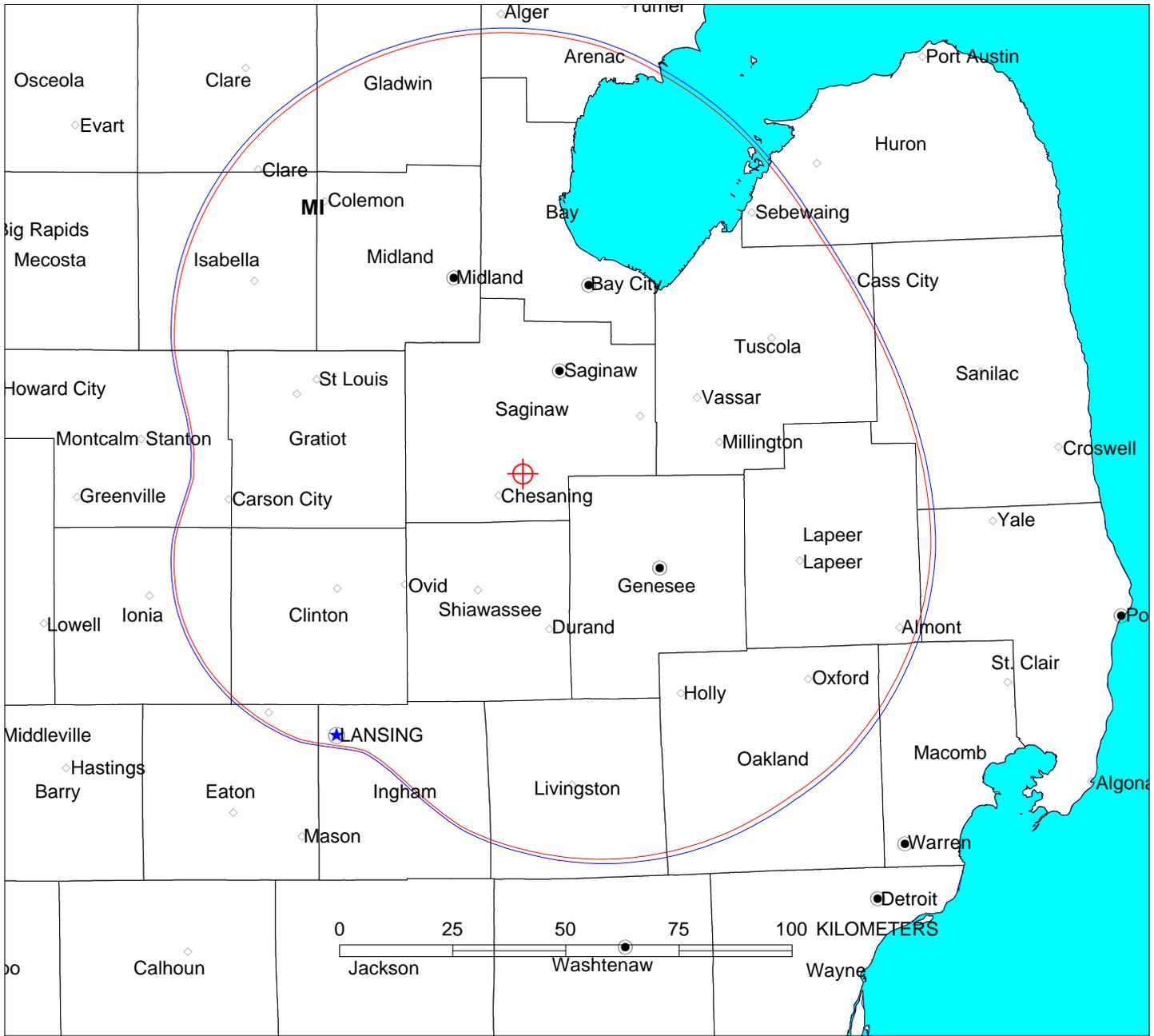
Good morning Mr George,

This is to advise that Industry Canada would have no objection to an application by WSMH-DT Flint, MI for an operation at 897kW and HAAT of 287m on channel 16 assuming that the other technical parameters(antenna pattern, transmitter location) remain the same as the application submitted in February 19, 2002. The application must be notified by the FCC.

Regards,

Khiem Lê  
TV Engineer/Ingénieur en TV  
Broadcasting Application Engineering/ Ingénierie des demandes en radiodiffusion  
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Azcar email.

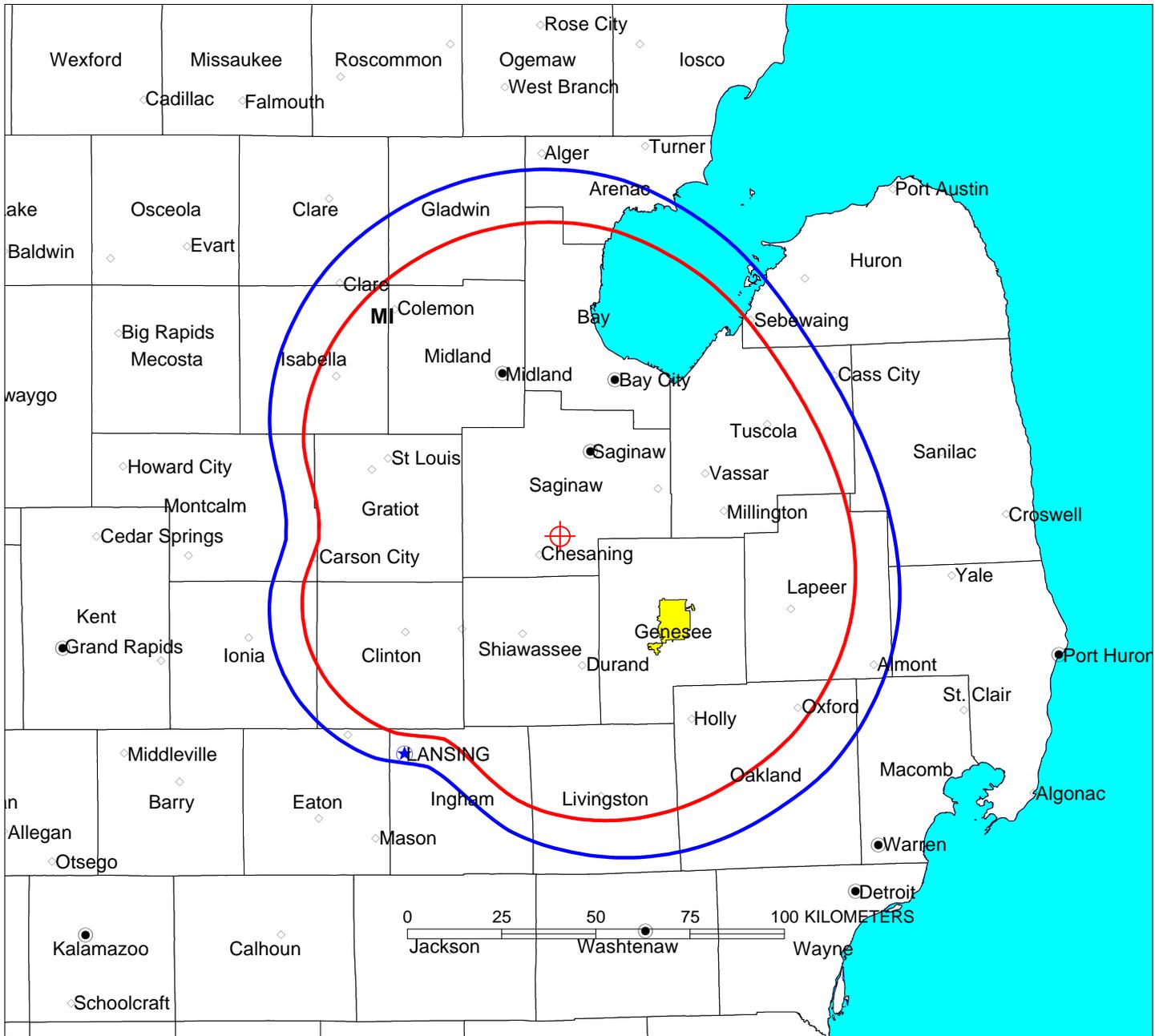


**COMPARISON OF PREDICTED COVERAGE CONTOURS**

**WSMH-DT, FLINT, MICHIGAN  
CERTIFIED FACILITY VS FACILITY AT 895 KW ERP  
OCTOBER, 2007**

○ WSMH-DT Channel 16, Certified Facility  
Protected Coverage Contour  
1000 kW ERP, 287.0 m HAAT, 41 dBu, F(50,90)  
Directional Antenna; FCC ID No. 28994  
Population Inside Contour = 2,186,647  
Coverage Area = 23,580 km<sup>2</sup>

○ WSMH-DT Channel 16, Proposed Facility  
Protected Coverage Contour  
895 kW ERP, 287.0 m HAAT, 41 dBu, F(50,90)  
Directional Antenna; FCC ID No. 28994  
Population Inside Contour = 2,125,294  
Coverage Area = 23,100 km<sup>2</sup>



**PREDICTED COVERAGE CONTOURS**

**WSMH-DT, FLINT, MICHIGAN  
COMMUNITY COVERAGE CONTOUR AT 895 KW ERP  
OCTOBER, 2007**

○ WSMH-DT Channel 16, Proposed Facility  
Protected Coverage Contour  
895 kW ERP, 287.0 m HAAT, 41 dBu, F(50,90)  
Directional Antenna; FCC ID No. 28994

○ WSMH-DT Channel 16, Proposed Facility  
Community Coverage Contour  
895 kW ERP, 287.0 m HAAT, 48 dBu, F(50,90)  
Directional Antenna; FCC ID No. 28994

**SUMMARY OF RADIOFREQUENCY  
RADIATION STUDY**  
WSMH-DT, FLINT MICHIGAN  
CHANNEL 16, 895 kW ERP, 287 m HAAT  
SEPTEMBER, 2007

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm<sup>2</sup>)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm<sup>2</sup>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WSMH-DT	DT	16	485	H	293	895.000	0.300	0.03134	0.323	9.69%
WSMH(TV)	TV	66	785	H	293	1170.000	0.300	0.02049	0.523	3.92%
WAQP-DT	DT	48	677	H	293	851.000	0.300	0.02980	0.451	6.60%
WAQP(TV)	TV	49	683	H	293	1000.000	0.300	0.01751	0.455	3.85%

**TOTAL PERCENTAGE OF ANSI VALUE= 24.06%**

*\*\* The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.*