TPO Calculation Summary
Main Antenna Operation

Call letters: WCMI-FM
City of License: Catlettsburg, KY
Frequency: CH224A (92.7 MHz)
File No: License Modification
Facility ID: 21589
Applicant: Fifth Avenue Broadcasting, Co. Inc.

Operating Effective Radiated Power (ERP): 2.350 kW

Antenna Make: Electronic Research Inc. (ERI)
Antenna Model: LPX-2E-HW
No of Elements: Two (2)
Antenna COR AGL: 119 meters AGL
Antenna COR AMSL: 373 meters AMSL
Max Input Power: 9.0 kW
Power Gain: 0.702
Log[power gain]*10 = **Antenna Gain:** -1.537 dB
Calculated Antenna Input Power: 3.348 kW
Transmitter Make/Model: BE-FM5
Transmitter Rated Power: 5.000 kW

System Loss Info:

Description	Component Make/Model		Length	Loss
1 5/8 Inch End Connector	Generic (1@0.02 dB each)			-0.020 dB
Main Antenna Feedline (Tower)	Andrew 7/8" HJ7-50A (Air)	(0.199 dB/100 ft)	390 ft	-0.776 dB
Main Antenna Feedline (Ground)	Andrew 7/8" HJ7-50A (Air)	(0.199 dB/100 ft)	25 ft	-0.050 dB
1 5/8 Inch Elbow Connector	Generic (1@0.02 dB each)			-0.020 dB
1 5/8 Inch End Connector	Generic (1@0.02 dB each)			-0.020 dB

TOTAL SYSTEM GAIN/LOSS: -2.422 dB
1 / [[10^[dB/10]/ERP]] = **CALCULATED TRANSMITTER POWER OUTPUT:** 4.105 kW

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