

Exhibit 29 - Engineering Statement C
ENVIRONMENTAL CONSIDERATIONS
prepared for
Galaxy Communications, L.P.
WTKV(FM) Granby, New York
Facility ID 24131
Ch. 288A 3.9 kW 125 m

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. However, *Galaxy* is commissioning a review of the various environmental subjects outlined in Section 1.1307(a)(1-8). The instant application will be amended when that review is complete to provide any additional material that may be necessary. Pending submission of that amendment, a response of "no" has been supplied in response to Item 17 of the associated FCC Form 301 Section III-B.

Nature of The Proposal

The instant application seeks a Construction Permit to change the location of the WTKV(FM) facility. The antenna system for WTKV will be side-mounted on a proposed new antenna support structure in the town of Granby, NY. The FAA has been notified of the proposed tower construction. When a *Determination of No Hazard* is received, the structure will be registered with the FCC. The applicant has requested red lights and paint as its desired obstruction marking and lighting. High intensity white strobe lighting requirements are not anticipated for the proposed structure.

Human Exposure to Radiofrequency Radiation

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

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It is proposed to install the WTKV antenna such that its center of radiation is 142 meters above ground level. A maximum effective radiated power (“ERP”) of 3.9 kilowatts, circularly polarized, will be employed utilizing a Shively model 6813NX-4-HW 4 bay, half-wavelength spaced antenna. The “uncontrolled/general population” limit specified in §1.1310 for the FM radio band is 200 $\mu\text{W}/\text{cm}^2$.

Calculations were made per OET 65 to predict power density attributable to the proposed facility at points two meters above ground level locations in the immediate vicinity of the tower. According to elevation pattern data provided by the manufacturer of the proposed antenna system (see **Exhibit 29 - Figure 7**), the WTKV antenna¹ will have a relative field of less than 40 percent from 20 to 90 degrees below the horizontal plane (*i.e.*, below the antenna). Thus, a conservative value of 40 percent relative field is used for this calculation.

Using equation (9) in OET-65, and considering terrain elevations near the site and the directivity of the proposed antenna system in the vertical (elevation) plane, the maximum calculated RF density level attributable to the proposed WTKV(FM) facility will be 2.1 $\mu\text{W}/\text{cm}^2$, or 1.1 percent of the uncontrolled MPE limit. At ground level locations away from the base of the tower, the calculated RF power density is even lower, due to the increasing distance from the transmitting antenna. Thus, based on this analysis, the Commission’s limit regarding general population / uncontrolled exposure to RF electromagnetic field is not exceeded by the proposed WTKV facility at ground level locations near the proposed WTKV tower site.

§1.1307(b)(3) states that facilities contributing less than five percent of the exposure limit at locations with multiple transmitters are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent. Since the instant

¹Should an alternate antenna make and/or model eventually be employed for the actual WTKV facility, a revised analysis of RF exposure will be provided as appropriate in an exhibit to the FCC Form 302-FM *Application for License* to cover the construction.

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situation meets the five percent exclusion test at all ground level areas, the impact of any other facilities using this site or at a nearby site may be considered independently from this proposal. Accordingly, it is believed that the impact of the proposed operation should not be considered to be a factor at or near ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

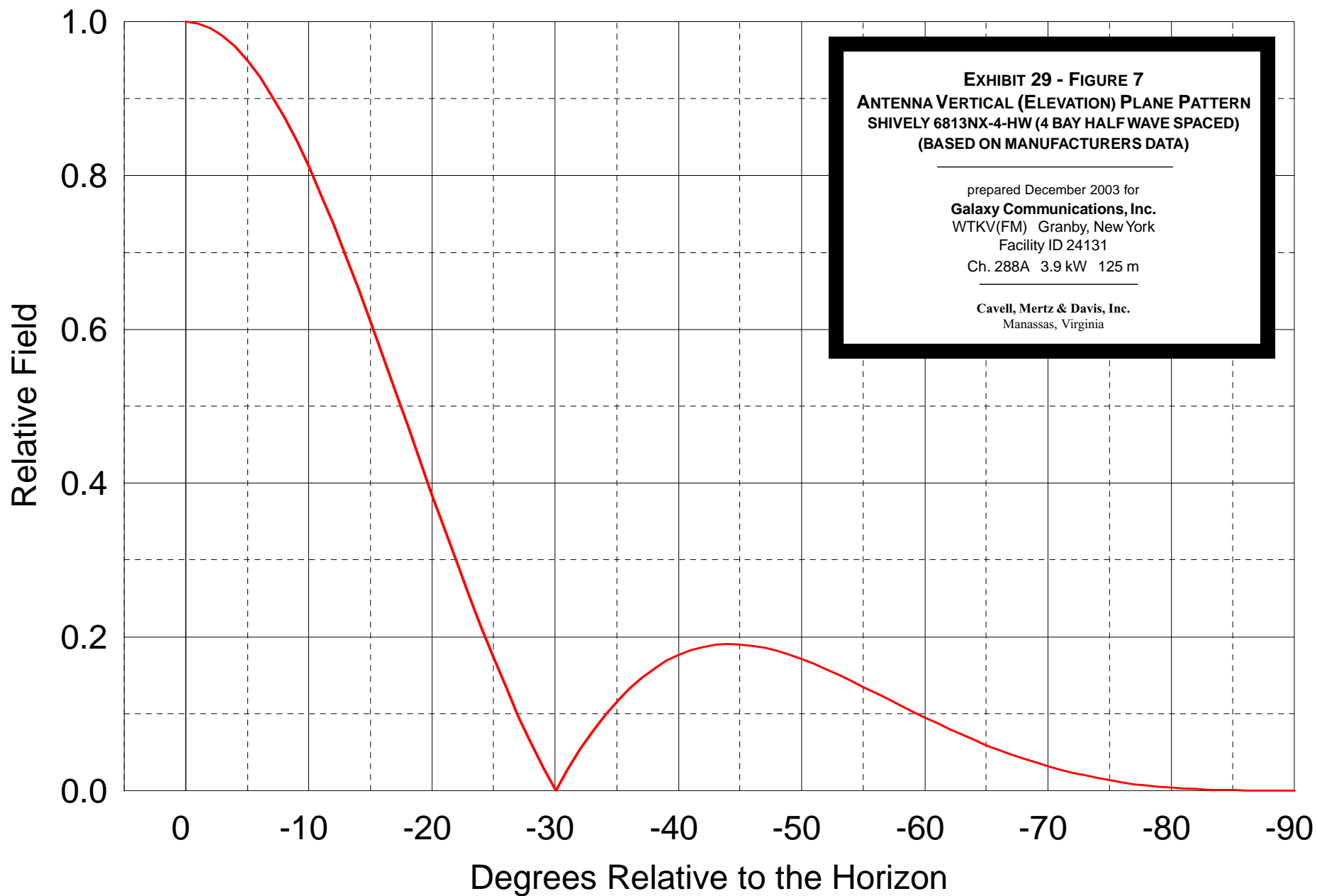
As demonstrated herein, excessive levels of RF energy attributable to the proposed facility will not be caused at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs will be posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines will be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with any pertinent stations.

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Conclusion

Based on the preceding, it is believed that the instant proposal will not have a significant environmental effect that would be attributable to its contribution of radio frequency energy. *Galaxy* is commissioning a review of the other various environmental subjects outlined in Section 1.1307(a)(1-8). The instant application will be amended when that review is complete to provide any additional material that may be necessary. Pending submission of that amendment, a response of “no” has been supplied in response to Item 17 of the associated FCC Form 301 Section III-B.



ENGINEERING EXHIBITS

**Application for
Construction Permit**
prepared for
Galaxy Communications, L.P.
WTKV(FM) Granby, New York
Facility ID 24131
Ch. 288A 3.9 kW 125 m

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FCC Form 301, Section III-B - FM Engineering

Exhibit 4

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Exhibit 24

Statement B	Allocation Considerations
Figure 6	Proposed Coverage Contours

Exhibit 29

Statement C	Environmental Considerations
Figure 7	Antenna Vertical Plane (Elevation) Pattern

This material supplies a "hard copy" of the engineering portions of this application as entered December 9, 2003 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.

Section III-B - FM Engineering

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 Number: 288

2. Class (select one):
☒ A
☐ B1
☐ B
☐ C3
☐ C2
☐ C1
☐ C0
☐ C
☐ D

3. Antenna Location Coordinates: (NAD 27)

Latitude:
Degrees 43 Minutes 16 Seconds 23
☒ North
☐ South

Longitude:
Degrees 76 Minutes 24 Seconds 5
☒ West
☐ East

4. One Step Proposal Allotment Coordinates: (NAD 27)
☐ Not Applicable

Latitude:
Degrees Minutes Seconds
☐ North
☐ South

Longitude:
Degrees Minutes Seconds
☐ West
☐ East

5. Antenna Structure Registration Number:
☐ Not Applicable
☒ Notification filed with FAA

6. Overall Tower Height Above Ground Level: 147.8meters

7. Height of Radiation Center Above Mean Sea Level: 253.6 meters(H) 253.6 meters(V)

8. Height of Radiation Center Above Ground Level: 142meters(H) 142meters(V)

9. Height of Radiation Center Above Average Terrain: 125.3meters(H) 125.3meters(V)

10. Effective Radiated Power: 3.9 kW(H) 3.9 kW(V)

11. Maximum Effective Radiated Power:
☒ Not Applicable
(Beam-Tilt Antenna ONLY) kW(H) kW(V)

12. Directional Antenna Relative Field Values:
☒ Not applicable (Nondirectional)

Rotation (Degrees):
☐ No Rotation

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

Relative Field Polar Plot

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.

CERTIFICATION

AUXILIARY ANTENNA APPLICANTS ARE NOT REQUIRED TO RESPOND TO ITEMS 13-16. PROCEED TO ITEM 17.

13. Allotment.

The proposed facility complies with the allotment requirements of 47 C.F.R. Section 73.203.

☒ Yes
☐ No

See Explanation in

		[Exhibit 21]
14.	Community Coverage. The proposed facility complies with 47 C.F.R. Section 73.315.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 22]
15.	Main Studio Location. The proposed main studio location complies with 47 C.F.R. Section 73.1125.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 23]
16.	Interference. The proposed facility complies with all of the following applicable rule sections: Check all those that apply: Separation Requirements. <input checked="" type="checkbox"/> a) 47 C.F.R. Section 73.207 Grandfathered Short-Spaced. <input type="checkbox"/> b) 47 C.F.R. Section 73.213(a) with respect to station(s): [Exhibit 25] Exhibit required <input type="checkbox"/> c) 47 C.F.R. Section 73.213(b) with respect to station(s): [Exhibit 26] Exhibit required <input type="checkbox"/> d) 47 C.F.R. Section 73.213(c) with respect to station(s): [Exhibit 27] Exhibit required. Contour Protection <input type="checkbox"/> e) 47 C.F.R. Section 73.215 with respect to station(s): [Exhibit 28] Exhibit required.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 24]
17.	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 compliance through the use of the RF worksheets in Appendix A, an Exhibit is required. 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.	<input type="radio"/> Yes <input checked="" type="radio"/> No See Explanation in [Exhibit 29]
PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.		

SECTION III - PREPARER'S CERTIFICATION

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 ROBERT J CLINTON		Relationship to Applicant (e.g., Consulting Engineer) CONSULTANT	
Signature		Date 12/9/2003	
Mailing Address CAVELL, MERTZ, & DAVIS, INC. 7839 ASHTON AVENUE			
City MANASSAS	State or Country (if foreign address) VA		Zip Code 20109 -2883
Telephone Number (include area code) 7033929090	E-Mail Address (if available) BCLINTON@CMDCONSULTING.COM		

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001),

Exhibits

Exhibit 1
Description: CHANGE IN COMMUNITY OF LICENSE

THIS APPLICATION IS BEING FILED TO FACILITATE A CHANGE IN STATION WTKV'S COMMUNITY OF LICENSE FROM OSWEGO, NEW YORK TO GRANBY, NEW YORK, AS AUTHORIZED BY THE COMMISSION'S REPORT AND ORDER IN MM DOCKET 00-169.

Attachment 1

Exhibit 4
Description: EXHIBIT 4 - ENGINEERING STATEMENT - MULTIPLE OWNERSHIP STUDY

ATTACHED AS EXHIBIT 4

Attachment 4

Description
Exhibit 4 - Engineering Statement - Multiple Ownership Study

Attachment 21

Exhibit 24
Description: EXHIBIT 24 - ALLOCATIONS CONSIDERATIONS

ATTACHED AS EXHIBIT 24

Attachment 24

Description
Exhibit 24 - Allocations Considerations

Exhibit 29
Description: EXHIBIT 29 - ENVIRONMENTAL CONSIDERATIONS

ATTACHED AS EXHIBIT 29

Attachment 29

Description
Exhibit 29 - Environmental Considerations