EXHIBIT 1
TECHNICAL CERTIFICATION
RE: ENVIRONMENTAL EFFECT

The Applicant seeks to update the antenna information authorized in the underlying displacement CP for K09ZX-D to specify a different directional antenna.[1] The new transmitting antenna will be mounted on an existing pole located within an established communications site. The pole to be utilized is 6 meters in overall height. Because the criteria in 47 CFR § 1.1307(a) does not generally encompass the mounting of antennas on existing structures of 6.1 meters or less in height, this application does not appear to warrant additional environmental processing. With regard to the requirements concerning human exposure to radio-frequency (RF) energy in 47 CFR § 1.1307(b), this proposal is not expected to result in ground-level exposure in excess of the FCC guidelines as described below.

The specified transmitter location is situated on a secluded mountaintop where there are no inhabitants or populated areas nearby. This site has been designated as the Squaw Peak Electronic Site by the U.S. Forest Service. Access to the site is via a narrow unpaved single-lane road that climbs to the mountaintop over very steep and rugged terrain. At the top of the mountain the road splits into two driveways, one that goes to the K09ZX-D site and another that leads to an adjacent area where other communication facilities are located. For these reasons, it is believed that the remote nature of the site, and its mountainous geography, significantly limit access by the general public. With regard to occupational exposure, the station will adhere to the new rules adopted in the *RF Report and Order* and will ensure that suitable warning signs to establish awareness of the potential for exposure are strategically posted at the site.[2]

The maximum permissible exposure (MPE) limits for Channel 9, as set forth in 47 CFR § 1.1310 for uncontrolled and controlled situations, are 200 μW/cm² and 1,000 μW/cm²

[1] See FCC File No. 0000054722. The current construction permit (CP) specifies a Scala Model 1X1KBBU antenna and this application seeks to instead utilize a Kathrein Model DRV-1-1.

[2] *Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies*, ET Docket No. 19-226, Resolution of Notice of Inquiry, Second Report and Order, Notice of Proposed Rulemaking, and Memorandum Opinion and Order, 34 FCC Rcd 11687 (2019) (*RF Report and Order*).

respectively.[3] As shown in Figure 1, the new antenna specified for K09ZX-D is calculated to produce a maximum ground-level exposure of 90.35 µW/cm² at a horizontal distance of 3.75 meters from the antenna structure. This determination was derived from Equation 10 of OET Bulletin 65, which is shown below.[4]

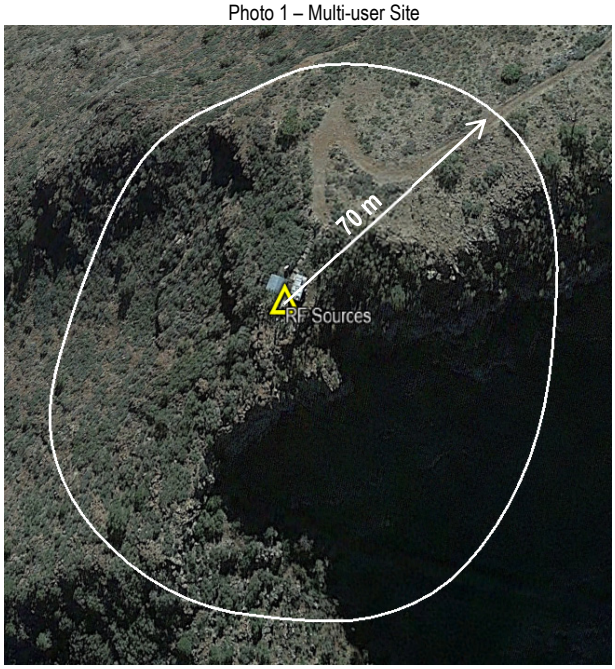
$$S = \frac{33.4\ (F^2)\ ERP}{R^2}$$

Where: S = power density in µW/cm²
F = relative field factor
ERP = power in watts
R = distance in meters

Relative field data provided by the antenna manufacturer was used to determine the ground-level exposure values plotted on Figure 1.

The only other broadcast facilities in operation at the site are co-owned stations K19FD, K21GE, K23FZ, K25MK-D, K30OI-D and K32ME-D, which are all licensed to serve Camp Verde. K19FD, K21GE, K23FZ and K25MK-D hold authorizations to flash-cut over to their new digital parameters on or before the transition deadline of July 13, 2021. Using the same methodology for determining ground-level exposure described above, the exposure levels were calculated for all of the post-transition RF sources located at the multi-user site depicted in Photo 1. Figure 2 is a plot of the calculated post-transition results for all of the above contributors, which shows ground-level exposure is not anticipated to exceed

Photo 1 – Multi-user Site



[3] The limits for maximum permissible exposure (MPE) in uncontrolled and controlled situations are set forth in 47 CFR § 1.1310.

[4] FCC Office of Engineering and Technology, Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65, Edition 97-01 (1997) (OET Bulletin 65).

the FCC's MPE-based limits.[5] The plot further shows that the total exposure level is estimated to fall below 5 percent of the general population limit at distances greater than 70 meters from the K09ZX-D site. As can be observed in Photo 1, the area within 70 meters is not populated. Therefore, the foregoing evaluation results demonstrate that the application complies with the RF exposure rules.

All persons authorized to access the site, supporting-structure or antenna will be protected from excessive exposure to RF fields in accordance with the methods recommended in OET Bulletin No. 65. The station will also reduce power or cease operation in coordination with other site users.

Respectfully submitted,

Scott Turpie
Sr. Technical Consultant
LOHNES & CULVER, LLC
P.O. Box 16343
Alexandria, VA 22302
(301) 776-4488

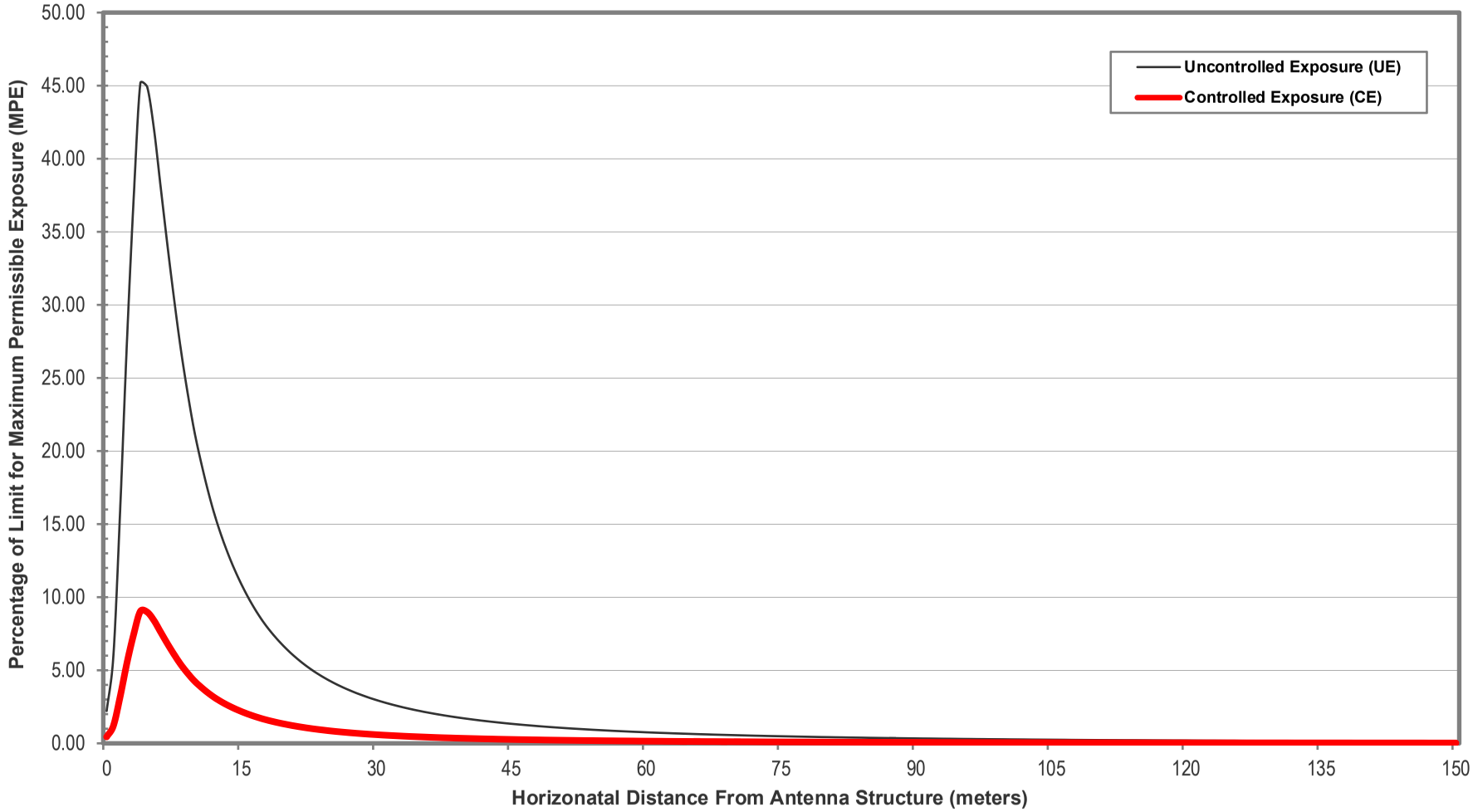
June 1, 2021

List of Attachments
Figure 1 – Ground-Level Exposure from K09ZX-D
Figure 2 – Ground-Level Exposure from All LPTVs

[5] The combined results indicate that the seven co-owned TV translator stations will not cause continuous exposure in excess of the general population limit in 47 CFR § 1.1310 and, assuming there are no other RF sources at the site, the Category One signage requirements may apply.

LOHNES & CULVER
A Limited Liability Company
TELECOMMUNICATIONS CONSULTING
P.O. Box 16343 Alexandria, Virginia 22302

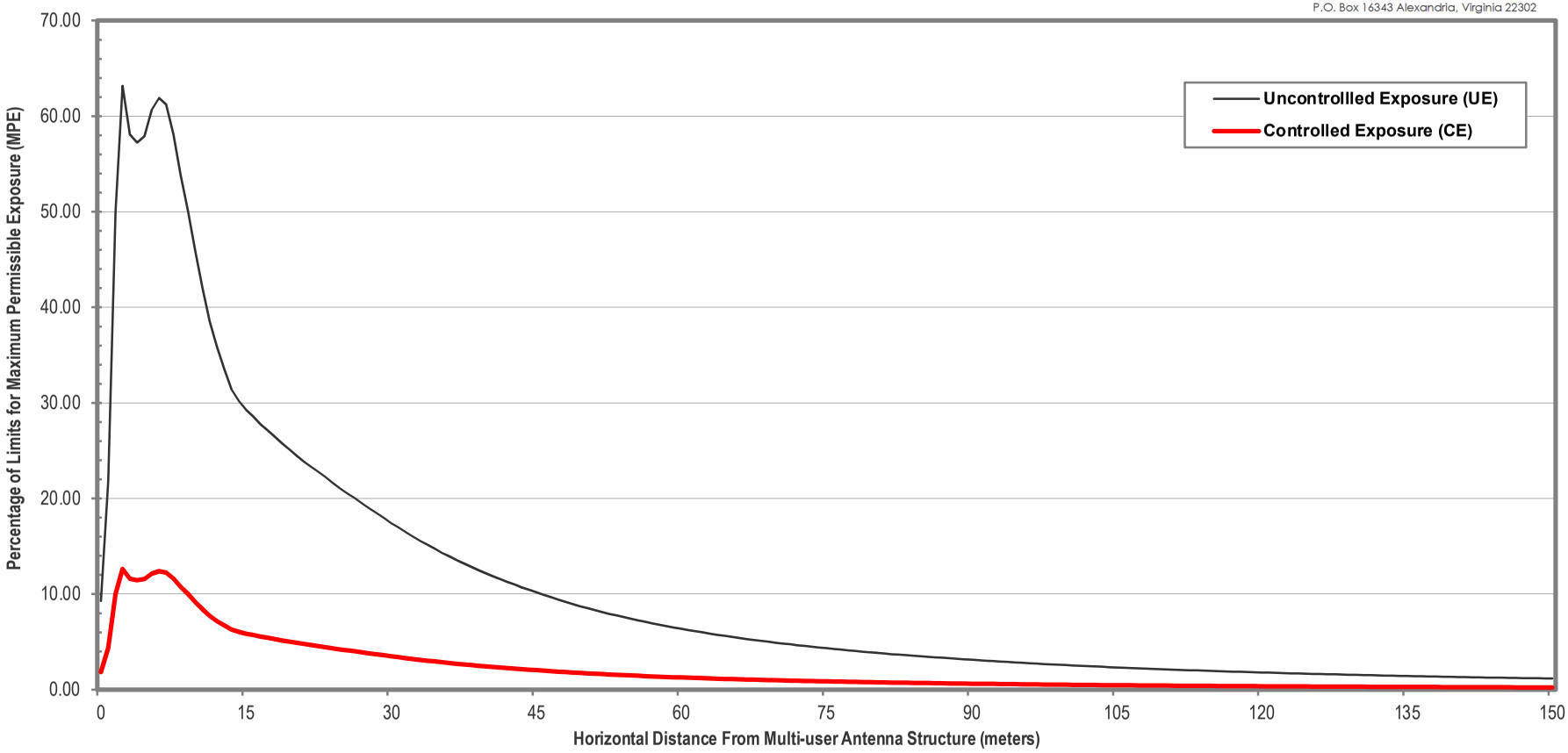
ESTIMATED GROUND LEVEL EXPOSURE
(FCC OET Bulletin 65, ed. 97-01, Prediction Methodology)



STATION INFORMATION		ANTENNA TYPE		ANALYSIS PARAMETERS		MPE LIMITS (µW/cm²)	
Call Sign:	K09ZX-D	Make & Model:	KAT DRV-1-1	FM antenna elements:		General / UE:	200
Location:	Camp Verde, AZ	Vertical pattern / equivalent:	KAT_DRV-1-1_189	>> Element spacing(λ):		Occupational / CE:	1,000
Service:	LD	SITE DESCRIPTION		Total avg power (W):	165	COMPLIANCE SUMMARY	
Frequency(MHz):	VHF			Antenna RCAGL(m):	5.0		
(P)eak or (A)vg pwr:	A	Accessible to public:	Yes	Exposure ht. AGL(m):	2	Peak power density (µW/cm²):	90.35
ERP in Watts (H+V):	165	Nearest uncontrolled pt.(m):		Ground reflection factor:	2.56	>> Horizontal distance(m):	3.75
TV Aural ERP(%):		UE compliance shown:	Yes	Isotropic factor:	1.64	Percentage of UE limit:	45.17%
Radial (°):	All	Slope (m):	0	>> Resultant multiplier	33.41	Percentage of CE limit:	9.03%

LOHNES & CULVER
A Limited Liability Company
TELECOMMUNICATIONS CONSULTING
P.O. Box 16343 Alexandria, Virginia 22302

PREDICTED GROUND LEVEL EXPOSURE
(Pursuant to FCC OET Bulletin 65, ed. 97-01)



CO-LOCATED RF SOURCES				ANTENNA TYPES	FACILITIES		COMPLIANCE SUMMARY			
Call sign	City, State	Srvc	Ch.	Make & Model or Equivalent	ERP H&V	RCAGL	UE Limit (µW/cm²)	2.3 m Dist.	CE Limit (µW/cm²)	2.3 m Dist.
K09ZX-D	Camp Verde, AZ	LD	9	KAT DRV-1-1	0.165 kW	5.0 m	200	27.387%	1,000	5.477%
K25MK-D	Camp Verde, AZ	LD	25	KAT 75010210	0.287 kW	4.5 m	357	14.238%	1,787	2.848%
K30OI-D	Camp Verde, AZ	LD	30	KAT 75010210	0.122 kW	4.5 m	377	5.732%	1,887	1.146%
K32ME-D	Camp Verde, AZ	LD	32	KAT 75010210	0.122 kW	4.5 m	385	8.528%	1,927	1.706%
K19FD	Camp Verde, AZ	LD	19	KAT K72314	0.5 kW	9.8 m	333	2.586%	1,667	0.517%
K21GE	Camp Verde, AZ	LD	21	KAT K72314	0.5 kW	9.8 m	341	2.525%	1,707	0.505%
K23FZ	Camp Verde, AZ	LD	23	KAT K72314	1.0 kW	9.8 m	349	2.167%	1,747	0.433%
All Users	**Azimuthal Direction:**	**All**					**Worst Case UE:**	**63.163%**	**Worst Case CE:**	**12.632%**