

FOR
FCC
USE
ONLY

FCC 302-AM
APPLICATION FOR AM
BROADCAST STATION LICENSE

(Please read instructions before filling out form.)

FOR COMMISSION USE ONLY

FILE NO.

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

Sadowsky, Shelley

MAILING ADDRESS (Line 1) (Maximum 35 characters)

5938 Dorchester Way

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY

North Bethesda

STATE OR COUNTRY (if foreign address)

MD

ZIP CODE

20852

TELEPHONE NUMBER (include area code)

202-997-9392

CALL LETTERS

KXEN

OTHER FCC IDENTIFIER (If applicable)

Fac ID 54739

2. A. Is a fee submitted with this application?



Yes



No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section



Governmental Entity



Noncommercial educational licensee



Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A)

FEE TYPE CODE		
M	M	R

(B)

FEE MULTIPLE			
0	0	0	1

(C)

FEE DUE FOR FEE TYPE CODE IN COLUMN (A)
\$ 645.00

FOR FCC USE ONLY

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)

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(B)

0	0	0	1
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(C)

\$

FOR FCC USE ONLY

ADD ALL AMOUNTS SHOWN IN COLUMN C,
AND ENTER THE TOTAL HERE.
THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED
REMITTANCE.

TOTAL AMOUNT
REMITTED WITH THIS
APPLICATION

\$ 645.00 (by credit card/Fee Filer)

FOR FCC USE ONLY

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT BDJ Radio Enterprises, LLC		
MAILING ADDRESS 5615 Pershing Ave.. Suite 12		
CITY St. Louis	STATE MO	ZIP CODE 63112

2. This application is for:

- ☒ Commercial
 ☐ Noncommercial
☐ AM Directional
 ☒ AM Non-Directional

Call letters KXEN	Community of License St. Louis, MO	Construction Permit File No. BP-20210209AAF	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
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3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

☐ Yes
 ☒ No

If No, explain in an Exhibit.

Exhibit No.
Eng. Statement

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☒ Yes
 ☐ No

If No, state exceptions in an Exhibit.

Exhibit No.

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

☐ Yes
 ☒ No

If Yes, explain in an Exhibit.

Exhibit No.

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

☐ Yes
 ☐ No

If No, explain in an Exhibit.

☒ Does not apply

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

☐ Yes
 ☒ No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☒ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name Burt W. Kaufman	Signature <i>Burt W. Kaufman</i>
Title Manager	Date 7/22/21 Telephone Number 314-454-0400

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

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATAName of Applicant **BDJ RADIO ENTERPRISES, LLC**

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)



Station License



Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
KXEN	BP-20210209AAF	1010	UNLIMITED	Night 0.014	Day 0.16

2. Station location

State	City or Town
MISSOURI	ST. LOUIS

3. Transmitter location

State	County	City or Town	Street address (or other identification)
MO	ST. LOUIS	ST. LOUIS	1215 COLE ST

4. Main studio location

State	County	City or Town	Street address (or other identification)
MO	ST. LOUIS	ST. LOUIS	5615 PERSHING AVE.

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)
MO	ST. LOUIS	ST. LOUIS	5615 PERSHING AVE.

6. Has type-approved stereo generating equipment been installed?



Yes



No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68?



Yes



No



Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed.

Exhibit No.

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system 0.9	RF common point or antenna current (in amperes) without modulation for day system 3.1
Measured antenna or common point resistance (in ohms) at operating frequency Night 17 Day 17	Measured antenna or common point reactance (in ohms) at operating frequency Night +J 22 Day +J 22

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day

Manufacturer and type of antenna monitor:

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator TAPERED SELF SUPPORTING	Overall height in meters of radiator above base insulator, or above base, if grounded. 160.8	Overall height in meters above ground (without obstruction lighting) 160.8	Overall height in meters above ground (include obstruction lighting) 160.8	If antenna is either top loaded or sectionalized, describe fully in an Exhibit. <div>Exhibit No. N/A</div>
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Excitation

☐

Series

☒

Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	38 °	38 '	09 "	West Longitude	90 °	11 '	45 "
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If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits.

Exhibit No.
N/A

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system.

Exhibit No.
N/A

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

NONE

11. Give reasons for the change in antenna or common point resistance.

N/A

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type) Clarence M. Beverage	Signature (check appropriate box below) 
Address (include ZIP Code) Communications Technologies, Inc. 23 Binsted Drive Medford, NJ 08055	Date 07/21/2021 Telephone No. (Include Area Code) 609-451-5296

☐

Technical Director

☐

Registered Professional Engineer

☐

Chief Operator

☐

Technical Consultant

☒

Other (specify) Broadcast Engineering Consultant

**ENGINEERING STATEMENT
PREPARED IN SUPPORT OF APPLICATION
FOR LICENSE
BDJ RADIO ENTERPRISES, LLC
KXEN(AM) FCC ID #54739
0.014/0.160 kW LS ND-U 1010 kHz
ST. LOUIS, MISSOURI**

JULY 2021

SUMMARY

The following engineering statement has been prepared in support of an Application for Station License by **BDJ Radio Enterprises, LCC** ("BDJ") in accordance with construction permit BP-20210209AAF which authorizes fulltime, standard broadcast facilities for KXEN(AM), 1010 kHz at St. Louis, Missouri, FCC ID # 54739. The authorized antenna system is an existing tower FCC Registration #1003524. The authorized tower structure is a four sided, self-supporting, tapered steel tower excited through with a vertical half wave dipole feed. Due to the method of feeding the tower a buried, or parallel with but above earth, ground system is not required.

BDJ was granted an STA to operate on the proposed tower with the now authorized antenna system on December 13, 2012, BSTA-20121204ACJ. At that time the station operated with 0.35 kW daytime and 125 watts nighttime. The radiator has been stable and the few sample field strength readings taken appeared to support the calculated RMS efficiency.

SPECIAL OPERATING CONDITIONS

The permittee agrees to the special operating conditions on the construction permit as follows:

1. FCC form 302-AM is submitted herein well before the CP expiration date.
2. The permittee agrees to reduce power or cease operation to meet FCC OET-65 worker and public exposure guidelines.
3. The main and auxiliary transmitters are both type accepted BE solid state transmitters.
4. The CP description of the wire model is accurate and represents the antenna system as constructed.
5. Exhibit I attached is believed to include the data necessary to support the radiation efficiency of 370.5 mV/m at 1 kilometer for 1 kilowatt.
6. It is acknowledged that night skywave calculations for KXEN be undertaken using a radiator electrical height of 140 degrees and an inverse field of 370.5 mV/m @ 1 km for 1 kilowatt.

The licensee agrees to satisfy all reasonable complaints of blanketing interference as required by Section 73.88 of the Commission's rules.

Below is the data submitted and reviewed by Commission staff establishing that the inverse distance field at one kilometer is essentially 370.5 mV/m @ 1 kilometer for 1 kilowatt.

The station submitted NEC 4.2 computations to confirm the pattern shape and radiation efficiency as part of the application for CP. Exhibit I is a NEC 4.2 analysis of the proposed tower. The calculated radiation efficiency for the 160.8 meter, 195.2 degree, tapered, 4 sided tower with shunt feed is 370.5 mV/m RMS at 1 kM for 1 kW and that value is specified on the construction permit. The maximum radiated field is 430.45 mV/m at 90 degrees true and the minimum radiated field is 312.99 mV/m at an azimuth of 270 degrees which is a deviation of 2.77 dB or plus and minus 1.385 dB which is believed to be well within the 2 dB tolerance specified in rule section 1.30002(a). The calculated antenna system radiation efficiency has been specified for both day and night Omni operation.

OPERATING PARAMETERS

Joseph Garcia, chief engineer of KXEN, and technical consultant Vernon Jackson, jointly implemented and tested the facility to confirm operation in accordance with the CP and all applicable FCC Rule Sections.

Equipment used in the process of setting up and measuring the facility included:

Delta Electronics OIB-1 impedance bridge serial number 771 calibrated prior to measurements. The antenna feed point at the 207' elevation is fed with a section of 50 ohm heliax, $\frac{1}{2}$ wavelength long, which is connected to the output of the ATU cabinet. A J plug inside the cabinet at the matching network output is used for base current meters mounted on J pugs and is the location where the feed point impedance of 17 ohms +J22 is measured.

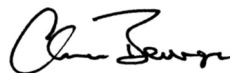
A Weschler Type T 351-9695 0-5 Amp meter was used to measure daytime current of 3.1 Amps. This meter was calibration checked against a Delta Toroidal RF current meter of known accuracy.

A Weston Model 308 0-1.5 Amp meter was used to measure nighttime current of 0.9 Amps. This meter was also calibration checked against a Delta Toroidal RF current meter of known accuracy.

The station conducts annual NRSC measurements, and all emission is well within FCC limits. Spurious and harmonic measurements were made on July 17, 2021, using a Potomac instruments FIM-41 serial #1988 owned by Vernon Jackson. The meter was calibration checked against KXEN's FIM-41 and two other available meters. Measurements were made on specific frequencies calculated to be potential mixing products with other stations. A sweep from 530 kHz to 5 MHz was also run. All measurements, conducted at the daytime power of 160 watts, showed that emissions were in full compliance with 73.44(b) limits.

CONCLUSION

The foregoing was prepared on behalf of **BDJ Radio Enterprises, LLC** by Clarence M. Beverage of *Communications Technologies, Inc.*, Medford, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By_____

Clarence M. Beverage
for Communications Technologies, Inc.
Medford, New Jersey

July 21, 2021

EXHIBIT I

PHYSICAL DESCRIPTION OF ANTENNA SYSTEM
And NEC 4.2 Calculated Horizontal Plane Radiation Pattern
KXEN(AM) 1010 kHz 0.014/0.160 kW LS ND-U
ST. LOUIS, MISSOURI
July 2021

TRANSMITTER SITE: (NAD27)	North Latitude: 38° 38' 09" West Longitude: 90° 11' 45"
TOWER: 1	Electrical 195.2° 160.8 meters - tower steel
RADIATOR TYPE:	Vertical, grounded, tapered, 4 sided, self-supporting tower.
PATTERN ASSUMPTION:	Sinusoidal current distribution in tower 140 degrees for nighttime
GROUND SYSTEM:	The tower is shunt excited with a vertical half wave dipole mounted in the center of one face. The tower electrical height of 195.2 degrees allows a current maximum to occur at the feed point in wire 279 which connects to wire 278 which is a vertical wire running from 207' to 450' up the tower. Wires 280 and 281 extend down from the feed point to opposite tower legs 60' above ground providing a counterpoise effect.
FIELD STRENGTH:	Theoretical 370.5 mV/m @ 1 km for 1 kW (Based on NEC 4.2 analysis over Perfect Earth)

EXHIBIT I – Page 2

EZNEC Pro/4 ver. 6.0

KXEN at KDNL

2/4/2021

11:21:49 AM

----- FAR FIELD PATTERN DATA -----

Frequency = 1.01 MHz

mV/m for 1 kW at 1 km

Elevation Pattern Azimuth bearing = 0 deg.

Deg	V Fld	H Fld	Tot Fld	V Pha	H Pha
0	363.58	9.94E-14	363.58	120.49	38.66
5	360.08	4.4373	360.11	120.47	18.68
10	349.81	8.6688	349.92	120.43	18.67
15	333.45	12.507	333.69	120.36	18.66
20	312.02	15.796	312.42	120.27	18.64
25	286.78	18.429	287.37	120.14	18.61
30	259.07	20.345	259.87	119.98	18.56
35	230.2	21.539	231.21	119.79	18.48
40	201.31	22.05	202.51	119.56	18.34
45	173.32	21.959	174.7	119.30	18.12
50	146.88	21.372	148.43	119.01	17.78
55	122.39	20.413	124.08	118.69	17.25
60	99.998	19.216	101.83	118.34	16.46
65	79.665	17.909	81.653	117.95	15.32
70	61.204	16.615	63.42	117.52	13.70
75	44.324	15.446	46.938	116.99	11.50
80	28.668	14.497	32.125	116.17	8.67
85	13.85	13.843	19.582	114.01	5.27
90	1.1514	13.537	13.586	-3.93	1.47
95	15.078	13.6	20.305	-58.18	-2.41
100	29.931	14.019	33.052	-59.90	-6.03
105	45.641	14.748	47.964	-60.36	-9.14
110	62.591	15.714	64.534	-60.47	-11.63
115	81.135	16.825	82.861	-60.43	-13.50
120	101.56	17.972	103.14	-60.32	-14.84
125	124.04	19.038	125.49	-60.17	-15.77
130	148.62	19.897	149.94	-60.00	-16.39
135	175.13	20.422	176.32	-59.84	-16.78
140	203.18	20.495	204.22	-59.69	-17.03
145	232.12	20.014	232.98	-59.55	-17.17
150	261.02	18.902	261.7	-59.44	-17.25
155	288.74	17.12	289.24	-59.34	-17.29
160	313.97	14.675	314.32	-59.27	-17.30
165	335.39	11.619	335.6	-59.21	-17.31
170	351.74	8.0537	351.84	-59.17	-17.30
175	362	4.1225	362.03	-59.14	-17.30
180	365.5	6.56E-14	365.5	-59.14	-28.25

EXHIBIT I – Page 3

EZNEC Pro/4 ver. 6.0

KXEN at KDNL

2/4/2021

11:21:49 AM

----- FAR FIELD PATTERN DATA -----

Frequency = 1.01 MHz

mV/m for 1 kW at 1 km

Elevation Pattern Azimuth bearing = 0 deg.

Deg	V Fld	H Fld	Tot Fld	V Pha	H Pha	
185	360.4	0.072162	0	-13.07	29.67	0.00
190	355.36	0.071219	0	-14.49	29.03	0.00
195	350.5	0.069775	0	-15.92	28.25	0.00
200	345.85	0.067848	0	-17.35	27.30	0.00
205	341.45	0.065455	0	-18.76	26.18	0.00
210	337.33	0.062628	0	-20.15	24.84	0.00
215	333.5	0.059397	0	-21.49	23.25	0.00
220	329.99	0.055803	0	-22.78	21.34	0.00
225	326.79	0.051895	0	-24.00	19.04	0.00
230	323.93	0.047736	0	-25.14	16.20	0.00
235	321.41	0.043407	0	-26.18	12.67	0.00
240	319.22	0.039013	0	-27.11	8.18	0.00
245	317.36	0.0347	0	-27.92	2.37	0.00
250	315.84	0.030672	0	-28.60	-5.22	0.00
255	314.65	0.027222	0	-29.15	-15.13	0.00
260	313.78	0.024734	0	-29.55	-27.65	0.00
265	313.23	0.023619	0	-29.80	-42.26	0.00
270	312.99	0.024119	0	-29.90	-57.31	0.00
275	313.09	0.026145	0	-29.84	-70.81	0.00
280	313.49	0.029345	0	-29.64	-81.72	0.00
285	314.22	0.033313	0	-29.28	-90.07	0.00
290	315.28	0.037718	0	-28.77	-96.35	0.00
295	316.66	0.042321	0	-28.12	-101.06	0.00
300	318.38	0.046952	0	-27.35	-104.62	0.00
305	320.43	0.051487	0	-26.45	-107.34	0.00
310	322.83	0.055835	0	-25.43	-109.41	0.00
315	325.56	0.059924	0	-24.32	-110.99	0.00
320	328.64	0.063693	0	-23.12	-112.18	0.00
325	332.04	0.067095	0	-21.85	-113.07	0.00
330	335.77	0.070093	0	-20.52	-113.70	0.00
335	339.8	0.072657	0	-19.15	-114.12	0.00
340	344.12	0.07475	0	-17.74	-114.35	0.00
345	348.7	0.076359	0	-16.31	-114.43	0.00
350	353.51	0.077467	0	-14.88	-114.37	0.00
355	358.51	0.078066	0	-13.45	-114.17	0.00

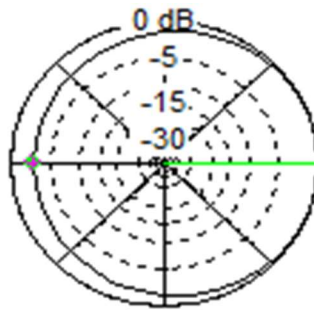
EXHIBIT I – Page 4 RMS CALCULATION

Azimuth Degrees	Authorized Pattern Relative Field	Measured Pattern Relative Field
0	0.596	363.700
10	0.710	374.300
20	0.842	385.000
30	0.945	395.400
40	1.000	405.000
50	1.000	413.500
60	1.000	420.600
70	1.000	425.900
80	1.000	429.200
90	1.000	430.500
100	1.000	429.600
110	1.000	426.500
120	1.000	421.600
130	1.000	414.800
140	1.000	406.500
150	1.000	397.100
160	0.945	386.400
170	0.813	376.200
180	0.735	365.600
190	0.735	355.400
200	0.735	345.900
210	0.735	337.300
220	0.735	330.000
230	0.735	323.900
240	0.735	319.200
250	0.735	315.800
260	0.735	313.800
270	0.735	313.000
280	0.735	313.500
290	0.735	315.300
300	0.735	318.400
310	0.735	322.800
320	0.735	328.600
330	0.682	335.800
340	0.596	344.100
350	0.562	353.500
	RMS =	370.5 mV/m

EXHIBIT I – Page 5

POLAR PLOT

Total Field



EZNEC Pro/4

1.01 MHz

Azimuth Plot
Observation Ht 5 ft
Outer Ring 7.91 dBi

Cursor Bear 270.0 deg.
Gain 5.14 dBi
-2.77 dBmax

Slice Max Gain 7.91 dBi @ Bearing = 90.0 deg.
Front/Back 2.77 dB
Beamwidth ?
Sidelobe Gain < -100 dBi
Front/Sidelobe > 100 dB

SOURCE IMPEDANCE

EZNEC Pro/4 ver. 6.0

KXEN at KDNL 2/4/2021 11:27:40 AM

----- SOURCE DATA -----

Frequency = 1.01 MHz

Source 1 Voltage = 3470 V at 88.09 deg.

Current = 8.654 A at 0.0 deg.

Impedance = $13.35 + j 400.8$ ohms

Power = 1000 watts

SWR (50 ohm system) > 100 (50 ohm system) > 100

EXHIBIT I – Page 6

WIRE MODEL

