Exhibit AA

Electromagnetic Frequencies from Transmission Lines

Bakeoven Solar Project
November 2019

Prepared for

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Acronyms and Abbreviations

AC	alternating current
Applicant	Bakeoven Solar, LLC
EMF	electric and magnetic fields
Facility	Bakeoven Solar Project
G	gauss
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronics Engineers
kA	kiloampere
kV	kilovolt
kV/m	thousands of volts per meter
mG	milligauss
MHz	megahertz
OAR	Oregon Administrative Rule
ROW	right-of-way
V/m	volt per meter

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1.0 Introduction

Bakeoven Solar, LLC (Applicant) proposes to construct and operate a solar energy generation facility and related or supporting facilities in Wasco County, Oregon. This Exhibit AA was prepared to meet the submittal requirements in Oregon Administrative Rule (OAR) 345-021-0010(1)(aa).

2.0 Proposed Transmission Line

OAR 345-021-0010(1)(aa) Exhibit AA. If the proposed energy facility is a transmission line or has, as a related or supporting facility, a transmission line of any size:

(A) Information about the expected electric and magnetic fields, including:

2.1 Assumptions and Methods Used in the Analysis

(vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line.

2.1.1 Electric and Magnetic Field Background Information

Electric and magnetic fields (EMF) occur throughout nature and are one of the basic forces of nature. Any object with an electric charge on it has a voltage (potential) at its surface and can create an electric field. The change in voltage over distance is known as the electric field. When electrical charges move together (known as "current"), they create forces. These forces are represented by magnetic fields. All electric currents create magnetic fields.

The strength of EMF is related to the voltage and current, respectively, and to the distance away from the source. The strength of the electric field depends on the voltage (higher voltages create higher electric fields) and distance (electric fields grow weaker as the distance from the source increases). The strength of the magnetic field depends on the current or load (higher currents or loads create higher magnetic fields) and distance (magnetic fields grow weaker as the distance from the source increases). For transmission line sources, the arrangement of the conductors (line geometry) and phasing also influence the strength of the EMF.

The electric power distribution system creates alternating current (AC) EMF. In the United States, the power system uses current that alternates 60 times each second (60 hertz). For each electrical circuit, AC power is carried by each of the three-phase conductors. The AC voltage and current in each phase conductor is out of sync with the other two phases by 120 degrees, or one-third of a 360-degree cycle.

Transmission lines also create power-frequency electric and magnetic fields. Since the voltage of a transmission line is held relatively constant (typically within +/-5 percent), the electric field from a transmission line remains steady and is not affected by daily and seasonal fluctuations in usage of electricity by customers. However, the current in a transmission line does fluctuate due to

consumer power usage and varies by time of day and also seasonally. Therefore, the magnetic field from a transmission line will also fluctuate (since magnetic field is related to the current or load on the line).

Electric fields are reported in units of volts per meter (V/m) or thousands of volts per meter (kV/m). Magnetic fields are reported in units of gauss (G), or more typically in units of milligauss (mG), which are equal to one-thousandth of a gauss (i.e., 1 mG = 0.001 G).

2.1.1.1 Electric Fields

The State of Oregon has an alternating current electric field limit of 9 kV/m at one meter above the ground surface in areas accessible to the public, as stated in OAR 345-024-0090.

2.1.1.2 Magnetic Fields

Presently, there are no magnetic field standards for the State of Oregon or federal health standards. Although there are no federal health standards in the United States specifically for 60 hertz, some non-regulatory organizations have developed guidelines: the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and the Institute of Electrical and Electronics Engineers (IEEE). For the general public, the ICNIRP guideline is 2,000 mG (ICNIRP 2010) while the IEEE guideline is 9,040 mG (IEEE 2002).

2.1.2 Electromagnetic Frequency Modeling

2.1.2.1 Modeling Methods

The Applicant analyzed EMF levels by considering the peak electrical currents expected on the lines. These analyses were conducted conservatively, using the peak electrical currents expected on the lines that produce the highest magnetic fields. Additionally, the double-circuit collector line was modeled so that similar phases were located at the same elevation on each side of the support structure, which results in a conservative analysis. Finally, the modeling was performed at the point mid-way between transmission structures where the conductors are closest to the ground and where the EMF will be the highest.

The software tool program used for the analyses, Corona and Field Effects Program (Version 3.1), was developed by the Bonneville Power Administration and is based on the methods and equations of the *Transmission Line Reference Book* (Electric Power Research Institute 1985).

2.1.2.2 Modeling Assumptions

The following assumptions were made during the development of the models:

- Elevation – 1,000 feet;
- Rain rate – 2 inches per hour;
- Wind speed – 2 miles per hour;

- Detector Information:
    - Radio interference antenna height – 6.6 feet;
    - TV interference antenna height – 9.8 feet;
    - Frequency at which radio interference values are to be calculated – 1 megahertz (MHz);
    - Frequency at which TV interference values are to be calculated – 75 MHz;
    - Magnetic field sensor height – 3.3 feet;
    - Ground conductivity – 6.7 millimhos per meter; and
    - Electric field sensor height – 3.3 feet;
- Width of modeling – 200 feet on each side of the centerline, through the entire width of the ROW. Sample points are taken every 4 feet uniformly in a perpendicular direction to the centerline;
- 230-kilovolt (kV) H-frame transmission line (Figure AA-1):
    - Horizontal location of the three conductors – 20 feet, 0 feet, and -20 feet from each side of the H-frame centerline;
    - Height of conductors – 30 feet;
    - Conductor diameters – 1.345 inches;
    - Power – 761 amps, or 0.761 kiloamperes (kA);
    - Horizontal location of the two ground wires – 11 feet and -11 feet from each side of the H-frame centerline;
    - Height of ground wires – 47.1 feet; and
    - Ground wire diameter – 0.75 inches;
- 34.5-kV double-circuit collector line (Figure AA-2):
    - Horizontal location of the three conductors – 4.17 feet (A circuit), 5.15 feet (B circuit), and 4.17 feet (C circuit) mirrored on both sides of the double-circuit centerline;
    - Height of conductors – 45 feet (A circuit), 35 feet (B circuit), and 25 feet (C circuit);
    - Conductor diameters – 1.345 inches;
    - Power – 837 amps, or 0.837 kA;
    - Horizontal location of the single ground wire – 0.66 feet from on one side of the double-circuit centerline;
    - Height of the single ground wire – 54.3 feet; and

- Ground wire diameter – 0.75 inches.

2.2 Distance from Proposed Center Line

(i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way.

The proposed 230-kV H-frame transmission line traverses private land under lease by the Applicant for approximately the first 7.5 miles. After that point, the transmission line turns west along an existing county road right-of-way for the remaining 3.5 miles to the Maupin Interconnection Substation. Land currently under lease is considered under the Applicant's control, such that the Facility will not require a new right-of-way or widening of an existing right-of-way. The width of the transmission line corridor (which is mostly equivalent to the proposed micrositing corridor along the transmission line) ranges from 60 feet to 520 feet, centered on the line (see Exhibit C, Figure C-2). This range is within the transmission line corridor width defined in OAR-001-0010(13).

2.3 Occupied Structures within 200 Feet of Proposed Center Line

(ii) The type of each occupied structure, including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals, within 200 feet on each side of the proposed center line of each proposed transmission line.

(iii) The approximate distance in feet from the proposed center line to each structure identified in (A).

Table AA-1 shows potential receptors within 200 feet of either the 230-kV H-frame transmission line or the 34.5-kV double-circuit collector line.

Table AA-1. Potential Receptors within 200 Feet of Proposed Center Line

Receptor Number	Type of Structure	Approximate Distance to Transmission Line (Feet)	Type of Transmission Line
CH102	Occupied residence (house)	141	230-kV H-frame transmission line
R54	Occupied residence (house)	187	230-kV H-frame transmission line
R53	Occupied residence (house)	148	230-kV H-frame transmission line
R9	Occupied residence (house with outbuildings and barn)	171	34.5-kV double-circuit collector line
R8	Occupied residence (house with outbuildings and barn)	200	34.5-kV double-circuit collector line

2.4 Representative Field Strength along the Proposed Transmission Line

(iv) At representative locations along each proposed transmission line, a graph of the predicted electric and magnetic fields levels from the proposed center line to 200 feet on each side of the proposed center line.

Table AA-2 shows the results of the electric field calculations for the overhead 230-kV H-frame transmission lines and 34.5-kV double-circuit collector lines. Figures AA-3 and AA-4 provide graphs of the predicted electric field calculations for these lines from the proposed center line to 200 feet on each side of the proposed center line.

Table AA-2. Overhead Electric Field Calculations

Support Structure	Figure	Voltage	Electric Field (kV/m)1/		
			Left Side (200 Feet)	Maximum (Location)	Right Side (200 Feet)
230-kV H-Frame Transmission Line	AA-1, AA-3	230 kV	0.036	2.68 (24 feet right or left of center line)	0.038
34.5-kV Double-Circuit Collector Line	AA-2, AA-4	34.5 kV	0.009	0.756 (on center line)	0.009
1/ Oregon Electric Field Standard is 9 kV/m within the right of way.					

Table AA-3 shows the results of the magnetic field calculations for the overhead transmission lines. Figures AA-5 and AA-6 provide graphs of the predicted magnetic field calculations for these lines from the proposed center line to 200 feet on each side of the proposed center line.

Table AA-3. Overhead Magnetic Field Calculations

Support Structure	Figure	Voltage	Magnetic Field (mG)		
			Left Side (200 Feet)	Centerline	Right Side (200 Feet)
230-kV H-Frame Transmission Line	AA-1, AA-5	230 kV	4.3	155.3	4.5
34.5-kV Double-Circuit Collector Line	AA-2, AA-6	34.5 kV	4.6	200.1	4.8

Tables AA-2 and AA-3 show the modeling results at the edges of and the highest values within 200 feet on either side of the centerline of the 230-kV H-frame transmission line and the 34.5-kV double-circuit collector line, respectively. Results from the modeling software can be found in Attachments AA-1 and AA-2 for both support structures. The electric fields on the corridor of the proposed 230-kV H-frame transmission line do not exceed 9 kV/m (see Figure AA-3). The electric fields on the corridors of the proposed overhead 34.5-kV double-circuit collector lines do not exceed 9 kV/m (see Figure AA-4). These figures demonstrate that, for the proposed overhead

transmission and collector lines, the maximum electric field modeled is about 2.7 kV/m, which is less than the 9-kV/m standard set forth in OAR 345-024-0090(1).

As identified in Section 2.3, three occupied residences will be within 200 feet of the overhead 230-kV H-frame transmission line, and two occupied residences will be within 200 feet of the 34.5-kV double-circuit collector line. However, the maximum electric field modeled based on the 230-kV H-frame transmission line configuration analyzed is less than 30 percent of the 9-kV/m standard set forth in OAR 345-024-0090(1). Therefore, the potential for human exposure to EMF from either the 230-kV H-frame transmission line or the 34.5-kV double-circuit collector line is minimized.

2.5 Mitigation Measures to Reduce Electric or Magnetic Fields

(v) Any measures the applicant proposes to reduce electric or magnetic field levels.

The highest electric fields within the ROW will be much less than the Oregon standard of 9 kV/m, and therefore no mitigation is required.

2.6 Proposed Monitoring Program

(vii) The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels.

As the maximum electrical field modeled in Section 2.4 are lower than the 9-kV/m standard set forth in OAR 345-024-0090(1), no monitoring program is proposed by the Applicant.

3.0 Radio and TV Interference

Radio and TV interference is caused by corona discharge from the line. This discharge will be greatest during rainy weather conditions. Interference may be noticed as a humming or buzzing sound on weak AM radio signals or as bands of snow across the picture in TV signals received by an over the air broadcast signal. FM radio signals and digital satellite or cable TV signals will not be affected.

The modeling results show that low levels of AM radio or TV interference may be noted due the corona discharge from the 230-kV transmission line. People listening to weak AM radio signals in their home or vehicle may notice some interference when located close to the transmission line. FM radio signals will not be affected. Satellite TV reception will not be affected since transmission line corona discharge does not affect satellite TV's digital format. Over the air TV signals are now broadcast in a digital format as well, which will not be affected unless the signal strength is extremely weak.

4.0 Submittal Requirements and Approval Standards

4.1 Submittal Requirements

Table AA-4. Submittal Requirements Matrix

Requirement	Location
OAR 345-021-0010(1)(aa) Exhibit AA. If the proposed energy facility is a transmission line or has, as a related or supporting facility, a transmission line of any size:	–
(A) Information about the expected electric and magnetic fields, including:	Section 2.0
(i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way;	Section 2.2
(ii) The type of each occupied structure, including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals, within 200 feet on each side of the proposed center line of each proposed transmission line;	Section 2.3
(iii) The approximate distance in feet from the proposed center line to each structure identified in (A);	Section 2.3
(iv) At representative locations along each proposed transmission line, a graph of the predicted electric and magnetic fields levels from the proposed center line to 200 feet on each side of the proposed center line;	Section 2.4
(v) Any measures the applicant proposes to reduce electric or magnetic field levels;	Section 2.5
(vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line; and	Section 2.1
(vii) The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels; and	Section 2.6
(B) An evaluation of alternate methods and costs of reducing radio interference likely to be caused by the transmission line in the primary reception area near interstate, U.S. and state highways.	Section 3.0

4.2 Approval Standards

OAR 345 Division 21 does not provide an approval standard specific to Exhibit AA. However, compliance with OAR 345-024-0090 is demonstrated by the analysis above, as described in Exhibit DD.

5.0 References

Electric Power Research Institute. 1985. *Transmission Line Reference Book*. Third Edition.

ICNIRP (International Commission on Non-Ionizing Radiation Protection). 2010. Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (Up To 300 GHz). *Health Physics* 99 6: 818-836, December.

IEEE (Institute of Electrical and Electronics Engineers), 2002. IEEE Standard for Safety Levels with Respect to Human Exposure to Electromagnetic Fields, 0 – 3 kHz. IEEE Std C95.6-2002.

Figures

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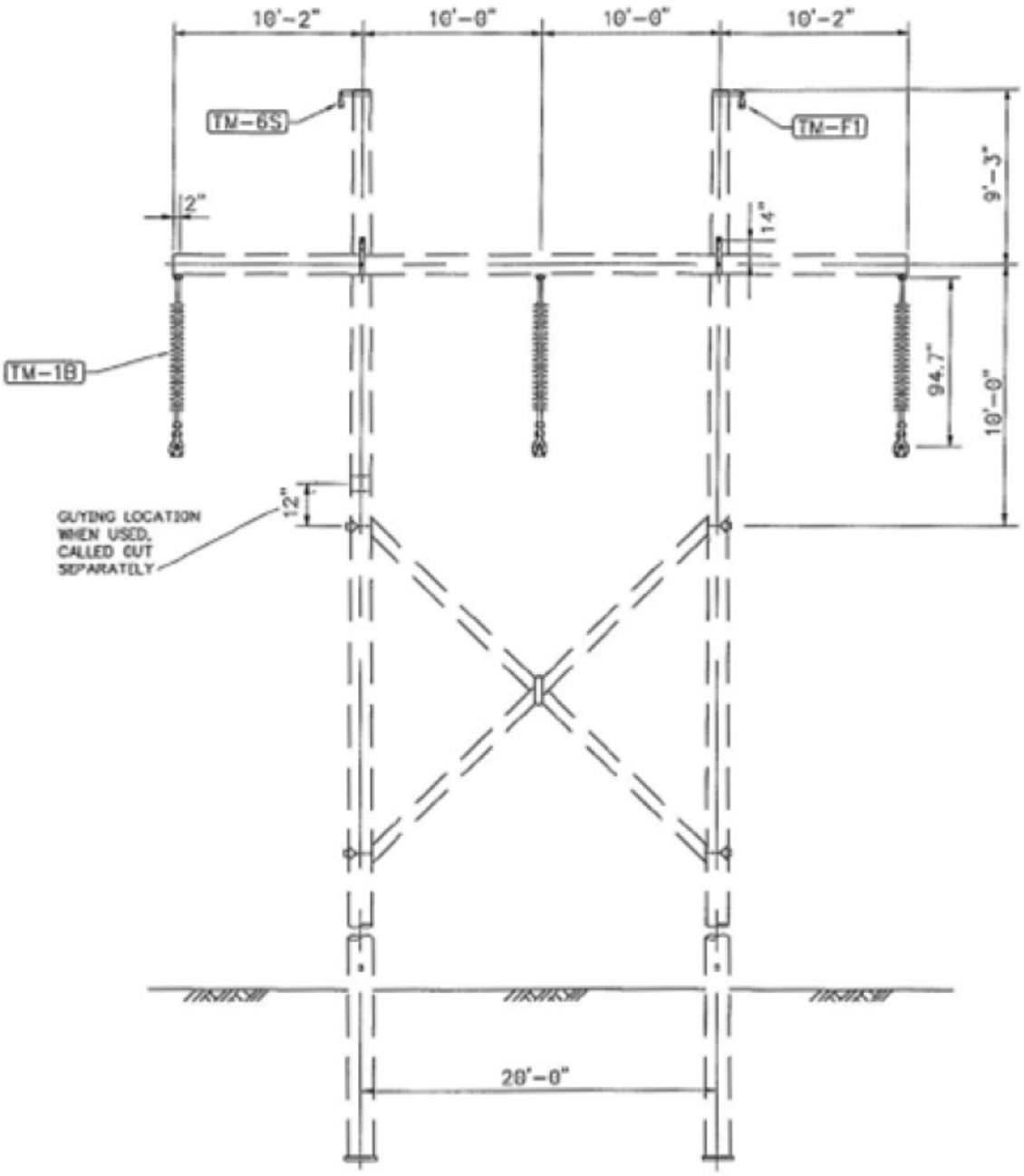
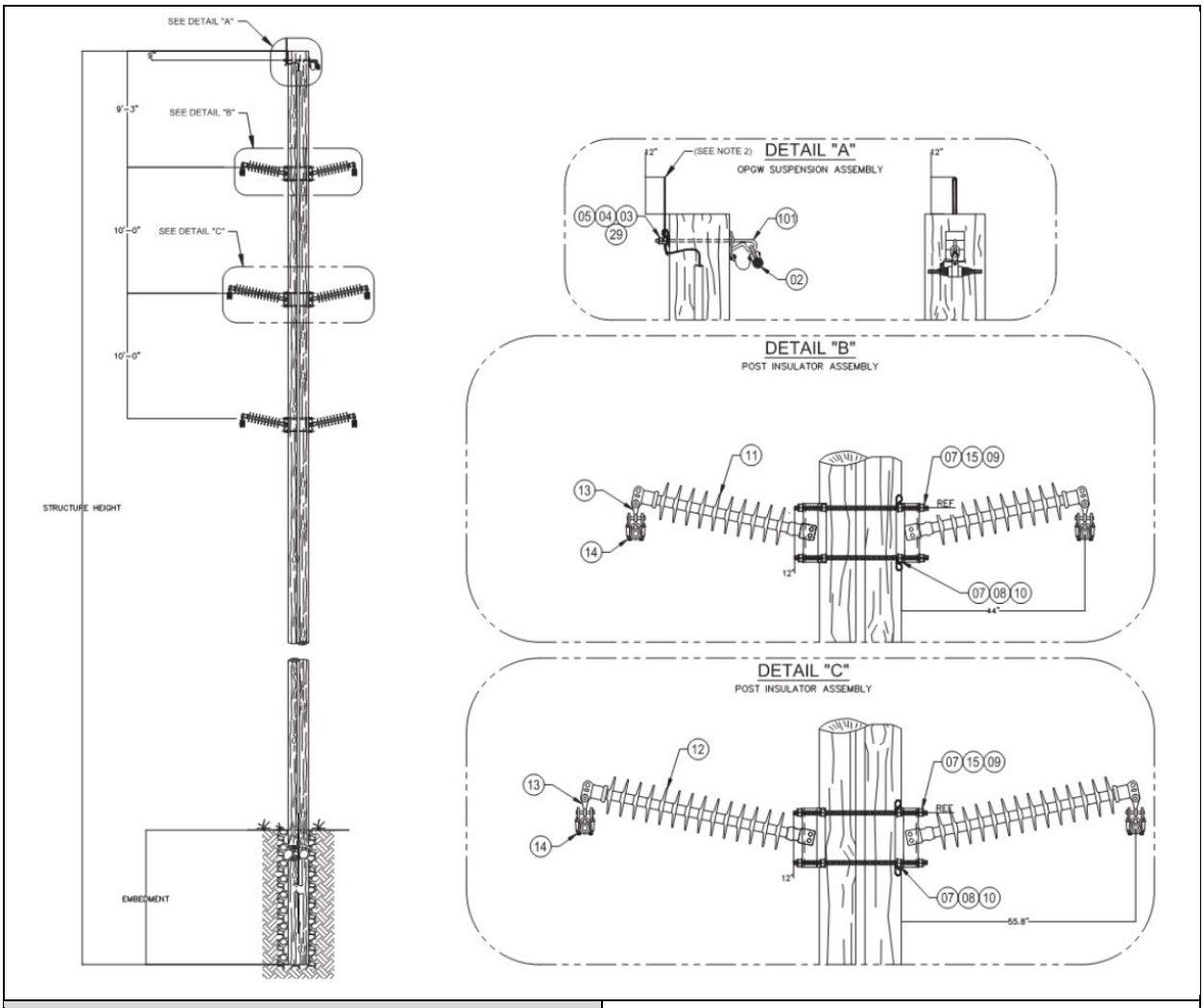


Bakeoven Solar Project

Figure AA-1
230-kV H-Frame Transmission Structure

AVANGRID RENEWABLES



Bakeoven Solar Project

Figure AA-2
34.5-kV Double-Circuit Overhead Collector

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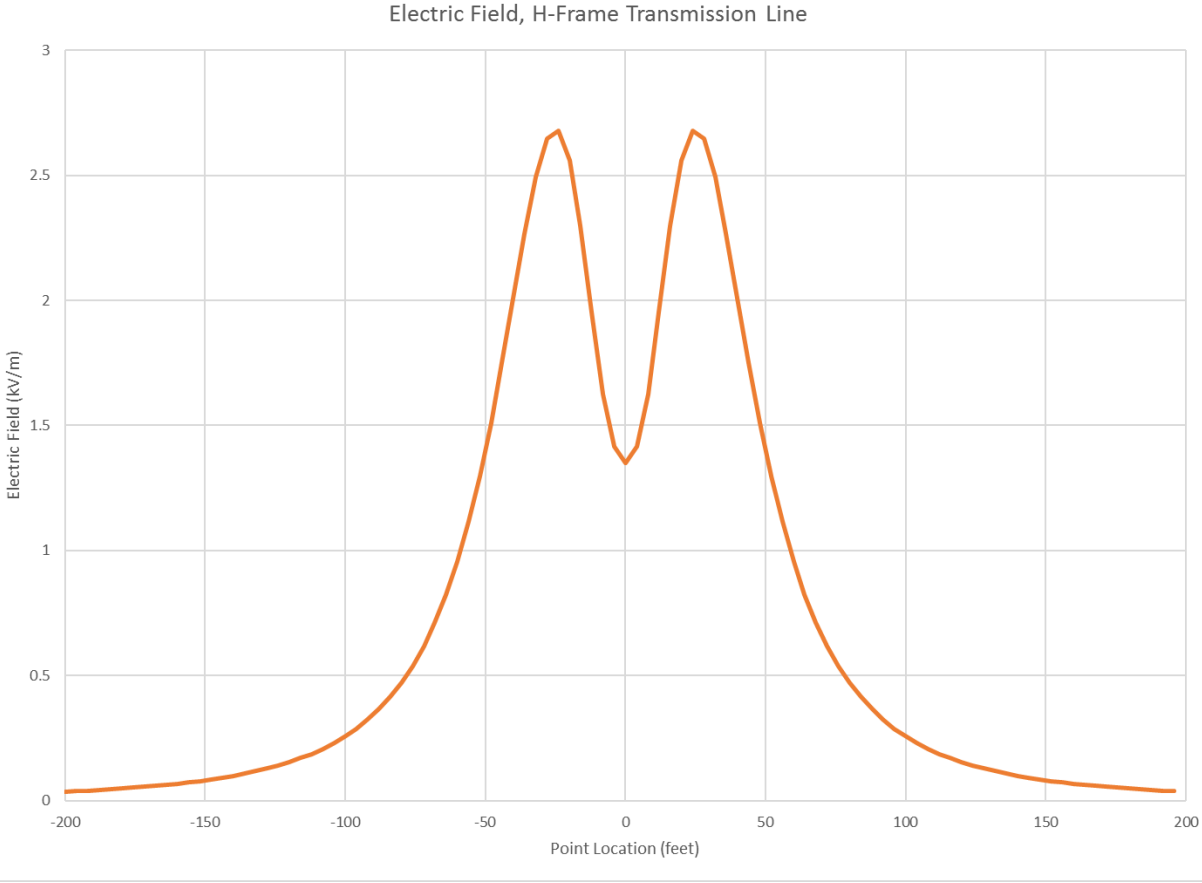

Bakeoven Solar Project

Figure AA-3
230-kV Electric Field Plot

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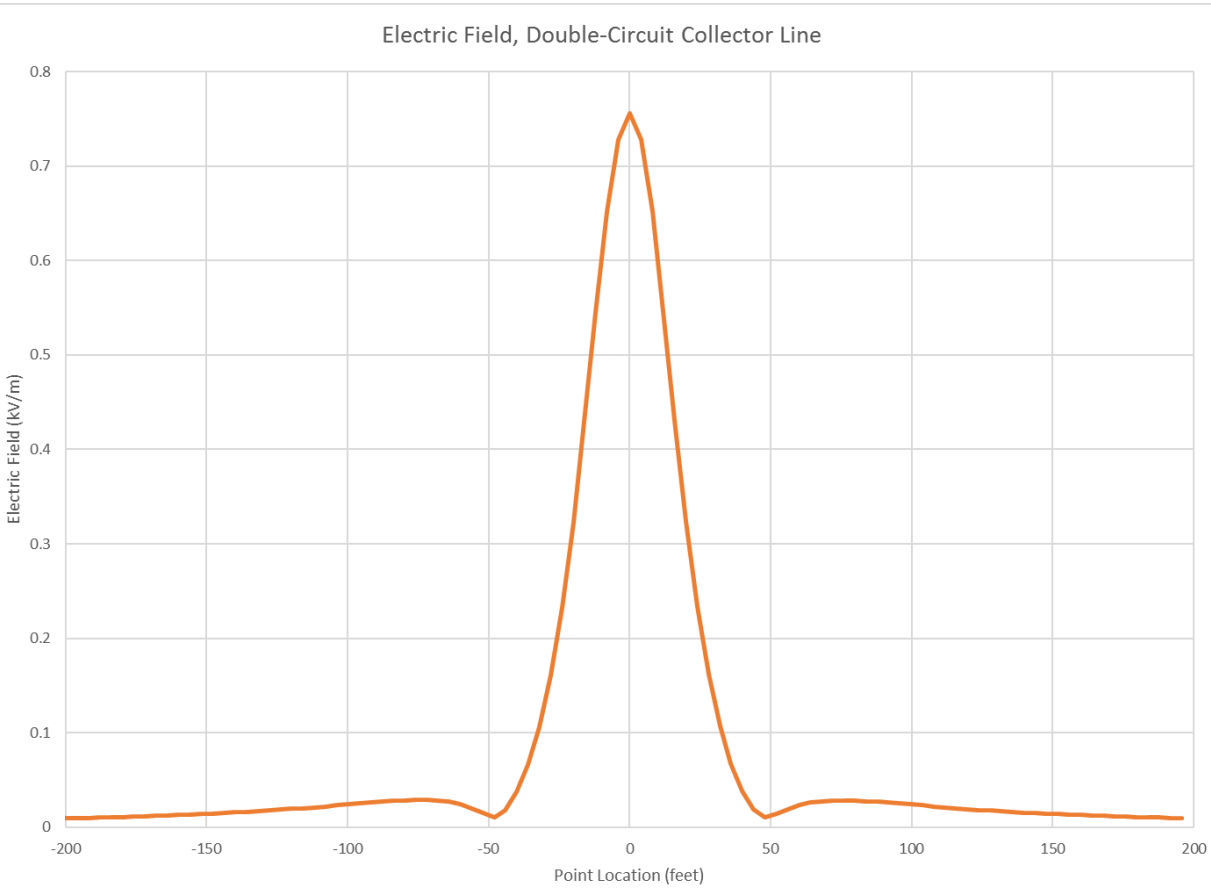

Bakeoven Solar Project

Figure AA-4

34.5-kV Electric Field Plot

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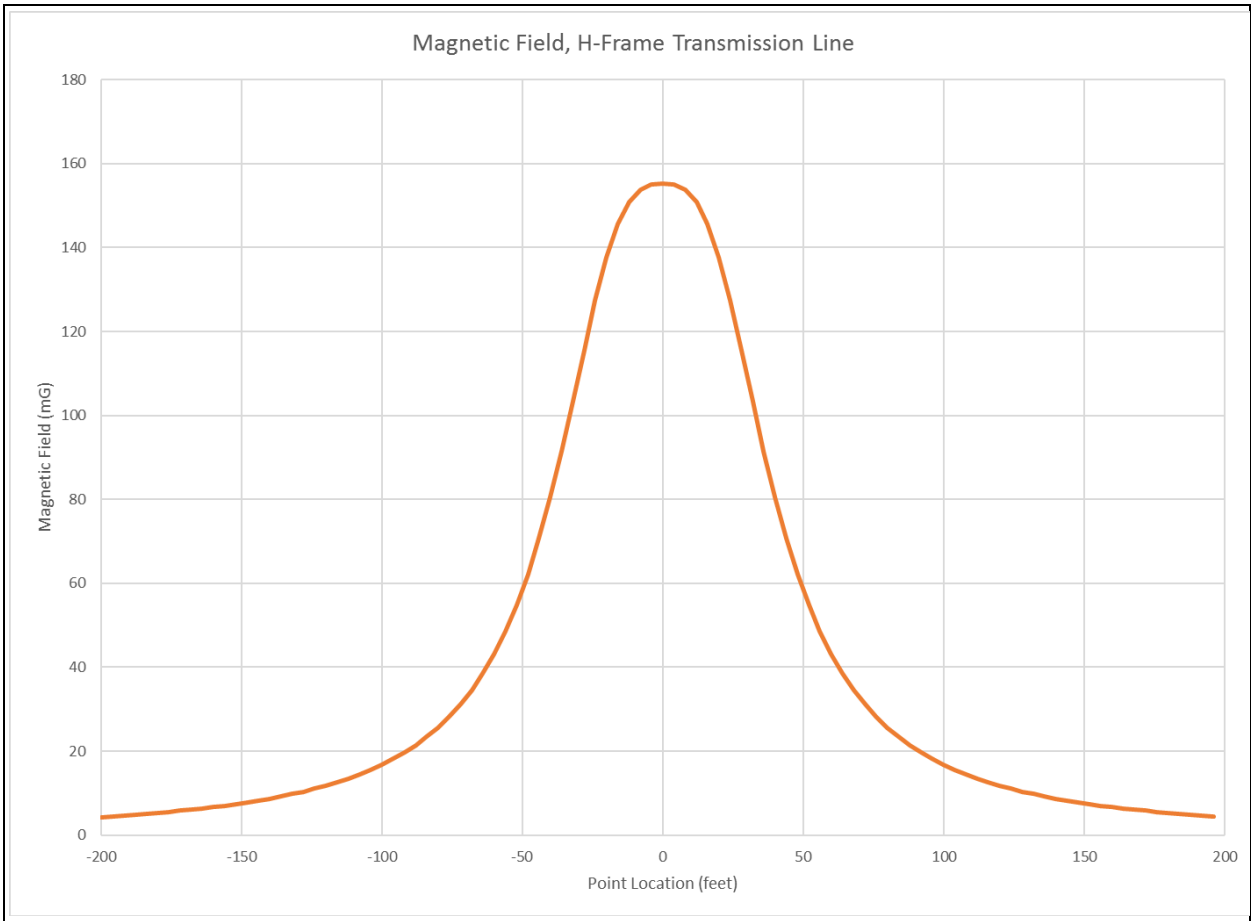

Bakeoven Solar Project

Figure AA-5
230-kV Magnetic Field Plot

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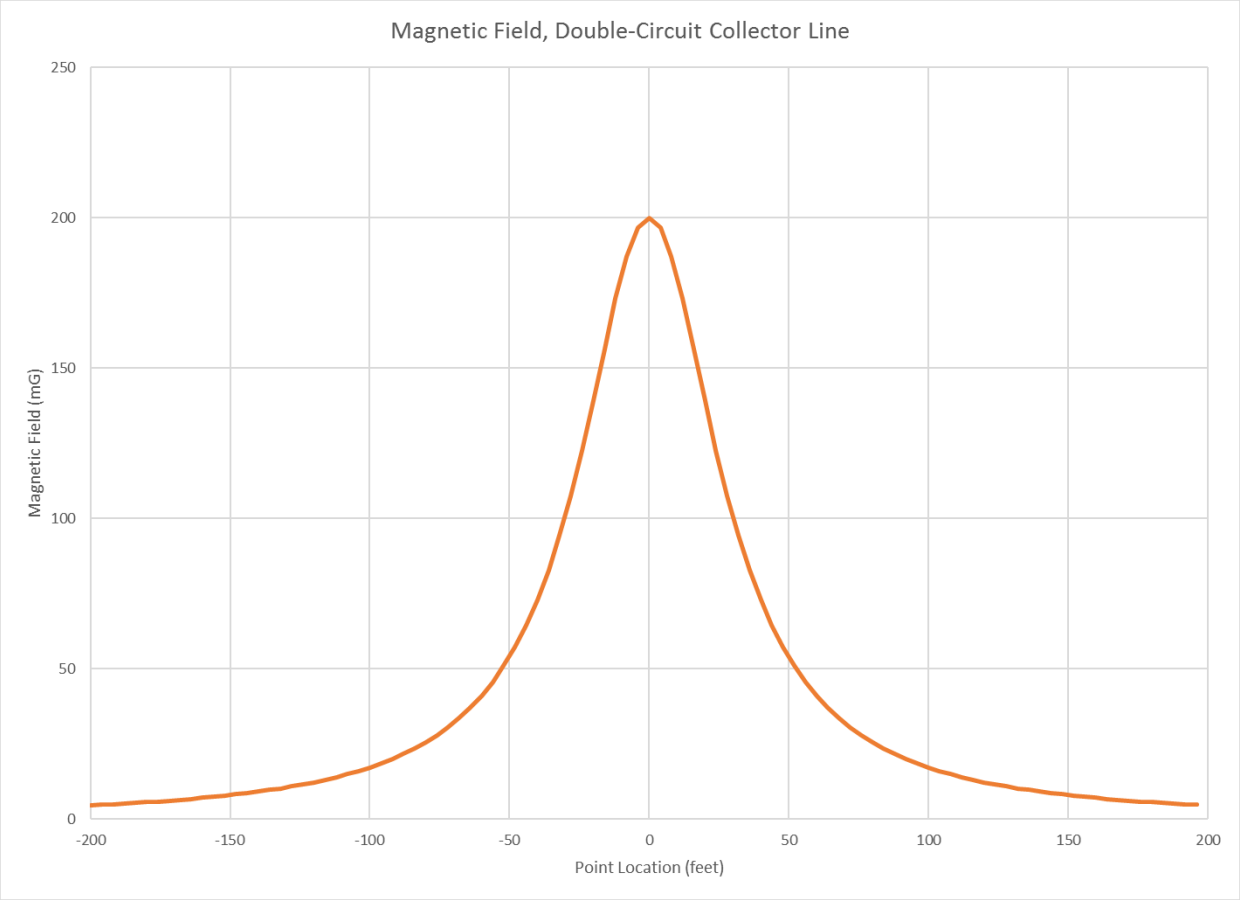

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Figure AA-6
34.5-kV Magnetic Field Plot

AVANGRID RENEWABLES

Attachment AA-1. Results of the Bonneville Power Administration Corona and Field Effects Program for 230-kV H-Frame Overhead Transmission Lines

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Û      C O R O N A   A N D   F I E L D      Û
Û E F F E C T S   P R O G R A M   V E R.  3  Û
Û   Source: Bonneville Power Administration   Û
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                            INPUT DATA LIST


                1/21/2019          10:18:32
 BAKEOVEN SOLAR
 230 KV H FRAME
1,0, 3, 5,0.0,   2.00,   2.00,1000.00

(ENGLISH UNITS OPTION)

(GRADIENTS ARE COMPUTED BY PROGRAM)

PHYSICAL SYSTEM CONSISTS OF  5 CONDUCTORS, OF WHICH  3 ARE ENERGIZED PHASES

OPTIONS: EF,MF,RI,TV
  4.921,  6.562,  9.842,   .000,  1.000, 75.000,  3.280,  6.700,  3.280
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100 -200.0    4.0
1RADIO NOISE CALCULATION - 5KHZ BAND WIDTH - RAIN
```

* * * * * L50 * * * * *

* * * * * FREQUENCY, MHZ * * * * *

DIST FROM REFERENCE (FEET)	.100 (DB)	.200 (DB)	.300 (DB)	.500 (DB)	.834 (DB)	1.000 (DB)	1.250 (DB)	1.500 (DB)	2.000 (DB)	3.000 (DB)	5.000 (DB)	10.000 (DB)	20.000 (DB)
-200.0	40.2	39.5	38.3	36.4	34.0	33.0	31.6	30.3	27.9	23.7	17.0	5.0	-11.6
-196.0	40.6	39.8	38.7	36.7	34.2	33.2	31.8	30.5	28.1	23.9	17.2	5.2	-11.3
-192.0	40.9	40.1	39.0	37.0	34.5	33.5	32.0	30.7	28.3	24.1	17.3	5.4	-11.0
-188.0	41.3	40.5	39.3	37.3	34.7	33.7	32.3	31.0	28.5	24.3	17.5	5.7	-10.6
-184.0	41.6	40.9	39.7	37.6	35.0	34.0	32.5	31.2	28.8	24.5	17.7	5.9	-10.3
-180.0	42.0	41.2	40.0	37.9	35.3	34.2	32.8	31.4	29.0	24.7	17.9	6.1	-9.9
-176.0	42.4	41.6	40.4	38.3	35.6	34.5	33.0	31.7	29.2	24.9	18.1	6.4	-9.6
-172.0	42.8	42.0	40.8	38.6	35.9	34.8	33.3	31.9	29.4	25.1	18.4	6.6	-9.2
-168.0	43.2	42.4	41.2	39.0	36.2	35.1	33.6	32.2	29.7	25.3	18.6	6.9	-8.8
-164.0	43.6	42.8	41.5	39.3	36.5	35.4	33.8	32.4	29.9	25.6	18.8	7.1	-8.5
-160.0	44.0	43.2	41.9	39.7	36.9	35.7	34.1	32.7	30.2	25.8	19.0	7.4	-8.1
-156.0	44.4	43.6	42.4	40.1	37.2	36.0	34.4	33.0	30.4	26.0	19.3	7.7	-7.7
-152.0	44.9	44.0	42.8	40.5	37.5	36.3	34.7	33.3	30.7	26.3	19.5	7.9	-7.3

-148.0	45.3	44.5	43.2	40.9	37.9	36.7	35.1	33.6	31.0	26.5	19.7	8.2	-6.9
-144.0	45.8	44.9	43.7	41.3	38.3	37.0	35.4	33.9	31.2	26.8	20.0	8.5	-6.5
-140.0	46.3	45.4	44.1	41.8	38.7	37.4	35.7	34.2	31.5	27.1	20.3	8.8	-6.0
-136.0	46.7	45.9	44.6	42.2	39.1	37.8	36.1	34.5	31.8	27.4	20.5	9.1	-5.6
-132.0	47.2	46.4	45.1	42.7	39.5	38.2	36.4	34.9	32.2	27.6	20.8	9.4	-5.1
-128.0	47.8	46.9	45.6	43.2	39.9	38.6	36.8	35.3	32.5	27.9	21.1	9.7	-4.7
-124.0	48.3	47.4	46.1	43.6	40.4	39.0	37.2	35.6	32.8	28.3	21.4	10.0	-4.2
-120.0	48.8	48.0	46.6	44.2	40.8	39.5	37.6	36.0	33.2	28.6	21.7	10.3	-3.7
-116.0	49.4	48.5	47.2	44.7	41.3	39.9	38.1	36.4	33.6	28.9	22.0	10.7	-3.3
-112.0	50.1	49.2	47.8	45.2	41.8	40.4	38.5	36.8	33.9	29.2	22.3	11.0	-2.7
-108.0	50.8	49.9	48.5	45.9	42.4	40.9	39.0	37.3	34.3	29.6	22.7	11.4	-2.2
-104.0	51.5	50.6	49.2	46.6	42.9	41.4	39.5	37.7	34.8	30.0	23.0	11.8	-1.7
-100.0	52.3	51.4	50.0	47.3	43.6	42.0	40.0	38.2	35.2	30.4	23.4	12.1	-1.1
-96.0	53.1	52.2	50.8	48.1	44.3	42.7	40.5	38.7	35.7	30.8	23.7	12.5	-.6
-92.0	54.0	53.1	51.7	49.0	45.1	43.5	41.3	39.3	36.2	31.2	24.1	13.0	.1
-88.0	54.9	53.9	52.5	49.8	46.0	44.3	42.0	40.0	36.7	31.7	24.5	13.4	.9
-84.0	55.8	54.9	53.5	50.7	46.8	45.2	42.9	40.8	37.3	32.1	25.0	13.8	1.7
-80.0	56.8	55.9	54.4	51.7	47.8	46.1	43.7	41.6	38.1	32.6	25.4	14.3	2.5
-76.0	57.8	56.9	55.5	52.7	48.7	47.0	44.7	42.5	38.9	33.2	25.9	14.8	3.3
-72.0	58.9	58.0	56.5	53.8	49.8	48.0	45.6	43.5	39.8	34.0	26.4	15.3	4.3
-68.0	60.0	59.1	57.7	54.9	50.9	49.1	46.7	44.5	40.7	34.9	27.0	15.9	5.2
-64.0	61.2	60.3	58.9	56.1	52.0	50.3	47.8	45.6	41.8	35.8	27.8	16.7	6.2
-60.0	62.5	61.6	60.1	57.3	53.2	51.5	49.0	46.7	42.8	36.8	28.6	17.5	7.1
-56.0	63.8	62.9	61.4	58.6	54.5	52.7	50.2	48.0	44.0	37.8	29.5	18.4	7.8
-52.0	65.2	64.3	62.8	60.0	55.9	54.1	51.6	49.3	45.2	38.9	30.5	19.4	8.6
-48.0	66.6	65.7	64.3	61.4	57.3	55.5	52.9	50.6	46.5	40.1	31.6	20.4	9.4
-44.0	68.1	67.2	65.7	62.9	58.7	56.9	54.3	52.0	47.9	41.4	32.7	21.5	10.2
-40.0	69.6	68.6	67.2	64.4	60.2	58.4	55.8	53.4	49.3	42.7	33.8	22.5	11.0
-36.0	71.0	70.1	68.6	65.8	61.6	59.8	57.2	54.8	50.6	43.9	34.9	23.6	11.8
-32.0	72.3	71.4	69.9	67.1	62.9	61.0	58.4	56.1	51.8	45.1	35.9	24.6	12.5
-28.0	73.4	72.4	71.0	68.1	64.0	62.1	59.5	57.1	52.8	46.0	36.8	25.5	13.1
-24.0	74.1	73.1	71.7	68.9	64.7	62.8	60.2	57.8	53.5	46.7	37.4	26.0	13.5
-20.0	74.3	73.4	71.9	69.1	64.9	63.0	60.4	58.0	53.8	46.9	37.6	26.2	14.2
-16.0	74.2	73.2	71.8	69.0	64.8	62.9	60.3	58.0	53.8	47.1	38.1	26.8	15.0
-12.0	75.5	74.5	73.1	70.2	66.1	64.2	61.6	59.2	55.0	48.2	39.1	27.8	15.7
-8.0	76.6	75.6	74.2	71.3	67.1	65.3	62.6	60.3	56.0	49.2	40.0	28.6	16.3
-4.0	77.3	76.3	74.9	72.0	67.8	66.0	63.3	60.9	56.7	49.8	40.6	29.2	16.6
.0	77.5	76.6	75.1	72.3	68.1	66.2	63.6	61.2	56.9	50.1	40.8	29.3	16.8
4.0	77.3	76.3	74.9	72.0	67.8	66.0	63.3	60.9	56.7	49.8	40.6	29.2	16.6
8.0	76.6	75.6	74.2	71.3	67.1	65.3	62.6	60.3	56.0	49.2	40.0	28.6	16.3
12.0	75.5	74.5	73.1	70.2	66.1	64.2	61.6	59.2	55.0	48.2	39.1	27.8	15.7
16.0	74.2	73.2	71.8	69.0	64.8	62.9	60.3	58.0	53.8	47.1	38.1	26.8	15.0
20.0	74.3	73.4	71.9	69.1	64.9	63.0	60.4	58.0	53.8	46.9	37.6	26.2	14.2
24.0	74.1	73.1	71.7	68.9	64.7	62.8	60.2	57.8	53.5	46.7	37.4	26.0	13.5
28.0	73.4	72.4	71.0	68.1	64.0	62.1	59.5	57.1	52.8	46.0	36.8	25.5	13.1
32.0	72.3	71.4	69.9	67.1	62.9	61.0	58.4	56.1	51.8	45.1	35.9	24.6	12.5
36.0	71.0	70.1	68.6	65.8	61.6	59.8	57.2	54.8	50.6	43.9	34.9	23.6	11.8
40.0	69.6	68.6	67.2	64.4	60.2	58.4	55.8	53.4	49.3	42.7	33.8	22.5	11.0
44.0	68.1	67.2	65.7	62.9	58.7	56.9	54.3	52.0	47.9	41.4	32.7	21.5	10.2
48.0	66.6	65.7	64.3	61.4	57.3	55.5	52.9	50.6	46.5	40.1	31.6	20.4	9.4
52.0	65.2	64.3	62.8	60.0	55.9	54.1	51.6	49.3	45.2	38.9	30.5	19.4	8.6

56.0	63.8	62.9	61.4	58.6	54.5	52.7	50.2	48.0	44.0	37.8	29.5	18.4	7.8
60.0	62.5	61.6	60.1	57.3	53.2	51.5	49.0	46.7	42.8	36.8	28.6	17.5	7.1
64.0	61.2	60.3	58.9	56.1	52.0	50.3	47.8	45.6	41.8	35.8	27.8	16.7	6.2
68.0	60.0	59.1	57.7	54.9	50.9	49.1	46.7	44.5	40.7	34.9	27.0	15.9	5.2
72.0	58.9	58.0	56.5	53.8	49.8	48.0	45.6	43.5	39.8	34.0	26.4	15.3	4.3
76.0	57.8	56.9	55.5	52.7	48.7	47.0	44.7	42.5	38.9	33.2	25.9	14.8	3.3
80.0	56.8	55.9	54.4	51.7	47.8	46.1	43.7	41.6	38.1	32.6	25.4	14.3	2.5
84.0	55.8	54.9	53.5	50.7	46.8	45.2	42.9	40.8	37.3	32.1	25.0	13.8	1.7
88.0	54.9	53.9	52.5	49.8	46.0	44.3	42.0	40.0	36.7	31.7	24.5	13.4	.9
92.0	54.0	53.1	51.7	49.0	45.1	43.5	41.3	39.3	36.2	31.2	24.1	13.0	.1
96.0	53.1	52.2	50.8	48.1	44.3	42.7	40.5	38.7	35.7	30.8	23.7	12.5	-.6
100.0	52.3	51.4	50.0	47.3	43.6	42.0	40.0	38.2	35.2	30.4	23.4	12.1	-1.1
104.0	51.5	50.6	49.2	46.6	42.9	41.4	39.5	37.7	34.8	30.0	23.0	11.8	-1.7
108.0	50.8	49.9	48.5	45.9	42.4	40.9	39.0	37.3	34.3	29.6	22.7	11.4	-2.2
112.0	50.1	49.2	47.8	45.2	41.8	40.4	38.5	36.8	33.9	29.2	22.3	11.0	-2.7
116.0	49.4	48.5	47.2	44.7	41.3	39.9	38.1	36.4	33.6	28.9	22.0	10.7	-3.3
120.0	48.8	48.0	46.6	44.2	40.8	39.5	37.6	36.0	33.2	28.6	21.7	10.3	-3.7
124.0	48.3	47.4	46.1	43.6	40.4	39.0	37.2	35.6	32.8	28.3	21.4	10.0	-4.2
128.0	47.8	46.9	45.6	43.2	39.9	38.6	36.8	35.3	32.5	27.9	21.1	9.7	-4.7
132.0	47.2	46.4	45.1	42.7	39.5	38.2	36.4	34.9	32.2	27.6	20.8	9.4	-5.1
136.0	46.7	45.9	44.6	42.2	39.1	37.8	36.1	34.5	31.8	27.4	20.5	9.1	-5.6
140.0	46.3	45.4	44.1	41.8	38.7	37.4	35.7	34.2	31.5	27.1	20.3	8.8	-6.0
144.0	45.8	44.9	43.7	41.3	38.3	37.0	35.4	33.9	31.2	26.8	20.0	8.5	-6.5
148.0	45.3	44.5	43.2	40.9	37.9	36.7	35.1	33.6	31.0	26.5	19.7	8.2	-6.9
152.0	44.9	44.0	42.8	40.5	37.5	36.3	34.7	33.3	30.7	26.3	19.5	7.9	-7.3
156.0	44.4	43.6	42.4	40.1	37.2	36.0	34.4	33.0	30.4	26.0	19.3	7.7	-7.7
160.0	44.0	43.2	41.9	39.7	36.9	35.7	34.1	32.7	30.2	25.8	19.0	7.4	-8.1
164.0	43.6	42.8	41.5	39.3	36.5	35.4	33.8	32.4	29.9	25.6	18.8	7.1	-8.5
168.0	43.2	42.4	41.2	39.0	36.2	35.1	33.6	32.2	29.7	25.3	18.6	6.9	-8.8
172.0	42.8	42.0	40.8	38.6	35.9	34.8	33.3	31.9	29.4	25.1	18.4	6.6	-9.2
176.0	42.4	41.6	40.4	38.3	35.6	34.5	33.0	31.7	29.2	24.9	18.1	6.4	-9.6
180.0	42.0	41.2	40.0	37.9	35.3	34.2	32.8	31.4	29.0	24.7	17.9	6.1	-9.9
184.0	41.6	40.9	39.7	37.6	35.0	34.0	32.5	31.2	28.8	24.5	17.7	5.9	-10.3
188.0	41.3	40.5	39.3	37.3	34.7	33.7	32.3	31.0	28.5	24.3	17.5	5.7	-10.6
192.0	40.9	40.1	39.0	37.0	34.5	33.5	32.0	30.7	28.3	24.1	17.3	5.4	-11.0
196.0	40.6	39.8	38.7	36.7	34.2	33.2	31.8	30.5	28.1	23.9	17.2	5.2	-11.3

1RADIO NOISE CALCULATION - 5KHZ BAND WIDTH - FAIR

	* * * * * L50 * * * * *											
DIST FROM REFERENCE	* * * * * FREQUENCY, MHZ * * * * *											
	.100	.200	.300	.500	.834	1.000	1.250	1.500	2.000	3.000	5.000	10.000	20.000
(FEET)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)
-200.0	23.2	22.5	21.3	19.4	17.0	16.0	14.6	13.3	10.9	6.7	.0	-12.0	-28.6
-196.0	23.6	22.8	21.7	19.7	17.2	16.2	14.8	13.5	11.1	6.9	.2	-11.8	-28.3
-192.0	23.9	23.1	22.0	20.0	17.5	16.5	15.0	13.7	11.3	7.1	.3	-11.6	-28.0
-188.0	24.3	23.5	22.3	20.3	17.7	16.7	15.3	14.0	11.5	7.3	.5	-11.3	-27.6
-184.0	24.6	23.9	22.7	20.6	18.0	17.0	15.5	14.2	11.8	7.5	.7	-11.1	-27.3
-180.0	25.0	24.2	23.0	20.9	18.3	17.2	15.8	14.4	12.0	7.7	.9	-10.9	-26.9

-176.0	25.4	24.6	23.4	21.3	18.6	17.5	16.0	14.7	12.2	7.9	1.1	-10.6	-26.6
-172.0	25.8	25.0	23.8	21.6	18.9	17.8	16.3	14.9	12.4	8.1	1.4	-10.4	-26.2
-168.0	26.2	25.4	24.2	22.0	19.2	18.1	16.6	15.2	12.7	8.3	1.6	-10.1	-25.8
-164.0	26.6	25.8	24.5	22.3	19.5	18.4	16.8	15.4	12.9	8.6	1.8	-9.9	-25.5
-160.0	27.0	26.2	24.9	22.7	19.9	18.7	17.1	15.7	13.2	8.8	2.0	-9.6	-25.1
-156.0	27.4	26.6	25.4	23.1	20.2	19.0	17.4	16.0	13.4	9.0	2.3	-9.3	-24.7
-152.0	27.9	27.0	25.8	23.5	20.5	19.3	17.7	16.3	13.7	9.3	2.5	-9.1	-24.3
-148.0	28.3	27.5	26.2	23.9	20.9	19.7	18.1	16.6	14.0	9.5	2.7	-8.8	-23.9
-144.0	28.8	27.9	26.7	24.3	21.3	20.0	18.4	16.9	14.2	9.8	3.0	-8.5	-23.5
-140.0	29.3	28.4	27.1	24.8	21.7	20.4	18.7	17.2	14.5	10.1	3.3	-8.2	-23.0
-136.0	29.7	28.9	27.6	25.2	22.1	20.8	19.1	17.5	14.8	10.4	3.5	-7.9	-22.6
-132.0	30.2	29.4	28.1	25.7	22.5	21.2	19.4	17.9	15.2	10.6	3.8	-7.6	-22.1
-128.0	30.8	29.9	28.6	26.2	22.9	21.6	19.8	18.3	15.5	10.9	4.1	-7.3	-21.7
-124.0	31.3	30.4	29.1	26.6	23.4	22.0	20.2	18.6	15.8	11.3	4.4	-7.0	-21.2
-120.0	31.8	31.0	29.6	27.2	23.8	22.5	20.6	19.0	16.2	11.6	4.7	-6.7	-20.7
-116.0	32.4	31.5	30.2	27.7	24.3	22.9	21.1	19.4	16.6	11.9	5.0	-6.3	-20.3
-112.0	33.1	32.2	30.8	28.2	24.8	23.4	21.5	19.8	16.9	12.2	5.3	-6.0	-19.7
-108.0	33.8	32.9	31.5	28.9	25.4	23.9	22.0	20.3	17.3	12.6	5.7	-5.6	-19.2
-104.0	34.5	33.6	32.2	29.6	25.9	24.4	22.5	20.7	17.8	13.0	6.0	-5.2	-18.7
-100.0	35.3	34.4	33.0	30.3	26.6	25.0	23.0	21.2	18.2	13.4	6.4	-4.9	-18.1
-96.0	36.1	35.2	33.8	31.1	27.3	25.7	23.5	21.7	18.7	13.8	6.7	-4.5	-17.6
-92.0	37.0	36.1	34.7	32.0	28.1	26.5	24.3	22.3	19.2	14.2	7.1	-4.0	-16.9
-88.0	37.9	36.9	35.5	32.8	29.0	27.3	25.0	23.0	19.7	14.7	7.5	-3.6	-16.1
-84.0	38.8	37.9	36.5	33.7	29.8	28.2	25.9	23.8	20.3	15.1	8.0	-3.2	-15.3
-80.0	39.8	38.9	37.4	34.7	30.8	29.1	26.7	24.6	21.1	15.6	8.4	-2.7	-14.5
-76.0	40.8	39.9	38.5	35.7	31.7	30.0	27.7	25.5	21.9	16.2	8.9	-2.2	-13.7
-72.0	41.9	41.0	39.5	36.8	32.8	31.0	28.6	26.5	22.8	17.0	9.4	-1.7	-12.7
-68.0	43.0	42.1	40.7	37.9	33.9	32.1	29.7	27.5	23.7	17.9	10.0	-1.1	-11.8
-64.0	44.2	43.3	41.9	39.1	35.0	33.3	30.8	28.6	24.8	18.8	10.8	-.3	-10.8
-60.0	45.5	44.6	43.1	40.3	36.2	34.5	32.0	29.7	25.8	19.8	11.6	.5	-9.9
-56.0	46.8	45.9	44.4	41.6	37.5	35.7	33.2	31.0	27.0	20.8	12.5	1.4	-9.2
-52.0	48.2	47.3	45.8	43.0	38.9	37.1	34.6	32.3	28.2	21.9	13.5	2.4	-8.4
-48.0	49.6	48.7	47.3	44.4	40.3	38.5	35.9	33.6	29.5	23.1	14.6	3.4	-7.6
-44.0	51.1	50.2	48.7	45.9	41.7	39.9	37.3	35.0	30.9	24.4	15.7	4.5	-6.8
-40.0	52.6	51.6	50.2	47.4	43.2	41.4	38.8	36.4	32.3	25.7	16.8	5.5	-6.0
-36.0	54.0	53.1	51.6	48.8	44.6	42.8	40.2	37.8	33.6	26.9	17.9	6.6	-5.2
-32.0	55.3	54.4	52.9	50.1	45.9	44.0	41.4	39.1	34.8	28.1	18.9	7.6	-4.5
-28.0	56.4	55.4	54.0	51.1	47.0	45.1	42.5	40.1	35.8	29.0	19.8	8.5	-3.9
-24.0	57.1	56.1	54.7	51.9	47.7	45.8	43.2	40.8	36.5	29.7	20.4	9.0	-3.5
-20.0	57.3	56.4	54.9	52.1	47.9	46.0	43.4	41.0	36.8	29.9	20.6	9.2	-2.8
-16.0	57.2	56.2	54.8	52.0	47.8	45.9	43.3	41.0	36.8	30.1	21.1	9.8	-2.0
-12.0	58.5	57.5	56.1	53.2	49.1	47.2	44.6	42.2	38.0	31.2	22.1	10.8	-1.3
-8.0	59.6	58.6	57.2	54.3	50.1	48.3	45.6	43.3	39.0	32.2	23.0	11.6	-.7
-4.0	60.3	59.3	57.9	55.0	50.8	49.0	46.3	43.9	39.7	32.8	23.6	12.2	-.4
.0	60.5	59.6	58.1	55.3	51.1	49.2	46.6	44.2	39.9	33.1	23.8	12.3	-.2
4.0	60.3	59.3	57.9	55.0	50.8	49.0	46.3	43.9	39.7	32.8	23.6	12.2	-.4
8.0	59.6	58.6	57.2	54.3	50.1	48.3	45.6	43.3	39.0	32.2	23.0	11.6	-.7
12.0	58.5	57.5	56.1	53.2	49.1	47.2	44.6	42.2	38.0	31.2	22.1	10.8	-1.3
16.0	57.2	56.2	54.8	52.0	47.8	45.9	43.3	41.0	36.8	30.1	21.1	9.8	-2.0
20.0	57.3	56.4	54.9	52.1	47.9	46.0	43.4	41.0	36.8	29.9	20.6	9.2	-2.8
24.0	57.1	56.1	54.7	51.9	47.7	45.8	43.2	40.8	36.5	29.7	20.4	9.0	-3.5

28.0	56.4	55.4	54.0	51.1	47.0	45.1	42.5	40.1	35.8	29.0	19.8	8.5	-3.9
32.0	55.3	54.4	52.9	50.1	45.9	44.0	41.4	39.1	34.8	28.1	18.9	7.6	-4.5
36.0	54.0	53.1	51.6	48.8	44.6	42.8	40.2	37.8	33.6	26.9	17.9	6.6	-5.2
40.0	52.6	51.6	50.2	47.4	43.2	41.4	38.8	36.4	32.3	25.7	16.8	5.5	-6.0
44.0	51.1	50.2	48.7	45.9	41.7	39.9	37.3	35.0	30.9	24.4	15.7	4.5	-6.8
48.0	49.6	48.7	47.3	44.4	40.3	38.5	35.9	33.6	29.5	23.1	14.6	3.4	-7.6
52.0	48.2	47.3	45.8	43.0	38.9	37.1	34.6	32.3	28.2	21.9	13.5	2.4	-8.4
56.0	46.8	45.9	44.4	41.6	37.5	35.7	33.2	31.0	27.0	20.8	12.5	1.4	-9.2
60.0	45.5	44.6	43.1	40.3	36.2	34.5	32.0	29.7	25.8	19.8	11.6	.5	-9.9
64.0	44.2	43.3	41.9	39.1	35.0	33.3	30.8	28.6	24.8	18.8	10.8	-.3	-10.8
68.0	43.0	42.1	40.7	37.9	33.9	32.1	29.7	27.5	23.7	17.9	10.0	-1.1	-11.8
72.0	41.9	41.0	39.5	36.8	32.8	31.0	28.6	26.5	22.8	17.0	9.4	-1.7	-12.7
76.0	40.8	39.9	38.5	35.7	31.7	30.0	27.7	25.5	21.9	16.2	8.9	-2.2	-13.7
80.0	39.8	38.9	37.4	34.7	30.8	29.1	26.7	24.6	21.1	15.6	8.4	-2.7	-14.5
84.0	38.8	37.9	36.5	33.7	29.8	28.2	25.9	23.8	20.3	15.1	8.0	-3.2	-15.3
88.0	37.9	36.9	35.5	32.8	29.0	27.3	25.0	23.0	19.7	14.7	7.5	-3.6	-16.1
92.0	37.0	36.1	34.7	32.0	28.1	26.5	24.3	22.3	19.2	14.2	7.1	-4.0	-16.9
96.0	36.1	35.2	33.8	31.1	27.3	25.7	23.5	21.7	18.7	13.8	6.7	-4.5	-17.6
100.0	35.3	34.4	33.0	30.3	26.6	25.0	23.0	21.2	18.2	13.4	6.4	-4.9	-18.1
104.0	34.5	33.6	32.2	29.6	25.9	24.4	22.5	20.7	17.8	13.0	6.0	-5.2	-18.7
108.0	33.8	32.9	31.5	28.9	25.4	23.9	22.0	20.3	17.3	12.6	5.7	-5.6	-19.2
112.0	33.1	32.2	30.8	28.2	24.8	23.4	21.5	19.8	16.9	12.2	5.3	-6.0	-19.7
116.0	32.4	31.5	30.2	27.7	24.3	22.9	21.1	19.4	16.6	11.9	5.0	-6.3	-20.3
120.0	31.8	31.0	29.6	27.2	23.8	22.5	20.6	19.0	16.2	11.6	4.7	-6.7	-20.7
124.0	31.3	30.4	29.1	26.6	23.4	22.0	20.2	18.6	15.8	11.3	4.4	-7.0	-21.2
128.0	30.8	29.9	28.6	26.2	22.9	21.6	19.8	18.3	15.5	10.9	4.1	-7.3	-21.7
132.0	30.2	29.4	28.1	25.7	22.5	21.2	19.4	17.9	15.2	10.6	3.8	-7.6	-22.1
136.0	29.7	28.9	27.6	25.2	22.1	20.8	19.1	17.5	14.8	10.4	3.5	-7.9	-22.6
140.0	29.3	28.4	27.1	24.8	21.7	20.4	18.7	17.2	14.5	10.1	3.3	-8.2	-23.0
144.0	28.8	27.9	26.7	24.3	21.3	20.0	18.4	16.9	14.2	9.8	3.0	-8.5	-23.5
148.0	28.3	27.5	26.2	23.9	20.9	19.7	18.1	16.6	14.0	9.5	2.7	-8.8	-23.9
152.0	27.9	27.0	25.8	23.5	20.5	19.3	17.7	16.3	13.7	9.3	2.5	-9.1	-24.3
156.0	27.4	26.6	25.4	23.1	20.2	19.0	17.4	16.0	13.4	9.0	2.3	-9.3	-24.7
160.0	27.0	26.2	24.9	22.7	19.9	18.7	17.1	15.7	13.2	8.8	2.0	-9.6	-25.1
164.0	26.6	25.8	24.5	22.3	19.5	18.4	16.8	15.4	12.9	8.6	1.8	-9.9	-25.5
168.0	26.2	25.4	24.2	22.0	19.2	18.1	16.6	15.2	12.7	8.3	1.6	-10.1	-25.8
172.0	25.8	25.0	23.8	21.6	18.9	17.8	16.3	14.9	12.4	8.1	1.4	-10.4	-26.2
176.0	25.4	24.6	23.4	21.3	18.6	17.5	16.0	14.7	12.2	7.9	1.1	-10.6	-26.6
180.0	25.0	24.2	23.0	20.9	18.3	17.2	15.8	14.4	12.0	7.7	.9	-10.9	-26.9
184.0	24.6	23.9	22.7	20.6	18.0	17.0	15.5	14.2	11.8	7.5	.7	-11.1	-27.3
188.0	24.3	23.5	22.3	20.3	17.7	16.7	15.3	14.0	11.5	7.3	.5	-11.3	-27.6
192.0	23.9	23.1	22.0	20.0	17.5	16.5	15.0	13.7	11.3	7.1	.3	-11.6	-28.0
196.0	23.6	22.8	21.7	19.7	17.2	16.2	14.8	13.5	11.1	6.9	.2	-11.8	-28.3

1TVI CALCULATIONS, QP DETECTOR, STODDART NM30A METER

NOTE: A -999.9 APPEARS FOR DC BUNDLES.

DIST FROM REFERENCE	* * * * * L50 * * * * *							
	* * * * * FREQUENCY, MHZ * * * * *							
(FEET)	30.000	60.000	75.000	125.000	250.000	500.000	750.000	1000.000
DBUV/M								

-200.0	11.5	5.5	3.6	-.8	-6.8	-12.9	-16.4	-18.9
-196.0	11.9	5.7	3.8	-.7	-6.7	-12.7	-16.2	-18.7
-192.0	12.2	5.9	4.0	-.5	-6.5	-12.5	-16.0	-18.5
-188.0	12.6	6.1	4.1	-.3	-6.3	-12.3	-15.9	-18.4
-184.0	13.0	6.3	4.3	-.1	-6.1	-12.2	-15.7	-18.2
-180.0	13.3	6.5	4.5	.1	-5.9	-12.0	-15.5	-18.0
-176.0	13.7	6.6	4.7	.3	-5.7	-11.8	-15.3	-17.8
-172.0	14.1	6.8	4.9	.5	-5.6	-11.6	-15.1	-17.6
-168.0	14.5	7.0	5.1	.7	-5.4	-11.4	-14.9	-17.4
-164.0	14.9	7.3	5.3	.9	-5.1	-11.2	-14.7	-17.2
-160.0	15.4	7.5	5.5	1.1	-4.9	-11.0	-14.5	-17.0
-156.0	15.8	7.7	5.7	1.3	-4.7	-10.7	-14.3	-16.8
-152.0	16.2	7.9	6.0	1.5	-4.5	-10.5	-14.0	-16.5
-148.0	16.7	8.1	6.2	1.8	-4.3	-10.3	-13.8	-16.3
-144.0	17.2	8.4	6.4	2.0	-4.0	-10.1	-13.6	-16.1
-140.0	17.6	8.6	6.7	2.2	-3.8	-9.8	-13.3	-15.8
-136.0	18.1	8.8	6.9	2.5	-3.5	-9.6	-13.1	-15.6
-132.0	18.6	9.1	7.2	2.7	-3.3	-9.3	-12.8	-15.3
-128.0	19.2	9.4	7.4	3.0	-3.0	-9.1	-12.6	-15.1
-124.0	19.7	9.6	7.7	3.3	-2.8	-8.8	-12.3	-14.8
-120.0	20.3	9.9	8.0	3.5	-2.5	-8.5	-12.0	-14.5
-116.0	20.8	10.2	8.3	3.8	-2.2	-8.2	-11.7	-14.2
-112.0	21.4	10.5	8.6	4.1	-1.9	-7.9	-11.4	-13.9
-108.0	22.0	10.8	8.9	4.4	-1.6	-7.6	-11.1	-13.6
-104.0	22.5	11.1	9.2	4.7	-1.3	-7.3	-10.8	-13.3
-100.0	22.8	11.4	9.5	5.1	-1.0	-7.0	-10.5	-13.0
-96.0	23.2	11.8	9.8	5.4	-.6	-6.6	-10.2	-12.7
-92.0	23.5	12.1	10.2	5.8	-.3	-6.3	-9.8	-12.3
-88.0	23.9	12.5	10.6	6.1	.1	-5.9	-9.4	-11.9
-84.0	24.3	12.9	10.9	6.5	.5	-5.5	-9.1	-11.6
-80.0	24.7	13.3	11.3	6.9	.9	-5.1	-8.7	-11.2
-76.0	25.1	13.7	11.8	7.3	1.3	-4.7	-8.2	-10.7
-72.0	25.5	14.1	12.2	7.8	1.7	-4.3	-7.8	-10.3
-68.0	26.0	14.6	12.7	8.2	2.2	-3.8	-7.3	-9.8
-64.0	26.5	15.1	13.1	8.7	2.7	-3.3	-6.9	-9.4
-60.0	27.0	15.6	13.6	9.2	3.2	-2.8	-6.4	-8.9
-56.0	27.5	16.1	14.2	9.8	3.7	-2.3	-5.8	-8.3
-52.0	28.3	16.9	15.0	10.5	4.5	-1.5	-5.0	-7.5
-48.0	29.1	17.7	15.8	11.3	5.3	-.7	-4.2	-6.7
-44.0	29.9	18.5	16.6	12.2	6.1	.1	-3.4	-5.9
-40.0	30.8	19.4	17.5	13.0	7.0	1.0	-2.5	-5.0
-36.0	31.6	20.2	18.3	13.9	7.8	1.8	-1.7	-4.2
-32.0	32.4	21.0	19.1	14.7	8.7	2.6	-.9	-3.4
-28.0	33.1	21.7	19.8	15.4	9.3	3.3	-.2	-2.7
-24.0	33.6	22.2	20.3	15.8	9.8	3.8	.3	-2.2
-20.0	33.9	22.5	20.6	16.2	10.2	4.1	.6	-1.9
-16.0	34.8	23.4	21.5	17.0	11.0	5.0	1.5	-1.0
-12.0	35.6	24.2	22.3	17.8	11.8	5.8	2.3	-.2
-8.0	36.3	24.9	23.0	18.5	12.5	6.5	3.0	.5
-4.0	36.7	25.4	23.4	19.0	13.0	6.9	3.4	.9

.0	36.9	25.5	23.6	19.1	13.1	7.1	3.6	1.1
4.0	36.7	25.4	23.4	19.0	13.0	6.9	3.4	.9
8.0	36.3	24.9	23.0	18.5	12.5	6.5	3.0	.5
12.0	35.6	24.2	22.3	17.8	11.8	5.8	2.3	-.2
16.0	34.8	23.4	21.5	17.0	11.0	5.0	1.5	-1.0
20.0	33.9	22.5	20.6	16.2	10.2	4.1	.6	-1.9
24.0	33.6	22.2	20.3	15.8	9.8	3.8	.3	-2.2
28.0	33.1	21.7	19.8	15.4	9.3	3.3	-.2	-2.7
32.0	32.4	21.0	19.1	14.7	8.7	2.6	-.9	-3.4
36.0	31.6	20.2	18.3	13.9	7.8	1.8	-1.7	-4.2
40.0	30.8	19.4	17.5	13.0	7.0	1.0	-2.5	-5.0
44.0	29.9	18.5	16.6	12.2	6.1	.1	-3.4	-5.9
48.0	29.1	17.7	15.8	11.3	5.3	-.7	-4.2	-6.7
52.0	28.3	16.9	15.0	10.5	4.5	-1.5	-5.0	-7.5
56.0	27.5	16.1	14.2	9.8	3.7	-2.3	-5.8	-8.3
60.0	27.0	15.6	13.6	9.2	3.2	-2.8	-6.4	-8.9
64.0	26.5	15.1	13.1	8.7	2.7	-3.3	-6.9	-9.4
68.0	26.0	14.6	12.7	8.2	2.2	-3.8	-7.3	-9.8
72.0	25.5	14.1	12.2	7.8	1.7	-4.3	-7.8	-10.3
76.0	25.1	13.7	11.8	7.3	1.3	-4.7	-8.2	-10.7
80.0	24.7	13.3	11.3	6.9	.9	-5.1	-8.7	-11.2
84.0	24.3	12.9	10.9	6.5	.5	-5.5	-9.1	-11.6
88.0	23.9	12.5	10.6	6.1	.1	-5.9	-9.4	-11.9
92.0	23.5	12.1	10.2	5.8	-.3	-6.3	-9.8	-12.3
96.0	23.2	11.8	9.8	5.4	-.6	-6.6	-10.2	-12.7
100.0	22.8	11.4	9.5	5.1	-1.0	-7.0	-10.5	-13.0
104.0	22.5	11.1	9.2	4.7	-1.3	-7.3	-10.8	-13.3
108.0	22.0	10.8	8.9	4.4	-1.6	-7.6	-11.1	-13.6
112.0	21.4	10.5	8.6	4.1	-1.9	-7.9	-11.4	-13.9
116.0	20.8	10.2	8.3	3.8	-2.2	-8.2	-11.7	-14.2
120.0	20.3	9.9	8.0	3.5	-2.5	-8.5	-12.0	-14.5
124.0	19.7	9.6	7.7	3.3	-2.8	-8.8	-12.3	-14.8
128.0	19.2	9.4	7.4	3.0	-3.0	-9.1	-12.6	-15.1
132.0	18.6	9.1	7.2	2.7	-3.3	-9.3	-12.8	-15.3
136.0	18.1	8.8	6.9	2.5	-3.5	-9.6	-13.1	-15.6
140.0	17.6	8.6	6.7	2.2	-3.8	-9.8	-13.3	-15.8
144.0	17.2	8.4	6.4	2.0	-4.0	-10.1	-13.6	-16.1
148.0	16.7	8.1	6.2	1.8	-4.3	-10.3	-13.8	-16.3
152.0	16.2	7.9	6.0	1.5	-4.5	-10.5	-14.0	-16.5
156.0	15.8	7.7	5.7	1.3	-4.7	-10.7	-14.3	-16.8
160.0	15.4	7.5	5.5	1.1	-4.9	-11.0	-14.5	-17.0
164.0	14.9	7.3	5.3	.9	-5.1	-11.2	-14.7	-17.2
168.0	14.5	7.0	5.1	.7	-5.4	-11.4	-14.9	-17.4
172.0	14.1	6.8	4.9	.5	-5.6	-11.6	-15.1	-17.6
176.0	13.7	6.6	4.7	.3	-5.7	-11.8	-15.3	-17.8
180.0	13.3	6.5	4.5	.1	-5.9	-12.0	-15.5	-18.0
184.0	13.0	6.3	4.3	-.1	-6.1	-12.2	-15.7	-18.2
188.0	12.6	6.1	4.1	-.3	-6.3	-12.3	-15.9	-18.4
192.0	12.2	5.9	4.0	-.5	-6.5	-12.5	-16.0	-18.5
196.0	11.9	5.7	3.8	-.7	-6.7	-12.7	-16.2	-18.7

1ELECTRIC FIELD CALCULATIONS

BAKEOVEN SOLAR
230 KV H FRAME

	DIST. FROM REFERENCE FEET	HEIGHT FEET	MAXIMUM GRADIENT (KV/CM)	SUBCON. DIAM. (IN)	NO. OF SUBCON.	PHASE ANGLE (DEGREES)
A1	20.00	30.00	12.81	1.35	1	.0
B	.00	30.00	13.61	1.35	1	-120.0
C	-20.00	30.00	12.81	1.35	1	120.0
G1	11.00	47.10	1.62	.75	1	.0
G2	-11.00	47.10	1.62	.75	1	.0

SENSOR HT. = 3.3 FEET

DIST FROM REFERENCE FEET	E-FIELD (KV/METER)	THETA (DEGREES)	EY-FIELD (KV/METER)	THETAY (DEGREES)	EX-FIELD (KV/METER)	THETAX (DEGREES)	SPACE POTENTIAL (VOLTS)
-200.0	.036	87.3	.036	-54.7	.002	-50.3	35.8
-196.0	.038	87.3	.038	-54.5	.002	-50.1	37.9
-192.0	.040	87.2	.040	-54.2	.002	-50.0	40.2
-188.0	.043	87.1	.043	-54.0	.002	-49.9	42.7
-184.0	.045	87.1	.045	-53.7	.002	-49.8	45.4
-180.0	.048	87.0	.048	-53.5	.003	-49.7	48.4
-176.0	.052	86.9	.052	-53.2	.003	-49.6	51.6
-172.0	.055	86.9	.055	-53.0	.003	-49.5	55.1
-168.0	.059	86.8	.059	-52.8	.003	-49.4	59.0
-164.0	.063	86.7	.063	-52.5	.004	-49.3	63.2
-160.0	.068	86.6	.068	-52.3	.004	-49.2	67.8
-156.0	.073	86.5	.073	-52.1	.004	-49.2	72.9
-152.0	.079	86.5	.078	-51.9	.005	-49.1	78.5
-148.0	.085	86.4	.085	-51.7	.005	-49.0	84.8
-144.0	.092	86.3	.092	-51.5	.006	-49.0	91.7
-140.0	.099	86.2	.099	-51.3	.007	-48.9	99.4
-136.0	.108	86.1	.108	-51.1	.007	-48.9	108.0
-132.0	.118	85.9	.117	-50.9	.008	-48.9	117.6
-128.0	.128	85.8	.128	-50.7	.009	-48.9	128.3
-124.0	.141	85.7	.140	-50.6	.011	-48.8	140.4
-120.0	.154	85.6	.154	-50.4	.012	-48.8	154.1
-116.0	.170	85.4	.169	-50.3	.014	-48.9	169.6
-112.0	.187	85.3	.187	-50.1	.015	-48.9	187.3
-108.0	.208	85.1	.207	-50.0	.018	-48.9	207.4
-104.0	.231	85.0	.230	-49.9	.020	-48.9	230.5
-100.0	.257	84.8	.256	-49.8	.023	-49.0	257.0
-96.0	.288	84.6	.287	-49.7	.027	-49.0	287.6
-92.0	.324	84.4	.322	-49.7	.031	-49.1	323.2
-88.0	.365	84.2	.363	-49.6	.037	-49.1	364.6
-84.0	.414	84.0	.411	-49.5	.043	-49.2	413.1
-80.0	.471	83.8	.468	-49.5	.051	-49.2	470.0

-76.0	.538	83.6	.535	-49.5	.060	-49.3	537.2
-72.0	.618	83.4	.613	-49.5	.071	-49.3	616.6
-68.0	.712	83.2	.707	-49.4	.084	-49.3	710.7
-64.0	.824	83.0	.818	-49.4	.100	-49.2	822.5
-60.0	.957	82.9	.950	-49.4	.118	-49.0	955.1
-56.0	1.115	82.8	1.106	-49.3	.139	-48.7	1111.8
-52.0	1.299	82.8	1.289	-49.2	.162	-48.2	1295.2
-48.0	1.512	83.0	1.501	-49.0	.185	-47.2	1506.6
-44.0	1.752	83.3	1.740	-48.7	.204	-45.6	1743.7
-40.0	2.010	84.0	1.999	-48.2	.212	-42.8	1998.2
-36.0	2.268	84.9	2.259	-47.4	.203	-37.2	2251.5
-32.0	2.495	86.4	2.491	-46.1	.168	-24.7	2472.4
-28.0	2.648	88.4	2.647	-44.0	.126	9.7	2617.7
-24.0	2.680	90.9	2.680	-40.6	.165	64.0	2641.2
-20.0	2.560	93.8	2.554	-35.3	.292	89.9	2514.0
-16.0	2.298	96.8	2.282	-26.9	.426	101.5	2246.9
-12.0	1.954	98.9	1.931	-13.5	.522	110.0	1902.7
-8.0	1.627	98.8	1.610	6.2	.560	119.7	1581.2
-4.0	1.416	95.2	1.411	31.7	.555	133.0	1371.9
.0	1.350	90.0	1.350	60.0	.546	150.0	1303.8
4.0	1.416	84.8	1.411	88.3	.555	167.0	1371.9
8.0	1.627	81.2	1.610	113.8	.560	-179.7	1581.2
12.0	1.954	81.1	1.931	133.5	.522	-170.0	1902.7
16.0	2.298	83.2	2.282	146.9	.426	-161.5	2246.9
20.0	2.560	86.2	2.554	155.3	.292	-149.9	2514.0
24.0	2.680	89.1	2.680	160.6	.165	-124.0	2641.2
28.0	2.648	91.6	2.647	164.0	.126	-69.7	2617.7
32.0	2.495	93.6	2.491	166.1	.168	-35.3	2472.4
36.0	2.268	95.1	2.259	167.4	.203	-22.8	2251.5
40.0	2.010	96.0	1.999	168.2	.212	-17.2	1998.2
44.0	1.752	96.7	1.740	168.7	.204	-14.4	1743.7
48.0	1.512	97.0	1.501	169.0	.185	-12.8	1506.6
52.0	1.299	97.2	1.289	169.2	.162	-11.8	1295.2
56.0	1.115	97.2	1.106	169.3	.139	-11.3	1111.8
60.0	.957	97.1	.950	169.4	.118	-11.0	955.1
64.0	.824	97.0	.818	169.4	.100	-10.8	822.5
68.0	.712	96.8	.707	169.4	.084	-10.7	710.7
72.0	.618	96.6	.613	169.5	.071	-10.7	616.6
76.0	.538	96.4	.535	169.5	.060	-10.7	537.2
80.0	.471	96.2	.468	169.5	.051	-10.8	470.0
84.0	.414	96.0	.411	169.5	.043	-10.8	413.1
88.0	.365	95.8	.363	169.6	.037	-10.9	364.6
92.0	.324	95.6	.322	169.7	.031	-10.9	323.2
96.0	.288	95.4	.287	169.7	.027	-11.0	287.6
100.0	.257	95.2	.256	169.8	.023	-11.0	257.0
104.0	.231	95.0	.230	169.9	.020	-11.1	230.5
108.0	.208	94.9	.207	170.0	.018	-11.1	207.4
112.0	.187	94.7	.187	170.1	.015	-11.1	187.3
116.0	.170	94.6	.169	170.3	.014	-11.1	169.6
120.0	.154	94.4	.154	170.4	.012	-11.2	154.1
124.0	.141	94.3	.140	170.6	.011	-11.2	140.4

128.0	.128	94.2	.128	170.7	.009	-11.1	128.3
132.0	.118	94.1	.117	170.9	.008	-11.1	117.6
136.0	.108	93.9	.108	171.1	.007	-11.1	108.0
140.0	.099	93.8	.099	171.3	.007	-11.1	99.4
144.0	.092	93.7	.092	171.5	.006	-11.0	91.7
148.0	.085	93.6	.085	171.7	.005	-11.0	84.8
152.0	.079	93.5	.078	171.9	.005	-10.9	78.5
156.0	.073	93.5	.073	172.1	.004	-10.8	72.9
160.0	.068	93.4	.068	172.3	.004	-10.8	67.8
164.0	.063	93.3	.063	172.5	.004	-10.7	63.2
168.0	.059	93.2	.059	172.8	.003	-10.6	59.0
172.0	.055	93.1	.055	173.0	.003	-10.5	55.1
176.0	.052	93.1	.052	173.2	.003	-10.4	51.6
180.0	.048	93.0	.048	173.5	.003	-10.3	48.4
184.0	.045	92.9	.045	173.7	.002	-10.2	45.4
188.0	.043	92.9	.043	174.0	.002	-10.1	42.7
192.0	.040	92.8	.040	174.2	.002	-10.0	40.2
196.0	.038	92.7	.038	174.5	.002	-9.9	37.9

1MAGNETIC FIELD CALCULATIONS

SENSOR HT. = 3.3 FEET

DIST FROM REFERENCE FEET	B-FIELD (GAUSS)	THETA	BY-FIELD (GAUSS)	THETAY	BX-FIELD (GAUSS)	THETAX
-200.0	.00429616	105.4	.00414205	-33.1	.00114080	145.2
-196.0	.00447202	105.7	.00430496	-33.2	.00121139	145.1
-192.0	.00465887	106.0	.00447747	-33.2	.00128792	145.0
-188.0	.00485763	106.4	.00466033	-33.3	.00137100	144.9
-184.0	.00506935	106.7	.00485436	-33.4	.00146137	144.8
-180.0	.00529517	107.1	.00506045	-33.4	.00155981	144.7
-176.0	.00553635	107.5	.00527961	-33.5	.00166727	144.6
-172.0	.00579433	107.9	.00551292	-33.6	.00178478	144.5
-168.0	.00607068	108.4	.00576156	-33.6	.00191355	144.3
-164.0	.00636718	108.8	.00602687	-33.7	.00205494	144.2
-160.0	.00668584	109.3	.00631031	-33.8	.00221054	144.1
-156.0	.00702889	109.8	.00661347	-33.9	.00238215	143.9
-152.0	.00739888	110.3	.00693815	-33.9	.00257189	143.8
-148.0	.00779867	110.9	.00728629	-34.0	.00278218	143.6
-144.0	.00823155	111.5	.00766008	-34.1	.00301587	143.5
-140.0	.00870121	112.1	.00806191	-34.2	.00327626	143.3
-136.0	.00921191	112.8	.00849444	-34.3	.00356725	143.1
-132.0	.00976851	113.5	.00896060	-34.4	.00389340	143.0
-128.0	.01037663	114.2	.00946363	-34.5	.00426014	142.8
-124.0	.01104274	115.0	.01000705	-34.6	.00467388	142.6
-120.0	.01177434	115.9	.01059475	-34.7	.00514229	142.4
-116.0	.01258016	116.8	.01123093	-34.8	.00567454	142.1
-112.0	.01347041	117.8	.01192011	-34.9	.00628166	141.9

-108.0	.01445706	118.8	.01266708	-35.0	.00697703	141.7
-104.0	.01555422	120.0	.01347679	-35.1	.00777685	141.4
-100.0	.01677859	121.2	.01435419	-35.2	.00870094	141.2
-96.0	.01815002	122.5	.01530393	-35.3	.00977360	140.9
-92.0	.01969220	124.0	.01632985	-35.3	.01102476	140.6
-88.0	.02143355	125.6	.01743426	-35.4	.01249151	140.3
-84.0	.02340824	127.3	.01861664	-35.4	.01421986	139.9
-80.0	.02565754	129.3	.01987179	-35.4	.01626712	139.6
-76.0	.02823137	131.4	.02118681	-35.4	.01870472	139.3
-72.0	.03119017	133.8	.02253653	-35.2	.02162153	138.9
-68.0	.03460704	136.5	.02387651	-35.0	.02512752	138.5
-64.0	.03856986	139.5	.02513241	-34.6	.02935706	138.2
-60.0	.04318312	142.9	.02618450	-33.9	.03447052	137.8
-56.0	.04856845	146.7	.02684601	-32.8	.04065109	137.5
-52.0	.05486202	151.1	.02683661	-31.0	.04809060	137.2
-48.0	.06220546	156.2	.02576144	-27.9	.05695339	137.0
-44.0	.07072496	162.0	.02314519	-22.0	.06730041	136.9
-40.0	.08049081	168.7	.01875841	-8.9	.07895110	137.1
-36.0	.09145055	176.4	.01461375	24.8	.09127173	137.5
-32.0	.10333930	-174.9	.01976166	75.6	.10293560	138.5
-28.0	.11559800	-165.0	.03704539	101.0	.11183090	140.3
-24.0	.12737130	-154.3	.06116021	111.9	.11544090	143.5
-20.0	.13766410	-142.9	.08803270	118.1	.11193510	148.7
-16.0	.14564790	-131.2	.11343120	123.1	.10163870	157.3
-12.0	.15096460	-119.8	.13361840	128.2	.08783796	170.9
-8.0	.15385070	-109.0	.14676140	134.3	.07571657	190.5
-4.0	.15501750	-99.2	.15339120	141.7	.06894357	214.6
.0	.15528210	-90.0	.15528210	150.0	.06710491	240.0
4.0	.15501750	-80.8	.15339120	158.3	.06894355	265.4
8.0	.15385070	-71.0	.14676150	165.7	.07571654	-70.5
12.0	.15096460	-60.2	.13361840	171.8	.08783793	-50.9
16.0	.14564780	-48.8	.11343120	176.9	.10163870	-37.3
20.0	.13766410	-37.1	.08803271	181.9	.11193510	-28.7
24.0	.12737130	-25.7	.06116023	188.1	.11544090	-23.5
28.0	.11559800	-15.0	.03704540	199.0	.11183090	-20.3
32.0	.10333930	-5.1	.01976167	224.4	.10293560	-18.5
36.0	.09145053	3.6	.01461374	-84.8	.09127171	-17.5
40.0	.08049079	11.3	.01875839	-51.1	.07895109	-17.1
44.0	.07072494	18.0	.02314517	-38.0	.06730040	-16.9
48.0	.06220545	23.8	.02576142	-32.1	.05695339	-17.0
52.0	.05486201	28.9	.02683659	-29.0	.04809060	-17.2
56.0	.04856844	33.3	.02684600	-27.2	.04065108	-17.5
60.0	.04318311	37.1	.02618448	-26.1	.03447052	-17.8
64.0	.03856985	40.5	.02513240	-25.4	.02935706	-18.2
68.0	.03460703	43.5	.02387650	-25.0	.02512752	-18.5
72.0	.03119016	46.2	.02253653	-24.8	.02162153	-18.9
76.0	.02823136	48.6	.02118680	-24.6	.01870471	-19.3
80.0	.02565753	50.7	.01987178	-24.6	.01626711	-19.6
84.0	.02340823	52.7	.01861663	-24.6	.01421985	-19.9
88.0	.02143354	54.4	.01743425	-24.6	.01249151	-20.3
92.0	.01969219	56.0	.01632984	-24.7	.01102476	-20.6

96.0	.01815001	57.5	.01530392	-24.7	.00977359	-20.9
100.0	.01677858	58.8	.01435419	-24.8	.00870094	-21.2
104.0	.01555421	60.0	.01347678	-24.9	.00777685	-21.4
108.0	.01445705	61.2	.01266707	-25.0	.00697702	-21.7
112.0	.01347040	62.2	.01192010	-25.1	.00628166	-21.9
116.0	.01258015	63.2	.01123092	-25.2	.00567453	-22.1
120.0	.01177433	64.1	.01059474	-25.3	.00514229	-22.4
124.0	.01104273	65.0	.01000704	-25.4	.00467388	-22.6
128.0	.01037662	65.8	.00946362	-25.5	.00426014	-22.8
132.0	.00976850	66.5	.00896060	-25.6	.00389340	-23.0
136.0	.00921190	67.2	.00849443	-25.7	.00356724	-23.1
140.0	.00870120	67.9	.00806190	-25.8	.00327626	-23.3
144.0	.00823154	68.5	.00766007	-25.9	.00301587	-23.5
148.0	.00779867	69.1	.00728628	-26.0	.00278218	-23.6
152.0	.00739887	69.7	.00693814	-26.1	.00257189	-23.8
156.0	.00702888	70.2	.00661347	-26.1	.00238215	-23.9
160.0	.00668583	70.7	.00631030	-26.2	.00221054	-24.1
164.0	.00636717	71.2	.00602687	-26.3	.00205494	-24.2
168.0	.00607067	71.6	.00576156	-26.4	.00191355	-24.3
172.0	.00579432	72.1	.00551291	-26.4	.00178478	-24.5
176.0	.00553634	72.5	.00527960	-26.5	.00166727	-24.6
180.0	.00529516	72.9	.00506045	-26.6	.00155981	-24.7
184.0	.00506935	73.3	.00485435	-26.6	.00146136	-24.8
188.0	.00485763	73.6	.00466032	-26.7	.00137100	-24.9
192.0	.00465886	74.0	.00447747	-26.8	.00128792	-25.0
196.0	.00447201	74.3	.00430496	-26.8	.00121139	-25.1

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Attachment AA-2. Results of the Bonneville Power Administration Corona and Field Effects Program for 34.5-kV Double-Circuit Collector Lines

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Û      C O R O N A   A N D   F I E L D      Û
Û E F F E C T S   P R O G R A M   V E R. 3  Û
Û   Source: Bonneville Power Administration   Û
ÛÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÛ

                           INPUT DATA LIST

                1/21/2019         10:25:21
 BAKEOVEN SOLAR
 34.5 KV DOUBLE CIRCUIT MONOPOLE
1,0, 6, 7,0.0,   2.00,   2.00,1000.00

(ENGLISH UNITS OPTION)

(GRADIENTS ARE COMPUTED BY PROGRAM)

PHYSICAL SYSTEM CONSISTS OF  7 CONDUCTORS, OF WHICH  6 ARE ENERGIZED PHASES

OPTIONS: EF,MF,RI,TV
  4.921,  6.562,  9.842,   .000,  1.000, 75.000,  3.280,  6.700,  3.280
'A1      ','A',   -4.17,   45.00, 1,   1.345,    .000,  20.000,    .000,    .837,    .000
'B1      ','A',   -5.15,   35.00, 1,   1.345,    .000,  20.000,-120.000,    .837,    .000
'C1      ','A',   -4.17,   25.00, 1,   1.345,    .000,  20.000, 120.000,    .837,    .000
'A2      ','A',    4.17,   45.00, 1,   1.345,    .000,  20.000,    .000,    .837,    .000
'B2      ','A',    5.15,   35.00, 1,   1.345,    .000,  20.000,-120.000,    .837,    .000
'C2      ','A',    4.17,   25.00, 1,   1.345,    .000,  20.000, 120.000,    .837,    .000
'G       ','A',     .66,   54.30, 1,    .750,    .000,    .000,    .000,    .000,    .000
100 -200.0    4.0
1RADIO NOISE CALCULATION - 5KHZ BAND WIDTH - RAIN
```

* * * * * L50 * * * * *

DIST FROM REFERENCE (FEET)	* * * * * FREQUENCY, MHZ * * * * *											
	.100 (DB)	.200 (DB)	.300 (DB)	.500 (DB)	.834 (DB)	1.000 (DB)	1.250 (DB)	1.500 (DB)	2.000 (DB)	3.000 (DB)	5.000 (DB)	10.000 (DB)	20.000 (DB)
-200.0	-52.7	-53.4	-54.5	-56.5	-59.0	-60.0	-61.4	-62.7	-65.1	-69.3	-76.1	-88.0	-104.1
-196.0	-52.3	-53.1	-54.2	-56.2	-58.7	-59.8	-61.2	-62.5	-64.9	-69.1	-75.9	-87.7	-103.8
-192.0	-51.9	-52.7	-53.9	-55.9	-58.5	-59.5	-60.9	-62.3	-64.7	-68.9	-75.7	-87.5	-103.4
-188.0	-51.6	-52.4	-53.5	-55.6	-58.2	-59.3	-60.7	-62.0	-64.5	-68.7	-75.5	-87.3	-103.1
-184.0	-51.2	-52.0	-53.2	-55.3	-57.9	-59.0	-60.5	-61.8	-64.3	-68.5	-75.3	-87.0	-102.7
-180.0	-50.8	-51.6	-52.8	-54.9	-57.6	-58.7	-60.2	-61.6	-64.0	-68.3	-75.1	-86.8	-102.4
-176.0	-50.4	-51.2	-52.4	-54.6	-57.3	-58.4	-59.9	-61.3	-63.8	-68.1	-74.9	-86.6	-102.0
-172.0	-50.0	-50.8	-52.1	-54.2	-57.0	-58.1	-59.7	-61.1	-63.6	-67.9	-74.6	-86.3	-101.6
-168.0	-49.6	-50.4	-51.7	-53.9	-56.7	-57.8	-59.4	-60.8	-63.3	-67.7	-74.4	-86.1	-101.2
-164.0	-49.2	-50.0	-51.3	-53.5	-56.4	-57.5	-59.1	-60.5	-63.1	-67.4	-74.2	-85.8	-100.9
-160.0	-48.8	-49.6	-50.9	-53.1	-56.0	-57.2	-58.8	-60.2	-62.8	-67.2	-74.0	-85.5	-100.5

-156.0	-48.4	-49.2	-50.4	-52.7	-55.7	-56.9	-58.5	-59.9	-62.5	-66.9	-73.7	-85.3	-100.1
-152.0	-47.9	-48.7	-50.0	-52.3	-55.3	-56.5	-58.2	-59.7	-62.3	-66.7	-73.5	-85.0	-99.6
-148.0	-47.4	-48.3	-49.6	-51.9	-54.9	-56.2	-57.8	-59.3	-62.0	-66.4	-73.2	-84.7	-99.2
-144.0	-47.0	-47.8	-49.1	-51.5	-54.6	-55.8	-57.5	-59.0	-61.7	-66.2	-73.0	-84.4	-98.8
-140.0	-46.5	-47.3	-48.6	-51.0	-54.2	-55.4	-57.2	-58.7	-61.4	-65.9	-72.7	-84.1	-98.4
-136.0	-46.0	-46.9	-48.2	-50.6	-53.7	-55.0	-56.8	-58.3	-61.1	-65.6	-72.4	-83.8	-97.9
-132.0	-45.5	-46.3	-47.7	-50.1	-53.3	-54.6	-56.4	-58.0	-60.8	-65.3	-72.1	-83.5	-97.5
-128.0	-44.9	-45.8	-47.1	-49.6	-52.9	-54.2	-56.0	-57.6	-60.4	-65.0	-71.9	-83.2	-97.0
-124.0	-44.4	-45.3	-46.6	-49.1	-52.4	-53.8	-55.6	-57.2	-60.1	-64.7	-71.6	-82.8	-96.5
-120.0	-43.8	-44.7	-46.1	-48.6	-51.9	-53.3	-55.2	-56.8	-59.7	-64.3	-71.2	-82.5	-96.0
-116.0	-43.3	-44.2	-45.5	-48.0	-51.4	-52.8	-54.7	-56.4	-59.3	-64.0	-70.9	-82.2	-95.5
-112.0	-42.7	-43.6	-44.9	-47.5	-50.9	-52.3	-54.3	-56.0	-58.9	-63.6	-70.6	-81.8	-95.0
-108.0	-42.1	-43.0	-44.3	-46.9	-50.4	-51.8	-53.8	-55.5	-58.5	-63.3	-70.2	-81.4	-94.4
-104.0	-41.4	-42.3	-43.7	-46.3	-49.8	-51.3	-53.3	-55.0	-58.1	-62.9	-69.9	-81.0	-93.9
-100.0	-40.8	-41.7	-43.0	-45.6	-49.2	-50.7	-52.7	-54.5	-57.6	-62.5	-69.5	-80.6	-93.3
-96.0	-40.1	-41.0	-42.4	-45.0	-48.6	-50.1	-52.2	-54.0	-57.1	-62.1	-69.1	-80.2	-92.7
-92.0	-39.4	-40.3	-41.7	-44.3	-48.0	-49.5	-51.6	-53.5	-56.6	-61.6	-68.7	-79.8	-92.1
-88.0	-38.6	-39.5	-40.9	-43.6	-47.3	-48.9	-51.0	-52.9	-56.1	-61.1	-68.3	-79.3	-91.5
-84.0	-37.9	-38.8	-40.2	-42.9	-46.6	-48.2	-50.3	-52.3	-55.5	-60.7	-67.8	-78.9	-90.8
-80.0	-37.1	-38.0	-39.4	-42.1	-45.9	-47.5	-49.7	-51.6	-55.0	-60.1	-67.4	-78.4	-90.1
-76.0	-36.2	-37.2	-38.6	-41.3	-45.1	-46.7	-49.0	-50.9	-54.3	-59.6	-66.9	-77.9	-89.4
-72.0	-35.4	-36.3	-37.7	-40.4	-44.3	-46.0	-48.2	-50.2	-53.7	-59.0	-66.4	-77.3	-88.7
-68.0	-34.5	-35.4	-36.8	-39.6	-43.5	-45.1	-47.4	-49.5	-53.0	-58.4	-65.8	-76.8	-87.9
-64.0	-33.6	-34.5	-35.9	-38.6	-42.6	-44.3	-46.6	-48.7	-52.2	-57.7	-65.3	-76.2	-87.1
-60.0	-32.6	-33.5	-34.9	-37.7	-41.6	-43.4	-45.7	-47.8	-51.4	-57.1	-64.7	-75.5	-86.3
-56.0	-31.6	-32.5	-33.9	-36.7	-40.7	-42.4	-44.8	-46.9	-50.6	-56.3	-64.0	-74.9	-85.4
-52.0	-30.5	-31.4	-32.9	-35.6	-39.7	-41.4	-43.8	-46.0	-49.7	-55.5	-63.3	-74.2	-84.6
-48.0	-29.4	-30.3	-31.8	-34.6	-38.6	-40.4	-42.8	-45.0	-48.8	-54.7	-62.6	-73.5	-84.0
-44.0	-28.2	-29.2	-30.6	-33.4	-37.5	-39.3	-41.7	-43.9	-47.8	-53.8	-61.8	-72.7	-83.3
-40.0	-27.1	-28.0	-29.4	-32.3	-36.3	-38.1	-40.6	-42.9	-46.8	-52.9	-61.0	-71.9	-82.7
-36.0	-25.9	-26.8	-28.2	-31.1	-35.2	-37.0	-39.5	-41.7	-45.7	-51.9	-60.2	-71.0	-82.0
-32.0	-24.6	-25.6	-27.0	-29.8	-34.0	-35.8	-38.3	-40.6	-44.6	-50.9	-59.3	-70.2	-81.3
-28.0	-23.4	-24.4	-25.8	-28.6	-32.8	-34.6	-37.1	-39.5	-43.5	-49.9	-58.4	-69.3	-80.7
-24.0	-22.3	-23.2	-24.7	-27.5	-31.6	-33.5	-36.0	-38.4	-42.5	-48.9	-57.6	-68.4	-80.0
-20.0	-21.2	-22.1	-23.6	-26.4	-30.6	-32.4	-35.0	-37.3	-41.5	-48.0	-56.7	-67.6	-79.5
-16.0	-20.3	-21.2	-22.7	-25.5	-29.7	-31.5	-34.1	-36.5	-40.6	-47.2	-56.0	-66.9	-79.0
-12.0	-19.6	-20.5	-22.0	-24.8	-29.0	-30.8	-33.4	-35.8	-40.0	-46.6	-55.5	-66.4	-78.6
-8.0	-19.2	-20.1	-21.6	-24.4	-28.6	-30.5	-33.0	-35.4	-39.6	-46.3	-55.2	-66.0	-78.4
-4.0	-19.1	-20.1	-21.5	-24.4	-28.5	-30.4	-33.0	-35.3	-39.5	-46.2	-55.1	-66.0	-78.3
.0	-19.4	-20.3	-21.8	-24.6	-28.8	-30.6	-33.2	-35.6	-39.8	-46.4	-55.3	-66.2	-78.5
4.0	-19.1	-20.1	-21.5	-24.4	-28.5	-30.4	-33.0	-35.3	-39.5	-46.2	-55.1	-66.0	-78.3
8.0	-19.2	-20.1	-21.6	-24.4	-28.6	-30.5	-33.0	-35.4	-39.6	-46.3	-55.2	-66.0	-78.4
12.0	-19.6	-20.6	-22.0	-24.8	-29.0	-30.9	-33.4	-35.8	-40.0	-46.6	-55.5	-66.4	-78.6
16.0	-20.3	-21.2	-22.7	-25.5	-29.7	-31.5	-34.1	-36.5	-40.6	-47.2	-56.0	-66.9	-79.0
20.0	-21.2	-22.2	-23.6	-26.4	-30.6	-32.4	-35.0	-37.3	-41.5	-48.0	-56.8	-67.6	-79.5
24.0	-22.3	-23.2	-24.7	-27.5	-31.6	-33.5	-36.0	-38.4	-42.5	-49.0	-57.6	-68.4	-80.1
28.0	-23.4	-24.4	-25.8	-28.7	-32.8	-34.6	-37.2	-39.5	-43.5	-49.9	-58.4	-69.3	-80.7
32.0	-24.6	-25.6	-27.0	-29.9	-34.0	-35.8	-38.3	-40.6	-44.6	-50.9	-59.3	-70.2	-81.4
36.0	-25.9	-26.8	-28.2	-31.1	-35.2	-37.0	-39.5	-41.8	-45.7	-51.9	-60.2	-71.0	-82.0
40.0	-27.1	-28.0	-29.5	-32.3	-36.3	-38.1	-40.6	-42.9	-46.8	-52.9	-61.0	-71.9	-82.7
44.0	-28.3	-29.2	-30.6	-33.4	-37.5	-39.3	-41.7	-44.0	-47.8	-53.8	-61.8	-72.7	-83.3

48.0	-29.4	-30.3	-31.8	-34.6	-38.6	-40.4	-42.8	-45.0	-48.8	-54.7	-62.6	-73.5	-84.0
52.0	-30.5	-31.4	-32.9	-35.6	-39.7	-41.4	-43.8	-46.0	-49.7	-55.5	-63.3	-74.2	-84.6
56.0	-31.6	-32.5	-33.9	-36.7	-40.7	-42.4	-44.8	-46.9	-50.6	-56.3	-64.0	-74.9	-85.4
60.0	-32.6	-33.5	-34.9	-37.7	-41.7	-43.4	-45.7	-47.8	-51.5	-57.1	-64.7	-75.6	-86.3
64.0	-33.6	-34.5	-35.9	-38.7	-42.6	-44.3	-46.6	-48.7	-52.2	-57.8	-65.3	-76.2	-87.1
68.0	-34.5	-35.4	-36.8	-39.6	-43.5	-45.1	-47.4	-49.5	-53.0	-58.4	-65.8	-76.8	-87.9
72.0	-35.4	-36.3	-37.7	-40.4	-44.3	-46.0	-48.2	-50.2	-53.7	-59.0	-66.4	-77.3	-88.7
76.0	-36.3	-37.2	-38.6	-41.3	-45.1	-46.7	-49.0	-50.9	-54.3	-59.6	-66.9	-77.9	-89.4
80.0	-37.1	-38.0	-39.4	-42.1	-45.9	-47.5	-49.7	-51.6	-55.0	-60.1	-67.4	-78.4	-90.1
84.0	-37.9	-38.8	-40.2	-42.9	-46.6	-48.2	-50.4	-52.3	-55.5	-60.7	-67.9	-78.9	-90.8
88.0	-38.6	-39.6	-40.9	-43.6	-47.3	-48.9	-51.0	-52.9	-56.1	-61.2	-68.3	-79.3	-91.5
92.0	-39.4	-40.3	-41.7	-44.3	-48.0	-49.5	-51.6	-53.5	-56.6	-61.6	-68.7	-79.8	-92.1
96.0	-40.1	-41.0	-42.4	-45.0	-48.6	-50.1	-52.2	-54.0	-57.1	-62.1	-69.1	-80.2	-92.7
100.0	-40.8	-41.7	-43.0	-45.6	-49.2	-50.7	-52.8	-54.5	-57.6	-62.5	-69.5	-80.6	-93.3
104.0	-41.4	-42.3	-43.7	-46.3	-49.8	-51.3	-53.3	-55.0	-58.1	-62.9	-69.9	-81.0	-93.9
108.0	-42.1	-43.0	-44.3	-46.9	-50.4	-51.8	-53.8	-55.5	-58.5	-63.3	-70.3	-81.4	-94.4
112.0	-42.7	-43.6	-44.9	-47.5	-50.9	-52.4	-54.3	-56.0	-58.9	-63.7	-70.6	-81.8	-95.0
116.0	-43.3	-44.2	-45.5	-48.0	-51.4	-52.9	-54.7	-56.4	-59.3	-64.0	-70.9	-82.2	-95.5
120.0	-43.9	-44.7	-46.1	-48.6	-51.9	-53.3	-55.2	-56.8	-59.7	-64.4	-71.3	-82.5	-96.0
124.0	-44.4	-45.3	-46.6	-49.1	-52.4	-53.8	-55.6	-57.2	-60.1	-64.7	-71.6	-82.9	-96.5
128.0	-45.0	-45.8	-47.1	-49.6	-52.9	-54.2	-56.0	-57.6	-60.4	-65.0	-71.9	-83.2	-97.0
132.0	-45.5	-46.4	-47.7	-50.1	-53.3	-54.6	-56.4	-58.0	-60.8	-65.3	-72.2	-83.5	-97.5
136.0	-46.0	-46.9	-48.2	-50.6	-53.8	-55.1	-56.8	-58.4	-61.1	-65.6	-72.4	-83.8	-97.9
140.0	-46.5	-47.4	-48.6	-51.0	-54.2	-55.4	-57.2	-58.7	-61.4	-65.9	-72.7	-84.1	-98.4
144.0	-47.0	-47.8	-49.1	-51.5	-54.6	-55.8	-57.5	-59.0	-61.7	-66.2	-73.0	-84.4	-98.8
148.0	-47.5	-48.3	-49.6	-51.9	-55.0	-56.2	-57.9	-59.4	-62.0	-66.4	-73.2	-84.7	-99.2
152.0	-47.9	-48.8	-50.0	-52.3	-55.3	-56.5	-58.2	-59.7	-62.3	-66.7	-73.5	-85.0	-99.7
156.0	-48.4	-49.2	-50.5	-52.7	-55.7	-56.9	-58.5	-60.0	-62.6	-66.9	-73.7	-85.3	-100.1
160.0	-48.8	-49.6	-50.9	-53.1	-56.0	-57.2	-58.8	-60.2	-62.8	-67.2	-74.0	-85.5	-100.5
164.0	-49.2	-50.0	-51.3	-53.5	-56.4	-57.5	-59.1	-60.5	-63.1	-67.4	-74.2	-85.8	-100.9
168.0	-49.6	-50.5	-51.7	-53.9	-56.7	-57.9	-59.4	-60.8	-63.3	-67.7	-74.4	-86.1	-101.3
172.0	-50.0	-50.9	-52.1	-54.3	-57.0	-58.2	-59.7	-61.1	-63.6	-67.9	-74.7	-86.3	-101.6
176.0	-50.4	-51.2	-52.5	-54.6	-57.3	-58.4	-59.9	-61.3	-63.8	-68.1	-74.9	-86.6	-102.0
180.0	-50.8	-51.6	-52.8	-55.0	-57.6	-58.7	-60.2	-61.6	-64.0	-68.3	-75.1	-86.8	-102.4
184.0	-51.2	-52.0	-53.2	-55.3	-57.9	-59.0	-60.5	-61.8	-64.3	-68.5	-75.3	-87.1	-102.7
188.0	-51.6	-52.4	-53.5	-55.6	-58.2	-59.3	-60.7	-62.0	-64.5	-68.7	-75.5	-87.3	-103.1
192.0	-52.0	-52.7	-53.9	-55.9	-58.5	-59.5	-61.0	-62.3	-64.7	-68.9	-75.7	-87.5	-103.4
196.0	-52.3	-53.1	-54.2	-56.3	-58.8	-59.8	-61.2	-62.5	-64.9	-69.1	-75.9	-87.8	-103.8

1RADIO NOISE CALCULATION - 5KHZ BAND WIDTH - FAIR

	* * * * * L50 * * * * *												
DIST FROM REFERENCE	* * * * * FREQUENCY, MHZ * * * * *												
	.100	.200	.300	.500	.834	1.000	1.250	1.500	2.000	3.000	5.000	10.000	20.000
(FEET)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)	(DB)
-200.0	-69.7	-70.4	-71.5	-73.5	-76.0	-77.0	-78.4	-79.7	-82.1	-86.3	-93.1	-105.0	-121.1
-196.0	-69.3	-70.1	-71.2	-73.2	-75.7	-76.8	-78.2	-79.5	-81.9	-86.1	-92.9	-104.7	-120.8
-192.0	-68.9	-69.7	-70.9	-72.9	-75.5	-76.5	-77.9	-79.3	-81.7	-85.9	-92.7	-104.5	-120.4
-188.0	-68.6	-69.4	-70.5	-72.6	-75.2	-76.3	-77.7	-79.0	-81.5	-85.7	-92.5	-104.3	-120.1

-184.0	-68.2	-69.0	-70.2	-72.3	-74.9	-76.0	-77.5	-78.8	-81.3	-85.5	-92.3	-104.0	-119.7
-180.0	-67.8	-68.6	-69.8	-71.9	-74.6	-75.7	-77.2	-78.6	-81.0	-85.3	-92.1	-103.8	-119.4
-176.0	-67.4	-68.2	-69.4	-71.6	-74.3	-75.4	-76.9	-78.3	-80.8	-85.1	-91.9	-103.6	-119.0
-172.0	-67.0	-67.8	-69.1	-71.2	-74.0	-75.1	-76.7	-78.1	-80.6	-84.9	-91.6	-103.3	-118.6
-168.0	-66.6	-67.4	-68.7	-70.9	-73.7	-74.8	-76.4	-77.8	-80.3	-84.7	-91.4	-103.1	-118.2
-164.0	-66.2	-67.0	-68.3	-70.5	-73.4	-74.5	-76.1	-77.5	-80.1	-84.4	-91.2	-102.8	-117.9
-160.0	-65.8	-66.6	-67.9	-70.1	-73.0	-74.2	-75.8	-77.2	-79.8	-84.2	-91.0	-102.5	-117.5
-156.0	-65.4	-66.2	-67.4	-69.7	-72.7	-73.9	-75.5	-76.9	-79.5	-83.9	-90.7	-102.3	-117.1
-152.0	-64.9	-65.7	-67.0	-69.3	-72.3	-73.5	-75.2	-76.7	-79.3	-83.7	-90.5	-102.0	-116.6
-148.0	-64.4	-65.3	-66.6	-68.9	-71.9	-73.2	-74.8	-76.3	-79.0	-83.4	-90.2	-101.7	-116.2
-144.0	-64.0	-64.8	-66.1	-68.5	-71.6	-72.8	-74.5	-76.0	-78.7	-83.2	-90.0	-101.4	-115.8
-140.0	-63.5	-64.3	-65.6	-68.0	-71.2	-72.4	-74.2	-75.7	-78.4	-82.9	-89.7	-101.1	-115.4
-136.0	-63.0	-63.9	-65.2	-67.6	-70.7	-72.0	-73.8	-75.3	-78.1	-82.6	-89.4	-100.8	-114.9
-132.0	-62.5	-63.3	-64.7	-67.1	-70.3	-71.6	-73.4	-75.0	-77.8	-82.3	-89.1	-100.5	-114.5
-128.0	-61.9	-62.8	-64.1	-66.6	-69.9	-71.2	-73.0	-74.6	-77.4	-82.0	-88.9	-100.2	-114.0
-124.0	-61.4	-62.3	-63.6	-66.1	-69.4	-70.8	-72.6	-74.2	-77.1	-81.7	-88.6	-99.8	-113.5
-120.0	-60.8	-61.7	-63.1	-65.6	-68.9	-70.3	-72.2	-73.8	-76.7	-81.3	-88.2	-99.5	-113.0
-116.0	-60.3	-61.2	-62.5	-65.0	-68.4	-69.8	-71.7	-73.4	-76.3	-81.0	-87.9	-99.2	-112.5
-112.0	-59.7	-60.6	-61.9	-64.5	-67.9	-69.3	-71.3	-73.0	-75.9	-80.6	-87.6	-98.8	-112.0
-108.0	-59.1	-60.0	-61.3	-63.9	-67.4	-68.8	-70.8	-72.5	-75.5	-80.3	-87.2	-98.4	-111.4
-104.0	-58.4	-59.3	-60.7	-63.3	-66.8	-68.3	-70.3	-72.0	-75.1	-79.9	-86.9	-98.0	-110.9
-100.0	-57.8	-58.7	-60.0	-62.6	-66.2	-67.7	-69.7	-71.5	-74.6	-79.5	-86.5	-97.6	-110.3
-96.0	-57.1	-58.0	-59.4	-62.0	-65.6	-67.1	-69.2	-71.0	-74.1	-79.1	-86.1	-97.2	-109.7
-92.0	-56.4	-57.3	-58.7	-61.3	-65.0	-66.5	-68.6	-70.5	-73.6	-78.6	-85.7	-96.8	-109.1
-88.0	-55.6	-56.5	-57.9	-60.6	-64.3	-65.9	-68.0	-69.9	-73.1	-78.1	-85.3	-96.3	-108.5
-84.0	-54.9	-55.8	-57.2	-59.9	-63.6	-65.2	-67.3	-69.3	-72.5	-77.7	-84.8	-95.9	-107.8
-80.0	-54.1	-55.0	-56.4	-59.1	-62.9	-64.5	-66.7	-68.6	-72.0	-77.1	-84.4	-95.4	-107.1
-76.0	-53.2	-54.2	-55.6	-58.3	-62.1	-63.7	-66.0	-67.9	-71.3	-76.6	-83.9	-94.9	-106.4
-72.0	-52.4	-53.3	-54.7	-57.4	-61.3	-63.0	-65.2	-67.2	-70.7	-76.0	-83.4	-94.3	-105.7
-68.0	-51.5	-52.4	-53.8	-56.6	-60.5	-62.1	-64.4	-66.5	-70.0	-75.4	-82.8	-93.8	-104.9
-64.0	-50.6	-51.5	-52.9	-55.6	-59.6	-61.3	-63.6	-65.7	-69.2	-74.7	-82.3	-93.2	-104.1
-60.0	-49.6	-50.5	-51.9	-54.7	-58.6	-60.4	-62.7	-64.8	-68.4	-74.1	-81.7	-92.5	-103.3
-56.0	-48.6	-49.5	-50.9	-53.7	-57.7	-59.4	-61.8	-63.9	-67.6	-73.3	-81.0	-91.9	-102.4
-52.0	-47.5	-48.4	-49.9	-52.6	-56.7	-58.4	-60.8	-63.0	-66.7	-72.5	-80.3	-91.2	-101.6
-48.0	-46.4	-47.3	-48.8	-51.6	-55.6	-57.4	-59.8	-62.0	-65.8	-71.7	-79.6	-90.5	-101.0
-44.0	-45.2	-46.2	-47.6	-50.4	-54.5	-56.3	-58.7	-60.9	-64.8	-70.8	-78.8	-89.7	-100.3
-40.0	-44.1	-45.0	-46.4	-49.3	-53.3	-55.1	-57.6	-59.9	-63.8	-69.9	-78.0	-88.9	-99.7
-36.0	-42.9	-43.8	-45.2	-48.1	-52.2	-54.0	-56.5	-58.7	-62.7	-68.9	-77.2	-88.0	-99.0
-32.0	-41.6	-42.6	-44.0	-46.8	-51.0	-52.8	-55.3	-57.6	-61.6	-67.9	-76.3	-87.2	-98.3
-28.0	-40.4	-41.4	-42.8	-45.6	-49.8	-51.6	-54.1	-56.5	-60.5	-66.9	-75.4	-86.3	-97.7
-24.0	-39.3	-40.2	-41.7	-44.5	-48.6	-50.5	-53.0	-55.4	-59.5	-65.9	-74.6	-85.4	-97.0
-20.0	-38.2	-39.1	-40.6	-43.4	-47.6	-49.4	-52.0	-54.3	-58.5	-65.0	-73.7	-84.6	-96.5
-16.0	-37.3	-38.2	-39.7	-42.5	-46.7	-48.5	-51.1	-53.5	-57.6	-64.2	-73.0	-83.9	-96.0
-12.0	-36.6	-37.5	-39.0	-41.8	-46.0	-47.8	-50.4	-52.8	-57.0	-63.6	-72.5	-83.4	-95.6
-8.0	-36.2	-37.1	-38.6	-41.4	-45.6	-47.5	-50.0	-52.4	-56.6	-63.3	-72.2	-83.0	-95.4
-4.0	-36.1	-37.1	-38.5	-41.4	-45.5	-47.4	-50.0	-52.3	-56.5	-63.2	-72.1	-83.0	-95.3
.0	-36.4	-37.3	-38.8	-41.6	-45.8	-47.6	-50.2	-52.6	-56.8	-63.4	-72.3	-83.2	-95.5
4.0	-36.1	-37.1	-38.5	-41.4	-45.5	-47.4	-50.0	-52.3	-56.5	-63.2	-72.1	-83.0	-95.3
8.0	-36.2	-37.1	-38.6	-41.4	-45.6	-47.5	-50.0	-52.4	-56.6	-63.3	-72.2	-83.0	-95.4
12.0	-36.6	-37.6	-39.0	-41.8	-46.0	-47.9	-50.4	-52.8	-57.0	-63.6	-72.5	-83.4	-95.6
16.0	-37.3	-38.2	-39.7	-42.5	-46.7	-48.5	-51.1	-53.5	-57.6	-64.2	-73.0	-83.9	-96.0

20.0	-38.2	-39.2	-40.6	-43.4	-47.6	-49.4	-52.0	-54.3	-58.5	-65.0	-73.8	-84.6	-96.5
24.0	-39.3	-40.2	-41.7	-44.5	-48.6	-50.5	-53.0	-55.4	-59.5	-66.0	-74.6	-85.4	-97.1
28.0	-40.4	-41.4	-42.8	-45.7	-49.8	-51.6	-54.2	-56.5	-60.5	-66.9	-75.4	-86.3	-97.7
32.0	-41.6	-42.6	-44.0	-46.9	-51.0	-52.8	-55.3	-57.6	-61.6	-67.9	-76.3	-87.2	-98.4
36.0	-42.9	-43.8	-45.2	-48.1	-52.2	-54.0	-56.5	-58.8	-62.7	-68.9	-77.2	-88.0	-99.0
40.0	-44.1	-45.0	-46.5	-49.3	-53.3	-55.1	-57.6	-59.9	-63.8	-69.9	-78.0	-88.9	-99.7
44.0	-45.3	-46.2	-47.6	-50.4	-54.5	-56.3	-58.7	-61.0	-64.8	-70.8	-78.8	-89.7	-100.3
48.0	-46.4	-47.3	-48.8	-51.6	-55.6	-57.4	-59.8	-62.0	-65.8	-71.7	-79.6	-90.5	-101.0
52.0	-47.5	-48.4	-49.9	-52.6	-56.7	-58.4	-60.8	-63.0	-66.7	-72.5	-80.3	-91.2	-101.6
56.0	-48.6	-49.5	-50.9	-53.7	-57.7	-59.4	-61.8	-63.9	-67.6	-73.3	-81.0	-91.9	-102.4
60.0	-49.6	-50.5	-51.9	-54.7	-58.7	-60.4	-62.7	-64.8	-68.5	-74.1	-81.7	-92.6	-103.3
64.0	-50.6	-51.5	-52.9	-55.7	-59.6	-61.3	-63.6	-65.7	-69.2	-74.8	-82.3	-93.2	-104.1
68.0	-51.5	-52.4	-53.8	-56.6	-60.5	-62.1	-64.4	-66.5	-70.0	-75.4	-82.8	-93.8	-104.9
72.0	-52.4	-53.3	-54.7	-57.4	-61.3	-63.0	-65.2	-67.2	-70.7	-76.0	-83.4	-94.3	-105.7
76.0	-53.3	-54.2	-55.6	-58.3	-62.1	-63.7	-66.0	-67.9	-71.3	-76.6	-83.9	-94.9	-106.4
80.0	-54.1	-55.0	-56.4	-59.1	-62.9	-64.5	-66.7	-68.6	-72.0	-77.1	-84.4	-95.4	-107.1
84.0	-54.9	-55.8	-57.2	-59.9	-63.6	-65.2	-67.4	-69.3	-72.5	-77.7	-84.9	-95.9	-107.8
88.0	-55.6	-56.6	-57.9	-60.6	-64.3	-65.9	-68.0	-69.9	-73.1	-78.2	-85.3	-96.3	-108.5
92.0	-56.4	-57.3	-58.7	-61.3	-65.0	-66.5	-68.6	-70.5	-73.6	-78.6	-85.7	-96.8	-109.1
96.0	-57.1	-58.0	-59.4	-62.0	-65.6	-67.1	-69.2	-71.0	-74.1	-79.1	-86.1	-97.2	-109.7
100.0	-57.8	-58.7	-60.0	-62.6	-66.2	-67.7	-69.8	-71.5	-74.6	-79.5	-86.5	-97.6	-110.3
104.0	-58.4	-59.3	-60.7	-63.3	-66.8	-68.3	-70.3	-72.0	-75.1	-79.9	-86.9	-98.0	-110.9
108.0	-59.1	-60.0	-61.3	-63.9	-67.4	-68.8	-70.8	-72.5	-75.5	-80.3	-87.3	-98.4	-111.4
112.0	-59.7	-60.6	-61.9	-64.5	-67.9	-69.4	-71.3	-73.0	-75.9	-80.7	-87.6	-98.8	-112.0
116.0	-60.3	-61.2	-62.5	-65.0	-68.4	-69.9	-71.7	-73.4	-76.3	-81.0	-87.9	-99.2	-112.5
120.0	-60.9	-61.7	-63.1	-65.6	-68.9	-70.3	-72.2	-73.8	-76.7	-81.4	-88.3	-99.5	-113.0
124.0	-61.4	-62.3	-63.6	-66.1	-69.4	-70.8	-72.6	-74.2	-77.1	-81.7	-88.6	-99.9	-113.5
128.0	-62.0	-62.8	-64.1	-66.6	-69.9	-71.2	-73.0	-74.6	-77.4	-82.0	-88.9	-100.2	-114.0
132.0	-62.5	-63.4	-64.7	-67.1	-70.3	-71.6	-73.4	-75.0	-77.8	-82.3	-89.2	-100.5	-114.5
136.0	-63.0	-63.9	-65.2	-67.6	-70.8	-72.1	-73.8	-75.4	-78.1	-82.6	-89.4	-100.8	-114.9
140.0	-63.5	-64.4	-65.6	-68.0	-71.2	-72.4	-74.2	-75.7	-78.4	-82.9	-89.7	-101.1	-115.4
144.0	-64.0	-64.8	-66.1	-68.5	-71.6	-72.8	-74.5	-76.0	-78.7	-83.2	-90.0	-101.4	-115.8
148.0	-64.5	-65.3	-66.6	-68.9	-72.0	-73.2	-74.9	-76.4	-79.0	-83.4	-90.2	-101.7	-116.2
152.0	-64.9	-65.8	-67.0	-69.3	-72.3	-73.5	-75.2	-76.7	-79.3	-83.7	-90.5	-102.0	-116.7
156.0	-65.4	-66.2	-67.5	-69.7	-72.7	-73.9	-75.5	-77.0	-79.6	-83.9	-90.7	-102.3	-117.1
160.0	-65.8	-66.6	-67.9	-70.1	-73.0	-74.2	-75.8	-77.2	-79.8	-84.2	-91.0	-102.5	-117.5
164.0	-66.2	-67.0	-68.3	-70.5	-73.4	-74.5	-76.1	-77.5	-80.1	-84.4	-91.2	-102.8	-117.9
168.0	-66.6	-67.5	-68.7	-70.9	-73.7	-74.9	-76.4	-77.8	-80.3	-84.7	-91.4	-103.1	-118.3
172.0	-67.0	-67.9	-69.1	-71.3	-74.0	-75.2	-76.7	-78.1	-80.6	-84.9	-91.7	-103.3	-118.6
176.0	-67.4	-68.2	-69.5	-71.6	-74.3	-75.4	-76.9	-78.3	-80.8	-85.1	-91.9	-103.6	-119.0
180.0	-67.8	-68.6	-69.8	-72.0	-74.6	-75.7	-77.2	-78.6	-81.0	-85.3	-92.1	-103.8	-119.4
184.0	-68.2	-69.0	-70.2	-72.3	-74.9	-76.0	-77.5	-78.8	-81.3	-85.5	-92.3	-104.1	-119.7
188.0	-68.6	-69.4	-70.5	-72.6	-75.2	-76.3	-77.7	-79.0	-81.5	-85.7	-92.5	-104.3	-120.1
192.0	-69.0	-69.7	-70.9	-72.9	-75.5	-76.5	-78.0	-79.3	-81.7	-85.9	-92.7	-104.5	-120.4
196.0	-69.3	-70.1	-71.2	-73.3	-75.8	-76.8	-78.2	-79.5	-81.9	-86.1	-92.9	-104.8	-120.8

1TVI CALCULATIONS, QP DETECTOR, STODDART NM30A METER

NOTE: A -999.9 APPEARS FOR DC BUNDLES.

DIST FROM REFERENCE	* * * * * L50 * * * * *
	* * * * * FREQUENCY, MHZ * * * * *

(FEET)	30.000 DBUV/M	60.000	75.000	125.000	250.000	500.000	750.000	1000.000
-200.0	-82.7	-88.8	-90.8	-95.2	-101.2	-107.3	-110.8	-113.3
-196.0	-82.3	-88.7	-90.6	-95.0	-101.1	-107.1	-110.6	-113.1
-192.0	-81.9	-88.5	-90.4	-94.9	-100.9	-106.9	-110.4	-112.9
-188.0	-81.6	-88.3	-90.2	-94.7	-100.7	-106.7	-110.2	-112.7
-184.0	-81.2	-88.1	-90.1	-94.5	-100.5	-106.5	-110.1	-112.5
-180.0	-80.8	-87.9	-89.9	-94.3	-100.3	-106.3	-109.9	-112.4
-176.0	-80.4	-87.7	-89.7	-94.1	-100.1	-106.1	-109.7	-112.2
-172.0	-80.0	-87.5	-89.5	-93.9	-99.9	-105.9	-109.5	-112.0
-168.0	-79.6	-87.3	-89.3	-93.7	-99.7	-105.7	-109.3	-111.8
-164.0	-79.2	-87.1	-89.0	-93.5	-99.5	-105.5	-109.0	-111.5
-160.0	-78.8	-86.9	-88.8	-93.3	-99.3	-105.3	-108.8	-111.3
-156.0	-78.3	-86.7	-88.6	-93.0	-99.1	-105.1	-108.6	-111.1
-152.0	-77.9	-86.4	-88.4	-92.8	-98.8	-104.9	-108.4	-110.9
-148.0	-77.4	-86.2	-88.1	-92.6	-98.6	-104.6	-108.1	-110.6
-144.0	-76.9	-86.0	-87.9	-92.3	-98.4	-104.4	-107.9	-110.4
-140.0	-76.4	-85.7	-87.7	-92.1	-98.1	-104.1	-107.7	-110.2
-136.0	-75.9	-85.5	-87.4	-91.8	-97.9	-103.9	-107.4	-109.9
-132.0	-75.4	-85.2	-87.1	-91.6	-97.6	-103.6	-107.1	-109.6
-128.0	-74.9	-84.9	-86.9	-91.3	-97.3	-103.4	-106.9	-109.4
-124.0	-74.6	-84.7	-86.6	-91.0	-97.1	-103.1	-106.6	-109.1
-120.0	-74.3	-84.4	-86.3	-90.8	-96.8	-102.8	-106.3	-108.8
-116.0	-74.1	-84.1	-86.0	-90.5	-96.5	-102.5	-106.0	-108.5
-112.0	-73.7	-83.8	-85.7	-90.2	-96.2	-102.2	-105.7	-108.2
-108.0	-73.4	-83.5	-85.4	-89.8	-95.9	-101.9	-105.4	-107.9
-104.0	-73.1	-83.1	-85.1	-89.5	-95.5	-101.6	-105.1	-107.6
-100.0	-72.8	-82.8	-84.8	-89.2	-95.2	-101.2	-104.8	-107.3
-96.0	-72.4	-82.5	-84.4	-88.8	-94.9	-100.9	-104.4	-106.9
-92.0	-72.1	-82.1	-84.0	-88.5	-94.5	-100.5	-104.0	-106.5
-88.0	-71.7	-81.7	-83.7	-88.1	-94.1	-100.1	-103.7	-106.2
-84.0	-71.3	-81.3	-83.3	-87.7	-93.7	-99.8	-103.3	-105.8
-80.0	-70.9	-80.9	-82.9	-87.3	-93.3	-99.3	-102.9	-105.4
-76.0	-70.5	-80.5	-82.4	-86.9	-92.9	-98.9	-102.4	-104.9
-72.0	-70.0	-80.1	-82.0	-86.4	-92.5	-98.5	-102.0	-104.5
-68.0	-69.5	-79.6	-81.5	-86.0	-92.0	-98.0	-101.5	-104.0
-64.0	-69.1	-79.1	-81.0	-85.5	-91.5	-97.5	-101.0	-103.5
-60.0	-68.6	-78.6	-80.5	-85.0	-91.0	-97.0	-100.5	-103.0
-56.0	-68.0	-78.1	-80.0	-84.4	-90.4	-96.5	-100.0	-102.5
-52.0	-67.5	-77.5	-79.4	-83.9	-89.9	-95.9	-99.4	-101.9
-48.0	-66.9	-76.9	-78.8	-83.3	-89.3	-95.3	-98.8	-101.3
-44.0	-66.2	-76.3	-78.2	-82.7	-88.7	-94.7	-98.2	-100.7
-40.0	-65.6	-75.6	-77.6	-82.0	-88.0	-94.1	-97.6	-100.1
-36.0	-64.9	-75.0	-76.9	-81.4	-87.4	-93.4	-96.9	-99.4
-32.0	-64.3	-74.3	-76.2	-80.7	-86.7	-92.7	-96.2	-98.7
-28.0	-63.6	-73.6	-75.5	-80.0	-86.0	-92.0	-95.5	-98.0
-24.0	-62.9	-72.9	-74.9	-79.3	-85.3	-91.3	-94.9	-97.4
-20.0	-62.2	-72.3	-74.2	-78.7	-84.7	-90.7	-94.2	-96.7
-16.0	-61.7	-71.7	-73.7	-78.1	-84.1	-90.1	-93.7	-96.2
-12.0	-60.9	-71.3	-73.2	-77.7	-83.7	-89.7	-93.2	-95.7

-8.0	-60.2	-71.0	-73.0	-77.4	-83.4	-89.5	-93.0	-95.5
-4.0	-59.9	-71.0	-72.9	-77.4	-83.4	-89.4	-92.9	-95.4
.0	-60.2	-71.2	-73.1	-77.5	-83.6	-89.6	-93.1	-95.6
4.0	-59.9	-71.0	-72.9	-77.4	-83.4	-89.4	-92.9	-95.4
8.0	-60.2	-71.1	-73.0	-77.4	-83.5	-89.5	-93.0	-95.5
12.0	-60.9	-71.3	-73.2	-77.7	-83.7	-89.7	-93.2	-95.7
16.0	-61.7	-71.7	-73.7	-78.1	-84.1	-90.2	-93.7	-96.2
20.0	-62.3	-72.3	-74.2	-78.7	-84.7	-90.7	-94.2	-96.7
24.0	-62.9	-72.9	-74.9	-79.3	-85.3	-91.4	-94.9	-97.4
28.0	-63.6	-73.6	-75.6	-80.0	-86.0	-92.0	-95.6	-98.0
32.0	-64.3	-74.3	-76.2	-80.7	-86.7	-92.7	-96.2	-98.7
36.0	-64.9	-75.0	-76.9	-81.4	-87.4	-93.4	-96.9	-99.4
40.0	-65.6	-75.7	-77.6	-82.0	-88.0	-94.1	-97.6	-100.1
44.0	-66.3	-76.3	-78.2	-82.7	-88.7	-94.7	-98.2	-100.7
48.0	-66.9	-76.9	-78.8	-83.3	-89.3	-95.3	-98.8	-101.3
52.0	-67.5	-77.5	-79.4	-83.9	-89.9	-95.9	-99.4	-101.9
56.0	-68.0	-78.1	-80.0	-84.4	-90.5	-96.5	-100.0	-102.5
60.0	-68.6	-78.6	-80.5	-85.0	-91.0	-97.0	-100.5	-103.0
64.0	-69.1	-79.1	-81.0	-85.5	-91.5	-97.5	-101.0	-103.5
68.0	-69.6	-79.6	-81.5	-86.0	-92.0	-98.0	-101.5	-104.0
72.0	-70.0	-80.1	-82.0	-86.4	-92.5	-98.5	-102.0	-104.5
76.0	-70.5	-80.5	-82.4	-86.9	-92.9	-98.9	-102.4	-104.9
80.0	-70.9	-80.9	-82.9	-87.3	-93.3	-99.4	-102.9	-105.4
84.0	-71.3	-81.3	-83.3	-87.7	-93.7	-99.8	-103.3	-105.8
88.0	-71.7	-81.7	-83.7	-88.1	-94.1	-100.2	-103.7	-106.2
92.0	-72.1	-82.1	-84.0	-88.5	-94.5	-100.5	-104.0	-106.5
96.0	-72.4	-82.5	-84.4	-88.8	-94.9	-100.9	-104.4	-106.9
100.0	-72.8	-82.8	-84.8	-89.2	-95.2	-101.2	-104.8	-107.3
104.0	-73.1	-83.2	-85.1	-89.5	-95.6	-101.6	-105.1	-107.6
108.0	-73.4	-83.5	-85.4	-89.9	-95.9	-101.9	-105.4	-107.9
112.0	-73.8	-83.8	-85.7	-90.2	-96.2	-102.2	-105.7	-108.2
116.0	-74.1	-84.1	-86.0	-90.5	-96.5	-102.5	-106.0	-108.5
120.0	-74.4	-84.4	-86.3	-90.8	-96.8	-102.8	-106.3	-108.8
124.0	-74.6	-84.7	-86.6	-91.1	-97.1	-103.1	-106.6	-109.1
128.0	-74.9	-85.0	-86.9	-91.3	-97.3	-103.4	-106.9	-109.4
132.0	-75.4	-85.2	-87.2	-91.6	-97.6	-103.6	-107.2	-109.7
136.0	-75.9	-85.5	-87.4	-91.9	-97.9	-103.9	-107.4	-109.9
140.0	-76.4	-85.7	-87.7	-92.1	-98.1	-104.1	-107.7	-110.2
144.0	-76.9	-86.0	-87.9	-92.4	-98.4	-104.4	-107.9	-110.4
148.0	-77.4	-86.2	-88.2	-92.6	-98.6	-104.6	-108.2	-110.7
152.0	-77.9	-86.4	-88.4	-92.8	-98.8	-104.9	-108.4	-110.9
156.0	-78.3	-86.7	-88.6	-93.1	-99.1	-105.1	-108.6	-111.1
160.0	-78.8	-86.9	-88.8	-93.3	-99.3	-105.3	-108.8	-111.3
164.0	-79.2	-87.1	-89.1	-93.5	-99.5	-105.5	-109.1	-111.6
168.0	-79.6	-87.3	-89.3	-93.7	-99.7	-105.7	-109.3	-111.8
172.0	-80.0	-87.5	-89.5	-93.9	-99.9	-105.9	-109.5	-112.0
176.0	-80.4	-87.7	-89.7	-94.1	-100.1	-106.1	-109.7	-112.2
180.0	-80.8	-87.9	-89.9	-94.3	-100.3	-106.3	-109.9	-112.4
184.0	-81.2	-88.1	-90.1	-94.5	-100.5	-106.5	-110.1	-112.6
188.0	-81.6	-88.3	-90.2	-94.7	-100.7	-106.7	-110.2	-112.7
192.0	-82.0	-88.5	-90.4	-94.9	-100.9	-106.9	-110.4	-112.9

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    196.0    -82.3    -88.7    -90.6    -95.1   -101.1   -107.1   -110.6   -113.1
1ELECTRIC FIELD CALCULATIONS


  BAKEOVEN SOLAR
  34.5 KV DOUBLE CIRCUIT MONOPOLE
              DIST. FROM            MAXIMUM   SUBCON.   NO. OF     PHASE
               REFERENCE    HEIGHT  GRADIENT   DIAM.    SUBCON.    ANGLE
                 FEET        FEET   (KV/CM)    (IN)               (DEGREES)

 A1               -4.17       45.00     1.96     1.35         1         .0
 B1               -5.15       35.00     2.22     1.35         1     -120.0
 C1               -4.17       25.00     1.97     1.35         1      120.0
 A2                4.17       45.00     1.96     1.35         1         .0
 B2                5.15       35.00     2.22     1.35         1     -120.0
 C2                4.17       25.00     1.97     1.35         1      120.0
 G                  .66       54.30      .90      .75         1         .0

 SENSOR HT. =  3.3 FEET

 DIST FROM
 REFERENCE       E-FIELD         THETA       EY-FIELD        THETAY       EX-FIELD       THETAX   SPACE POTENTIAL
     FEET      (KV/METER)      (DEGREES)    (KV/METER)      (DEGREES)    (KV/METER)     (DEGREES)      (VOLTS)

   -200.0          .009           88.3          .009          158.4          .000          157.4           8.7
   -196.0          .009           88.3          .009          158.3          .000          157.3           9.0
   -192.0          .009           88.3          .009          158.3          .000          157.2           9.3
   -188.0          .010           88.3          .010          158.2          .000          157.1           9.7
   -184.0          .010           88.2          .010          158.2          .000          157.0          10.0
   -180.0          .010           88.2          .010          158.2          .000          156.9          10.4
   -176.0          .011           88.2          .011          158.1          .000          156.8          10.8
   -172.0          .011           88.2          .011          158.1          .000          156.7          11.3
   -168.0          .012           88.1          .012          158.0          .000          156.6          11.7
   -164.0          .012           88.1          .012          157.9          .000          156.4          12.2
   -160.0          .013           88.1          .013          157.9          .000          156.3          12.7
   -156.0          .013           88.0          .013          157.8          .000          156.1          13.2
   -152.0          .014           88.0          .014          157.7          .000          156.0          13.8
   -148.0          .014           88.0          .014          157.7          .001          155.8          14.4
   -144.0          .015           88.0          .015          157.6          .001          155.5          15.0
   -140.0          .016           88.0          .016          157.5          .001          155.3          15.7
   -136.0          .016           87.9          .016          157.4          .001          155.1          16.4
   -132.0          .017           87.9          .017          157.3          .001          154.8          17.1
   -128.0          .018           87.9          .018          157.2          .001          154.4          17.9
   -124.0          .019           87.9          .019          157.0          .001          154.1          18.7
   -120.0          .020           87.9          .020          156.9          .001          153.6          19.6
   -116.0          .020           87.9          .020          156.8          .001          153.2          20.5
   -112.0          .021           87.9          .021          156.6          .001          152.6          21.4
   -108.0          .022           88.0          .022          156.4          .001          151.9          22.3
   -104.0          .023           88.0          .023          156.2          .001          151.1          23.3
   -100.0          .024           88.1          .024          156.0          .001          150.1          24.3
    -96.0          .025           88.2          .025          155.7          .001          148.9          25.3
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-92.0	.026	88.4	.026	155.5	.001	147.1	26.2
-88.0	.027	88.6	.027	155.1	.001	144.5	27.1
-84.0	.028	88.9	.028	154.8	.001	139.9	27.9
-80.0	.028	89.3	.028	154.4	.000	129.7	28.4
-76.0	.029	89.8	.029	154.0	.000	88.9	28.7
-72.0	.029	90.6	.029	153.4	.000	8.6	28.6
-68.0	.028	91.8	.028	152.9	.001	-11.6	27.9
-64.0	.027	93.7	.027	152.2	.002	-18.8	26.3
-60.0	.024	96.9	.024	151.4	.003	-22.8	23.5
-56.0	.020	102.9	.020	150.3	.005	-25.7	19.1
-52.0	.015	117.4	.013	148.8	.007	-28.2	12.3
-48.0	.010	161.8	.003	142.5	.010	-30.6	2.3
-44.0	.018	37.6	.011	-29.6	.014	-32.9	12.3
-40.0	.037	57.2	.031	-32.3	.020	-35.3	33.0
-36.0	.066	64.9	.060	-34.2	.028	-37.8	62.1
-32.0	.106	68.9	.099	-36.0	.038	-40.4	102.1
-28.0	.161	71.5	.152	-37.9	.051	-43.1	156.1
-24.0	.233	73.6	.223	-39.9	.066	-45.7	227.1
-20.0	.323	75.5	.313	-41.9	.081	-48.2	316.5
-16.0	.430	77.7	.421	-43.8	.092	-50.5	422.1
-12.0	.545	80.3	.538	-45.5	.093	-52.3	535.5
-8.0	.652	83.2	.647	-46.8	.077	-53.6	640.4
-4.0	.728	86.5	.727	-47.6	.044	-54.3	715.8
.0	.756	90.0	.756	-47.9	.000	-12.5	743.3
4.0	.728	93.5	.727	-47.6	.044	125.5	716.0
8.0	.652	96.8	.648	-46.8	.077	126.3	640.9
12.0	.546	99.7	.538	-45.5	.093	127.6	536.2
16.0	.431	102.2	.421	-43.8	.092	129.5	423.0
20.0	.324	104.4	.314	-41.8	.081	131.7	317.5
24.0	.234	106.3	.224	-39.7	.066	134.2	228.3
28.0	.162	108.3	.154	-37.7	.051	136.9	157.4
32.0	.107	110.8	.100	-35.7	.038	139.6	103.4
36.0	.067	114.6	.061	-33.7	.028	142.2	63.4
40.0	.038	121.7	.032	-31.5	.020	144.7	34.3
44.0	.019	139.4	.012	-27.8	.014	147.2	13.6
48.0	.010	11.7	.002	128.7	.010	149.5	1.2
52.0	.014	60.2	.012	147.0	.007	151.9	11.2
56.0	.019	76.2	.019	149.3	.005	154.5	18.1
60.0	.023	82.7	.023	150.7	.003	157.4	22.6
64.0	.026	86.0	.026	151.6	.002	161.5	25.4
68.0	.027	88.0	.027	152.4	.001	168.3	27.0
72.0	.028	89.2	.028	153.1	.000	-174.0	27.8
76.0	.028	90.1	.028	153.6	.000	-104.8	28.0
80.0	.028	90.7	.028	154.1	.000	-54.8	27.8
84.0	.027	91.1	.027	154.5	.001	-42.2	27.2
88.0	.027	91.4	.027	154.9	.001	-36.9	26.5
92.0	.026	91.6	.026	155.2	.001	-33.9	25.7
96.0	.025	91.8	.025	155.5	.001	-31.9	24.8
100.0	.024	91.9	.024	155.8	.001	-30.5	23.9
104.0	.023	91.9	.023	156.0	.001	-29.4	22.9
108.0	.022	92.0	.022	156.2	.001	-28.5	22.0

112.0	.021	92.0	.021	156.4	.001	-27.8	21.0
116.0	.020	92.1	.020	156.6	.001	-27.2	20.1
120.0	.019	92.1	.019	156.7	.001	-26.7	19.3
124.0	.018	92.1	.018	156.9	.001	-26.3	18.4
128.0	.018	92.1	.018	157.0	.001	-25.9	17.7
132.0	.017	92.1	.017	157.1	.001	-25.5	16.9
136.0	.016	92.0	.016	157.3	.001	-25.2	16.2
140.0	.015	92.0	.015	157.4	.001	-24.9	15.5
144.0	.015	92.0	.015	157.5	.001	-24.7	14.8
148.0	.014	92.0	.014	157.5	.000	-24.5	14.2
152.0	.014	92.0	.014	157.6	.000	-24.3	13.6
156.0	.013	91.9	.013	157.7	.000	-24.1	13.1
160.0	.013	91.9	.013	157.8	.000	-23.9	12.6
164.0	.012	91.9	.012	157.8	.000	-23.8	12.1
168.0	.012	91.9	.012	157.9	.000	-23.6	11.6
172.0	.011	91.8	.011	158.0	.000	-23.5	11.1
176.0	.011	91.8	.011	158.0	.000	-23.3	10.7
180.0	.010	91.8	.010	158.1	.000	-23.2	10.3
184.0	.010	91.8	.010	158.1	.000	-23.1	9.9
188.0	.010	91.7	.010	158.2	.000	-23.0	9.6
192.0	.009	91.7	.009	158.2	.000	-22.9	9.2
196.0	.009	91.7	.009	158.2	.000	-22.8	8.9

1MAGNETIC FIELD CALCULATIONS

SENSOR HT. = 3.3 FEET

DIST FROM REFERENCE FEET	B-FIELD (GAUSS)	THETA	BY-FIELD (GAUSS)	THETAY	BX-FIELD (GAUSS)	THETAX
-200.0	.00463451	18.0	.00143815	-24.9	.00440804	-30.9
-196.0	.00482053	18.4	.00152473	-24.9	.00457554	-30.9
-192.0	.00501787	18.7	.00161834	-24.9	.00475244	-30.9
-188.0	.00522745	19.1	.00171969	-24.9	.00493943	-31.0
-184.0	.00545030	19.5	.00182959	-25.0	.00513725	-31.0
-180.0	.00568756	19.9	.00194894	-25.0	.00534671	-31.1
-176.0	.00594047	20.4	.00207878	-25.0	.00556870	-31.1
-172.0	.00621043	20.9	.00222025	-25.1	.00580418	-31.2
-168.0	.00649899	21.3	.00237469	-25.1	.00605420	-31.2
-164.0	.00680787	21.8	.00254358	-25.1	.00631989	-31.3
-160.0	.00713899	22.4	.00272863	-25.2	.00660251	-31.3
-156.0	.00749451	22.9	.00293179	-25.2	.00690341	-31.4
-152.0	.00787686	23.5	.00315529	-25.3	.00722408	-31.5
-148.0	.00828875	24.1	.00340169	-25.3	.00756612	-31.6
-144.0	.00873325	24.8	.00367394	-25.4	.00793128	-31.6
-140.0	.00921384	25.5	.00397546	-25.4	.00832147	-31.7
-136.0	.00973445	26.2	.00431019	-25.5	.00873874	-31.8
-132.0	.01029956	26.9	.00468274	-25.5	.00918532	-31.9
-128.0	.01091428	27.7	.00509844	-25.6	.00966358	-32.1

-124.0	.01158443	28.6	.00556356	-25.7	.01017607	-32.2
-120.0	.01231673	29.5	.00608547	-25.8	.01072549	-32.3
-116.0	.01311889	30.4	.00667281	-25.9	.01131462	-32.5
-112.0	.01399982	31.5	.00733582	-26.0	.01194634	-32.7
-108.0	.01496985	32.6	.00808661	-26.1	.01262351	-32.9
-104.0	.01604102	33.7	.00893964	-26.2	.01334886	-33.1
-100.0	.01722734	35.0	.00991209	-26.4	.01412480	-33.4
-96.0	.01854528	36.3	.01102463	-26.5	.01495314	-33.6
-92.0	.02001419	37.8	.01230200	-26.7	.01583471	-34.0
-88.0	.02165692	39.4	.01377408	-26.9	.01676876	-34.3
-84.0	.02350057	41.0	.01547689	-27.1	.01775208	-34.7
-80.0	.02557737	42.9	.01745402	-27.4	.01877779	-35.2
-76.0	.02792579	44.9	.01975823	-27.7	.01983352	-35.8
-72.0	.03059192	47.1	.02245333	-28.0	.02089883	-36.4
-68.0	.03363111	49.5	.02561633	-28.4	.02194140	-37.2
-64.0	.03710993	52.1	.02933962	-28.8	.02291176	-38.1
-60.0	.04110854	55.0	.03373297	-29.3	.02373549	-39.2
-56.0	.04572336	58.2	.03892461	-29.8	.02430248	-40.7
-52.0	.05106991	61.8	.04505990	-30.5	.02445222	-42.5
-48.0	.05728551	65.8	.05229527	-31.3	.02395478	-45.0
-44.0	.06453098	70.3	.06078261	-32.1	.02249105	-48.6
-40.0	.07298959	75.3	.07063555	-33.1	.01965202	-54.5
-36.0	.08285994	81.1	.08186378	-34.3	.01507959	-66.6
-32.0	.09433653	87.6	.09425287	-35.6	.00986413	258.0
-28.0	.10756660	95.0	.10715930	-37.0	.01373806	190.3
-24.0	.12256680	103.5	.11919790	-38.6	.03055080	162.9
-20.0	.13908050	113.3	.12785840	-40.2	.05588876	152.5
-16.0	.15637870	124.3	.12927880	-41.7	.08866860	146.9
-12.0	.17308470	136.8	.11874530	-43.1	.12629930	143.3
-8.0	.18722770	150.4	.09259015	-44.1	.16289230	141.1
-4.0	.19672040	165.0	.05108648	-44.7	.19001110	139.8
.0	.20005840	180.0	.00000000	233.0	.20005840	139.4
4.0	.19672040	-165.0	.05108648	135.3	.19001110	139.8
8.0	.18722770	-150.4	.09259015	135.9	.16289230	141.1
12.0	.17308470	-136.8	.11874540	136.9	.12629930	143.3
16.0	.15637870	-124.3	.12927880	138.3	.08866861	146.9
20.0	.13908050	-113.3	.12785840	139.8	.05588876	152.5
24.0	.12256680	-103.5	.11919790	141.4	.03055079	162.9
28.0	.10756660	-95.0	.10715930	143.0	.01373806	190.3
32.0	.09433653	-87.6	.09425287	144.4	.00986413	258.0
36.0	.08285994	-81.1	.08186378	145.7	.01507959	-66.6
40.0	.07298960	-75.3	.07063555	146.9	.01965202	-54.5
44.0	.06453098	-70.3	.06078261	147.9	.02249105	-48.6
48.0	.05728552	-65.8	.05229528	148.7	.02395478	-45.0
52.0	.05106991	-61.8	.04505989	149.5	.02445222	-42.5
56.0	.04572336	-58.2	.03892461	150.2	.02430248	-40.7
60.0	.04110853	-55.0	.03373297	150.7	.02373548	-39.2
64.0	.03710993	-52.1	.02933962	151.2	.02291176	-38.1
68.0	.03363111	-49.5	.02561633	151.6	.02194141	-37.2
72.0	.03059192	-47.1	.02245333	152.0	.02089883	-36.4
76.0	.02792579	-44.9	.01975823	152.3	.01983352	-35.8

80.0	.02557736	-42.9	.01745403	152.6	.01877779	-35.2
84.0	.02350057	-41.0	.01547690	152.9	.01775208	-34.7
88.0	.02165692	-39.4	.01377409	153.1	.01676875	-34.3
92.0	.02001419	-37.8	.01230201	153.3	.01583471	-34.0
96.0	.01854528	-36.3	.01102463	153.5	.01495314	-33.6
100.0	.01722734	-35.0	.00991209	153.6	.01412480	-33.4
104.0	.01604101	-33.7	.00893963	153.8	.01334886	-33.1
108.0	.01496985	-32.6	.00808661	153.9	.01262351	-32.9
112.0	.01399982	-31.5	.00733582	154.0	.01194634	-32.7
116.0	.01311889	-30.4	.00667281	154.1	.01131462	-32.5
120.0	.01231673	-29.5	.00608547	154.2	.01072549	-32.3
124.0	.01158443	-28.6	.00556356	154.3	.01017607	-32.2
128.0	.01091428	-27.7	.00509844	154.4	.00966358	-32.1
132.0	.01029956	-26.9	.00468273	154.5	.00918532	-31.9
136.0	.00973446	-26.2	.00431019	154.5	.00873874	-31.8
140.0	.00921384	-25.5	.00397546	154.6	.00832147	-31.7
144.0	.00873325	-24.8	.00367394	154.6	.00793128	-31.6
148.0	.00828875	-24.1	.00340169	154.7	.00756612	-31.6
152.0	.00787686	-23.5	.00315529	154.7	.00722408	-31.5
156.0	.00749451	-22.9	.00293179	154.8	.00690341	-31.4
160.0	.00713899	-22.4	.00272863	154.8	.00660251	-31.3
164.0	.00680787	-21.8	.00254358	154.9	.00631989	-31.3
168.0	.00649899	-21.3	.00237469	154.9	.00605420	-31.2
172.0	.00621043	-20.9	.00222025	154.9	.00580418	-31.2
176.0	.00594047	-20.4	.00207878	155.0	.00556870	-31.1
180.0	.00568756	-19.9	.00194894	155.0	.00534672	-31.1
184.0	.00545030	-19.5	.00182959	155.0	.00513725	-31.0
188.0	.00522745	-19.1	.00171969	155.1	.00493943	-31.0
192.0	.00501787	-18.7	.00161835	155.1	.00475244	-30.9
196.0	.00482053	-18.4	.00152473	155.1	.00457554	-30.9

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