Exhibit AA
Electric and Magnetic Fields

Boardman to Hemingway Transmission Line Project

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Application for Site Certificate

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ACRONYMS AND ABBREVIATIONS

A/phase	amps per phase
AC	alternating current
BPA	Bonneville Power Administration
dB	decibels
EFSC or Council	Energy Facility Siting Council
ELF	extremely low frequency
EMF	electric and magnetic fields
EMR	electromagnetic radiation
EPRI	Electric Power Research Institute
FCC	Federal Communications Commission
GHz	gigahertz
GPS	Global Positioning System
Hz	hertz
IARC	International Agency for Research on Cancer
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronics Engineers
IPC	Idaho Power Company
kHz	kilohertz
kV	kilovolt
kV/m	kilovolt per meter
m	meter
µV/m	microvolt per meter
mG	milligauss
MHz	megahertz
MP	milepost
NESC	National Electrical Safety Code
NIEHS	National Institute of Environmental Health Sciences
NRC	National Research Council
NRPB	National Radiological Protection Board of Great Britain
OAR	Oregon Administrative Rules
Project	Boardman to Hemingway Transmission Line Project
ROW	right-of-way
Second Amended Project Order	Second Amended Project Order, Regarding Statutes, Administrative Rules, and Other Requirements Applicable to the Proposed BOARDMAN TO HEMINGWAY TRANSMISSION LINE (July 26, 2018)

Exhibit AA
Electric and Magnetic Fields

1.0 INTRODUCTION

Exhibit AA provides an analysis of electric and magnetic fields (EMF) for the Boardman to Hemingway Transmission Line Project (Project). This Exhibit shows the Project will be designed, constructed, and operated to ensure public health and safety with EMFs in mind.

2.0 APPLICABLE RULES AND SECOND AMENDED PROJECT ORDER PROVISIONS

2.1 Specific Standards for Transmission Lines

The Specific Standards for Transmission Lines under Oregon Administrative Rule (OAR) 345-024-0090 provide Idaho Power Company (IPC) must demonstrate it:

> *(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;*
>
> *(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.*

2.2 Site Certificate Application Requirements

OAR 345-021-0010(1)(aa) provides Exhibit AA must include the following information related to the Project transmission lines:

> *(A) Information about the expected electric and magnetic fields, including:*
>
>> *(i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way.*
>>
>> *(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).*
>>
>> *(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.*
>>
>> *(v) Any measures the applicant proposes to reduce electric or magnetic field levels.*
>>
>> *(vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line.*

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

(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.

2.3 Second Amended Project Order Provisions

The Second Amended Project Order provides the following discussion regarding Exhibit AA:

The provisions of Exhibit AA apply.

(Second Amended Project Order, Section III(aa)).

3.0 ANALYSIS

3.1 Analysis Area

The Second Amended Project Order states the analysis area for Exhibit AA is the Site Boundary (Second Amended Project Order, Section IV). For purposes of analyzing the Project's EMFs—specifically the alternating current (AC) electric fields and induced currents—IPC focused its analysis on the right-of-way (ROW) for the Proposed Route and alternative routes. The ROW extends outward from the centerline sufficiently far to identify and analyze impacts to structures that may be located within 200 feet on each side of the centerline of the final transmission line alignment. As discussed herein, the analysis shows that the Project's AC electric fields and induced currents will meet the relevant AC electric field standard within the ROW. Moreover, the effects of AC electric fields and induced currents diminish with distance, meaning the Project will also meet the AC electric field standard beyond the ROW, including throughout the entire Site Boundary, which may exceed the ROW.

3.2 Background

3.2.1 EMF Description

EMFs occur both naturally and as a result of the generation, transmission, and use of electric power. The earth itself generates steady-state magnetic and electric fields. Electromagnetic fields are present around any conductors or devices that transmit or use electrical energy; as a result, exposure to EMF is common from an array of electrical appliances and equipment, building wiring, and electric distribution and transmission lines. The electrical power system in the United States is an AC system operating at a frequency of 60 hertz (Hz)[1], resulting in "power frequency" or "extremely low frequency (ELF)" EMF.[2] While electric and magnetic fields are often referred to and thought of collectively, each arises through a different mechanism and can have differing effects.

Electric fields around transmission lines are produced by the presence of an electric charge, measured as voltage, on the energized conductor. Electric field strength is directly proportional to the line's voltage; that is, increased voltage produces a stronger electric field. The strength of

[1] Hertz is a measure of cycles per second. In a 60-Hz transmission system, the charge and direction of current flow on each conductor will cycle from positive to negative and back to positive 60 times per second. The direction of force in the electric and magnetic fields will also cycle in direct relation to the charge and direction of flow on the conductor.

[2] The electric transmission system in the U.S. operates at 60 Hz, while in Europe and other parts of the world, the systems operate at 50 Hz; both produce fields that are referred to as power frequency or ELF EMF.

the electric field is inversely proportional to the distance from the conductors; the electric field strength declines as the distance from the conductor increases. The strength of the electric field is measured in units of kilovolts (kV) per meter (m) or kV/m. Electric fields are readily weakened or blocked by conductive objects such as trees or buildings. The direction of force within the electric field alternates at a frequency of 60 Hz, in direct relation to the charge on each conductor. However, the overall transmission line voltage, and therefore the overall strength and reach of the electric field, remains practically steady and is not affected by the common daily and seasonal fluctuations in usage of electricity by customers.

Magnetic fields around transmission lines are produced by the movement of electrical charge, measured in terms of amperage, through the conductors. Like the electric field, the magnetic field alternates at a frequency of 60 Hz. Magnetic field strength is expressed in units of milligauss (mG).[3] The magnetic field strength is directly proportional to the amperage; that is, increased current flow produces a stronger magnetic field. As with electric fields, the magnetic field is inversely proportional to the distance from the conductors, declining in strength as the distance from the conductor increases. Magnetic fields are not blocked or shielded by most materials. Unlike voltage, the amperage and the resulting magnetic field around a transmission line fluctuate daily and seasonally as the usage of electricity varies and the amount of current flow varies.

Each AC three-phase circuit carries power over three conductors. One phase of the circuit is carried by each of the three 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 the 360 degree cycle. The fields from these conductors tend to cancel out because of this phase difference. However, when a person stands under a transmission line, one conductor is significantly closer and will contribute a net uncanceled field at the person's location.

3.2.2 EMF Standards

No federal regulations or guidelines apply directly to the EMF levels for the Project's proposed lines in Oregon. The National Institute of Environmental Health Sciences (NIEHS) performed an extensive review of field-related issues in the 1990s that resulted in the decision that regulatory actions are unwarranted (NIEHS 1999).

Although there are no federal regulations on power-frequency EMF in the United States, international recommendations and guidelines exist. Table AA-1 lists power-frequency EMF guidelines recommended by the European Union (EU 1999), the International Committee on Electromagnetic Safety (ICES), and the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which is an affiliate of the World Health Organization (ICES 2002; ICNIRP 2010).

[3] Magnetic field strength may also be measured in terms of the Tesla, an International System unit of measurement. 1 Gauss = .0001 Tesla, or 1 Tesla = 10,000 Gauss; 1 Gauss = 1,000 mG.

Table AA-1. International Guidelines for Alternating Current Power-frequency EMF Levels

Agency	Exposure	Electric Field (kV/m)	Magnetic Field (mG)
European Union	General public	4.2	833
ICES[1]	Occupational General public General public within ROW	20 5 10	27,100 9,040 NA
ICNIRP	Occupational General public	8.3 4.2	10,000 2,000

[1] ICES recommendations have been adopted as standards by the Institute of Electrical and Electronics Engineers (IEEE); see Standard C95.6 -2002 (R2007).
Magnetic fields are measured in gauss (G) and milligauss. 1 G = 1,000 mG
NA = Not Applicable (no requirements)

Transmission line projects in Oregon must comply with the electric field standard found in OAR 345-024-0090, which requires that the applicant design, construct, and operate the proposed transmission line so that AC electric fields do not exceed 9 kV/m at 1 meter above the ground surface in areas accessible to the public. There is no similar Oregon design standard for magnetic fields.

Six other states have adopted limits for electric field strength either at the edge or within the ROW of the transmission line corridor. Only Florida and New York currently limit magnetic fields levels from transmission lines. The magnetic field levels set in those two states only apply at the edge of the ROW and were developed to prevent magnetic fields from increasing beyond levels currently experienced by the public. Table AA-2 shows the AC electric field and magnetic field standards that have been adopted by states in the U.S.

Table AA-2. Other State Alternating Current Power-frequency EMF Standards

State	Location	Electric Field (kV/m)	Magnetic Field (mG)
Florida			
230- to 500-kV lines	Within ROW Edge of ROW	10 2	NA 200 [1]
230 kV or less	Within ROW Edge of ROW	8 2	NA 150
Minnesota	Within ROW	8	NA
Montana	Within ROW–road crossing Edge of ROW	7 1 [2]	NA NA
New Jersey	Within ROW Edge of ROW	NA 3	NA NA
New York	Within ROW–open Within ROW–public road Within ROW–private road Edge of ROW	11.8 7 11 1.6	NA NA NA 200
North Dakota	Within ROW Edge of ROW	9 NA	NA NA

State	Location	Electric Field (kV/m)	Magnetic Field (mG)
Oregon	Within ROW Edge of ROW	9 NA	NA NA

[1] Magnetic field strength is limited to 250 mG for new double-circuit 500-kV lines constructed on a previously existing right-of-way.
[2] Can be waived by landowner.
NA = Not Applicable (no requirements)

In the fall of 2009, the Energy Facility Siting Council (EFSC or Council) commissioned a review of existing information to prepare for the review of several transmission lines under discussion at that time. That review was conducted by Dr. Kara Warner and presented to the Council on November 20, 2009, during a regular Council meeting. The prevailing conclusions were that there is a need to continue to monitor the science on EMF; that low-cost, prudent avoidance measures of public EMF exposure are appropriate; and that health-based limits are not appropriate given the scientific data available (EFSC 2009).

3.3 Distance Between Transmission Line Center Lines and Right-of-Way Edge

> OAR 345-021-0010(1)(aa)(A)(i): The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way.

The transmission line will be located approximately in the middle of the ROW. The ROW width will typically be 150 feet, but in a few areas for very short distances may extend to 250 feet; accordingly, the distance from the center line to the ROW edge will be 75 to 125 feet. While crossing the Naval Weapons System Training Facility Boardman, the ROW will be 90 feet. The ROW width for the single-circuit 230-kV rebuilding portion of the Project will be up to 125 feet. The ROW width for the 1.1 miles of 138-kV rebuilding will be 100 feet. The required ROW width will be determined during final design.

3.4 Occupied Structures Within 200 Feet of Transmission Lines

> OAR 345-021-0010(1)(aa)(A): . . . (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). . . .

3.4.1 Methods for Identifying Occupied Structures Within 200 Feet

Geographic information system and aerial photographs were used to identify and classify potential structures near the transmission line and rebuild segments that could be affected by Project EMF. A field reconnaissance was then undertaken to determine occupancy. Occupied structures included in this analysis are defined by OAR 345-021-0010 as including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers, hospitals, and rest areas. Receptors that were not included as occupied structures consisted of silos, tanks, gravel pits, mines, quarries, and water features.

3.4.2 Occupied Structures Identified Within 200 Feet

Based on review of aerial photography from 2012-2016, IPC identified six possible structures within 200 feet of the transmission line. IPC investigated the nature of those structures further, finding that the structures no longer exist, were transient vehicles and not structures, or should not be considered occupied because they are not permanently or frequently visited. Therefore, there are no occupied structures within 200 feet of the transmission line.

IPC's findings with respect to each of the six identified possible structures are as follows:

- Structure 1 (near milepost [MP] 81.5): In two of three years of aerial photography, a trailer or other object appears to have been parked within 200 feet of the centerline. This appears to be a campsite with a temporary, unfixed recreational vehicle on it. The term "structure" generally means a building or other fixture that is permanently fixed to the ground. Because the recreational vehicle does not appear to be fixed permanently to the ground, it is not considered a structure, or occupied structure, under OAR 345-021-0010(1)(aa)(A)(ii).
- Structure 2 (near MP 84.6): There was a possible structure apparent in 2012 photography. However, it does not seem to be present in the more recent aerial photographs (2013/2014). Further, it appears to be a vehicle and not a permanent fixture. For these reasons, it is not considered a structure, or occupied structure, under OAR 345-021-0010(1)(aa)(A)(ii).
- Structure 3 (near MP 1.8): There is a pumphouse on the east side of Bombing Range Road that is located approximately 180 feet from the transmission line centerline. Pumphouse operators visit the pumphouse when necessary for maintenance and control of the pumps, but there is no regular presence at the pumphouse. The term "occupied structure" is not defined in Chapter 345 of the OAR. Under the canon of ejusdem generis, the regulation is to be construed to include persons and things not specifically mentioned only if they are of the same general kind or class specifically mentioned.[4] Here, OAR 345-021-0010(1)(aa)(A)(ii) defines "occupied structures" as including but not limited to "residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals." The common characteristic among the enumerated items is that each facility has people on-site continuously or at least daily or during regular work days and hours. In this instance, workers are not present at the pumphouse continuously, daily, or on a regular schedule during normal working days and hours, but rather, they are at the pumphouse only sporadically and temporarily. Such use is not of the same general kind or class as that found with the facilities specifically mentioned in the regulation. Therefore, applying the principle of ejusdem generis to OAR 345-021-0010(1)(aa)(A)(ii), the pumphouse is not considered an "occupied structure."
- Structure 4 (near MP 6.1): An object appeared in the 2016 aerial photography on the west side of Bombing Range Road that appeared to possibly be a structure. However, on-the-ground review confirmed there are no structures on the west side of the road near MP 6.1, which is Navy property, where the object was seen in the aerial photograph. It likely was a vehicle working on the Bonneville Power Administration (BPA) transmission line. For these reasons, it is not considered a structure, or occupied structure, under OAR 345-021-0010(1)(aa)(A)(ii).
- Structure 5 (near MP 9.5): There is a potato storage shed on the east side of Bombing Range Road. The shed has activity during the fall when it is being filled with potatoes, the occasional employee visits the shed to monitor temperature and quality of inventory, and there's some activity when they are emptying the shed. There is no permanent or regular presence at the shed. Therefore, its use is not of the same general kind or class

[4] See Liberty v. State Dept. of Transportation, 342 Or. 11, 20, 148 P.3d 909 (2006) (applying principle of ejusdem generis when interpreting the phrase "outdoor activities such as hunting, fishing, [and other specified activities]").

as that found with the facilities specifically mentioned in OAR 345-021-0010(1)(aa)(A)(ii) and the potato shed is not considered an “occupied structure” under that regulation.

- Structure 6 (near MP 11): Two possible structures were identified in the aerial photography on the east side of Bombing Range Road near MP 11. One of the structures is a TransCanada metering station used to meter natural gas usage. There is no frequent or permanent visits to the station, and therefore, it is not considered an “occupied structure” under OAR 345-021-0010(1)(aa)(A)(ii). The second structure—while identified in earlier photography—is no longer present as of December 2016, and accordingly, it is not a structure to be analyzed under OAR 345-021-0010(1)(aa)(A)(ii).

To address potential concerns regarding electrical fields in proximity to occupied structures, IPC proposes the following site certificate condition:

> ***Siting Standard Condition 1****: During construction, the certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:*
> *a. Constructing all aboveground transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line;*
> *. . . .*

3.5 Predicted Electric and Magnetic Fields Levels

OAR 345-021-0010(1)(aa)(A): . . . (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. . . . (vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line. . . .

3.5.1 EMF Modeling Methods

The electric field, magnetic field, and audible noise that may be produced by the proposed transmission line was predicted using EMFWorkstation: ENVIRO (Version 3.52), a Windows-based model developed by the Electric Power Research Institute (EPRI) (EPRI 1997). The ENVIRO program uses the algorithms developed by BPA, which were originally described in the Corona and Field Effects program from BPA (BPA n.d.). The inputs to the ENVIRO model are line voltage, load flow (current), and the physical dimensions of the line (number of phases, conductor diameter, spacing, height, and subconductor configuration).

3.5.2 Modeling Assumptions

The EMF values were calculated at a reference height of 1 meter above ground. For modeling purposes, the voltage of the 500-kV circuits was 550 kV, 10 percent above the nominal 500-kV value. The voltage of 230-kV and 138-kV circuits was modeled at the nominal value.

Four transmission line designs were modeled corresponding to the designs that are expected to be used in Oregon. Exhibit B, Figures B-15 through B-20 provide illustrations of the proposed and alternative structures. Three line geometries were modeled for the Proposed Route:

- 500-kV transmission line on a single-circuit lattice tower (delta configuration; Figure B-15)
- 230-kV transmission line on a single-circuit H-frame structure (horizontal configuration; Figure B-19)

- 138-kV transmission line on a single-circuit H-frame structure (horizontal configuration; Figure B-20)

In addition, one alternative geometry was modeled where special structures could be employed to meet unique siting concerns:

- 500-kV transmission line on a single-circuit H-frame or Y-frame structure (horizontal configuration; see Figures B-16 and B-17)

Additional modeling assumptions are as follows. For the two configurations of the proposed 500-kV line:

- Each phase of the 500-kV three-phase circuit will be composed of three subconductors in a triple bundle configuration. The proposed conductor for the 500-kV line in all configurations is 1519 KCM ACSR/TW "Deschutes." However, the “Deschutes” conductor is not available from the ENVIRO program. Therefore, the comparable 1351.5 KCM ACSR/TW “Martin” was used from the ENVIRO program.
- A minimum ground clearance of 34.5 feet was used.
- A maximum voltage of 550 kV and 1,575 amps per phase (A/phase) was used.

For the proposed 230-kV rebuild:

- Each phase of the 230-kV three-phase circuit will be composed of one conductor. The proposed conductor for the relocated 230-kV line is 795 KCM 26/7 ACSR “Drake.”
- A minimum ground clearance of 20 feet was used.
- A maximum voltage of 230-kV and 402 A/phase was used.

For the proposed 138-kV rebuild:

- Each phase of the 138-kV three-phase circuit will be composed of one conductor. The proposed conductor for the 138-kV line is 250 MCM copper. The specific conductor used in the ENVIRO program was “CU250.”
- A minimum ground clearance of 20 feet was used.
- A maximum voltage of 138-kV and 515 A/phase was used.

The Project’s conductor distance above ground is based on the lowest midspan height at normal operating conditions, or the lowest point of the catenary. For most of the transmission line alignment, the conductors will be higher than this minimum allowable clearance, and resulting EMF levels on the ground will be lower than indicated.

The level of EMF was predicted with the program EMFWorkstation: ENVIRO version 3.52. The strength and range of EMF near transmission lines is a function of the line design, the voltage, and amperage (also referred to as current or load). The shape or distribution of EMF around transmission lines are a function of the conductor geometry as well as the size of the conductor and its configuration, including if the conductors for each phase are single wires or composed of multiple subconductors or bundles. The electric field strength is proportional to the voltage while the magnetic field strength is proportional to current (amperage). Unlike voltage which is typically stable, the amperage and the resulting magnetic field around a transmission line fluctuate with the amperage or load that the line is carrying. As electrical loads vary, the magnetic field will also vary, and this assessment was based on the design load of 1,575 A/phase.

Weather and humidity do not influence EMF levels. Weather does affect the level of corona activity which influences the resulting audible noise and level of radio-frequency interference. Corona activity is greater during wet weather and at high altitude. Corona and noise modeling is discussed in Exhibit X. The contours of the earth or ground elevation may influence the minimum ground clearance, and EMF decreases with increasing distance. The assessment in this Exhibit was based on a minimum ground clearance of 34.5 feet. EMF levels may be influenced by other sources of EMF, such as at the crossing of other transmission lines; however, the nature of those interactions is to be determined through a site-specific study conducted during detailed engineering and design.

3.5.3 Interaction with Existing Transmission Lines

In areas where the transmission lines parallel each other, fields at the edges of the ROW nearest the adjacent line may increase or decrease depending on load and phasing, as shown on Figures AA-9 and AA-10 (see Section 3.6). The separation between the proposed 500-kV line and parallel lines in most cases will be greater than 200 feet where the lines do not cross. As seen in Figure AA-9, existing parallel lines near the proposed 500-kV corridors will not result in exceedances of the 9 kV/m electric field standard. In areas where the lines cross, increased electromagnetic field effects will occur immediately within the ROWs for the respective lines and the effects will decrease rapidly after the crossing. In areas where crossings occur, the vertical transmission line height and separation will be selected during detailed design in a manner to maintain electric fields in the area of the crossing below the 9 kV/m standard. Table AA-3 shows the existing adjacent lines for the Proposed Route by county.

Table AA-3. Existing Adjacent Lines for the Proposed Route

County	Paralleled Transmission Line	Parallel Location	Parallel Distance	Separation Distance	Effect on Electric and Magnetic Field
Morrow	BPA McNary to Coyote Springs 500-kV	MP 0.0 - MP 0.3	0.3 mile	280 feet	Little effect on highest fields within ROW May increase or decrease fields at edges of ROW nearest adjacent line <20% depending on load and phasing;
Morrow	BPA McNary to Boardman 230-kV	MP 0.0 - MP 0.3	0.3 mile	390 feet	Little effect on fields within ROW
Morrow	UEC Line along BPR 115-kV	MP 1.1- MP 7.0	5.9 mile	140 feet	Little effect on fields within ROW
Union	BPA Roundup to La Grande 230-kV	MP 95.9 - MP 105.7	9.8 mile	Lines cross at MPs 100.0 and 105.6	Increased fields within ROW, diminishing immediately after the crossing

County	Paralleled Transmission Line	Parallel Location	Parallel Distance	Separation Distance	Effect on Electric and Magnetic Field
Union and Baker	Idaho Power Quartz 230-kV	MP 109.7- MP 126.2 MP 127.8- MP 141.9 MP 143.6- MP 145.2 MP 146.1- MP 147.3 MP 150.2- MP153.2	From 1.2- 14.1 miles	250-foot minimum and crosses at MP 143.6	Increased fields within ROW, diminishing immediately after the crossing
Baker	Idaho Power NLTP 138-kV	MP 153.4- MP 156.9 MP 159.6- MP 162.9	3.5 and 3.3 miles	250-foot minimum and crosses at MPs 157, 162.8, and 164.7	Increased fields within ROW, diminishing immediately after the crossing
Baker	Idaho Power Durkee to Quartz 69-kV	MP 157.1- MP 159.5	2.4 miles	About 250-foot minimum and crosses at MPs 157.1, 159.5, and 165.6	Increased fields within ROW, diminishing immediately after the crossing
Baker and Malheur	Idaho Power WEJN-NLTP 138-kV	MP 186.0- MP 191.2 MP 197.6- MP 199.2	5.2 and 1.6 miles	About 200 to 250 feet and crosses at MPs 186.2, 191.1, 197.7, and 199.9	Increased fields within ROW, diminishing immediately after the crossing
Malheur	Idaho Power NHJN-JMSN 69-kV	–	–	Crosses at MP 216.5	Increased fields within ROW, diminishing immediately after the crossing
Malheur	Idaho Power HPJN-HRPJ 69-kV	–	–	Crosses at MP 236.4	Increased fields within ROW, diminishing immediately after the crossing
Malheur	Idaho Power from Hemmingway Station 500-kV	–	–	Crosses at MP 266.1	Increased fields within ROW, diminishing immediately after the crossing
Malheur	PacifiCorp BUMG-HMWY 500-kV	–	–	Crosses at MP 260.8	Increased fields within ROW, diminishing immediately after the crossing

3.6 Graphs of Predicted Electric and Magnetic Fields Levels

Using the transmission line design parameters described above, the ENVIRO model predicts electric and magnetic field strength at one meter above ground level, extending to either side of the centerline. As noted earlier, the predicted EMF levels are for the midspan point, or the lowest point in the catenary; field strengths would be lower than these predicted values where the conductors are higher. The predicted EMF levels out to distances of 200 feet on either side of each proposed transmission line structure type are shown as follows:

- Figures AA-1 and AA-2 show electric and magnetic field profiles for single-circuit 500-kV lattice structures with delta conductor configuration.
- Figures AA-3 and AA-4 show electric and magnetic field profiles for single-circuit 500-kV H-frame or Y-frame structures with horizontal conductor configuration.
- Figures AA-5 and AA-6 show electric and magnetic field profiles for single-circuit 230-kV H-frame structures with horizontal conductor configuration.
- Figures AA-7 and AA-8 show electric and magnetic field profiles for single-circuit 138-kV H-frame structures with horizontal conductor configuration.

The largest magnetic field calculated at the edge of the ROW was found for ROWs containing the single-circuit 500-kV H or Y-frame structure. The highest magnetic field found within the ROW was for ROWs containing the H-frame structure or Y-frame structure.

As the 500-kV lattice structure produced the highest electric fields, the parallel lines identified in Table AA-3 were modeled with the 500-kV lattice structure as follows:

- Figures AA-9 and AA-10 show the electric and magnetic field profiles for the single-circuit 500-kV lattice structures with delta conductor configuration along with the parallel lines identified in Table AA-3.

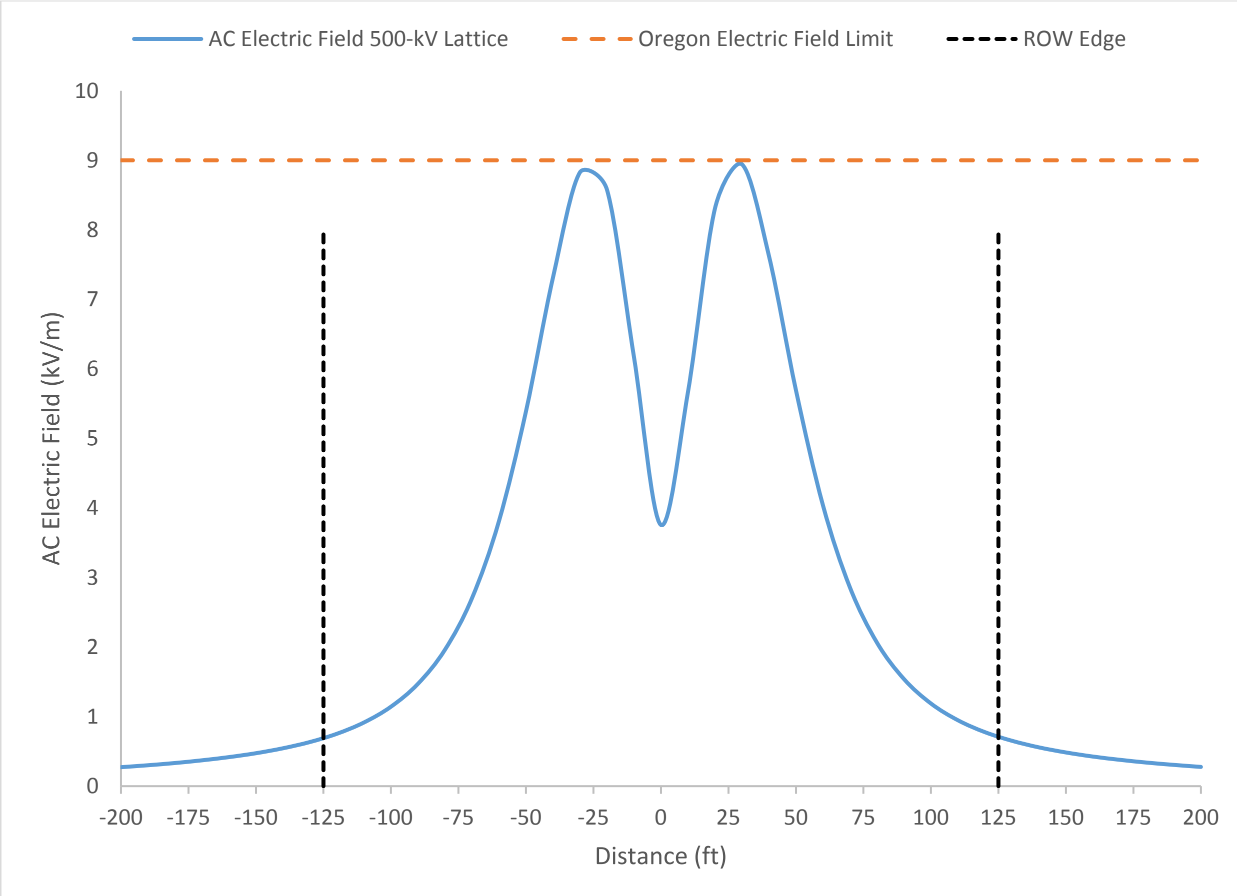


Figure AA-1. Electric Field Profile for Single-Circuit 500-kV Lattice Structures and Delta Conductor Configuration

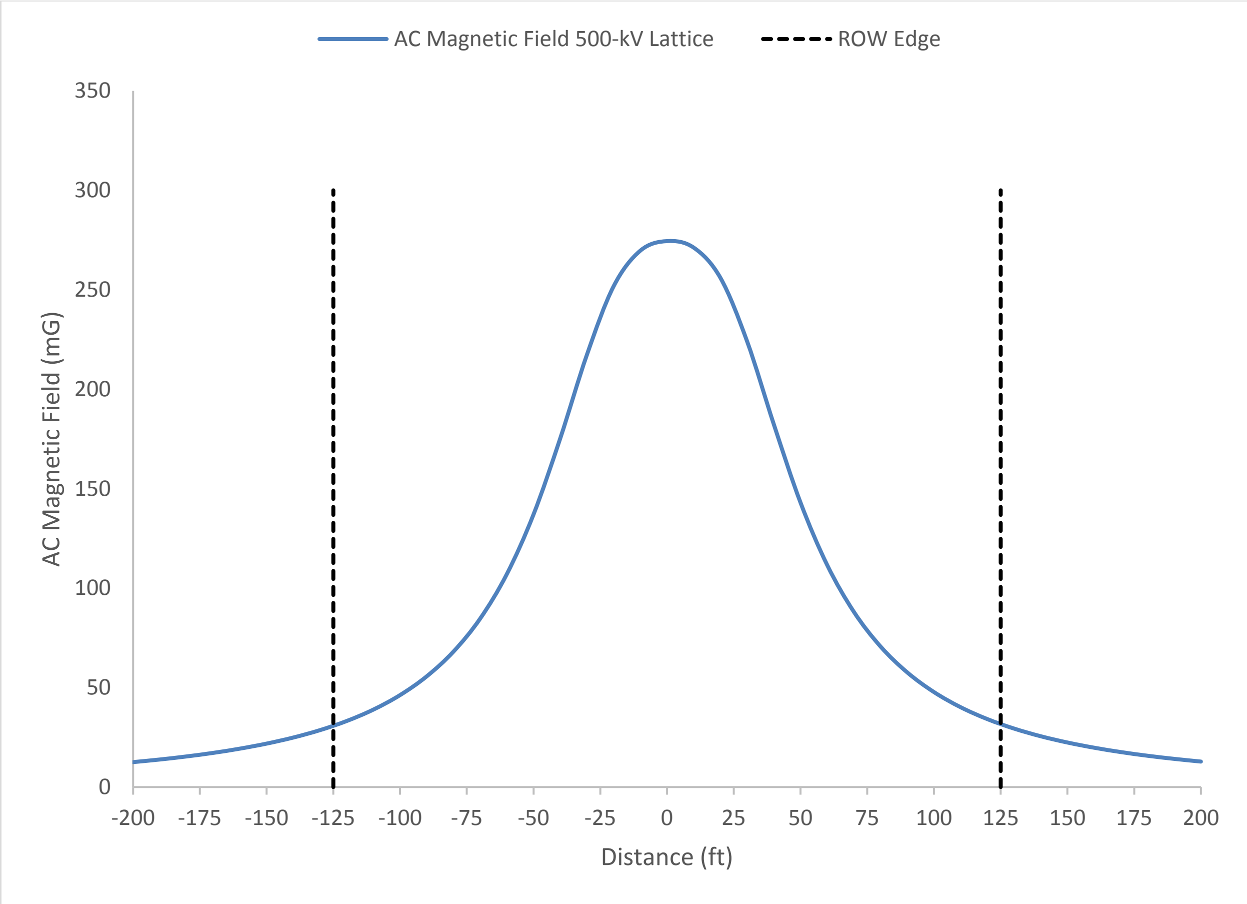


Figure AA-2. Magnetic Field Profile for Single-Circuit 500-kV Lattice Structures and Delta Conductor Configuration

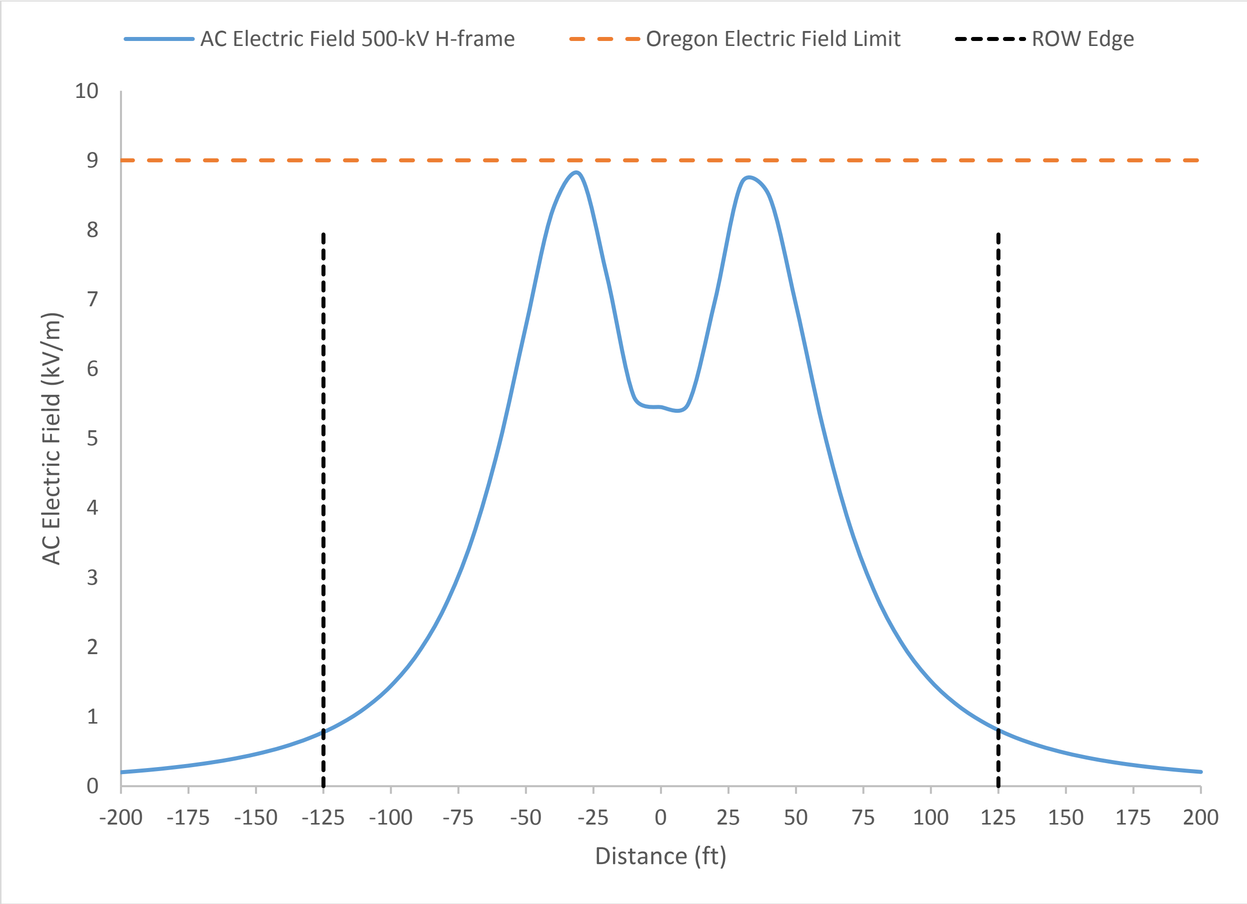


Figure AA-3. Electric Field Profile for Single-Circuit 500-kV H- or Y-Frame Structures and Horizontal Conductor Configuration

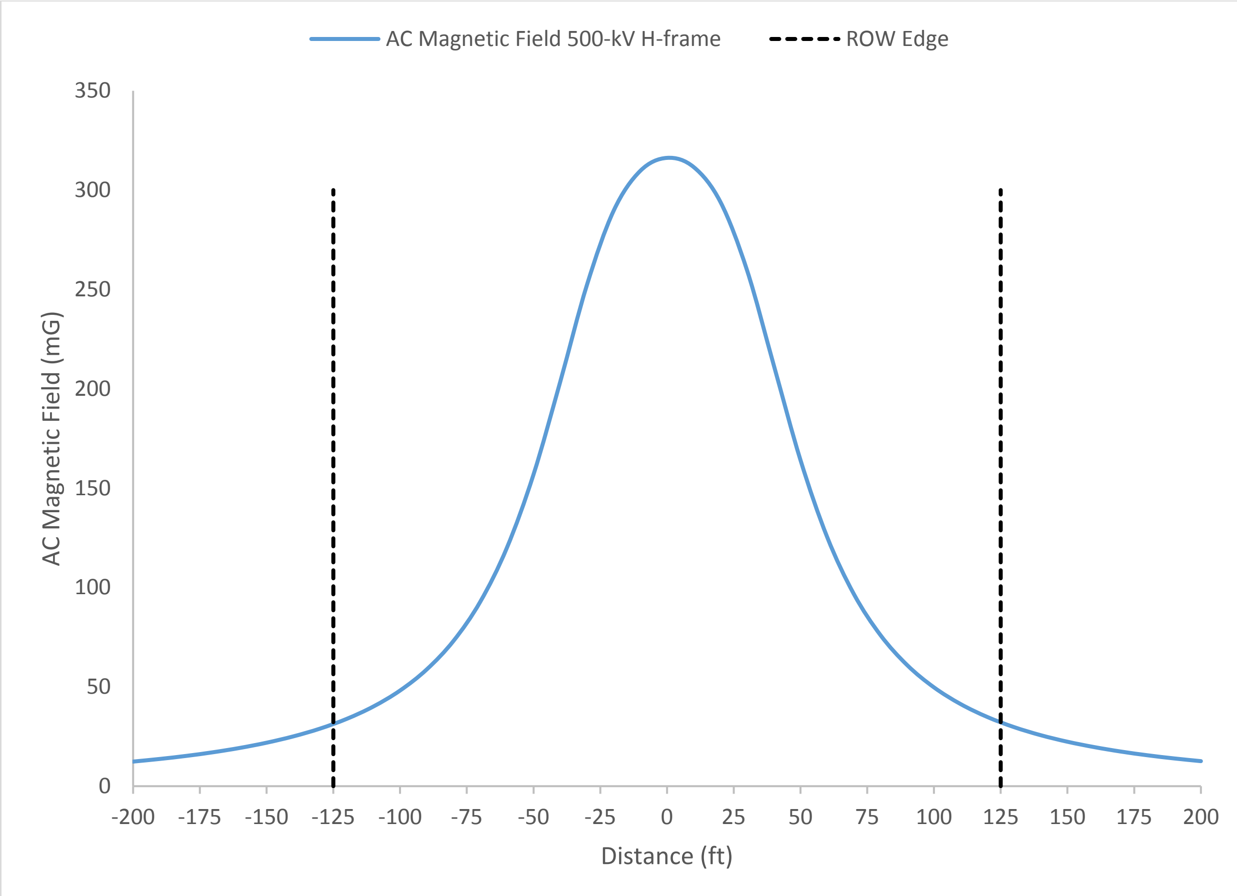


Figure AA-4. Magnetic Field Profile for Single-Circuit 500-kV H- or Y-Frame Structures and Horizontal Conductor Configuration

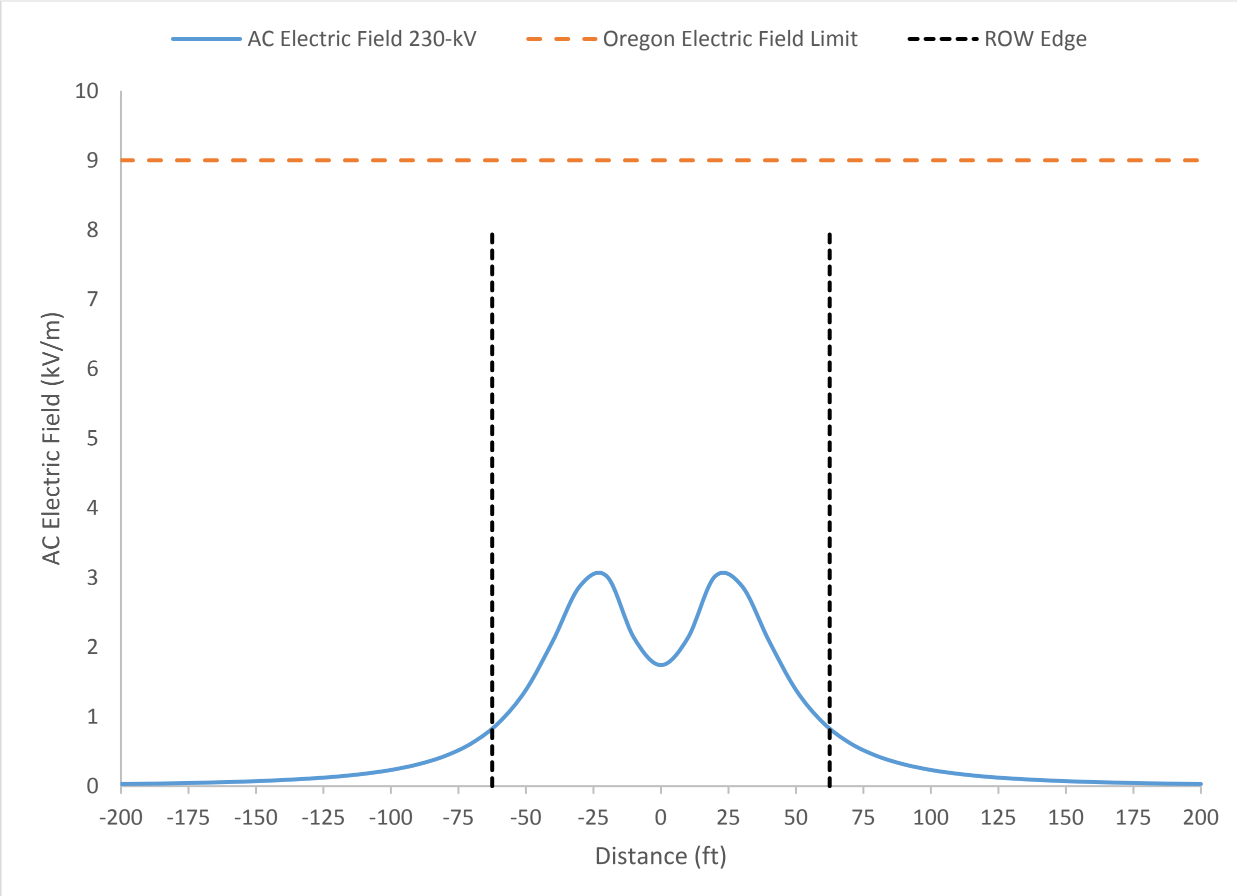


Figure AA-5. Electric Field Profile for Single-Circuit 230-kV H-Frame Structures and Horizontal Conductor Configuration

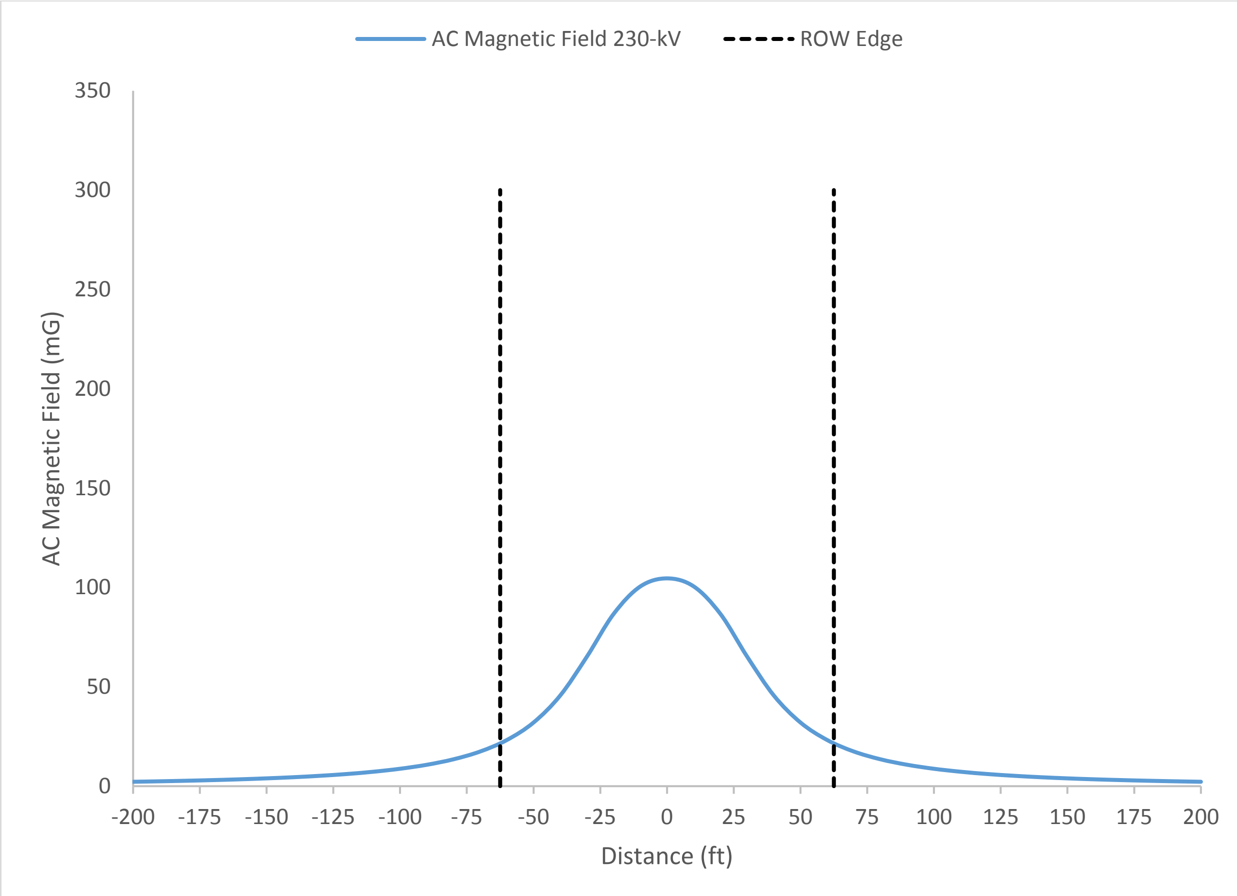


Figure AA-6.Magnetic Field Profile for Single-Circuit 230-kV H-Frame Structures and Horizontal Conductor Configuration

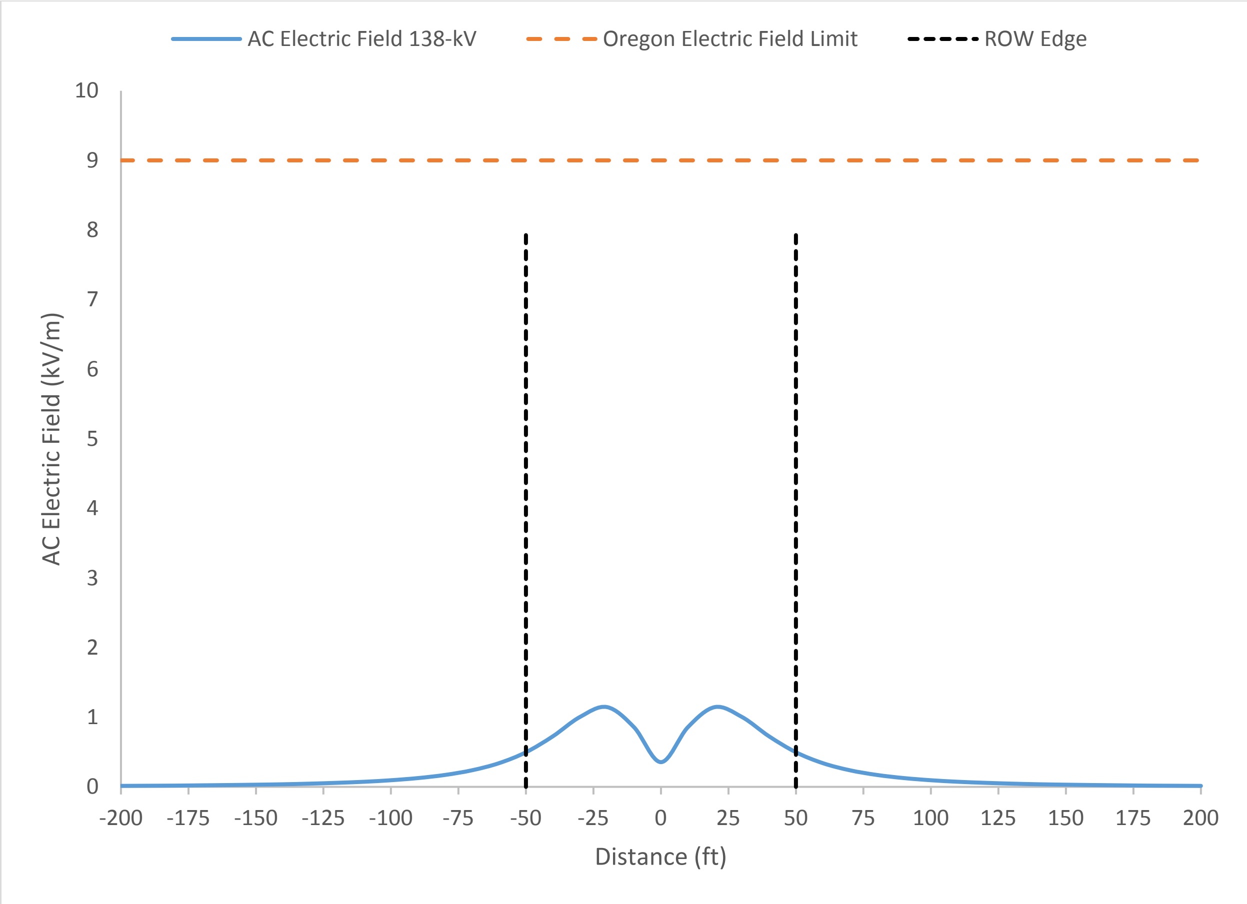


Figure AA-7. Electric Field Profile for Single-Circuit 138-kV H-Frame Structures and Horizontal Conductor Configuration

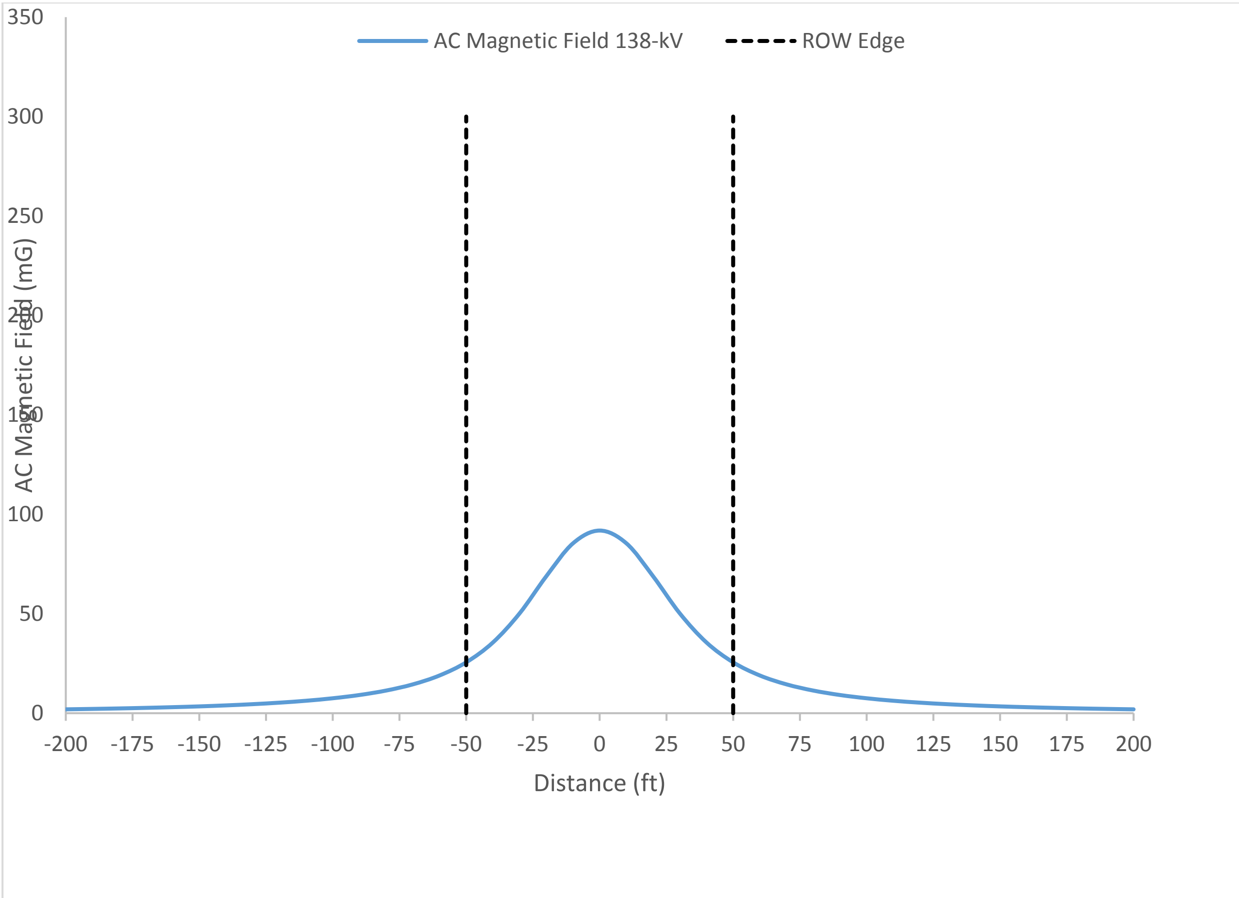


Figure AA-8.Magnetic Field Profile for Single-Circuit 138-kV H-Frame Structures and Horizontal Conductor Configuration

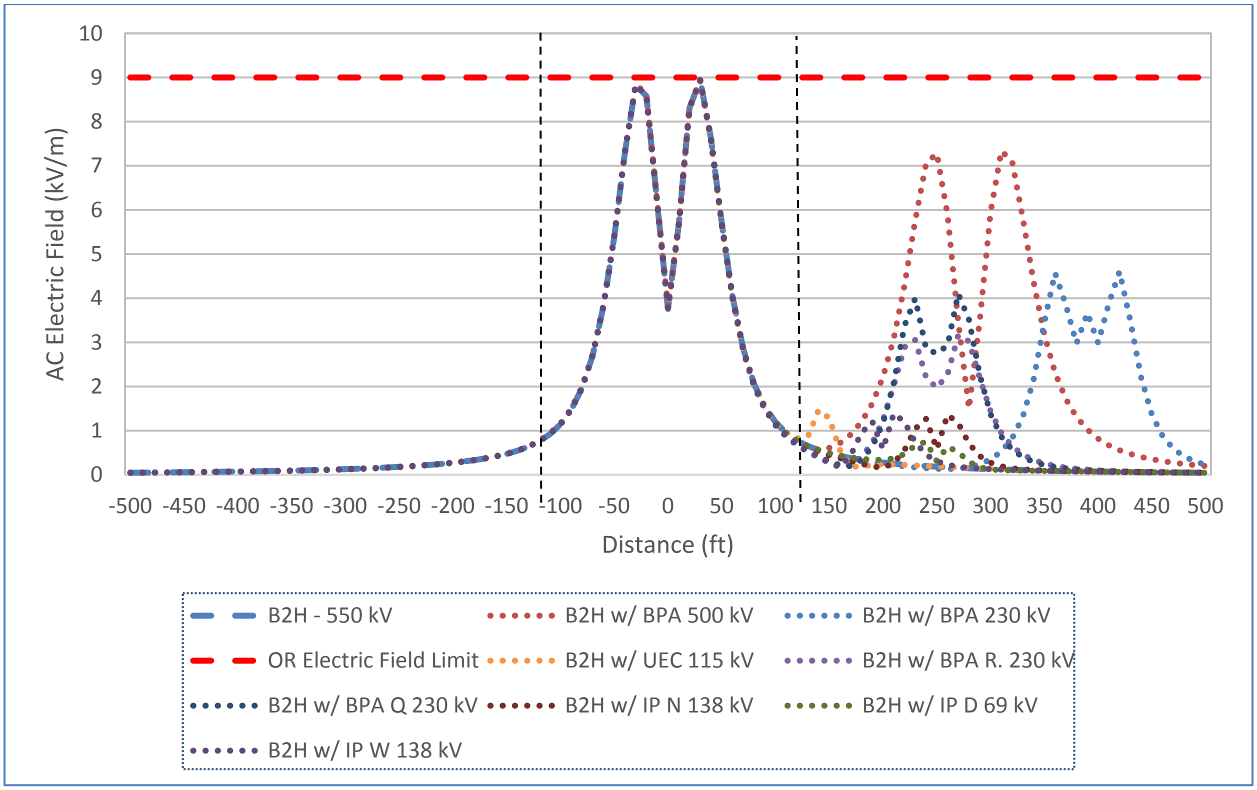


Figure AA-9.Electric Field Profile for Single-Circuit 500-kV Lattice Structures and Existing Parallel Transmission Lines

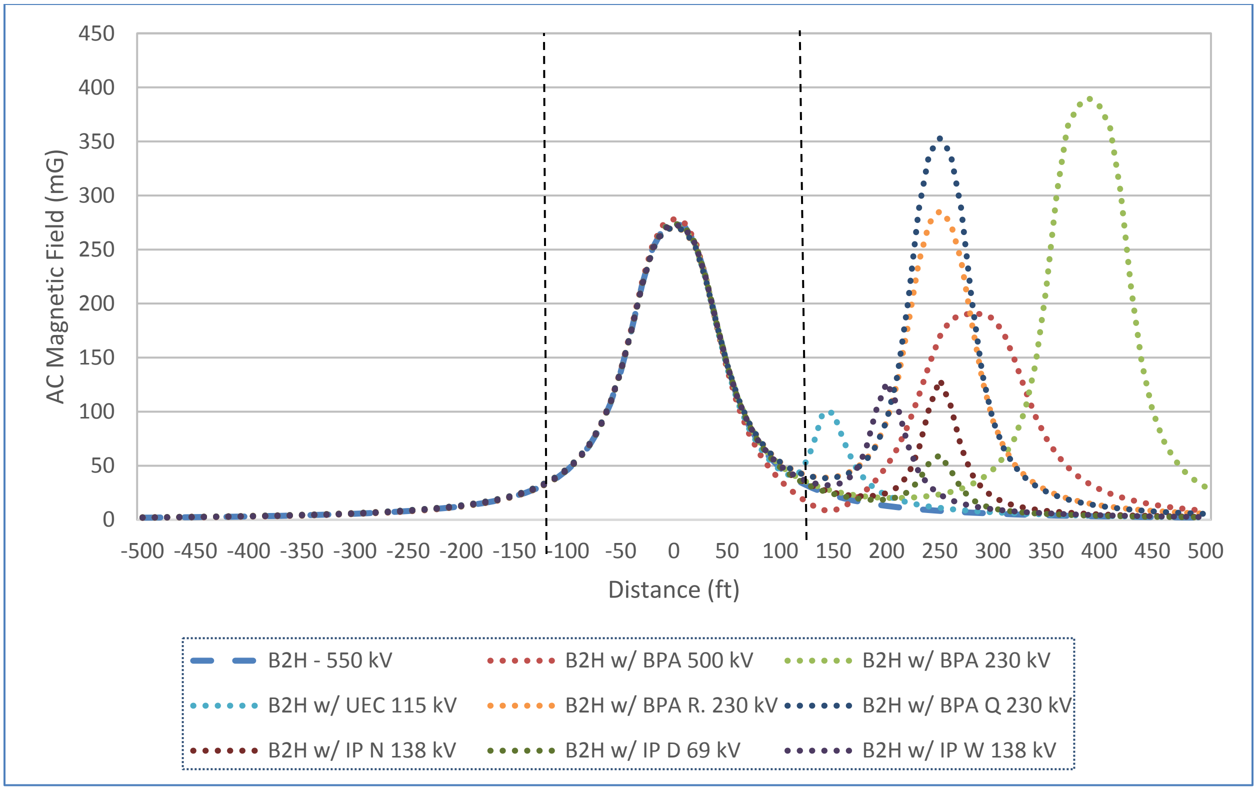


Figure AA-10. Magnetic Field Profile for Single-Circuit 500-kV Lattice Structures and Existing Parallel Transmission Lines

In order to demonstrate compliance with Oregon's electric field limit of 9 kV/m, and also to demonstrate consistency with other states' standards and international guidelines, Table AA-4 and Table AA-5 provide the maximum electric and magnetic field strength within the ROW and EMF levels at the edge of the ROW. Based on the design and modeling parameters described above, the Project will meet Oregon's electric field standard, and EMF levels within and at the edge of the ROW will be lower than standards and guidelines from other states and international organizations.

Table AA-4. Electric Field Strength for Each Considered Structural Configuration

Structure Type	ROW Width (feet)	South/West ROW Edge (kV/m)	Maximum within ROW (kV/m)[5]	North/East ROW Edge (kV/m)
500-kV lattice	250	0.8	8.9	0.8
500-kV H- or Y-frame	250	0.9	8.8	0.9
230-kV H-frame	125	0.8	5.0	0.8
138-kV H-frame	100	0.5	2.3	0.5

Electric field strength calculated at standard height of one meter above ground surface.
kV = kilovolt; kV/m = kilovolt per meter; ROW = right-of-way.

Table AA-5. Magnetic Field Strength for Each Considered Structural Configuration

Structure Type	ROW Width (feet)	South/West ROW Edge (mG)	Maximum within ROW (mG)	North/East ROW Edge (mG)
500-kV lattice	250	33.2	274.5	34.2
500-kV H- or Y-frame	250	33.9	316.2	34.8
230-kV H-frame	125	25.4	162.8	25.4
138-kV H-frame	100	30.3	188.8	30.3

Magnetic field strength calculated at standard height of one meter above ground surface.

3.7 Measures to Reduce Electric and Magnetic Field Levels

> OAR 345-021-0010(1)(aa)(A)(v): Any measures the applicant proposes to reduce electric or magnetic field levels.

The modeling results (Attachment AA-1) are based on certain minimum ground clearances. To ensure compliance with the AC electric field provisions of the Specific Standards for Transmission Lines, IPC proposes that the Council include the following conditions in the site certificate providing that IPC comply with the minimum ground clearances used in the modeling and that the Project otherwise meet the 9 kV/m standard:

> ***Siting Standard Condition 1:*** *During construction, the certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:*
>
> *. . .*
>
> *b. Constructing all aboveground 500-kV transmission lines with a minimum clearance of 34.5 feet from the ground at normal operating conditions;*
>
> *c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 20 feet from the ground at normal operating conditions;*

[5] Under OAR 345-024-0090, the 9-kV per meter threshold is focused on areas accessible to the public. Here, IPC generally will obtain easements for the lands crossed by the Project, and public access to those lands generally will depend on the policies of the landowners and will not be determined until the time that right-of-way negotiations take place (see Exhibit C, Table C-1 (describing the varying landownerships crossed by the Project)). Even so, as set forth in Table AA-4, the maximum electric field value will be below the 9-kV/m threshold throughout the right-of-way, regardless of whether there will be public access or not.

> *d. Constructing all aboveground 138-kV transmission lines with a minimum clearance of 20 feet from the ground at normal operating conditions;*
> *e. In areas where aboveground transmission line will cross an existing transmission line, constructing the transmission line at a height and separation ensuring that alternating current electric fields do not exceed 9-kV per meter at one meter above the ground surface; and*
> *. . . .*

The National Electric Safety Code (NESC) provides industry standards for transmission line design and operation, including standards for ensuring induced currents are as low as reasonably achievable. Accordingly, to ensure compliance with the induced current provisions of the Specific Standards for Transmission Lines, IPC proposes that the Council include the following conditions in the site certificate providing that the Project will be constructed consistent with the 2017 version of the NESC—including the induced current provisions:

> ***Siting Standard Condition 1:*** *During construction, the certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:*
>
> *. . .*
>
> *f. Constructing all aboveground transmission lines in accordance with the requirements of the 2017 edition of the National Electrical Safety Code.*

To ensure affected landowners are provided IPC's educational information, IPC proposes that the Council include the following conditions in the site certificate providing for the same:

> ***Siting Standard Condition 2:*** *During operation, the certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields, including:*
> *a. Providing to landowners a map of overhead transmission lines on their property and advising landowners of possible health and safety risks from induced currents caused by electric and magnetic fields;*
>
> *. . . .*

During final engineering and construction of the Project, IPC will identify all wire fences, pipelines, irrigation lines, metal roofs and other objects nearby the ROW in which a current could be induced. All such objects will be properly grounded within or as close as practicable to the ROW, in order to prevent induced current and nuisance shocks. IPC proposes that the Council include the following conditions in the site certificate providing for the same:

> ***Siting Standard Condition 2****: During operation, the certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields, including:*
>
> *. . .*
>
> *b. Developing and implementing a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation systems, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line; and*
> *c. Implementing a safety protocol to ensure adherence to NESC grounding requirements.*

3.8 Monitoring

OAR 345-021-0010(1)(aa)(A)(vii): The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels.

Here, post-construction monitoring is not necessary because modeling shows electric fields levels will be below Oregon's 9-kV/m standard. Moreover, EMF levels (both electric and magnetic fields) have been conservatively calculated assuming worst-case conditions of line overvoltage and minimum ground clearance, and therefore, EMF levels likely will be lower than those presented here.

3.9 Radio Interference

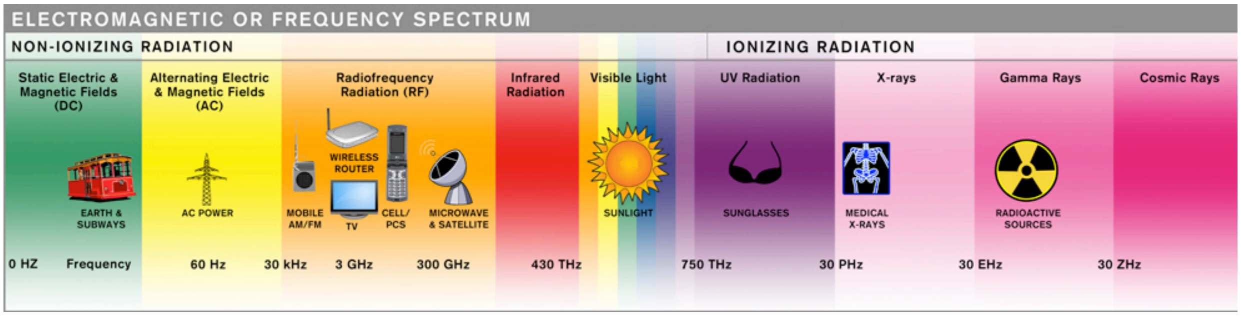
OAR 345-021-0010(1)(aa)(B): An evaluation of alternate methods and costs of reducing radio interference likely to be caused by the transmission line in the primary reception area near interstate, U.S. and state highways.

3.9.1 Background

3.9.1.1 Electromagnetic Interference

Electromagnetic interference from power transmission systems in the U.S. is governed by the Federal Communications Commission (FCC) Rules and Regulations (FCC 1988). A power transmission line is categorized by the FCC as an "incidental radiation device." It is defined as "a device that radiates radio frequency energy during the course of its operation although the device is not intentionally designed to generate radio frequency energy." Such a device "shall be operated so that the radio frequency energy that is emitted does not cause harmful interference. In the event that harmful interference is caused, the operator of the device shall promptly take steps to eliminate the harmful interference." In this case, "harmful interference" is defined as "any emission, radiation or induction which endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radio communication service operating in accordance with this chapter" (FCC 1988). Oregon does not have regulatory standards for either radio or TV interference.

Modern communications systems all rely on electromagnetic radiation (EMR) to transmit information. AM and FM radio, TV, shortwave radio, cellular telephones, radar, Global Positioning System (GPS) devices and satellite communications, cordless telephones, Bluetooth, and wireless computer networks such as WiFi or wireless local area network all utilize a region of the electromagnetic spectrum known as "radio frequency" EMR, which extends from the very low-frequency end at about 30 kilohertz (kHz) up into the high-frequency microwave range at about 300 gigahertz (GHz). Each type of technology uses a specific segment of the electromagnetic frequency spectrum; older technology such as AM radio is at the low-frequency end, while newer technologies such as GPS and WiFi utilize high-frequency signals. Figure AA-11 provides a visual representation of typical communications frequencies.



Source: EMF & Radio Frequency Solutions. Available at: http://www.emfrf.com/index.php/emf-rf/emf-overview/electromagnetic-spectrum-or-frequency-spectrum.html.

Figure AA-11. Communications Frequency Spectrum

The level of interference can be partially determined by how similar or different the signal frequency is compared to the noise frequency. In general, there is very little interaction between signals of differing frequency; radio signals, TV signals, cellular phone signals, and GPS signals can all coexist in the same space and time without interfering with each other. For interference to occur, frequencies must be similar.

3.9.1.2 Sources of Electromagnetic Interference

EMR and resulting interference can be an indirect product of electric transmission lines. EMR arises not from the lines themselves, but from the interaction of the strong electric field at the surface of the conductors and other energized components with the surrounding air. Two types of interactions may occur that create electromagnetic interference: corona discharge and gap discharge.

Corona Discharge

High-voltage power transmission lines generate a strong electric field at the surface of the conductor, which can be strong enough to split the surrounding air molecules, resulting in the emission of electromagnetic energy in the form of ultraviolet and near-ultraviolet light and broad-band radio frequency EMR (corona discharge also produces audible sound, which is addressed in Exhibit X; audible sound is not discussed further in this Exhibit). The former can sometimes be seen by humans under the right conditions or with specialized equipment, while the latter can sometimes be heard as electronic “noise,” or interference with radio signal reception. Broadband corona EMR discharge typically occurs in the frequency spectrum from below 100 kHz to approximately 1,000 megahertz (MHz), which overlaps with the frequencies used for AM and FM radio and some TV signals. With sufficient corona activity, low-frequency radio and TV interference can be noticeable within a few hundred feet of the transmission line. These effects are most pronounced directly underneath the line conductors, and decrease with distance from the transmission line.

Corona on a transmission line conductor depends on several factors such as operating voltage, conductor diameter, overall line geometry, weather conditions, and altitude. Conductor size, line voltage and line geometry are taken into consideration when designing a transmission line so that the electric fields at the conductor surface are minimized. However, for a high-voltage line, any incidental irregularities on the conductor surface (for example, water droplets, dust, debris, and nicks or scratches in the conductor) act as points where the electric field may be intensified sufficiently to produce corona. Thus, the level of corona activity is elevated during foul weather when raindrops on the conductor surface act as points producing corona.

Gap Discharge

A gap discharge occurs when current arcs across a gap between two conductive objects. Gap discharges can produce radio noise in the lower frequencies (AM radio frequencies) and well into the microwave range (analog TV frequencies). These discharges can be produced by loose connections, a problem that more commonly occurs on low-voltage distribution lines but rarely occurs on high-voltage transmission lines (Trinh 2012). Unlike corona discharge, which may occur anywhere along a high-voltage transmission line conductor, gap discharge occurs at mechanical connectors and components that are used to hold the conductors in place. Gap discharge is controlled through proper construction and maintenance practices to ensure all mechanical connectors and components are properly assembled. Because gap discharge is an intermittent, temporary, and readily resolved problem, and results only in localized electrical interference issues, the potential for interference with TV signals or higher-frequency communications is not considered a significant problem.

3.9.1.3 Radio Interference Effects

The corona-induced broadband EMR from transmission lines can produce interference to AM signals, such as a commercial AM radio audio signal (i.e., radio noise) or the video portion of an older analog broadcast TV station (i.e., TV noise). Technologies that use frequency modulation, such as FM radio stations and the audio portion of older analog broadcast TV signals, are generally not affected by noise from a transmission line. As digital signal processing has been integrated into these communication systems, the potential interference impact of corona-generated radio noise has decreased.

The level of interference caused by radio noise from a transmission line to the reception of a radio signal depends on the location of the radio transmitter, the radio receiver, and the transmission line. A transmission line that is directly between a radio transmitter and a listener's receiver may be more likely to interfere with that listener's reception, whereas a transmission line behind or beside the listener in relation to the transmitter will not necessarily cause interference, depending on the radio receiver's antennae. The radio noise generated by a transmission line is very low in power and decreases rapidly as distance from the line increases. It is experienced only when in close proximity to the transmission line.

In general, complaints related to corona-generated interference are infrequent. Moreover, the advent of cable and satellite TV service, and the federally-mandated conversion to digital TV broadcast in June 2009 have greatly reduced the occurrence of corona-generated interference. Low-frequency corona-induced EMR does not interact with the higher-frequency satellite signals or with wired communication systems, while digital TV receivers are equipped with systems to filter out interference. Many radio stations also broadcast in digital, reducing the likelihood of corona-induced EMR interference. Electric power companies are able to operate very effectively under the present FCC rule because harmful interference can generally be eliminated or effectively mitigated.

Radio noise is measured in units of decibels (dB) based on its field strength referenced to a signal level of 1 microvolt per meter (Institute of Electrical and Electronics Engineers [IEEE] 1986). Corona-induced radio noise during fair weather is calculated to be approximately 40 dB (dB-1 microvolt per meter [1 µV/m]) at the edge of the ROW. This is considered an acceptable level (IEEE 1971). When the transmission line is in proximity to roadways (for example, interstate, U.S., and state highways), such as when it passes over these roadways, radio interference may be experienced for short distances while in proximity to the line. Interference may be more noticeable near the line particularly during foul weather, when corona activity is elevated.

3.9.1.4 Interference with Other Electronic Communications

Wireless computer network systems, cell phones, GPS units, and satellite receivers operate at high frequencies in the tens to hundreds of MHz or even GHz. These systems also often use FM or digital coding of the signals so they are relatively immune to electromagnetic interference from transmission line corona. GPS units are used in a wide range of activities, including several important agricultural activities such as monitoring pivot irrigation, tracking wheeled and tracked equipment movements during farming operation, and checking the orientation of aerial spraying aircraft. GPS units operate in the frequency range of 1.2 to 1.6 GHz. Satellite receivers operate at frequencies of 3.4 GHz to 7 GHz and have shown no effect from transmission lines unless the receiver was trying to view the satellite through the transmission tower or conductor bundle of the transmission line (Chartier et al. 1986). Repositioning the receiver by a few feet was sufficient to eliminate the obstruction and reduced signal. Mobile phones operate in the radiofrequency range of about 800 MHz to 1,900 MHz or higher. As a result of the high frequencies used by these devices, modulation and processing techniques, and the typically lower-frequency corona-induced EMR, effects from interference are unlikely.

The voltages and currents associated with the transmission line have the potential to induce voltage and current in nearby conductors (e.g., ungrounded metal fences and ungrounded metal irrigation systems). This effect is more likely where ungrounded fences or irrigation systems are parallel and long (1 mile or more). These induced voltages could result in a “nuisance” shock to anyone who touches such a fence or irrigation system. These shocks are known as nuisance or “startle” shocks as they will not physically harm someone, but may be noticed by some people and provoke a startle reaction. An example of an ungrounded metal irrigation system would be a center pivot system on rubber tires. By contrast, the Vermeer-type metal irrigation system is grounded through its metal wheels and therefore presents less of a shock hazard.

A GPS unit in farming equipment should work properly within the vicinity of a transmission line. GPS devices continually pull signals from a number of satellites, not just one and may also utilize a fixed base station. A signal may be blocked temporarily if the transmission structure is between the receiver and a weak signal, but it will return as the farm equipment moves past the structure. It is also common for GPS receivers to drop and pick up signals even in the absence of transmission lines and structures. If the base station signal is weak or blocked, additional or alternate locations may improve the signal and performance.

Signal interference occurs when other signals at the same frequency as the satellite signal are present. Multipath occurs when objects such as buildings, structures, or tractor parts reflect a GPS satellite signal, causing the satellite signal to arrive at the receiver later than it would have if it followed a straight line from the satellite. A study commissioned by EPRI found that signal interference is “unlikely” based on the design of GPS receivers and their ability to separate the GPS signal from background noise (Silva and Olsen 2002). Another study compared the accuracy of real-time kinematic GPS receivers at different locations to transmission lines and towers (Gibbings et al. 2001). This study concluded that multipath from transmission towers could result in GPS-initialization errors (e.g., the system reports the wrong starting location) 1.1 percent to 2.3 percent of the time. This study also reported that GPS software was able to identify and correct these initialization errors within the normal startup time. This study reported initialization errors caused by electromagnetic interference from energized overhead transmission lines when the GPS receiver was located outside the vehicle, but concluded that “most, if not all of this effect can be eliminated by shielding the receiver and cables.” Placing the receiver inside the vehicle significantly reduced initialization errors.

IPC does not specifically track interference with GPS tractor navigation systems; however, these systems are widely used in other locations in IPC’s service area and several existing transmission lines up to 500-kV cross the area. Over the last 10 years, IPC has not been contacted about interference with tractor GPS navigation systems. Users of these systems have expressed concerns about the possibility of interference, but no specific examples have been reported.

3.9.2 Evaluation of Alternate Methods and Costs to Reduce Interference

Design options for reducing the radio noise from the transmission line include use of larger diameter conductors, or use of more conductors within the conductor bundles. Increasing the distance between phases of the lines (conductor bundles) may also result in a decrease in the radio noise. These line design options have been employed to minimize the generation of radio noise to acceptable levels.

3.10 Long-Term Electric and Magnetic Fields Health Effects

3.10.1 Studies on Electric and Magnetic Fields

For more than 30 years, questions have been asked about the potential effect on people of EMF from power lines. Early studies focused on electric fields, and magnetic fields began receiving increased attention in the late 1970s. A substantial amount of research has been conducted in the U.S. and around the world over the past several decades examining whether exposures to power-frequency EMFs cause health or environmental effects.

Epidemiological studies have addressed many of the issues raised about EMFs and health. Multidisciplinary reviews express the consensus in the scientific community that the epidemiologic evidence is insufficient to demonstrate a causal relationship between extremely low-frequency (power frequency) EMF and any health effect (NIEHS 1998, 1999; HCN 2001, 2004; National Radiological Protection Board of Great Britain [NRPB] 2001, 2004; IARC 2002).

Several organizations responsible for health decisions, including national and international organizations, have convened groups of scientists to review the body of EMF research. These expert groups, including the National Academy of Science, the NIEHS, the International Agency for Research on Cancer, the National Radiological Protection Board of Great Britain, and the Health Council of the Netherlands, have included dozens of scientists with diverse skills that reflect the different research approaches required to answer questions about health.

The assessments by these organizations agree that little evidence is available to suggest EMF is associated with adverse health effects, including most forms of adult and childhood cancer, heart disease, Alzheimer’s disease, depression, and reproductive effects. However, all of the assessments concluded that epidemiology studies in total suggest an association between magnetic fields at higher time-weighted average exposure levels (greater than 4 mG) and childhood leukemia. Nevertheless, all agree that the experimental laboratory data do not support a causal link between EMF and any adverse health effect, including leukemia, and have not concluded that EMF is, in fact, the cause of any disease.

Animal exposure to EMFs has also been investigated for over 30 years. Vegetation in the form of grasses, shrubs, and small trees largely shields small, ground-dwelling species, such as mice, rabbits, foxes, and snakes, from electric fields. Species that live underground, such as moles, woodchucks, and worms, are further shielded from electric fields by the soil; aquatic species are shielded from electric fields by water. Large species such as deer and domestic livestock have greater potential exposures to electric fields since they can stand taller than the surrounding vegetation. However, the duration of exposure for deer and other large animals is limited to foraging bouts or the time it takes them to cross under the line. All species will be exposed to higher magnetic fields under or near a transmission line than elsewhere because vegetation and soil do not provide shielding from this aspect of the transmission-line electrical environment.

Field studies have been performed to monitor the behavior of large mammals in the vicinity of high-voltage transmission lines. No effects of electric or magnetic fields were evident in two studies from the northern U.S. on big game species, such as deer and elk, exposed to a 500-kV transmission line (Goodwin 1975; Picton et al. 1985).

Much larger populations of animals that might spend time near a transmission line are livestock that graze under or near transmission lines. To provide a more sensitive and reliable test for adverse effects other than informal observation, scientists have studied animals continuously exposed to fields from high-voltage lines in relatively controlled conditions. For example, grazing animals, such as cows and sheep, have been exposed to high-voltage transmission lines and their reproductive performance examined (Lee et al. 1996). No adverse effects were found among cattle exposed to a 500-kV direct-current overhead transmission line over one or more successive breeding events (Angell et al. 1990). Compared to unexposed animals in a similar environment, the exposure to 50-Hz fields did not affect reproductive functions or pregnancy of cows (Algers and Hennichs 1985; Algers and Hultgren 1987). Sheep and cattle exposed to EMFs from transmission lines exceeding 500 kV were examined and no effect was found on their levels of hormones in the blood, weight gain, onset of puberty, or behavior (Stormshak et al. 1992; Lee et al. 1993; Lee et al. 1995; Thompson et al. 1995; Burchard et al. 1998; Burchard et al. 2004).

Similar to the human health studies, no mechanism has been demonstrated between the exposure of an animal to transmission line levels of electric and magnetic fields and a disease outcome. Another noteworthy study was performed by a professor of veterinary medicine at Purdue University. The study evaluated the effect of high-voltage power lines on milk production, reproductive performance, and the general health of farm animals maintained under practical farm conditions. Doctors Amstutz and Miller compared horses, beef cattle, dairy cattle, sheep, and hogs on 12 different farms in central Indiana. Some of the farms were located near a 765-kV electric transmission line while other farms with similar herds were located away from the line. The study concluded that there was no apparent difference between the animals located near the line and those located away from the line.

Greenberg et al. (1981) studied honeybee colonies placed near 765-kV transmission lines. They found that hives exposed to AC electric fields of 7-kV/m had decreased hive weight, abnormal amounts of propolis (a resinous material) at hive entrances, increased mortality and irritability, loss of the queen in some hives, and a decrease in the hive's overall survival compared to hives that were not exposed. Placing the hive farther from the line, shielding the hive, or using hives without metallic parts eliminates this problem.

Numerous studies have been carried out to assess the effect of plant exposure to transmission line EMFs. These studies have involved forest species and agriculture crops. Researchers have found no adverse effects on plant responses, including seed germination, seedling emergence, seedling growth, leaf area per plant, flowering, seed production, germination of the seeds, longevity, and biomass production (Lee et al. 1996).

Direct excerpts from certain of the reports discussed above are included here.

National Institute of Environmental Health Sciences (NIEHS 1999)

"The scientific evidence suggesting that ELF-EMF exposures pose any health risk is weak. The strongest evidence for health effects comes from associations observed in human populations with two forms of cancer: childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults. While the support from individual studies is weak, the epidemiological studies demonstrate, for some methods of measuring exposure, a fairly consistent pattern of a small, increased risk with increasing exposure that is somewhat weaker for chronic lymphocytic leukemia than for childhood leukemia. In contrast, the mechanistic studies and the animal toxicology literature fail to demonstrate any consistent pattern across studies although sporadic findings of biological effects have been reported. No indication of increased leukemia in experimental animals has been observed."

"The lack of connection between the human data and the experimental data (animal and mechanistic) severely complicates the interpretation of these results. The human data are in the "right" species, are tied to "real life" exposures and show some consistency that is difficult to ignore. This assessment is tempered by the observation that given the weak magnitude of these increased risks, some other factor or common source of error could explain these findings. However, no consistent explanation other than exposure to ELF-EMF has been identified."

"Epidemiological studies have serious limitations in their ability to demonstrate a cause and effect relationship whereas laboratory studies, by design, can clearly show that cause and effect are possible. Virtually all of the laboratory evidence in animals and humans and most of the mechanistic work done in cells fail to support a causal relationship between exposure to ELF-EMF at environmental levels and changes in biological function or disease status. The lack of consistent, positive findings in animal or mechanistic studies weakens the belief that this association is actually due to ELF-EMF, but it cannot completely discount the epidemiological findings."

"The NIEHS concludes that ELF-EMF exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. However, because virtually everyone in the United States uses electricity and therefore is routinely exposed to ELF-EMF, passive regulatory action is warranted such as a continued emphasis on educating both the public and the regulated community on means aimed at reducing exposures. The NIEHS does not believe that other cancers or non-cancer health outcomes provide sufficient evidence of a risk to currently warrant concern."

National Academy of Sciences (1999)

"An earlier Research Council assessment of the available body of information on biologic effects of power-frequency magnetic fields (National Research Council [NRC], 1997; http://www.nap.edu/catalog.php?record id=5155#toc) led to the conclusion 'that the current body of evidence does not show that exposure to these fields presents a human health hazard. Specifically, no conclusive and consistent evidence shows that exposure to residential electric and magnetic fields produces cancer, adverse neurobehavioral effects, or reproductive and developmental effects'. The new, largely unpublished contributions of the EMF-RAPID program are consistent with that conclusion. We conclude that no finding from the EMF-RAPID program alters the conclusions of the previous NRC review on the Possible Effects of Electromagnetic Fields on Biologic Systems (NRC, 1997). In view of the negative outcomes of EMFRAPID replication studies, it now appears even less likely that MFs [magnetic fields] in the normal domestic or occupational environment produce important health effects, including cancer."

National Radiological Protection Board of Great Britain (NRPB 2001, 2004)

"Laboratory experiments have provided no good evidence that extremely low-frequency [ELF] electromagnetic fields are capable of producing cancer, nor do human epidemiological studies suggests that they cause cancer in general. There is, however, some epidemiological evidence that prolonged exposure to higher levels of power frequency magnetic fields is associated with a small risk of leukemia in children. In practice, such levels of exposure are seldom encountered by the general public in the UK [or in the US].”

“Because of the uncertainty… and in absence of a ‘dose-response’ relationship, NRPB has concluded that the data concerning childhood leukemia cannot be used to derive quantitative guidance on restricting exposure.”

Health Council of the Netherlands (HCN 2001 and 2004)

“Because the association is only weak and without a reasonable biological explanation, it is not unlikely that it [an association between ELF exposure and childhood leukemia] could also be explained by chance… The committee therefore sees no reason to modify its earlier conclusion that the association is not likely to be indicative of a causal relationship.”

“The Committee, like the IARC itself, points out that there is no evidence to support the existence of a causal relationship here. Nor has research yet uncovered any evidence that a causal relationship might exist.”

International Agency for Research on Cancer (IARC 2002)

“Studies in experimental animals have not shown consistent carcinogenic or co-carcinogenic effects of exposures to ELF [extremely low frequency] magnetic fields, and no scientific explanation has been established for the observed association of increased childhood leukemia risk with increasing residential ELF magnetic field exposure.” IARC categorized EMF as a “possible carcinogen” for exposures at high levels, based on the meta-analysis of studies of statistical links with childhood leukemia at levels above 3 to 4 mG.

3.10.2 Oregon Energy Facility Siting Council Report

In the fall of 2009, EFSC requested that its contractor review recently released and historical information about EMF to validate that the 9-kV/m requirement was still relevant. In 2009, ICNIRP released their update, and that report triggered EFSC’s request.

Previously, in 1991 EFSC had established an Electric and Magnetic Field Committee that conducted its own review of the science concerning EMF, and concluded that while low-cost prudent avoidance of EMF exposure by the general public was encouraged, it was premature to set health-based limits to EMF from 60 Hz power lines based on the available science at that time. The Committee did recommend continuing to review the science surrounding EMF and potential health issues. The report compiled newly available information and was presented to EFSC in 2009. The report contained a discussion of U.S. state and federal level regulatory activities regarding EMF from transmission lines, along with a discussion of the factors that confound experiments and epidemiological EMF studies, complicating their interpretation.

Dr. Warner concluded: “Although there has been considerable research on the potential negative health effects of extremely low-frequency EMF exposure in the last two decades, the conclusions drawn by US and international reviewing bodies are not significantly different from those drawn by the Council’s Electric and Magnetic Field Committee in 1993. Those conclusions are (1) there is a need to continue to monitor the science on EMF, (2) low-cost prudent avoidance measures of public EMF exposure is appropriate, and (3) health-based exposure limits are not appropriate with the scientific data available to date.” At this point, EFSC decided to take no additional actions regarding the 9-kV/m requirement.

3.10.3 Bonneville Power Administration Report

The Bonneville Power Administration retained Exponent to prepare a report “Research on Extremely Low Frequency Electric and Magnetic Fields and Health” (Exponent 2015). The study provided an overview of previous research that investigated links between extremely low frequency electric and magnetic fields and various forms of cancer, leukemia and lymphoma, reproductive and developmental effects and neurodegenerative disease as well as an evaluation of research on the effects on pacemakers and other cardiac devices, plants and animals.

The report indicates that recent studies have shown no solid causal relationship between the exposure to electric and magnetic fields and the development of childhood cancer, leukemia, breast cancer, brain cancer, tumors, genotoxic effects in mammals, reproductive and developmental effects, and neurodegenerative diseases. The overview also highlighted the lack of a link to adverse effects on animal populations in the vicinity of high voltage transmission lines. The overview did note that interference with the operation of pacemakers and other cardiac devices was possible but unlikely due to modern device designs. Finally, the overview reviewed studies that indicated there may be an adverse effect on commercial honey bee hives although there was not a link to effects on wild honey bees.

3.10.4 Other Health Effects

One area of concern related to transmission line EMF is the potential for interference with cardiac pacemakers and defibrillators. A cardiac pacemaker monitors the electrical activity of the heart. If the heart fails to beat, the pacemaker administers a small stimulus to trigger the missing beats. An implanted cardiac defibrillator similarly monitors the electrical activity of the heart but is designed to block disorganized contractions of the heart (arrhythmias) by administering a strong electrical shock to restore normal heart rhythms. Exposure to EMFs could affect the function of these devices if induced signals on sensing leads are interpreted as natural cardiac activity (Griffin 1986; CCOHS 1988; Barold et al. 1991). As a result of recent design improvements, many pacemakers will not be particularly susceptible to electrical fields. There remains a small possibility that some pacemakers, particularly those of older designs and with single-lead electrodes, may sense potentials induced on the electrodes and leads of the pacemaker and provide unnecessary stimulation to the heart. However, the opportunities for exposure and interference from power lines are lower than for contact with ordinary household appliances.

EMFs from a variety of sources, including some industrial equipment, automobile ignition wiring, anti-theft devices in stores, magnetic resonance imaging (or MRI) machines, slot machines, cell phones, and certain medical procedures (e.g., radiation therapy, electrocautery, and defibrillation), have been reported to affect the operation of implanted cardiac pacemakers and defibrillators. In theory, pacemaker interference from the electric fields associated with high-voltage transmission lines may be possible depending on the type of pacemaker, the person’s location and orientation under the conductors of the transmission line, and the voltage and design of the transmission line. The manufacturers of pacemakers have designed their devices in various ways to minimize potential interference from external sources, including power line EMFs. For example, the increasingly prevalent bipolar pacemaker models are virtually immune to interference. Medtronic, a leading producer of pacemakers, notifies users of its products to limit their exposure to power frequency fields to below 6 kV/m and 1,000 mG to protect against possible electrical interference (Medtronic 2006).

Two general types of pacemakers exist: asynchronous and synchronous. The asynchronous pacemaker pulses at a predetermined rate. It is practically immune to interference because it has no sensing circuitry and is not exceptionally complex. The synchronous pacemaker, on the other hand, pulses only when its sensing circuitry determines pacing is necessary. Interference resulting from transmission line EMFs can cause a spurious signal in the pacemaker's sensing circuitry. However, when these pacemakers detect a spurious signal, such as a 60-Hz signal, they are programmed to revert to an asynchronous or fixed pacing mode of operation and return to synchronous operation within a specified time after the signal is no longer detected. The potential for pacer interference depends on the manufacturer, model, and implantation method, among other factors. Studies have determined thresholds of interference for the most sensitive units to be about 2,000 to 12,000 mG for magnetic fields and about 1.5 to 2.0 kV/m for electric fields. The magnetic fields from the transmission lines are well below these values, even the peak magnetic field of 316 mG found on the ROW (Table AA-5) for the H-frame tower. The electric fields expected at the edges of the ROW (1.2 kV/m or less) are below the threshold level of 1.5 kV/m for the most sensitive pacemaker. The proposed transmission lines will not affect pacemakers outside the ROW.

Cardiovascular specialists do not consider prolonged asynchronous pacing to be a problem. Periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Although the electric field within areas of the transmission line ROW may affect the operation of some models of pacemakers by causing them to revert to asynchronous pacing, this will only be for a short duration while walking under the transmission lines and is not considered harmful. The vehicle compartment of a car or truck or the cab of agricultural equipment (combine or tractor) shields the occupant from the electric field. Pacemakers in areas outside the transmission line ROW will not be affected. Before walking under the conductors of a high-voltage transmission line on the ROW, those with pacemakers or defibrillators should check with their physician if they have concerns.

4.0 IDAHO POWER'S PROPOSED SITE CERTIFICATE CONDITIONS

IPC proposes the following site certificate conditions to ensure compliance with the relevant EFSC standards.

During Construction

Siting Standard Condition 1*: During construction, the certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:*
a. Constructing all aboveground transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line;
b. Constructing all aboveground 500-kV transmission lines with a minimum clearance of 34.5 feet from the ground at normal operating conditions;
c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 20 feet from the ground at normal operating conditions;
d. Constructing all aboveground 138-kV transmission lines with a minimum clearance of 20 feet from the ground at normal operating conditions;
e. In areas where aboveground transmission line will cross an existing transmission line, constructing the transmission line at a height and separation ensuring that alternating current electric fields do not exceed 9-kV per meter at one meter above the ground surface; and
f. Constructing all aboveground transmission lines in accordance with the requirements of the 2017 edition of the National Electrical Safety Code.

During Operation

Siting Standard Condition 2*: During operation, the certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:*
a. Providing to landowners a map of overhead transmission lines on their property and advising landowners of possible health and safety risks from induced currents caused by electric and magnetic fields;
b. Implementing a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation systems, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line; and
c. Implementing a safety protocol to ensure adherence to NESC grounding requirements.

5.0 CONCLUSION

Exhibit AA demonstrates the Project will ensure public health and safety with respect to EMFs. Also, this Exhibit, together with the data provided in Exhibit DD, demonstrates that the Project's AC electric fields and induced currents will comply with the Specific Standards for Transmission Lines under OAR 345-024-0090 provide.

6.0 COMPLIANCE CROSS-REFERENCES

Table AA-6 identifies the location within the application for site certificate of the information responsive to the application submittal requirements of OAR 345-021-0010(1)(aa), the Specific Standards for Transmission Lines at OAR 345-024-0090, and the relevant Second Amended Project Order provisions.

Table AA-6. Compliance Requirements and Relevant Cross-References

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:	
(i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way;	Exhibit AA, Section 3.3
(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;	Exhibit AA, Section 3.4
(iii) The approximate distance in feet from the proposed center line to each structure identified in (A);	Exhibit AA, Section 3.4
(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;	Exhibit AA, Section 3.6, Figure AA-1 through Figure AA-8

Requirement	Location
(v) Any measures the applicant proposes to reduce electric or magnetic field levels;	Exhibit AA, Section 3.7
(vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line; and	Exhibit AA, Section 3.5
(vii) The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels; and	Exhibit AA, Section 3.8
(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;	Exhibit AA, Section 3.9
OAR 345-024-0090	
To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:	
(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;	Exhibit AA, Section 3.5; Exhibit DD, Section 3.3
(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.	Exhibit AA, Section 3.5; Exhibit DD, Section 3.4
Second Amended Project Order, Section III(aa)	
The provisions of Exhibit AA apply.	Throughout Exhibit AA

7.0 RESPONSE TO PUBLIC COMMENTS

ODOE received over 450 comments based on the Notice of Intent and the related scoping meetings. ODOE summarized those comments in the First Amended Project Order (December 2014) and then removed the summaries from the Second Amended Project Order "to reduce the risk of misinterpreting the intention of the individual comment."[6] Although ODOE eliminated the requirement that IPC address the comment summaries, IPC nonetheless voluntarily addresses those summaries here in Table AA-7, identifying the location within the Application for Site Certificate of the information responsive to the comments summarized in the First Amended Project Order.

[6] Second Amended Project Order, Section VI(a).

Table AA-7. Response to Comment Summaries

Comment Summaries	Location
Numerous commenters expressed concern about potential human health impacts of a high voltage transmission line from electromagnetic fields, corona effects, and induced currents. Exhibit AA shall include evidence that the proposed facility can meet the Council standards specific to transmission lines, and include mitigation measures proposed by the applicant to reduce or eliminate threats to human health and safety during construction and operation of the transmission line.	Exhibit AA, Section 3.10; Exhibit DD, Section 3.5
Many commenters expressed concern about the possibility that the transmission line will interfere with the normal operations of radios, telephones, and other electronic devices in the vicinity of the line. Exhibit AA should include discussion and mitigation measures to reduce or eliminate interference with electronic devices. This is especially important in farm use zones, where farmers often use a variety of electronic locating devices on mechanical equipment during planting and harvesting and other farming activities.	Exhibit AA, Section 3.9

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ATTACHMENT AA-1
EMF ENVIRO MODELING RESULTS

RESULTS OF ENVIRO PROGRAM

Single Circuit, 1,575 amp, 550-kV, Lattice Structure at 5,000 ft elevation.
Part 1: From Centerline to 3,100 ft horizontally.

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	550.0	.0	1575.0	.0	3	-23.0	34.5	A
2	1	550.0	240.0	1575.0	120.0	3	.0	66.0	B
3	1	550.0	120.0	1575.0	240.0	3	23.0	34.5	C

MINIMUM GROUND CLEARANCE = 34.500 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)

SUBCONDUCTOR INFORMATION - IRREGULAR BUNDLES

BNDL #	COORDINATES X (IN)	COORDINATES Y (IN)	DIAMETER (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	.00	.000	1.300	.06840	.071000	.368000
1	10.00	12.500	1.300	.06840	.071000	.368000
1	20.00	.000	1.300	.06840	.071000	.368000
2	.00	.000	1.300	.06840	.071000	.368000
2	10.00	12.500	1.300	.06840	.071000	.368000
2	20.00	.000	1.300	.06840	.071000	.368000
3	.00	.000	1.300	.06840	.071000	.368000
3	10.00	12.500	1.300	.06840	.071000	.368000
3	20.00	.000	1.300	.06840	.071000	.368000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	17.14	24.24	-24.24
2	AC	16.18	22.88	-22.88
3	AC	17.14	24.24	-24.24

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*     AC  ELECTRIC FIELD PROFILE      *
*    at   3.28 feet above ground      *
*                                     *
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LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
.0	.00	3.757	.381	3.753	1.440	3.773
10.0	3.05	5.665	.141	5.576	1.281	5.550
20.0	6.10	8.306	.039	8.283	.691	8.198
30.0	9.14	8.943	.021	8.941	.246	8.864
40.0	12.19	7.626	.021	7.603	.617	7.580
50.0	15.24	5.695	.026	5.663	.626	5.671
60.0	18.29	4.040	.032	4.014	.479	4.029
70.0	21.34	2.858	.036	2.840	.332	2.852
80.0	24.38	2.065	.039	2.055	.224	2.063
90.0	27.43	1.541	.040	1.534	.152	1.539
100.0	30.48	1.189	.039	1.186	.105	1.189
110.0	33.53	.948	.036	.946	.074	.948
120.0	36.58	.777	.033	.776	.054	.777
130.0	39.62	.653	.030	.652	.040	.652
140.0	42.67	.558	.026	.558	.031	.558
150.0	45.72	.485	.023	.484	.024	.485
160.0	48.77	.426	.020	.426	.019	.426
170.0	51.82	.379	.018	.378	.016	.379
180.0	54.86	.339	.016	.339	.013	.339
190.0	57.91	.306	.014	.306	.011	.306
200.0	60.96	.277	.012	.277	.009	.277
210.0	64.01	.253	.011	.253	.008	.253
220.0	67.06	.231	.010	.231	.007	.231
230.0	70.10	.213	.009	.213	.006	.213
240.0	73.15	.196	.008	.196	.005	.196
250.0	76.20	.182	.007	.182	.005	.182
260.0	79.25	.169	.007	.169	.004	.169
270.0	82.30	.157	.006	.157	.004	.157
280.0	85.34	.146	.006	.146	.003	.146
290.0	88.39	.137	.005	.137	.003	.137
300.0	91.44	.128	.005	.128	.003	.128
310.0	94.49	.121	.004	.121	.003	.121
320.0	97.54	.113	.004	.113	.002	.113
330.0	100.58	.107	.004	.107	.002	.107
340.0	103.63	.101	.004	.101	.002	.101
350.0	106.68	.096	.003	.095	.002	.095
360.0	109.73	.090	.003	.090	.002	.090
370.0	112.78	.086	.003	.086	.001	.086
380.0	115.82	.081	.003	.081	.001	.081
390.0	118.87	.077	.003	.077	.001	.077
400.0	121.92	.074	.003	.074	.001	.074
410.0	124.97	.070	.002	.070	.001	.070
420.0	128.02	.067	.002	.067	.001	.067
430.0	131.06	.064	.002	.064	.001	.064
440.0	134.11	.061	.002	.061	.001	.061
450.0	137.16	.059	.002	.059	.001	.059
460.0	140.21	.056	.002	.056	.001	.056
470.0	143.26	.054	.002	.054	.001	.054
480.0	146.30	.052	.002	.052	.001	.052
490.0	149.35	.050	.002	.050	.001	.050
500.0	152.40	.048	.002	.048	.001	.048
515.0	156.97	.045	.001	.045	.001	.045
530.0	161.54	.043	.001	.043	.001	.043
545.0	166.12	.040	.001	.040	.000	.040

560.0	170.69	.038	.001	.038	.000	.038
575.0	175.26	.036	.001	.036	.000	.036
590.0	179.83	.034	.001	.034	.000	.034
605.0	184.40	.033	.001	.033	.000	.033
620.0	188.98	.031	.001	.031	.000	.031
635.0	193.55	.030	.001	.030	.000	.030
650.0	198.12	.028	.001	.028	.000	.028
665.0	202.69	.027	.001	.027	.000	.027
680.0	207.26	.026	.001	.026	.000	.026
695.0	211.84	.025	.001	.025	.000	.025
710.0	216.41	.024	.001	.024	.000	.024
725.0	220.98	.023	.001	.023	.000	.023
740.0	225.55	.022	.001	.022	.000	.022
755.0	230.12	.021	.001	.021	.000	.021
770.0	234.70	.020	.001	.020	.000	.020
785.0	239.27	.020	.001	.020	.000	.020
800.0	243.84	.019	.001	.019	.000	.019
815.0	248.41	.018	.001	.018	.000	.018
830.0	252.98	.018	.001	.018	.000	.018
845.0	257.56	.017	.001	.017	.000	.017
860.0	262.13	.016	.000	.016	.000	.016
875.0	266.70	.016	.000	.016	.000	.016
890.0	271.27	.015	.000	.015	.000	.015
905.0	275.84	.015	.000	.015	.000	.015
920.0	280.42	.014	.000	.014	.000	.014
935.0	284.99	.014	.000	.014	.000	.014
950.0	289.56	.013	.000	.013	.000	.013
965.0	294.13	.013	.000	.013	.000	.013
980.0	298.70	.013	.000	.013	.000	.013
995.0	303.28	.012	.000	.012	.000	.012
1010.0	307.85	.012	.000	.012	.000	.012
1025.0	312.42	.012	.000	.012	.000	.012
1040.0	316.99	.011	.000	.011	.000	.011
1055.0	321.56	.011	.000	.011	.000	.011
1070.0	326.14	.011	.000	.011	.000	.011
1085.0	330.71	.010	.000	.010	.000	.010
1100.0	335.28	.010	.000	.010	.000	.010
1115.0	339.85	.010	.000	.010	.000	.010
1130.0	344.42	.009	.000	.009	.000	.009
1145.0	349.00	.009	.000	.009	.000	.009
1160.0	353.57	.009	.000	.009	.000	.009
1175.0	358.14	.009	.000	.009	.000	.009
1190.0	362.71	.009	.000	.009	.000	.009
1205.0	367.28	.008	.000	.008	.000	.008
1220.0	371.86	.008	.000	.008	.000	.008
1235.0	376.43	.008	.000	.008	.000	.008
1250.0	381.00	.008	.000	.008	.000	.008
1265.0	385.57	.008	.000	.008	.000	.008
1280.0	390.14	.007	.000	.007	.000	.007
1295.0	394.72	.007	.000	.007	.000	.007
1310.0	399.29	.007	.000	.007	.000	.007
1325.0	403.86	.007	.000	.007	.000	.007
1340.0	408.43	.007	.000	.007	.000	.007
1355.0	413.00	.007	.000	.007	.000	.007
1370.0	417.58	.006	.000	.006	.000	.006
1385.0	422.15	.006	.000	.006	.000	.006
1400.0	426.72	.006	.000	.006	.000	.006
1415.0	431.29	.006	.000	.006	.000	.006
1430.0	435.86	.006	.000	.006	.000	.006
1445.0	440.44	.006	.000	.006	.000	.006
1460.0	445.01	.006	.000	.006	.000	.006
1475.0	449.58	.006	.000	.006	.000	.006
1490.0	454.15	.005	.000	.005	.000	.005

1505.0	458.72	.005	.000	.005	.000	.005
1520.0	463.30	.005	.000	.005	.000	.005
1535.0	467.87	.005	.000	.005	.000	.005
1550.0	472.44	.005	.000	.005	.000	.005
1565.0	477.01	.005	.000	.005	.000	.005
1580.0	481.58	.005	.000	.005	.000	.005
1595.0	486.16	.005	.000	.005	.000	.005
1610.0	490.73	.005	.000	.005	.000	.005
1625.0	495.30	.005	.000	.005	.000	.005
1640.0	499.87	.005	.000	.005	.000	.005
1655.0	504.44	.004	.000	.004	.000	.004
1670.0	509.02	.004	.000	.004	.000	.004
1685.0	513.59	.004	.000	.004	.000	.004
1700.0	518.16	.004	.000	.004	.000	.004
1715.0	522.73	.004	.000	.004	.000	.004
1730.0	527.30	.004	.000	.004	.000	.004
1745.0	531.88	.004	.000	.004	.000	.004
1760.0	536.45	.004	.000	.004	.000	.004
1775.0	541.02	.004	.000	.004	.000	.004
1790.0	545.59	.004	.000	.004	.000	.004
1805.0	550.16	.004	.000	.004	.000	.004
1820.0	554.74	.004	.000	.004	.000	.004
1835.0	559.31	.004	.000	.004	.000	.004
1850.0	563.88	.004	.000	.004	.000	.004
1865.0	568.45	.003	.000	.003	.000	.003
1880.0	573.02	.003	.000	.003	.000	.003
1895.0	577.60	.003	.000	.003	.000	.003
1910.0	582.17	.003	.000	.003	.000	.003
1925.0	586.74	.003	.000	.003	.000	.003
1940.0	591.31	.003	.000	.003	.000	.003
1955.0	595.88	.003	.000	.003	.000	.003
1970.0	600.46	.003	.000	.003	.000	.003
1985.0	605.03	.003	.000	.003	.000	.003
2000.0	609.60	.003	.000	.003	.000	.003
2025.0	617.22	.003	.000	.003	.000	.003
2050.0	624.84	.003	.000	.003	.000	.003
2075.0	632.46	.003	.000	.003	.000	.003
2100.0	640.08	.003	.000	.003	.000	.003
2125.0	647.70	.003	.000	.003	.000	.003
2150.0	655.32	.003	.000	.003	.000	.003
2175.0	662.94	.003	.000	.003	.000	.003
2200.0	670.56	.003	.000	.003	.000	.003
2225.0	678.18	.002	.000	.002	.000	.002
2250.0	685.80	.002	.000	.002	.000	.002
2275.0	693.42	.002	.000	.002	.000	.002
2300.0	701.04	.002	.000	.002	.000	.002
2325.0	708.66	.002	.000	.002	.000	.002
2350.0	716.28	.002	.000	.002	.000	.002
2375.0	723.90	.002	.000	.002	.000	.002
2400.0	731.52	.002	.000	.002	.000	.002
2425.0	739.14	.002	.000	.002	.000	.002
2450.0	746.76	.002	.000	.002	.000	.002
2475.0	754.38	.002	.000	.002	.000	.002
2500.0	762.00	.002	.000	.002	.000	.002
2525.0	769.62	.002	.000	.002	.000	.002
2550.0	777.24	.002	.000	.002	.000	.002
2575.0	784.86	.002	.000	.002	.000	.002
2600.0	792.48	.002	.000	.002	.000	.002
2625.0	800.10	.002	.000	.002	.000	.002
2650.0	807.72	.002	.000	.002	.000	.002
2675.0	815.34	.002	.000	.002	.000	.002
2700.0	822.96	.002	.000	.002	.000	.002
2725.0	830.58	.002	.000	.002	.000	.002

2750.0	838.20	.002	.000	.002	.000	.002
2775.0	845.82	.002	.000	.002	.000	.002
2800.0	853.44	.002	.000	.002	.000	.002
2825.0	861.06	.002	.000	.002	.000	.002
2850.0	868.68	.001	.000	.001	.000	.001
2875.0	876.30	.001	.000	.001	.000	.001
2900.0	883.92	.001	.000	.001	.000	.001
2925.0	891.54	.001	.000	.001	.000	.001
2950.0	899.16	.001	.000	.001	.000	.001
2975.0	906.78	.001	.000	.001	.000	.001
3000.0	914.40	.001	.000	.001	.000	.001
3025.0	922.02	.001	.000	.001	.000	.001
3050.0	929.64	.001	.000	.001	.000	.001
3075.0	937.26	.001	.000	.001	.000	.001
3100.0	944.88	.001	.000	.001	.000	.001

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AC CURRENTS IN EACH BUNDLE:

BNDL	----- AC CURRENTS (Amperes) -----			BUNDLE POSITION	
#	REAL	IMAGINARY	TOTAL	X-COORD	Y-COORD
1	1575.00	.00	1575.00	-23.00	34.50
2	-787.50	1363.99	1575.00	.00	66.00
3	-787.50	-1363.99	1575.00	23.00	34.50

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*                                     *
*        MAGNETIC FIELD PROFILE       *
*      at   3.28 feet  above ground   *
*                                     *
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LATERAL DISTANCE (feet)	(meters)	<----------- AC MAGNETIC FIELD ------------> MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
.0	.00	269.85	.186	269.69	51.04	274.47
10.0	3.05	266.09	.197	245.97	114.20	271.19
20.0	6.10	249.50	.230	170.48	190.99	256.01
30.0	9.14	215.98	.276	83.02	208.12	224.07
40.0	12.19	173.36	.327	59.11	172.53	182.38
50.0	15.24	133.90	.376	70.54	124.43	143.04
60.0	18.29	102.90	.420	70.78	86.30	111.62
70.0	21.34	80.01	.460	63.72	60.80	88.07
80.0	24.38	63.31	.495	54.84	44.51	70.63
90.0	27.43	51.02	.525	46.49	34.04	57.62
100.0	30.48	41.83	.551	39.33	27.08	47.75
110.0	33.53	34.82	.573	33.40	22.25	40.13
120.0	36.58	29.38	.593	28.56	18.74	34.16
130.0	39.62	25.10	.610	24.61	16.08	29.40
140.0	42.67	21.67	.624	21.37	13.99	25.54
150.0	45.72	18.88	.637	18.70	12.32	22.39
160.0	48.77	16.59	.649	16.48	10.94	19.78
170.0	51.82	14.69	.658	14.62	9.78	17.59
180.0	54.86	13.10	.667	13.05	8.81	15.74
190.0	57.91	11.75	.674	11.72	7.97	14.17

200.0	60.96	10.59	.681	10.57	7.24	12.81
210.0	64.01	9.60	.687	9.59	6.61	11.64
220.0	67.06	8.74	.692	8.73	6.06	10.63
230.0	70.10	7.99	.696	7.98	5.57	9.73
240.0	73.15	7.33	.700	7.33	5.14	8.95
250.0	76.20	6.75	.703	6.75	4.75	8.25
260.0	79.25	6.24	.706	6.24	4.41	7.63
270.0	82.30	5.78	.708	5.78	4.10	7.08
280.0	85.34	5.37	.710	5.37	3.82	6.59
290.0	88.39	5.00	.712	5.00	3.56	6.14
300.0	91.44	4.67	.713	4.67	3.33	5.74
310.0	94.49	4.38	.714	4.37	3.12	5.38
320.0	97.54	4.10	.715	4.10	2.93	5.04
330.0	100.58	3.86	.715	3.86	2.76	4.74
340.0	103.63	3.63	.715	3.63	2.60	4.47
350.0	106.68	3.43	.715	3.43	2.45	4.21
360.0	109.73	3.24	.715	3.24	2.32	3.98
370.0	112.78	3.07	.715	3.07	2.19	3.77
380.0	115.82	2.91	.714	2.91	2.08	3.57
390.0	118.87	2.76	.714	2.76	1.97	3.39
400.0	121.92	2.62	.713	2.62	1.87	3.22
410.0	124.97	2.50	.712	2.49	1.78	3.06
420.0	128.02	2.38	.711	2.38	1.69	2.92
430.0	131.06	2.27	.709	2.27	1.61	2.78
440.0	134.11	2.17	.708	2.17	1.53	2.65
450.0	137.16	2.07	.706	2.07	1.46	2.54
460.0	140.21	1.98	.705	1.98	1.40	2.42
470.0	143.26	1.90	.703	1.90	1.34	2.32
480.0	146.30	1.82	.701	1.82	1.28	2.22
490.0	149.35	1.75	.699	1.75	1.22	2.13
500.0	152.40	1.68	.697	1.68	1.17	2.05
515.0	156.97	1.58	.694	1.58	1.10	1.93
530.0	161.54	1.49	.690	1.49	1.03	1.82
545.0	166.12	1.41	.687	1.41	.97	1.72
560.0	170.69	1.34	.683	1.34	.92	1.62
575.0	175.26	1.27	.679	1.27	.86	1.54
590.0	179.83	1.21	.675	1.21	.82	1.46
605.0	184.40	1.15	.671	1.15	.77	1.38
620.0	188.98	1.10	.666	1.09	.73	1.32
635.0	193.55	1.04	.662	1.04	.69	1.25
650.0	198.12	1.00	.657	1.00	.66	1.19
665.0	202.69	.95	.652	.95	.62	1.14
680.0	207.26	.91	.647	.91	.59	1.09
695.0	211.84	.87	.642	.87	.56	1.04
710.0	216.41	.84	.637	.84	.54	.99
725.0	220.98	.80	.632	.80	.51	.95
740.0	225.55	.77	.626	.77	.49	.91
755.0	230.12	.74	.621	.74	.46	.87
770.0	234.70	.72	.615	.71	.44	.84
785.0	239.27	.69	.609	.69	.42	.81
800.0	243.84	.66	.604	.66	.40	.78
815.0	248.41	.64	.598	.64	.38	.75
830.0	252.98	.62	.592	.62	.37	.72
845.0	257.56	.60	.585	.60	.35	.69
860.0	262.13	.58	.579	.57	.34	.67
875.0	266.70	.56	.573	.56	.32	.64
890.0	271.27	.54	.567	.54	.31	.62
905.0	275.84	.52	.560	.52	.30	.60
920.0	280.42	.51	.553	.50	.28	.58
935.0	284.99	.49	.547	.49	.27	.56
950.0	289.56	.48	.540	.47	.26	.54
965.0	294.13	.46	.533	.46	.25	.52
980.0	298.70	.45	.526	.45	.24	.51

995.0	303.28	.43	.519	.43	.23	.49
1010.0	307.85	.42	.512	.42	.22	.47
1025.0	312.42	.41	.505	.41	.21	.46
1040.0	316.99	.40	.498	.40	.20	.45
1055.0	321.56	.39	.491	.39	.20	.43
1070.0	326.14	.38	.483	.38	.19	.42
1085.0	330.71	.37	.476	.37	.18	.41
1100.0	335.28	.36	.469	.36	.17	.40
1115.0	339.85	.35	.461	.35	.17	.39
1130.0	344.42	.34	.454	.34	.16	.37
1145.0	349.00	.33	.446	.33	.15	.36
1160.0	353.57	.32	.438	.32	.15	.35
1175.0	358.14	.32	.431	.31	.14	.34
1190.0	362.71	.31	.423	.31	.14	.34
1205.0	367.28	.30	.415	.30	.13	.33
1220.0	371.86	.29	.407	.29	.13	.32
1235.0	376.43	.29	.399	.29	.12	.31
1250.0	381.00	.28	.391	.28	.12	.30
1265.0	385.57	.28	.383	.27	.11	.29
1280.0	390.14	.27	.375	.27	.11	.29
1295.0	394.72	.26	.367	.26	.10	.28
1310.0	399.29	.26	.359	.25	.10	.27
1325.0	403.86	.25	.351	.25	.10	.27
1340.0	408.43	.25	.342	.24	.09	.26
1355.0	413.00	.24	.334	.24	.09	.25
1370.0	417.58	.24	.326	.23	.09	.25
1385.0	422.15	.23	.317	.23	.08	.24
1400.0	426.72	.23	.309	.22	.08	.24
1415.0	431.29	.22	.301	.22	.08	.23
1430.0	435.86	.22	.292	.22	.07	.23
1445.0	440.44	.21	.284	.21	.07	.22
1460.0	445.01	.21	.275	.21	.07	.22
1475.0	449.58	.21	.267	.20	.06	.21
1490.0	454.15	.20	.258	.20	.06	.21
1505.0	458.72	.20	.249	.20	.06	.20
1520.0	463.30	.19	.241	.19	.06	.20
1535.0	467.87	.19	.232	.19	.06	.20
1550.0	472.44	.19	.224	.19	.05	.19
1565.0	477.01	.18	.215	.18	.05	.19
1580.0	481.58	.18	.206	.18	.05	.19
1595.0	486.16	.18	.198	.18	.05	.18
1610.0	490.73	.18	.189	.17	.05	.18
1625.0	495.30	.17	.181	.17	.04	.17
1640.0	499.87	.17	.172	.17	.04	.17
1655.0	504.44	.17	.163	.16	.04	.17
1670.0	509.02	.16	.155	.16	.04	.17
1685.0	513.59	.16	.146	.16	.04	.16
1700.0	518.16	.16	.138	.16	.04	.16
1715.0	522.73	.16	.129	.15	.03	.16
1730.0	527.30	.15	.120	.15	.03	.15
1745.0	531.88	.15	.112	.15	.03	.15
1760.0	536.45	.15	.103	.15	.03	.15
1775.0	541.02	.15	.095	.14	.03	.15
1790.0	545.59	.14	.086	.14	.03	.14
1805.0	550.16	.14	.078	.14	.03	.14
1820.0	554.74	.14	.070	.14	.03	.14
1835.0	559.31	.14	.061	.14	.03	.14
1850.0	563.88	.14	.053	.13	.03	.14
1865.0	568.45	.13	.045	.13	.02	.13
1880.0	573.02	.13	.037	.13	.02	.13
1895.0	577.60	.13	.029	.13	.02	.13
1910.0	582.17	.13	.021	.13	.02	.13
1925.0	586.74	.13	.013	.12	.02	.13

1940.0	591.31	.12	.005	.12	.02	.12
1955.0	595.88	.12	.003	.12	.02	.12
1970.0	600.46	.12	.011	.12	.02	.12
1985.0	605.03	.12	.018	.12	.02	.12
2000.0	609.60	.12	.026	.12	.02	.12
2025.0	617.22	.11	.038	.11	.02	.11
2050.0	624.84	.11	.050	.11	.02	.11
2075.0	632.46	.11	.062	.11	.02	.11
2100.0	640.08	.11	.074	.11	.02	.11
2125.0	647.70	.10	.085	.10	.02	.11
2150.0	655.32	.10	.096	.10	.02	.10
2175.0	662.94	.10	.106	.10	.02	.10
2200.0	670.56	.10	.117	.10	.02	.10
2225.0	678.18	.10	.126	.10	.02	.10
2250.0	685.80	.09	.136	.09	.02	.10
2275.0	693.42	.09	.145	.09	.02	.09
2300.0	701.04	.09	.154	.09	.02	.09
2325.0	708.66	.09	.162	.09	.02	.09
2350.0	716.28	.09	.170	.09	.02	.09
2375.0	723.90	.09	.177	.09	.02	.09
2400.0	731.52	.08	.184	.08	.02	.09
2425.0	739.14	.08	.191	.08	.02	.08
2450.0	746.76	.08	.198	.08	.02	.08
2475.0	754.38	.08	.204	.08	.02	.08
2500.0	762.00	.08	.209	.08	.02	.08
2525.0	769.62	.08	.215	.08	.02	.08
2550.0	777.24	.08	.220	.08	.02	.08
2575.0	784.86	.07	.224	.07	.02	.08
2600.0	792.48	.07	.229	.07	.02	.07
2625.0	800.10	.07	.233	.07	.02	.07
2650.0	807.72	.07	.236	.07	.02	.07
2675.0	815.34	.07	.240	.07	.02	.07
2700.0	822.96	.07	.243	.07	.02	.07
2725.0	830.58	.07	.246	.07	.02	.07
2750.0	838.20	.07	.249	.07	.02	.07
2775.0	845.82	.06	.252	.06	.02	.07
2800.0	853.44	.06	.254	.06	.02	.07
2825.0	861.06	.06	.256	.06	.02	.06
2850.0	868.68	.06	.259	.06	.02	.06
2875.0	876.30	.06	.261	.06	.02	.06
2900.0	883.92	.06	.262	.06	.02	.06
2925.0	891.54	.06	.264	.06	.02	.06
2950.0	899.16	.06	.266	.06	.02	.06
2975.0	906.78	.06	.268	.06	.02	.06
3000.0	914.40	.06	.269	.06	.02	.06
3025.0	922.02	.05	.271	.05	.01	.06
3050.0	929.64	.05	.272	.05	.01	.06
3075.0	937.26	.05	.273	.05	.01	.06
3100.0	944.88	.05	.275	.05	.01	.05

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*                               *
*        AUDIBLE NOISE          *
*   GENERATED ACOUSTIC POWER    *
*       (dB above 1uW/m)        *
*                               *
*********************************
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-60.82	-45.56	-49.33
2	AC	-64.26	-47.60	-52.27

3	AC	-60.82	-45.56	-49.33

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*                      *
*     AUDIBLE NOISE    *
*    (other methods)   *
*                      *
* Altitude     5000. ft *
*                      *
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LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	BPA METHOD FAIR WEATHER dB(A)	BPA METHOD L5 RAIN dB(A)	BPA METHOD L50 RAIN dB(A)	BPA METHOD Ldn dB(A)	CRIEPI AVERAGE FAIR dB(A)	CRIEPI L5 RAIN dB(A)	EdF L5 RAIN dB(A)	ENEL L5 RAIN dB(A)	IREQ L5 RAIN dB(A)
.0	.00	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0
10.0	3.05	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0
20.0	6.10	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0
30.0	9.14	32.5	61.0	57.5	.0	.0	.0	.0	.0	.0
40.0	12.19	31.9	60.4	56.9	.0	.0	.0	.0	.0	.0
50.0	15.24	31.2	59.7	56.2	.0	.0	.0	.0	.0	.0
60.0	18.29	30.5	59.0	55.5	.0	.0	.0	.0	.0	.0
70.0	21.34	29.9	58.4	54.9	.0	.0	.0	.0	.0	.0
80.0	24.38	29.3	57.8	54.3	.0	.0	.0	.0	.0	.0
90.0	27.43	28.8	57.3	53.8	.0	.0	.0	.0	.0	.0
100.0	30.48	28.3	56.8	53.3	.0	.0	.0	.0	.0	.0
110.0	33.53	27.8	56.3	52.8	.0	.0	.0	.0	.0	.0
120.0	36.58	27.4	55.9	52.4	.0	.0	.0	.0	.0	.0
130.0	39.62	27.0	55.5	52.0	.0	.0	.0	.0	.0	.0
140.0	42.67	26.7	55.2	51.7	.0	.0	.0	.0	.0	.0
150.0	45.72	26.3	54.8	51.3	.0	.0	.0	.0	.0	.0
160.0	48.77	26.0	54.5	51.0	.0	.0	.0	.0	.0	.0
170.0	51.82	25.7	54.2	50.7	.0	.0	.0	.0	.0	.0
180.0	54.86	25.4	53.9	50.4	.0	.0	.0	.0	.0	.0
190.0	57.91	25.2	53.7	50.2	.0	.0	.0	.0	.0	.0
200.0	60.96	24.9	53.4	49.9	.0	.0	.0	.0	.0	.0
210.0	64.01	24.7	53.2	49.7	.0	.0	.0	.0	.0	.0
220.0	67.06	24.4	52.9	49.4	.0	.0	.0	.0	.0	.0
230.0	70.10	24.2	52.7	49.2	.0	.0	.0	.0	.0	.0
240.0	73.15	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0
250.0	76.20	23.8	52.3	48.8	.0	.0	.0	.0	.0	.0
260.0	79.25	23.6	52.1	48.6	.0	.0	.0	.0	.0	.0
270.0	82.30	23.4	51.9	48.4	.0	.0	.0	.0	.0	.0
280.0	85.34	23.3	51.8	48.3	.0	.0	.0	.0	.0	.0
290.0	88.39	23.1	51.6	48.1	.0	.0	.0	.0	.0	.0
300.0	91.44	22.9	51.4	47.9	.0	.0	.0	.0	.0	.0
310.0	94.49	22.8	51.3	47.8	.0	.0	.0	.0	.0	.0
320.0	97.54	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0
330.0	100.58	22.4	50.9	47.4	.0	.0	.0	.0	.0	.0
340.0	103.63	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
350.0	106.68	22.2	50.7	47.2	.0	.0	.0	.0	.0	.0
360.0	109.73	22.0	50.5	47.0	.0	.0	.0	.0	.0	.0
370.0	112.78	21.9	50.4	46.9	.0	.0	.0	.0	.0	.0
380.0	115.82	21.8	50.3	46.8	.0	.0	.0	.0	.0	.0
390.0	118.87	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
400.0	121.92	21.5	50.0	46.5	.0	.0	.0	.0	.0	.0
410.0	124.97	21.4	49.9	46.4	.0	.0	.0	.0	.0	.0
420.0	128.02	21.3	49.8	46.3	.0	.0	.0	.0	.0	.0
430.0	131.06	21.1	49.6	46.1	.0	.0	.0	.0	.0	.0
440.0	134.11	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
450.0	137.16	20.9	49.4	45.9	.0	.0	.0	.0	.0	.0

460.0	140.21	20.8	49.3	45.8	.0	.0	.0	.0	.0	.0
470.0	143.26	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
480.0	146.30	20.6	49.1	45.6	.0	.0	.0	.0	.0	.0
490.0	149.35	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
500.0	152.40	20.4	48.9	45.4	.0	.0	.0	.0	.0	.0
515.0	156.97	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
530.0	161.54	20.1	48.6	45.1	.0	.0	.0	.0	.0	.0
545.0	166.12	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
560.0	170.69	19.8	48.3	44.8	.0	.0	.0	.0	.0	.0
575.0	175.26	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
590.0	179.83	19.6	48.1	44.6	.0	.0	.0	.0	.0	.0
605.0	184.40	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
620.0	188.98	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
635.0	193.55	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
650.0	198.12	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
665.0	202.69	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
680.0	207.26	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
695.0	211.84	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
710.0	216.41	18.7	47.2	43.7	.0	.0	.0	.0	.0	.0
725.0	220.98	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
740.0	225.55	18.5	47.0	43.5	.0	.0	.0	.0	.0	.0
755.0	230.12	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
770.0	234.70	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
785.0	239.27	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
800.0	243.84	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
815.0	248.41	18.0	46.5	43.0	.0	.0	.0	.0	.0	.0
830.0	252.98	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
845.0	257.56	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
860.0	262.13	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
875.0	266.70	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
890.0	271.27	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
905.0	275.84	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
920.0	280.42	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
935.0	284.99	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
950.0	289.56	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
965.0	294.13	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
980.0	298.70	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
995.0	303.28	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
1010.0	307.85	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
1025.0	312.42	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
1040.0	316.99	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
1055.0	321.56	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
1070.0	326.14	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
1085.0	330.71	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
1100.0	335.28	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
1115.0	339.85	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
1130.0	344.42	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
1145.0	349.00	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
1160.0	353.57	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
1175.0	358.14	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
1190.0	362.71	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
1205.0	367.28	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
1220.0	371.86	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
1235.0	376.43	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
1250.0	381.00	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
1265.0	385.57	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
1280.0	390.14	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
1295.0	394.72	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
1310.0	399.29	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
1325.0	403.86	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
1340.0	408.43	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
1355.0	413.00	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
1370.0	417.58	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0

1385.0	422.15	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
1400.0	426.72	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
1415.0	431.29	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
1430.0	435.86	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
1445.0	440.44	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
1460.0	445.01	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
1475.0	449.58	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
1490.0	454.15	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
1505.0	458.72	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
1520.0	463.30	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
1535.0	467.87	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
1550.0	472.44	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
1565.0	477.01	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
1580.0	481.58	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
1595.0	486.16	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
1610.0	490.73	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
1625.0	495.30	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
1640.0	499.87	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
1655.0	504.44	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
1670.0	509.02	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
1685.0	513.59	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
1700.0	518.16	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
1715.0	522.73	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
1730.0	527.30	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
1745.0	531.88	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
1760.0	536.45	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
1775.0	541.02	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
1790.0	545.59	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
1805.0	550.16	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
1820.0	554.74	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
1835.0	559.31	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
1850.0	563.88	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
1865.0	568.45	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
1880.0	573.02	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
1895.0	577.60	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
1910.0	582.17	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
1925.0	586.74	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
1940.0	591.31	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
1955.0	595.88	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
1970.0	600.46	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
1985.0	605.03	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
2000.0	609.60	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
2025.0	617.22	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
2050.0	624.84	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
2075.0	632.46	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
2100.0	640.08	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
2125.0	647.70	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
2150.0	655.32	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
2175.0	662.94	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
2200.0	670.56	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
2225.0	678.18	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
2250.0	685.80	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
2275.0	693.42	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
2300.0	701.04	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
2325.0	708.66	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
2350.0	716.28	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
2375.0	723.90	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
2400.0	731.52	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
2425.0	739.14	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
2450.0	746.76	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
2475.0	754.38	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
2500.0	762.00	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0
2525.0	769.62	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0

2550.0	777.24	12.3	40.8	37.3	.0	.0	.0	.0	.0	.0
2575.0	784.86	12.3	40.8	37.3	.0	.0	.0	.0	.0	.0
2600.0	792.48	12.2	40.7	37.2	.0	.0	.0	.0	.0	.0
2625.0	800.10	12.2	40.7	37.2	.0	.0	.0	.0	.0	.0
2650.0	807.72	12.1	40.6	37.1	.0	.0	.0	.0	.0	.0
2675.0	815.34	12.1	40.6	37.1	.0	.0	.0	.0	.0	.0
2700.0	822.96	12.0	40.5	37.0	.0	.0	.0	.0	.0	.0
2725.0	830.58	12.0	40.5	37.0	.0	.0	.0	.0	.0	.0
2750.0	838.20	12.0	40.5	37.0	.0	.0	.0	.0	.0	.0
2775.0	845.82	11.9	40.4	36.9	.0	.0	.0	.0	.0	.0
2800.0	853.44	11.9	40.4	36.9	.0	.0	.0	.0	.0	.0
2825.0	861.06	11.8	40.3	36.8	.0	.0	.0	.0	.0	.0
2850.0	868.68	11.8	40.3	36.8	.0	.0	.0	.0	.0	.0
2875.0	876.30	11.7	40.2	36.7	.0	.0	.0	.0	.0	.0
2900.0	883.92	11.7	40.2	36.7	.0	.0	.0	.0	.0	.0
2925.0	891.54	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
2950.0	899.16	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
2975.0	906.78	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
3000.0	914.40	11.5	40.0	36.5	.0	.0	.0	.0	.0	.0
3025.0	922.02	11.5	40.0	36.5	.0	.0	.0	.0	.0	.0
3050.0	929.64	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0
3075.0	937.26	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0
3100.0	944.88	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0

Audible noise prediction methods do not apply to all line geometries, voltages, or weather conditions. If a prediction method does not apply, the appropriate output data column will be zeros.

RESULTS OF ENVIRO PROGRAM

Single Circuit, 1,575 amp, 550-kV, Lattice Structure at 5,000 ft elevation.
Part 2: From Centerline to -3,100 ft horizontally.

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	550.0	.0	1575.0	.0	3	-23.0	34.5	A
2	1	550.0	240.0	1575.0	120.0	3	.0	66.0	B
3	1	550.0	120.0	1575.0	240.0	3	23.0	34.5	C

MINIMUM GROUND CLEARANCE = 34.500 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)

SUBCONDUCTOR INFORMATION - IRREGULAR BUNDLES

BNDL #	COORDINATES X (IN)	COORDINATES Y (IN)	DIAMETER (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	.00	.000	1.300	.06840	.071000	.368000
1	10.00	12.500	1.300	.06840	.071000	.368000
1	20.00	.000	1.300	.06840	.071000	.368000
2	.00	.000	1.300	.06840	.071000	.368000
2	10.00	12.500	1.300	.06840	.071000	.368000
2	20.00	.000	1.300	.06840	.071000	.368000
3	.00	.000	1.300	.06840	.071000	.368000
3	10.00	12.500	1.300	.06840	.071000	.368000
3	20.00	.000	1.300	.06840	.071000	.368000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	17.14	24.24	-24.24
2	AC	16.18	22.88	-22.88
3	AC	17.14	24.24	-24.24

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B2H50004

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*     AC  ELECTRIC FIELD PROFILE      *
*    at   3.28 feet above ground      *
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LATERAL DISTANCE (feet)	(meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-3100.0	-944.88	.001	.000	.001	.000	.001
-3075.0	-937.26	.001	.000	.001	.000	.001
-3050.0	-929.64	.001	.000	.001	.000	.001
-3025.0	-922.02	.001	.000	.001	.000	.001
-3000.0	-914.40	.001	.000	.001	.000	.001
-2975.0	-906.78	.001	.000	.001	.000	.001
-2950.0	-899.16	.001	.000	.001	.000	.001
-2925.0	-891.54	.001	.000	.001	.000	.001
-2900.0	-883.92	.001	.000	.001	.000	.001
-2875.0	-876.30	.001	.000	.001	.000	.001
-2850.0	-868.68	.001	.000	.001	.000	.001
-2825.0	-861.06	.002	.000	.002	.000	.002
-2800.0	-853.44	.002	.000	.002	.000	.002
-2775.0	-845.82	.002	.000	.002	.000	.002
-2750.0	-838.20	.002	.000	.002	.000	.002
-2725.0	-830.58	.002	.000	.002	.000	.002
-2700.0	-822.96	.002	.000	.002	.000	.002
-2675.0	-815.34	.002	.000	.002	.000	.002
-2650.0	-807.72	.002	.000	.002	.000	.002
-2625.0	-800.10	.002	.000	.002	.000	.002
-2600.0	-792.48	.002	.000	.002	.000	.002
-2575.0	-784.86	.002	.000	.002	.000	.002
-2550.0	-777.24	.002	.000	.002	.000	.002
-2525.0	-769.62	.002	.000	.002	.000	.002
-2500.0	-762.00	.002	.000	.002	.000	.002
-2475.0	-754.38	.002	.000	.002	.000	.002
-2450.0	-746.76	.002	.000	.002	.000	.002
-2425.0	-739.14	.002	.000	.002	.000	.002
-2400.0	-731.52	.002	.000	.002	.000	.002
-2375.0	-723.90	.002	.000	.002	.000	.002
-2350.0	-716.28	.002	.000	.002	.000	.002
-2325.0	-708.66	.002	.000	.002	.000	.002
-2300.0	-701.04	.002	.000	.002	.000	.002
-2275.0	-693.42	.002	.000	.002	.000	.002
-2250.0	-685.80	.002	.000	.002	.000	.002
-2225.0	-678.18	.002	.000	.002	.000	.002
-2200.0	-670.56	.003	.000	.003	.000	.003
-2175.0	-662.94	.003	.000	.003	.000	.003
-2150.0	-655.32	.003	.000	.003	.000	.003
-2125.0	-647.70	.003	.000	.003	.000	.003
-2100.0	-640.08	.003	.000	.003	.000	.003
-2075.0	-632.46	.003	.000	.003	.000	.003
-2050.0	-624.84	.003	.000	.003	.000	.003
-2025.0	-617.22	.003	.000	.003	.000	.003
-2000.0	-609.60	.003	.000	.003	.000	.003
-1985.0	-605.03	.003	.000	.003	.000	.003
-1970.0	-600.46	.003	.000	.003	.000	.003
-1955.0	-595.88	.003	.000	.003	.000	.003
-1940.0	-591.31	.003	.000	.003	.000	.003
-1925.0	-586.74	.003	.000	.003	.000	.003
-1910.0	-582.17	.003	.000	.003	.000	.003
-1895.0	-577.60	.003	.000	.003	.000	.003
-1880.0	-573.02	.003	.000	.003	.000	.003
-1865.0	-568.45	.003	.000	.003	.000	.003

-1850.0	-563.88	.004	.000	.004	.000	.004
-1835.0	-559.31	.004	.000	.004	.000	.004
-1820.0	-554.74	.004	.000	.004	.000	.004
-1805.0	-550.16	.004	.000	.004	.000	.004
-1790.0	-545.59	.004	.000	.004	.000	.004
-1775.0	-541.02	.004	.000	.004	.000	.004
-1760.0	-536.45	.004	.000	.004	.000	.004
-1745.0	-531.88	.004	.000	.004	.000	.004
-1730.0	-527.30	.004	.000	.004	.000	.004
-1715.0	-522.73	.004	.000	.004	.000	.004
-1700.0	-518.16	.004	.000	.004	.000	.004
-1685.0	-513.59	.004	.000	.004	.000	.004
-1670.0	-509.02	.004	.000	.004	.000	.004
-1655.0	-504.44	.004	.000	.004	.000	.004
-1640.0	-499.87	.005	.000	.005	.000	.005
-1625.0	-495.30	.005	.000	.005	.000	.005
-1610.0	-490.73	.005	.000	.005	.000	.005
-1595.0	-486.16	.005	.000	.005	.000	.005
-1580.0	-481.58	.005	.000	.005	.000	.005
-1565.0	-477.01	.005	.000	.005	.000	.005
-1550.0	-472.44	.005	.000	.005	.000	.005
-1535.0	-467.87	.005	.000	.005	.000	.005
-1520.0	-463.30	.005	.000	.005	.000	.005
-1505.0	-458.72	.005	.000	.005	.000	.005
-1490.0	-454.15	.005	.000	.005	.000	.005
-1475.0	-449.58	.006	.000	.006	.000	.006
-1460.0	-445.01	.006	.000	.006	.000	.006
-1445.0	-440.44	.006	.000	.006	.000	.006
-1430.0	-435.86	.006	.000	.006	.000	.006
-1415.0	-431.29	.006	.000	.006	.000	.006
-1400.0	-426.72	.006	.000	.006	.000	.006
-1385.0	-422.15	.006	.000	.006	.000	.006
-1370.0	-417.58	.006	.000	.006	.000	.006
-1355.0	-413.00	.007	.000	.007	.000	.007
-1340.0	-408.43	.007	.000	.007	.000	.007
-1325.0	-403.86	.007	.000	.007	.000	.007
-1310.0	-399.29	.007	.000	.007	.000	.007
-1295.0	-394.72	.007	.000	.007	.000	.007
-1280.0	-390.14	.007	.000	.007	.000	.007
-1265.0	-385.57	.008	.000	.008	.000	.008
-1250.0	-381.00	.008	.000	.008	.000	.008
-1235.0	-376.43	.008	.000	.008	.000	.008
-1220.0	-371.86	.008	.000	.008	.000	.008
-1205.0	-367.28	.008	.000	.008	.000	.008
-1190.0	-362.71	.009	.000	.009	.000	.009
-1175.0	-358.14	.009	.000	.009	.000	.009
-1160.0	-353.57	.009	.000	.009	.000	.009
-1145.0	-349.00	.009	.000	.009	.000	.009
-1130.0	-344.42	.009	.000	.009	.000	.009
-1115.0	-339.85	.010	.000	.010	.000	.010
-1100.0	-335.28	.010	.000	.010	.000	.010
-1085.0	-330.71	.010	.000	.010	.000	.010
-1070.0	-326.14	.011	.000	.011	.000	.011
-1055.0	-321.56	.011	.000	.011	.000	.011
-1040.0	-316.99	.011	.000	.011	.000	.011
-1025.0	-312.42	.011	.000	.011	.000	.011
-1010.0	-307.85	.012	.000	.012	.000	.012
-995.0	-303.28	.012	.000	.012	.000	.012
-980.0	-298.70	.013	.000	.013	.000	.013
-965.0	-294.13	.013	.000	.013	.000	.013
-950.0	-289.56	.013	.000	.013	.000	.013
-935.0	-284.99	.014	.000	.014	.000	.014
-920.0	-280.42	.014	.000	.014	.000	.014

-905.0	-275.84	.015	.000	.015	.000	.015
-890.0	-271.27	.015	.000	.015	.000	.015
-875.0	-266.70	.016	.000	.016	.000	.016
-860.0	-262.13	.016	.000	.016	.000	.016
-845.0	-257.56	.017	.001	.017	.000	.017
-830.0	-252.98	.017	.001	.017	.000	.017
-815.0	-248.41	.018	.001	.018	.000	.018
-800.0	-243.84	.019	.001	.019	.000	.019
-785.0	-239.27	.019	.001	.019	.000	.019
-770.0	-234.70	.020	.001	.020	.000	.020
-755.0	-230.12	.021	.001	.021	.000	.021
-740.0	-225.55	.022	.001	.022	.000	.022
-725.0	-220.98	.023	.001	.023	.000	.023
-710.0	-216.41	.024	.001	.024	.000	.024
-695.0	-211.84	.025	.001	.025	.000	.025
-680.0	-207.26	.026	.001	.026	.000	.026
-665.0	-202.69	.027	.001	.027	.000	.027
-650.0	-198.12	.028	.001	.028	.000	.028
-635.0	-193.55	.030	.001	.030	.000	.030
-620.0	-188.98	.031	.001	.031	.000	.031
-605.0	-184.40	.033	.001	.033	.000	.033
-590.0	-179.83	.034	.001	.034	.000	.034
-575.0	-175.26	.036	.001	.036	.000	.036
-560.0	-170.69	.038	.001	.038	.000	.038
-545.0	-166.12	.040	.001	.040	.000	.040
-530.0	-161.54	.042	.001	.042	.001	.042
-515.0	-156.97	.045	.001	.045	.001	.045
-500.0	-152.40	.047	.002	.047	.001	.047
-490.0	-149.35	.049	.002	.049	.001	.049
-480.0	-146.30	.051	.002	.051	.001	.051
-470.0	-143.26	.053	.002	.053	.001	.053
-460.0	-140.21	.056	.002	.056	.001	.056
-450.0	-137.16	.058	.002	.058	.001	.058
-440.0	-134.11	.061	.002	.061	.001	.061
-430.0	-131.06	.064	.002	.064	.001	.064
-420.0	-128.02	.067	.002	.067	.001	.067
-410.0	-124.97	.070	.002	.070	.001	.070
-400.0	-121.92	.073	.002	.073	.001	.073
-390.0	-118.87	.077	.003	.077	.001	.077
-380.0	-115.82	.081	.003	.081	.001	.081
-370.0	-112.78	.085	.003	.085	.001	.085
-360.0	-109.73	.090	.003	.090	.002	.090
-350.0	-106.68	.095	.003	.095	.002	.095
-340.0	-103.63	.100	.004	.100	.002	.100
-330.0	-100.58	.106	.004	.106	.002	.106
-320.0	-97.54	.112	.004	.112	.002	.112
-310.0	-94.49	.119	.004	.119	.002	.119
-300.0	-91.44	.127	.005	.127	.003	.127
-290.0	-88.39	.136	.005	.135	.003	.135
-280.0	-85.34	.145	.006	.145	.003	.145
-270.0	-82.30	.155	.006	.155	.004	.155
-260.0	-79.25	.167	.007	.167	.004	.167
-250.0	-76.20	.179	.007	.179	.005	.179
-240.0	-73.15	.194	.008	.194	.005	.194
-230.0	-70.10	.210	.009	.210	.006	.210
-220.0	-67.06	.228	.010	.228	.007	.228
-210.0	-64.01	.249	.011	.249	.008	.249
-200.0	-60.96	.273	.012	.273	.009	.273
-190.0	-57.91	.301	.014	.301	.011	.301
-180.0	-54.86	.333	.015	.333	.013	.333
-170.0	-51.82	.372	.017	.371	.015	.371
-160.0	-48.77	.418	.020	.417	.019	.418
-150.0	-45.72	.474	.022	.474	.023	.474

-140.0	-42.67	.545	.026	.544	.029	.545
-130.0	-39.62	.635	.029	.634	.038	.635
-120.0	-36.58	.754	.032	.753	.051	.754
-110.0	-33.53	.916	.036	.914	.070	.915
-100.0	-30.48	1.143	.038	1.139	.099	1.142
-90.0	-27.43	1.472	.040	1.466	.143	1.471
-80.0	-24.38	1.962	.039	1.952	.210	1.960
-70.0	-21.34	2.702	.037	2.686	.312	2.697
-60.0	-18.29	3.811	.033	3.786	.453	3.801
-50.0	-15.24	5.388	.027	5.356	.606	5.367
-40.0	-12.19	7.312	.022	7.286	.641	7.270
-30.0	-9.14	8.827	.020	8.823	.323	8.754
-20.0	-6.10	8.579	.034	8.565	.562	8.475
-10.0	-3.05	6.174	.111	6.092	1.213	6.054
.0	.00	3.757	.381	3.753	1.440	3.773

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AC CURRENTS IN EACH BUNDLE:

BNDL #	AC CURRENTS (Amperes) REAL	IMAGINARY	TOTAL	BUNDLE POSITION X-COORD	Y-COORD
1	1575.00	.00	1575.00	-23.00	34.50
2	-787.50	1363.99	1575.00	.00	66.00
3	-787.50	-1363.99	1575.00	23.00	34.50

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*                                     *
*       MAGNETIC FIELD PROFILE        *
*     at   3.28 feet  above ground    *
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LATERAL DISTANCE (feet)	(meters)	AC MAGNETIC FIELD MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
-3100.0	-944.88	.10	.438	.07	.08	.10
-3075.0	-937.26	.10	.438	.07	.08	.11
-3050.0	-929.64	.10	.437	.07	.08	.11
-3025.0	-922.02	.10	.436	.07	.09	.11
-3000.0	-914.40	.10	.436	.07	.09	.11
-2975.0	-906.78	.10	.435	.07	.09	.11
-2950.0	-899.16	.10	.434	.07	.09	.11
-2925.0	-891.54	.11	.432	.07	.09	.12
-2900.0	-883.92	.11	.431	.07	.09	.12
-2875.0	-876.30	.11	.430	.07	.10	.12
-2850.0	-868.68	.11	.428	.07	.10	.12
-2825.0	-861.06	.11	.426	.07	.10	.12
-2800.0	-853.44	.11	.424	.07	.10	.12
-2775.0	-845.82	.12	.422	.07	.10	.13
-2750.0	-838.20	.12	.420	.07	.11	.13
-2725.0	-830.58	.12	.418	.07	.11	.13
-2700.0	-822.96	.12	.415	.07	.11	.13
-2675.0	-815.34	.12	.413	.07	.11	.13
-2650.0	-807.72	.12	.410	.07	.11	.13
-2625.0	-800.10	.13	.407	.07	.11	.14

-2600.0	-792.48	.13	.403	.07	.12	.14
-2575.0	-784.86	.13	.400	.07	.12	.14
-2550.0	-777.24	.13	.396	.07	.12	.14
-2525.0	-769.62	.13	.393	.07	.12	.14
-2500.0	-762.00	.13	.388	.07	.12	.14
-2475.0	-754.38	.13	.384	.07	.13	.14
-2450.0	-746.76	.13	.380	.07	.13	.14
-2425.0	-739.14	.14	.375	.07	.13	.15
-2400.0	-731.52	.14	.370	.07	.13	.15
-2375.0	-723.90	.14	.364	.07	.13	.15
-2350.0	-716.28	.14	.359	.07	.13	.15
-2325.0	-708.66	.14	.353	.06	.13	.15
-2300.0	-701.04	.14	.347	.06	.14	.15
-2275.0	-693.42	.14	.340	.06	.14	.15
-2250.0	-685.80	.14	.333	.06	.14	.15
-2225.0	-678.18	.14	.326	.06	.14	.15
-2200.0	-670.56	.14	.319	.06	.14	.15
-2175.0	-662.94	.15	.311	.06	.14	.15
-2150.0	-655.32	.15	.303	.05	.14	.15
-2125.0	-647.70	.15	.294	.05	.14	.15
-2100.0	-640.08	.15	.285	.05	.14	.15
-2075.0	-632.46	.15	.276	.05	.15	.15
-2050.0	-624.84	.15	.266	.04	.15	.15
-2025.0	-617.22	.15	.256	.04	.15	.15
-2000.0	-609.60	.15	.245	.04	.15	.15
-1985.0	-605.03	.15	.239	.04	.15	.15
-1970.0	-600.46	.15	.232	.04	.15	.15
-1955.0	-595.88	.15	.225	.03	.15	.15
-1940.0	-591.31	.15	.218	.03	.15	.15
-1925.0	-586.74	.15	.211	.03	.15	.15
-1910.0	-582.17	.15	.204	.03	.15	.15
-1895.0	-577.60	.15	.196	.03	.15	.15
-1880.0	-573.02	.15	.189	.03	.15	.15
-1865.0	-568.45	.15	.181	.03	.15	.15
-1850.0	-563.88	.15	.173	.03	.15	.15
-1835.0	-559.31	.15	.165	.02	.15	.15
-1820.0	-554.74	.15	.158	.02	.15	.15
-1805.0	-550.16	.15	.150	.02	.15	.15
-1790.0	-545.59	.15	.142	.02	.15	.15
-1775.0	-541.02	.15	.134	.02	.15	.15
-1760.0	-536.45	.15	.126	.03	.14	.15
-1745.0	-531.88	.15	.118	.03	.14	.15
-1730.0	-527.30	.15	.110	.03	.14	.15
-1715.0	-522.73	.15	.103	.03	.14	.15
-1700.0	-518.16	.15	.095	.03	.14	.15
-1685.0	-513.59	.15	.088	.03	.14	.15
-1670.0	-509.02	.15	.081	.04	.14	.15
-1655.0	-504.44	.15	.075	.04	.14	.15
-1640.0	-499.87	.15	.069	.04	.14	.15
-1625.0	-495.30	.15	.063	.05	.14	.15
-1610.0	-490.73	.15	.058	.05	.14	.15
-1595.0	-486.16	.15	.054	.05	.14	.15
-1580.0	-481.58	.15	.051	.06	.14	.15
-1565.0	-477.01	.15	.048	.06	.14	.15
-1550.0	-472.44	.15	.046	.06	.14	.15
-1535.0	-467.87	.15	.045	.07	.13	.15
-1520.0	-463.30	.15	.045	.07	.13	.15
-1505.0	-458.72	.15	.046	.08	.13	.15
-1490.0	-454.15	.16	.048	.08	.13	.16
-1475.0	-449.58	.16	.051	.09	.13	.16
-1460.0	-445.01	.16	.055	.09	.13	.16
-1445.0	-440.44	.16	.060	.10	.13	.16
-1430.0	-435.86	.16	.066	.10	.13	.16

-1415.0	-431.29	.17	.073	.11	.13	.17
-1400.0	-426.72	.17	.081	.11	.13	.17
-1385.0	-422.15	.17	.091	.12	.13	.17
-1370.0	-417.58	.18	.100	.12	.13	.18
-1355.0	-413.00	.18	.111	.13	.13	.18
-1340.0	-408.43	.18	.123	.14	.13	.18
-1325.0	-403.86	.19	.134	.14	.13	.19
-1310.0	-399.29	.19	.147	.15	.12	.19
-1295.0	-394.72	.20	.160	.16	.13	.20
-1280.0	-390.14	.20	.173	.16	.13	.21
-1265.0	-385.57	.21	.187	.17	.13	.21
-1250.0	-381.00	.21	.201	.18	.13	.22
-1235.0	-376.43	.22	.215	.18	.13	.22
-1220.0	-371.86	.23	.229	.19	.13	.23
-1205.0	-367.28	.23	.243	.20	.13	.24
-1190.0	-362.71	.24	.258	.21	.13	.25
-1175.0	-358.14	.25	.272	.22	.13	.26
-1160.0	-353.57	.25	.286	.23	.14	.26
-1145.0	-349.00	.26	.300	.24	.14	.27
-1130.0	-344.42	.27	.314	.25	.14	.28
-1115.0	-339.85	.28	.328	.25	.15	.29
-1100.0	-335.28	.29	.342	.27	.15	.30
-1085.0	-330.71	.30	.355	.28	.15	.32
-1070.0	-326.14	.31	.369	.29	.16	.33
-1055.0	-321.56	.32	.382	.30	.17	.34
-1040.0	-316.99	.33	.394	.31	.17	.35
-1025.0	-312.42	.34	.407	.32	.18	.37
-1010.0	-307.85	.35	.419	.34	.18	.38
-995.0	-303.28	.37	.431	.35	.19	.40
-980.0	-298.70	.38	.443	.36	.20	.41
-965.0	-294.13	.39	.455	.38	.21	.43
-950.0	-289.56	.41	.466	.39	.22	.45
-935.0	-284.99	.42	.477	.41	.23	.47
-920.0	-280.42	.44	.488	.42	.24	.49
-905.0	-275.84	.45	.499	.44	.25	.51
-890.0	-271.27	.47	.509	.46	.26	.53
-875.0	-266.70	.49	.519	.48	.28	.55
-860.0	-262.13	.51	.529	.50	.29	.58
-845.0	-257.56	.53	.538	.52	.30	.60
-830.0	-252.98	.55	.548	.54	.32	.63
-815.0	-248.41	.57	.557	.57	.34	.66
-800.0	-243.84	.60	.565	.59	.35	.69
-785.0	-239.27	.62	.574	.62	.37	.72
-770.0	-234.70	.65	.582	.64	.39	.75
-755.0	-230.12	.68	.590	.67	.41	.79
-740.0	-225.55	.71	.598	.70	.44	.83
-725.0	-220.98	.74	.606	.73	.46	.87
-710.0	-216.41	.78	.613	.77	.48	.91
-695.0	-211.84	.81	.620	.81	.51	.95
-680.0	-207.26	.85	.627	.84	.54	1.00
-665.0	-202.69	.89	.634	.89	.57	1.06
-650.0	-198.12	.94	.640	.93	.61	1.11
-635.0	-193.55	.98	.646	.98	.64	1.17
-620.0	-188.98	1.03	.652	1.03	.68	1.23
-605.0	-184.40	1.09	.658	1.08	.72	1.30
-590.0	-179.83	1.15	.663	1.14	.77	1.38
-575.0	-175.26	1.21	.668	1.21	.81	1.45
-560.0	-170.69	1.28	.673	1.27	.86	1.54
-545.0	-166.12	1.35	.678	1.35	.92	1.63
-530.0	-161.54	1.43	.683	1.43	.98	1.73
-515.0	-156.97	1.52	.687	1.52	1.05	1.84
-500.0	-152.40	1.61	.691	1.61	1.12	1.96
-490.0	-149.35	1.68	.693	1.68	1.17	2.05

-480.0	-146.30	1.76	.696	1.75	1.22	2.14
-470.0	-143.26	1.83	.698	1.83	1.28	2.24
-460.0	-140.21	1.92	.700	1.91	1.34	2.34
-450.0	-137.16	2.00	.702	2.00	1.41	2.45
-440.0	-134.11	2.10	.704	2.10	1.48	2.57
-430.0	-131.06	2.20	.706	2.20	1.55	2.69
-420.0	-128.02	2.31	.707	2.31	1.63	2.83
-410.0	-124.97	2.42	.709	2.42	1.72	2.97
-400.0	-121.92	2.55	.710	2.55	1.81	3.13
-390.0	-118.87	2.68	.711	2.68	1.91	3.29
-380.0	-115.82	2.83	.712	2.83	2.02	3.47
-370.0	-112.78	2.99	.713	2.99	2.13	3.67
-360.0	-109.73	3.16	.714	3.16	2.26	3.88
-350.0	-106.68	3.34	.714	3.34	2.39	4.11
-340.0	-103.63	3.55	.714	3.55	2.53	4.36
-330.0	-100.58	3.77	.714	3.77	2.69	4.63
-320.0	-97.54	4.01	.714	4.01	2.86	4.93
-310.0	-94.49	4.28	.713	4.28	3.05	5.25
-300.0	-91.44	4.57	.712	4.57	3.26	5.61
-290.0	-88.39	4.90	.711	4.89	3.48	6.01
-280.0	-85.34	5.26	.710	5.25	3.73	6.44
-270.0	-82.30	5.66	.708	5.65	4.01	6.93
-260.0	-79.25	6.11	.706	6.10	4.31	7.47
-250.0	-76.20	6.61	.703	6.60	4.65	8.08
-240.0	-73.15	7.18	.700	7.17	5.03	8.76
-230.0	-70.10	7.82	.696	7.81	5.45	9.53
-220.0	-67.06	8.55	.692	8.54	5.93	10.40
-210.0	-64.01	9.39	.687	9.38	6.47	11.39
-200.0	-60.96	10.36	.681	10.34	7.09	12.54
-190.0	-57.91	11.48	.675	11.45	7.80	13.85
-180.0	-54.86	12.80	.668	12.75	8.61	15.39
-170.0	-51.82	14.35	.659	14.28	9.56	17.18
-160.0	-48.77	16.19	.650	16.08	10.68	19.31
-150.0	-45.72	18.41	.639	18.24	12.02	21.84
-140.0	-42.67	21.10	.626	20.82	13.64	24.89
-130.0	-39.62	24.41	.611	23.96	15.64	28.61
-120.0	-36.58	28.53	.595	27.78	18.18	33.20
-110.0	-33.53	33.75	.576	32.45	21.52	38.94
-100.0	-30.48	40.45	.554	38.18	26.09	46.24
-90.0	-27.43	49.23	.528	45.13	32.61	55.68
-80.0	-24.38	60.93	.499	53.30	42.37	68.09
-70.0	-21.34	76.78	.465	62.18	57.48	84.68
-60.0	-18.29	98.49	.427	69.83	81.18	107.08
-50.0	-15.24	128.04	.383	71.31	117.09	137.09
-40.0	-12.19	166.25	.334	60.96	164.36	175.30
-30.0	-9.14	209.08	.284	72.95	204.75	217.36
-20.0	-6.10	245.00	.237	154.82	198.55	251.78
-10.0	-3.05	264.39	.201	236.57	129.44	269.67
.0	.00	269.85	.186	269.69	51.04	274.47

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*********************************
*                               *
*          AUDIBLE NOISE        *
*   GENERATED ACOUSTIC POWER    *
*       (dB above 1uW/m)        *
*                               *
*********************************
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-60.82	-45.56	-49.33
2	AC	-64.26	-47.60	-52.27

3	AC	-60.82	-45.56	-49.33

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*                      *
*     AUDIBLE NOISE    *
*    (other methods)   *
*                      *
* Altitude     5000. ft *
*                      *
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		<------ BPA METHOD ------->				<- CRIEPI -->		EdF	ENEL	IREQ
LATERAL		FAIR	L5	L50		AVERAGE	L5	L5	L5	L5
DISTANCE		WEATHER	RAIN	RAIN	Ldn	FAIR	RAIN	RAIN	RAIN	RAIN
(feet)	(meters)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
-3100.0	-944.88	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0
-3075.0	-937.26	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0
-3050.0	-929.64	11.4	39.9	36.4	.0	.0	.0	.0	.0	.0
-3025.0	-922.02	11.5	40.0	36.5	.0	.0	.0	.0	.0	.0
-3000.0	-914.40	11.5	40.0	36.5	.0	.0	.0	.0	.0	.0
-2975.0	-906.78	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
-2950.0	-899.16	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
-2925.0	-891.54	11.6	40.1	36.6	.0	.0	.0	.0	.0	.0
-2900.0	-883.92	11.7	40.2	36.7	.0	.0	.0	.0	.0	.0
-2875.0	-876.30	11.7	40.2	36.7	.0	.0	.0	.0	.0	.0
-2850.0	-868.68	11.8	40.3	36.8	.0	.0	.0	.0	.0	.0
-2825.0	-861.06	11.8	40.3	36.8	.0	.0	.0	.0	.0	.0
-2800.0	-853.44	11.9	40.4	36.9	.0	.0	.0	.0	.0	.0
-2775.0	-845.82	11.9	40.4	36.9	.0	.0	.0	.0	.0	.0
-2750.0	-838.20	11.9	40.4	36.9	.0	.0	.0	.0	.0	.0
-2725.0	-830.58	12.0	40.5	37.0	.0	.0	.0	.0	.0	.0
-2700.0	-822.96	12.0	40.5	37.0	.0	.0	.0	.0	.0	.0
-2675.0	-815.34	12.1	40.6	37.1	.0	.0	.0	.0	.0	.0
-2650.0	-807.72	12.1	40.6	37.1	.0	.0	.0	.0	.0	.0
-2625.0	-800.10	12.2	40.7	37.2	.0	.0	.0	.0	.0	.0
-2600.0	-792.48	12.2	40.7	37.2	.0	.0	.0	.0	.0	.0
-2575.0	-784.86	12.3	40.8	37.3	.0	.0	.0	.0	.0	.0
-2550.0	-777.24	12.3	40.8	37.3	.0	.0	.0	.0	.0	.0
-2525.0	-769.62	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0
-2500.0	-762.00	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0
-2475.0	-754.38	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
-2450.0	-746.76	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
-2425.0	-739.14	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
-2400.0	-731.52	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
-2375.0	-723.90	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
-2350.0	-716.28	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
-2325.0	-708.66	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
-2300.0	-701.04	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
-2275.0	-693.42	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
-2250.0	-685.80	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
-2225.0	-678.18	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
-2200.0	-670.56	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
-2175.0	-662.94	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
-2150.0	-655.32	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
-2125.0	-647.70	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
-2100.0	-640.08	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
-2075.0	-632.46	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
-2050.0	-624.84	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
-2025.0	-617.22	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
-2000.0	-609.60	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0

-1985.0	-605.03	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
-1970.0	-600.46	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
-1955.0	-595.88	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
-1940.0	-591.31	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
-1925.0	-586.74	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
-1910.0	-582.17	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
-1895.0	-577.60	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
-1880.0	-573.02	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
-1865.0	-568.45	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
-1850.0	-563.88	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
-1835.0	-559.31	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
-1820.0	-554.74	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
-1805.0	-550.16	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
-1790.0	-545.59	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
-1775.0	-541.02	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
-1760.0	-536.45	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-1745.0	-531.88	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-1730.0	-527.30	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-1715.0	-522.73	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-1700.0	-518.16	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-1685.0	-513.59	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-1670.0	-509.02	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-1655.0	-504.44	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
-1640.0	-499.87	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
-1625.0	-495.30	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-1610.0	-490.73	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-1595.0	-486.16	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-1580.0	-481.58	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-1565.0	-477.01	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-1550.0	-472.44	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
-1535.0	-467.87	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
-1520.0	-463.30	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
-1505.0	-458.72	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
-1490.0	-454.15	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
-1475.0	-449.58	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
-1460.0	-445.01	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-1445.0	-440.44	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-1430.0	-435.86	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
-1415.0	-431.29	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
-1400.0	-426.72	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
-1385.0	-422.15	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
-1370.0	-417.58	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
-1355.0	-413.00	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
-1340.0	-408.43	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
-1325.0	-403.86	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
-1310.0	-399.29	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
-1295.0	-394.72	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
-1280.0	-390.14	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
-1265.0	-385.57	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
-1250.0	-381.00	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
-1235.0	-376.43	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
-1220.0	-371.86	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
-1205.0	-367.28	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
-1190.0	-362.71	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
-1175.0	-358.14	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
-1160.0	-353.57	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
-1145.0	-349.00	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
-1130.0	-344.42	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
-1115.0	-339.85	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
-1100.0	-335.28	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
-1085.0	-330.71	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
-1070.0	-326.14	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
-1055.0	-321.56	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0

-1040.0	-316.99	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
-1025.0	-312.42	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
-1010.0	-307.85	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
-995.0	-303.28	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
-980.0	-298.70	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
-965.0	-294.13	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
-950.0	-289.56	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
-935.0	-284.99	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
-920.0	-280.42	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-905.0	-275.84	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-890.0	-271.27	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
-875.0	-266.70	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
-860.0	-262.13	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
-845.0	-257.56	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
-830.0	-252.98	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
-815.0	-248.41	18.0	46.5	43.0	.0	.0	.0	.0	.0	.0
-800.0	-243.84	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
-785.0	-239.27	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
-770.0	-234.70	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
-755.0	-230.12	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
-740.0	-225.55	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
-725.0	-220.98	18.5	47.0	43.5	.0	.0	.0	.0	.0	.0
-710.0	-216.41	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
-695.0	-211.84	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
-680.0	-207.26	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
-665.0	-202.69	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
-650.0	-198.12	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
-635.0	-193.55	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
-620.0	-188.98	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
-605.0	-184.40	19.4	47.9	44.4	.0	.0	.0	.0	.0	.0
-590.0	-179.83	19.6	48.1	44.6	.0	.0	.0	.0	.0	.0
-575.0	-175.26	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
-560.0	-170.69	19.8	48.3	44.8	.0	.0	.0	.0	.0	.0
-545.0	-166.12	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
-530.0	-161.54	20.1	48.6	45.1	.0	.0	.0	.0	.0	.0
-515.0	-156.97	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
-500.0	-152.40	20.4	48.9	45.4	.0	.0	.0	.0	.0	.0
-490.0	-149.35	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
-480.0	-146.30	20.6	49.1	45.6	.0	.0	.0	.0	.0	.0
-470.0	-143.26	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
-460.0	-140.21	20.8	49.3	45.8	.0	.0	.0	.0	.0	.0
-450.0	-137.16	20.9	49.4	45.9	.0	.0	.0	.0	.0	.0
-440.0	-134.11	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
-430.0	-131.06	21.1	49.6	46.1	.0	.0	.0	.0	.0	.0
-420.0	-128.02	21.2	49.7	46.2	.0	.0	.0	.0	.0	.0
-410.0	-124.97	21.4	49.9	46.4	.0	.0	.0	.0	.0	.0
-400.0	-121.92	21.5	50.0	46.5	.0	.0	.0	.0	.0	.0
-390.0	-118.87	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
-380.0	-115.82	21.7	50.2	46.7	.0	.0	.0	.0	.0	.0
-370.0	-112.78	21.9	50.4	46.9	.0	.0	.0	.0	.0	.0
-360.0	-109.73	22.0	50.5	47.0	.0	.0	.0	.0	.0	.0
-350.0	-106.68	22.1	50.6	47.1	.0	.0	.0	.0	.0	.0
-340.0	-103.63	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
-330.0	-100.58	22.4	50.9	47.4	.0	.0	.0	.0	.0	.0
-320.0	-97.54	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0
-310.0	-94.49	22.7	51.2	47.7	.0	.0	.0	.0	.0	.0
-300.0	-91.44	22.9	51.4	47.9	.0	.0	.0	.0	.0	.0
-290.0	-88.39	23.1	51.6	48.1	.0	.0	.0	.0	.0	.0
-280.0	-85.34	23.2	51.7	48.2	.0	.0	.0	.0	.0	.0
-270.0	-82.30	23.4	51.9	48.4	.0	.0	.0	.0	.0	.0
-260.0	-79.25	23.6	52.1	48.6	.0	.0	.0	.0	.0	.0
-250.0	-76.20	23.8	52.3	48.8	.0	.0	.0	.0	.0	.0
-240.0	-73.15	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0

-230.0	-70.10	24.2	52.7	49.2	.0	.0	.0	.0	.0	.0
-220.0	-67.06	24.4	52.9	49.4	.0	.0	.0	.0	.0	.0
-210.0	-64.01	24.6	53.1	49.6	.0	.0	.0	.0	.0	.0
-200.0	-60.96	24.9	53.4	49.9	.0	.0	.0	.0	.0	.0
-190.0	-57.91	25.1	53.6	50.1	.0	.0	.0	.0	.0	.0
-180.0	-54.86	25.4	53.9	50.4	.0	.0	.0	.0	.0	.0
-170.0	-51.82	25.7	54.2	50.7	.0	.0	.0	.0	.0	.0
-160.0	-48.77	26.0	54.5	51.0	.0	.0	.0	.0	.0	.0
-150.0	-45.72	26.3	54.8	51.3	.0	.0	.0	.0	.0	.0
-140.0	-42.67	26.6	55.1	51.6	.0	.0	.0	.0	.0	.0
-130.0	-39.62	27.0	55.5	52.0	.0	.0	.0	.0	.0	.0
-120.0	-36.58	27.3	55.8	52.3	.0	.0	.0	.0	.0	.0
-110.0	-33.53	27.7	56.2	52.7	.0	.0	.0	.0	.0	.0
-100.0	-30.48	28.2	56.7	53.2	.0	.0	.0	.0	.0	.0
-90.0	-27.43	28.7	57.2	53.7	.0	.0	.0	.0	.0	.0
-80.0	-24.38	29.2	57.7	54.2	.0	.0	.0	.0	.0	.0
-70.0	-21.34	29.8	58.3	54.8	.0	.0	.0	.0	.0	.0
-60.0	-18.29	30.4	58.9	55.4	.0	.0	.0	.0	.0	.0
-50.0	-15.24	31.1	59.6	56.1	.0	.0	.0	.0	.0	.0
-40.0	-12.19	31.8	60.3	56.8	.0	.0	.0	.0	.0	.0
-30.0	-9.14	32.4	60.9	57.4	.0	.0	.0	.0	.0	.0
-20.0	-6.10	32.7	61.2	57.7	.0	.0	.0	.0	.0	.0
-10.0	-3.05	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0
.0	.00	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0

Audible noise prediction methods do not apply to all line geometries, voltages, or weather conditions. If a prediction method does not apply, the appropriate output data column will be zeros.

RESULTS OF ENVIRO PROGRAM

Single Circuit, 1,575 amp, 550-kV, H & Y-Frame Structure at 5,000 ft elevation.
Part 1: From Centerline to 3,100 ft horizontally.

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	550.0	.0	1575.0	.0	3	-28.0	34.5	A
2	1	550.0	240.0	1575.0	120.0	3	.0	34.5	B
3	1	550.0	120.0	1575.0	240.0	3	28.0	34.5	C

MINIMUM GROUND CLEARANCE = 34.500 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)

SUBCONDUCTOR INFORMATION - IRREGULAR BUNDLES

BNDL #	COORDINATES X (IN)	COORDINATES Y (IN)	DIAMETER (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	.00	.000	1.300	.06840	.071000	.368000
1	10.00	12.500	1.300	.06840	.071000	.368000
1	20.00	.000	1.300	.06840	.071000	.368000
2	.00	.000	1.300	.06840	.071000	.368000
2	10.00	12.500	1.300	.06840	.071000	.368000
2	20.00	.000	1.300	.06840	.071000	.368000
3	.00	.000	1.300	.06840	.071000	.368000
3	10.00	12.500	1.300	.06840	.071000	.368000
3	20.00	.000	1.300	.06840	.071000	.368000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	17.19	24.31	-24.31
2	AC	18.59	26.29	-26.29
3	AC	17.19	24.31	-24.31

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B2H50003

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*     AC  ELECTRIC FIELD PROFILE      *
*    at   3.28 feet above ground      *
*                                     *
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LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
.0	.00	5.451	.238	5.451	1.296	5.337
10.0	3.05	5.490	.266	5.488	1.469	5.421
20.0	6.10	6.979	.165	6.943	1.349	6.885
30.0	9.14	8.683	.064	8.678	.628	8.587
40.0	12.19	8.497	.023	8.490	.401	8.435
50.0	15.24	6.925	.007	6.900	.592	6.893
60.0	18.29	5.161	.001	5.134	.530	5.146
70.0	21.34	3.741	.002	3.720	.395	3.733
80.0	24.38	2.719	.002	2.705	.278	2.715
90.0	27.43	2.007	.002	1.998	.193	2.005
100.0	30.48	1.510	.002	1.504	.136	1.509
110.0	33.53	1.159	.002	1.155	.097	1.158
120.0	36.58	.906	.001	.903	.071	.906
130.0	39.62	.720	.001	.719	.052	.720
140.0	42.67	.582	.001	.580	.039	.581
150.0	45.72	.476	.000	.475	.030	.476
160.0	48.77	.394	.000	.393	.024	.394
170.0	51.82	.330	.000	.330	.019	.330
180.0	54.86	.279	.001	.279	.015	.279
190.0	57.91	.238	.001	.238	.012	.238
200.0	60.96	.205	.001	.205	.010	.205
210.0	64.01	.177	.001	.177	.008	.177
220.0	67.06	.155	.001	.155	.007	.155
230.0	70.10	.136	.001	.136	.006	.136
240.0	73.15	.120	.001	.120	.005	.120
250.0	76.20	.106	.002	.106	.004	.106
260.0	79.25	.095	.002	.095	.004	.095
270.0	82.30	.085	.002	.085	.003	.085
280.0	85.34	.076	.002	.076	.003	.076
290.0	88.39	.069	.002	.069	.002	.069
300.0	91.44	.062	.002	.062	.002	.062
310.0	94.49	.057	.002	.057	.002	.057
320.0	97.54	.052	.002	.052	.002	.052
330.0	100.58	.047	.002	.047	.001	.047
340.0	103.63	.043	.002	.043	.001	.043
350.0	106.68	.040	.002	.040	.001	.040
360.0	109.73	.037	.002	.037	.001	.037
370.0	112.78	.034	.002	.034	.001	.034
380.0	115.82	.031	.002	.031	.001	.031
390.0	118.87	.029	.002	.029	.001	.029
400.0	121.92	.027	.002	.027	.001	.027
410.0	124.97	.025	.002	.025	.001	.025
420.0	128.02	.023	.002	.023	.001	.023
430.0	131.06	.022	.002	.022	.000	.022
440.0	134.11	.021	.002	.021	.000	.021
450.0	137.16	.019	.002	.019	.000	.019
460.0	140.21	.018	.002	.018	.000	.018
470.0	143.26	.017	.002	.017	.000	.017
480.0	146.30	.016	.002	.016	.000	.016
490.0	149.35	.015	.002	.015	.000	.015
500.0	152.40	.014	.002	.014	.000	.014
515.0	156.97	.013	.002	.013	.000	.013
530.0	161.54	.012	.002	.012	.000	.012
545.0	166.12	.011	.002	.011	.000	.011

560.0	170.69	.010	.002	.010	.000	.010
575.0	175.26	.010	.002	.010	.000	.010
590.0	179.83	.009	.002	.009	.000	.009
605.0	184.40	.008	.002	.008	.000	.008
620.0	188.98	.008	.002	.008	.000	.008
635.0	193.55	.007	.002	.007	.000	.007
650.0	198.12	.007	.002	.007	.000	.007
665.0	202.69	.006	.002	.006	.000	.006
680.0	207.26	.006	.002	.006	.000	.006
695.0	211.84	.006	.002	.006	.000	.006
710.0	216.41	.005	.002	.005	.000	.005
725.0	220.98	.005	.002	.005	.000	.005
740.0	225.55	.005	.002	.005	.000	.005
755.0	230.12	.005	.002	.005	.000	.005
770.0	234.70	.004	.002	.004	.000	.004
785.0	239.27	.004	.002	.004	.000	.004
800.0	243.84	.004	.002	.004	.000	.004
815.0	248.41	.004	.002	.004	.000	.004
830.0	252.98	.004	.002	.004	.000	.004
845.0	257.56	.003	.002	.003	.000	.003
860.0	262.13	.003	.002	.003	.000	.003
875.0	266.70	.003	.002	.003	.000	.003
890.0	271.27	.003	.002	.003	.000	.003
905.0	275.84	.003	.002	.003	.000	.003
920.0	280.42	.003	.002	.003	.000	.003
935.0	284.99	.003	.002	.003	.000	.003
950.0	289.56	.003	.002	.003	.000	.003
965.0	294.13	.002	.002	.002	.000	.002
980.0	298.70	.002	.002	.002	.000	.002
995.0	303.28	.002	.002	.002	.000	.002
1010.0	307.85	.002	.002	.002	.000	.002
1025.0	312.42	.002	.002	.002	.000	.002
1040.0	316.99	.002	.001	.002	.000	.002
1055.0	321.56	.002	.001	.002	.000	.002
1070.0	326.14	.002	.001	.002	.000	.002
1085.0	330.71	.002	.001	.002	.000	.002
1100.0	335.28	.002	.001	.002	.000	.002
1115.0	339.85	.002	.001	.002	.000	.002
1130.0	344.42	.002	.001	.002	.000	.002
1145.0	349.00	.002	.001	.002	.000	.002
1160.0	353.57	.002	.001	.002	.000	.002
1175.0	358.14	.001	.001	.001	.000	.001
1190.0	362.71	.001	.001	.001	.000	.001
1205.0	367.28	.001	.001	.001	.000	.001
1220.0	371.86	.001	.001	.001	.000	.001
1235.0	376.43	.001	.001	.001	.000	.001
1250.0	381.00	.001	.001	.001	.000	.001
1265.0	385.57	.001	.001	.001	.000	.001
1280.0	390.14	.001	.001	.001	.000	.001
1295.0	394.72	.001	.001	.001	.000	.001
1310.0	399.29	.001	.001	.001	.000	.001
1325.0	403.86	.001	.001	.001	.000	.001
1340.0	408.43	.001	.001	.001	.000	.001
1355.0	413.00	.001	.001	.001	.000	.001
1370.0	417.58	.001	.001	.001	.000	.001
1385.0	422.15	.001	.001	.001	.000	.001
1400.0	426.72	.001	.001	.001	.000	.001
1415.0	431.29	.001	.001	.001	.000	.001
1430.0	435.86	.001	.001	.001	.000	.001
1445.0	440.44	.001	.001	.001	.000	.001
1460.0	445.01	.001	.001	.001	.000	.001
1475.0	449.58	.001	.001	.001	.000	.001
1490.0	454.15	.001	.001	.001	.000	.001

1505.0	458.72	.001	.001	.001	.000	.001
1520.0	463.30	.001	.001	.001	.000	.001
1535.0	467.87	.001	.001	.001	.000	.001
1550.0	472.44	.001	.001	.001	.000	.001
1565.0	477.01	.001	.001	.001	.000	.001
1580.0	481.58	.001	.001	.001	.000	.001
1595.0	486.16	.001	.001	.001	.000	.001
1610.0	490.73	.001	.001	.001	.000	.001
1625.0	495.30	.001	.001	.001	.000	.001
1640.0	499.87	.001	.001	.001	.000	.001
1655.0	504.44	.001	.001	.001	.000	.001
1670.0	509.02	.001	.001	.001	.000	.001
1685.0	513.59	.001	.001	.001	.000	.001
1700.0	518.16	.001	.001	.001	.000	.001
1715.0	522.73	.001	.001	.001	.000	.001
1730.0	527.30	.001	.001	.001	.000	.001
1745.0	531.88	.001	.001	.001	.000	.001
1760.0	536.45	.001	.001	.001	.000	.001
1775.0	541.02	.001	.001	.001	.000	.001
1790.0	545.59	.001	.001	.001	.000	.001
1805.0	550.16	.001	.001	.001	.000	.001
1820.0	554.74	.001	.001	.001	.000	.001
1835.0	559.31	.001	.001	.001	.000	.001
1850.0	563.88	.001	.001	.001	.000	.001
1865.0	568.45	.001	.001	.001	.000	.000
1880.0	573.02	.000	.001	.000	.000	.000
1895.0	577.60	.000	.001	.000	.000	.000
1910.0	582.17	.000	.001	.000	.000	.000
1925.0	586.74	.000	.001	.000	.000	.000
1940.0	591.31	.000	.001	.000	.000	.000
1955.0	595.88	.000	.001	.000	.000	.000
1970.0	600.46	.000	.001	.000	.000	.000
1985.0	605.03	.000	.001	.000	.000	.000
2000.0	609.60	.000	.001	.000	.000	.000
2025.0	617.22	.000	.001	.000	.000	.000
2050.0	624.84	.000	.001	.000	.000	.000
2075.0	632.46	.000	.001	.000	.000	.000
2100.0	640.08	.000	.001	.000	.000	.000
2125.0	647.70	.000	.001	.000	.000	.000
2150.0	655.32	.000	.001	.000	.000	.000
2175.0	662.94	.000	.001	.000	.000	.000
2200.0	670.56	.000	.001	.000	.000	.000
2225.0	678.18	.000	.001	.000	.000	.000
2250.0	685.80	.000	.001	.000	.000	.000
2275.0	693.42	.000	.001	.000	.000	.000
2300.0	701.04	.000	.001	.000	.000	.000
2325.0	708.66	.000	.001	.000	.000	.000
2350.0	716.28	.000	.001	.000	.000	.000
2375.0	723.90	.000	.000	.000	.000	.000
2400.0	731.52	.000	.000	.000	.000	.000
2425.0	739.14	.000	.000	.000	.000	.000
2450.0	746.76	.000	.000	.000	.000	.000
2475.0	754.38	.000	.000	.000	.000	.000
2500.0	762.00	.000	.000	.000	.000	.000
2525.0	769.62	.000	.000	.000	.000	.000
2550.0	777.24	.000	.000	.000	.000	.000
2575.0	784.86	.000	.000	.000	.000	.000
2600.0	792.48	.000	.000	.000	.000	.000
2625.0	800.10	.000	.000	.000	.000	.000
2650.0	807.72	.000	.000	.000	.000	.000
2675.0	815.34	.000	.000	.000	.000	.000
2700.0	822.96	.000	.000	.000	.000	.000
2725.0	830.58	.000	.000	.000	.000	.000

2750.0	838.20	.000	.000	.000	.000	.000
2775.0	845.82	.000	.000	.000	.000	.000
2800.0	853.44	.000	.000	.000	.000	.000
2825.0	861.06	.000	.000	.000	.000	.000
2850.0	868.68	.000	.000	.000	.000	.000
2875.0	876.30	.000	.000	.000	.000	.000
2900.0	883.92	.000	.000	.000	.000	.000
2925.0	891.54	.000	.000	.000	.000	.000
2950.0	899.16	.000	.000	.000	.000	.000
2975.0	906.78	.000	.000	.000	.000	.000
3000.0	914.40	.000	.000	.000	.000	.000
3025.0	922.02	.000	.000	.000	.000	.000
3050.0	929.64	.000	.000	.000	.000	.000
3075.0	937.26	.000	.000	.000	.000	.000
3100.0	944.88	.000	.000	.000	.000	.000

♀

AC CURRENTS IN EACH BUNDLE:

BNDL #	AC CURRENTS (Amperes) REAL	IMAGINARY	TOTAL	BUNDLE POSITION X-COORD	Y-COORD
1	1575.00	.00	1575.00	-28.00	34.50
2	-787.50	1363.99	1575.00	.00	34.50
3	-787.50	-1363.99	1575.00	28.00	34.50

♀

MAGNETIC FIELD PROFILE
at 3.28 feet above ground

LATERAL DISTANCE (feet)	(meters)	AC MAGNETIC FIELD: MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
.0	.00	281.52	.512	281.48	144.12	316.23
10.0	3.05	282.95	.461	276.14	144.33	311.59
20.0	6.10	277.28	.353	233.27	179.04	294.06
30.0	9.14	251.34	.258	140.37	218.34	259.56
40.0	12.19	208.15	.189	49.62	205.94	211.83
50.0	15.24	162.49	.141	35.45	160.23	164.11
60.0	18.29	124.64	.108	51.00	114.52	125.36
70.0	21.34	96.34	.084	53.71	80.39	96.68
80.0	24.38	75.78	.067	50.09	57.10	75.96
90.0	27.43	60.79	.055	44.60	41.45	60.88
100.0	30.48	49.68	.045	39.04	30.81	49.73
110.0	33.53	41.28	.038	34.02	23.43	41.31
120.0	36.58	34.80	.032	29.69	18.18	34.82
130.0	39.62	29.72	.027	26.02	14.37	29.73
140.0	42.67	25.66	.023	22.92	11.55	25.66
150.0	45.72	22.37	.020	20.30	9.41	22.37
160.0	48.77	19.67	.017	18.08	7.77	19.68
170.0	51.82	17.43	.015	16.18	6.48	17.43
180.0	54.86	15.55	.013	14.56	5.47	15.55
190.0	57.91	13.96	.011	13.16	4.65	13.96

200.0	60.96	12.60	.010	11.95	3.99	12.60
210.0	64.01	11.43	.009	10.90	3.45	11.43
220.0	67.06	10.41	.007	9.97	3.00	10.41
230.0	70.10	9.53	.006	9.16	2.63	9.53
240.0	73.15	8.75	.005	8.44	2.32	8.75
250.0	76.20	8.06	.004	7.80	2.05	8.06
260.0	79.25	7.45	.003	7.23	1.83	7.45
270.0	82.30	6.91	.003	6.72	1.63	6.91
280.0	85.34	6.43	.002	6.26	1.46	6.43
290.0	88.39	5.99	.001	5.84	1.32	5.99
300.0	91.44	5.60	.000	5.47	1.19	5.60
310.0	94.49	5.24	.000	5.13	1.08	5.24
320.0	97.54	4.92	.001	4.82	.99	4.92
330.0	100.58	4.62	.002	4.53	.90	4.62
340.0	103.63	4.35	.002	4.28	.83	4.35
350.0	106.68	4.11	.003	4.04	.76	4.11
360.0	109.73	3.88	.004	3.82	.70	3.88
370.0	112.78	3.68	.004	3.62	.65	3.68
380.0	115.82	3.48	.005	3.43	.60	3.48
390.0	118.87	3.31	.006	3.26	.56	3.31
400.0	121.92	3.14	.006	3.10	.52	3.14
410.0	124.97	2.99	.007	2.95	.48	2.99
420.0	128.02	2.85	.008	2.81	.45	2.85
430.0	131.06	2.72	.009	2.69	.42	2.72
440.0	134.11	2.60	.009	2.57	.40	2.60
450.0	137.16	2.48	.010	2.45	.37	2.48
460.0	140.21	2.37	.011	2.35	.35	2.37
470.0	143.26	2.27	.011	2.25	.33	2.27
480.0	146.30	2.18	.012	2.16	.31	2.18
490.0	149.35	2.09	.013	2.07	.30	2.09
500.0	152.40	2.01	.014	1.99	.28	2.01
515.0	156.97	1.89	.015	1.87	.26	1.89
530.0	161.54	1.79	.016	1.77	.24	1.79
545.0	166.12	1.69	.018	1.67	.23	1.69
560.0	170.69	1.60	.019	1.58	.21	1.60
575.0	175.26	1.51	.021	1.50	.20	1.51
590.0	179.83	1.44	.022	1.43	.19	1.44
605.0	184.40	1.37	.024	1.35	.18	1.37
620.0	188.98	1.30	.025	1.29	.17	1.30
635.0	193.55	1.24	.027	1.23	.16	1.24
650.0	198.12	1.18	.029	1.17	.15	1.18
665.0	202.69	1.13	.030	1.12	.15	1.13
680.0	207.26	1.08	.032	1.07	.14	1.08
695.0	211.84	1.03	.034	1.02	.14	1.03
710.0	216.41	.99	.036	.98	.13	.99
725.0	220.98	.94	.038	.94	.13	.95
740.0	225.55	.91	.040	.90	.12	.91
755.0	230.12	.87	.042	.86	.12	.87
770.0	234.70	.83	.044	.83	.12	.84
785.0	239.27	.80	.046	.79	.12	.80
800.0	243.84	.77	.049	.76	.11	.77
815.0	248.41	.74	.051	.73	.11	.74
830.0	252.98	.71	.053	.71	.11	.71
845.0	257.56	.69	.056	.68	.11	.69
860.0	262.13	.66	.058	.66	.11	.66
875.0	266.70	.64	.060	.63	.10	.64
890.0	271.27	.62	.063	.61	.10	.62
905.0	275.84	.60	.065	.59	.10	.60
920.0	280.42	.57	.068	.57	.10	.58
935.0	284.99	.56	.071	.55	.10	.56
950.0	289.56	.54	.073	.53	.10	.54
965.0	294.13	.52	.076	.51	.10	.52
980.0	298.70	.50	.078	.49	.10	.50

995.0	303.28	.49	.081	.48	.10	.49
1010.0	307.85	.47	.084	.46	.10	.47
1025.0	312.42	.46	.086	.45	.10	.46
1040.0	316.99	.44	.089	.43	.10	.44
1055.0	321.56	.43	.092	.42	.10	.43
1070.0	326.14	.41	.094	.41	.10	.42
1085.0	330.71	.40	.097	.39	.10	.40
1100.0	335.28	.39	.099	.38	.10	.39
1115.0	339.85	.38	.102	.37	.10	.38
1130.0	344.42	.37	.104	.36	.10	.37
1145.0	349.00	.36	.107	.35	.10	.36
1160.0	353.57	.35	.109	.33	.10	.35
1175.0	358.14	.34	.111	.32	.10	.34
1190.0	362.71	.33	.113	.31	.10	.33
1205.0	367.28	.32	.115	.31	.10	.32
1220.0	371.86	.31	.117	.30	.10	.31
1235.0	376.43	.30	.118	.29	.10	.30
1250.0	381.00	.29	.120	.28	.10	.30
1265.0	385.57	.29	.121	.27	.10	.29
1280.0	390.14	.28	.122	.26	.10	.28
1295.0	394.72	.27	.123	.25	.10	.27
1310.0	399.29	.26	.123	.25	.10	.27
1325.0	403.86	.26	.124	.24	.10	.26
1340.0	408.43	.25	.124	.23	.10	.25
1355.0	413.00	.24	.123	.23	.10	.25
1370.0	417.58	.24	.123	.22	.10	.24
1385.0	422.15	.23	.122	.21	.10	.23
1400.0	426.72	.23	.120	.21	.10	.23
1415.0	431.29	.22	.118	.20	.10	.22
1430.0	435.86	.22	.116	.19	.10	.22
1445.0	440.44	.21	.114	.19	.10	.21
1460.0	445.01	.21	.111	.18	.10	.21
1475.0	449.58	.20	.107	.18	.10	.20
1490.0	454.15	.20	.103	.17	.10	.20
1505.0	458.72	.19	.099	.17	.10	.20
1520.0	463.30	.19	.094	.16	.10	.19
1535.0	467.87	.19	.088	.16	.10	.19
1550.0	472.44	.18	.082	.15	.10	.18
1565.0	477.01	.18	.076	.15	.10	.18
1580.0	481.58	.18	.069	.14	.10	.18
1595.0	486.16	.17	.061	.14	.10	.17
1610.0	490.73	.17	.053	.14	.10	.17
1625.0	495.30	.17	.045	.13	.10	.17
1640.0	499.87	.16	.036	.13	.10	.16
1655.0	504.44	.16	.027	.12	.10	.16
1670.0	509.02	.16	.017	.12	.10	.16
1685.0	513.59	.16	.007	.12	.10	.16
1700.0	518.16	.15	.004	.11	.10	.15
1715.0	522.73	.15	.015	.11	.10	.15
1730.0	527.30	.15	.027	.11	.10	.15
1745.0	531.88	.15	.038	.10	.10	.15
1760.0	536.45	.15	.051	.10	.10	.15
1775.0	541.02	.14	.063	.10	.10	.14
1790.0	545.59	.14	.076	.10	.10	.14
1805.0	550.16	.14	.089	.09	.10	.14
1820.0	554.74	.14	.102	.09	.10	.14
1835.0	559.31	.14	.116	.09	.10	.14
1850.0	563.88	.13	.129	.09	.10	.14
1865.0	568.45	.13	.143	.08	.10	.13
1880.0	573.02	.13	.157	.08	.10	.13
1895.0	577.60	.13	.172	.08	.10	.13
1910.0	582.17	.13	.186	.08	.10	.13
1925.0	586.74	.13	.200	.08	.10	.13

1940.0	591.31	.12	.215	.08	.10	.13
1955.0	595.88	.12	.230	.07	.10	.13
1970.0	600.46	.12	.244	.07	.10	.13
1985.0	605.03	.12	.259	.07	.10	.12
2000.0	609.60	.12	.274	.07	.10	.12
2025.0	617.22	.12	.298	.07	.10	.12
2050.0	624.84	.12	.323	.07	.10	.12
2075.0	632.46	.11	.348	.07	.10	.12
2100.0	640.08	.11	.372	.06	.10	.12
2125.0	647.70	.11	.396	.06	.10	.12
2150.0	655.32	.11	.420	.06	.10	.12
2175.0	662.94	.11	.444	.06	.10	.12
2200.0	670.56	.10	.468	.06	.10	.11
2225.0	678.18	.10	.491	.06	.10	.11
2250.0	685.80	.10	.514	.06	.09	.11
2275.0	693.42	.10	.536	.06	.09	.11
2300.0	701.04	.10	.558	.06	.09	.11
2325.0	708.66	.10	.580	.06	.09	.11
2350.0	716.28	.09	.601	.06	.09	.11
2375.0	723.90	.09	.622	.06	.09	.11
2400.0	731.52	.09	.642	.06	.09	.11
2425.0	739.14	.09	.661	.06	.09	.11
2450.0	746.76	.09	.680	.06	.09	.11
2475.0	754.38	.09	.698	.06	.09	.11
2500.0	762.00	.09	.716	.06	.08	.10
2525.0	769.62	.08	.732	.06	.08	.10
2550.0	777.24	.08	.748	.06	.08	.10
2575.0	784.86	.08	.763	.06	.08	.10
2600.0	792.48	.08	.777	.06	.08	.10
2625.0	800.10	.08	.789	.06	.08	.10
2650.0	807.72	.08	.801	.06	.08	.10
2675.0	815.34	.08	.811	.06	.08	.10
2700.0	822.96	.08	.819	.06	.07	.10
2725.0	830.58	.07	.826	.06	.07	.10
2750.0	838.20	.07	.831	.06	.07	.09
2775.0	845.82	.07	.834	.06	.07	.09
2800.0	853.44	.07	.836	.06	.07	.09
2825.0	861.06	.07	.837	.06	.07	.09
2850.0	868.68	.07	.836	.06	.07	.09
2875.0	876.30	.07	.833	.06	.07	.09
2900.0	883.92	.07	.830	.06	.07	.09
2925.0	891.54	.07	.826	.06	.06	.09
2950.0	899.16	.07	.821	.06	.06	.09
2975.0	906.78	.07	.815	.06	.06	.09
3000.0	914.40	.07	.809	.06	.06	.08
3025.0	922.02	.06	.803	.06	.06	.08
3050.0	929.64	.06	.797	.06	.06	.08
3075.0	937.26	.06	.790	.06	.06	.08
3100.0	944.88	.06	.783	.06	.06	.08

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*                               *
*        AUDIBLE NOISE          *
*   GENERATED ACOUSTIC POWER    *
*       (dB above 1uW/m)        *
*                               *
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-60.66	-45.46	-49.19
2	AC	-56.31	-42.88	-45.47

3	AC	-60.66	-45.46	-49.19

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*                      *
*     AUDIBLE NOISE    *
*    (other methods)   *
*                      *
* Altitude    5000. ft *
*                      *
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LATERAL DISTANCE (feet)	(meters)	BPA METHOD FAIR WEATHER dB(A)	BPA METHOD L5 RAIN dB(A)	BPA METHOD L50 RAIN dB(A)	Ldn dB(A)	CRIEPI AVERAGE FAIR dB(A)	CRIEPI L5 RAIN dB(A)	EdF L5 RAIN dB(A)	ENEL L5 RAIN dB(A)	IREQ L5 RAIN dB(A)
.0	.00	36.5	65.0	61.5	.0	.0	.0	.0	.0	.0
10.0	3.05	36.4	64.9	61.4	.0	.0	.0	.0	.0	.0
20.0	6.10	36.0	64.5	61.0	.0	.0	.0	.0	.0	.0
30.0	9.14	35.5	64.0	60.5	.0	.0	.0	.0	.0	.0
40.0	12.19	34.9	63.4	59.9	.0	.0	.0	.0	.0	.0
50.0	15.24	34.2	62.7	59.2	.0	.0	.0	.0	.0	.0
60.0	18.29	33.4	61.9	58.4	.0	.0	.0	.0	.0	.0
70.0	21.34	32.8	61.3	57.8	.0	.0	.0	.0	.0	.0
80.0	24.38	32.2	60.7	57.2	.0	.0	.0	.0	.0	.0
90.0	27.43	31.6	60.1	56.6	.0	.0	.0	.0	.0	.0
100.0	30.48	31.1	59.6	56.1	.0	.0	.0	.0	.0	.0
110.0	33.53	30.6	59.1	55.6	.0	.0	.0	.0	.0	.0
120.0	36.58	30.2	58.7	55.2	.0	.0	.0	.0	.0	.0
130.0	39.62	29.8	58.3	54.8	.0	.0	.0	.0	.0	.0
140.0	42.67	29.5	58.0	54.5	.0	.0	.0	.0	.0	.0
150.0	45.72	29.1	57.6	54.1	.0	.0	.0	.0	.0	.0
160.0	48.77	28.8	57.3	53.8	.0	.0	.0	.0	.0	.0
170.0	51.82	28.5	57.0	53.5	.0	.0	.0	.0	.0	.0
180.0	54.86	28.2	56.7	53.2	.0	.0	.0	.0	.0	.0
190.0	57.91	27.9	56.4	52.9	.0	.0	.0	.0	.0	.0
200.0	60.96	27.7	56.2	52.7	.0	.0	.0	.0	.0	.0
210.0	64.01	27.4	55.9	52.4	.0	.0	.0	.0	.0	.0
220.0	67.06	27.2	55.7	52.2	.0	.0	.0	.0	.0	.0
230.0	70.10	27.0	55.5	52.0	.0	.0	.0	.0	.0	.0
240.0	73.15	26.8	55.3	51.8	.0	.0	.0	.0	.0	.0
250.0	76.20	26.6	55.1	51.6	.0	.0	.0	.0	.0	.0
260.0	79.25	26.4	54.9	51.4	.0	.0	.0	.0	.0	.0
270.0	82.30	26.2	54.7	51.2	.0	.0	.0	.0	.0	.0
280.0	85.34	26.0	54.5	51.0	.0	.0	.0	.0	.0	.0
290.0	88.39	25.9	54.4	50.9	.0	.0	.0	.0	.0	.0
300.0	91.44	25.7	54.2	50.7	.0	.0	.0	.0	.0	.0
310.0	94.49	25.5	54.0	50.5	.0	.0	.0	.0	.0	.0
320.0	97.54	25.4	53.9	50.4	.0	.0	.0	.0	.0	.0
330.0	100.58	25.2	53.7	50.2	.0	.0	.0	.0	.0	.0
340.0	103.63	25.1	53.6	50.1	.0	.0	.0	.0	.0	.0
350.0	106.68	24.9	53.4	49.9	.0	.0	.0	.0	.0	.0
360.0	109.73	24.8	53.3	49.8	.0	.0	.0	.0	.0	.0
370.0	112.78	24.6	53.1	49.6	.0	.0	.0	.0	.0	.0
380.0	115.82	24.5	53.0	49.5	.0	.0	.0	.0	.0	.0
390.0	118.87	24.4	52.9	49.4	.0	.0	.0	.0	.0	.0
400.0	121.92	24.3	52.8	49.3	.0	.0	.0	.0	.0	.0
410.0	124.97	24.1	52.6	49.1	.0	.0	.0	.0	.0	.0
420.0	128.02	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0
430.0	131.06	23.9	52.4	48.9	.0	.0	.0	.0	.0	.0
440.0	134.11	23.8	52.3	48.8	.0	.0	.0	.0	.0	.0
450.0	137.16	23.7	52.2	48.7	.0	.0	.0	.0	.0	.0
460.0	140.21	23.6	52.1	48.6	.0	.0	.0	.0	.0	.0

470.0	143.26	23.5	52.0	48.5	.0	.0	.0	.0	.0	.0
480.0	146.30	23.4	51.9	48.4	.0	.0	.0	.0	.0	.0
490.0	149.35	23.3	51.8	48.3	.0	.0	.0	.0	.0	.0
500.0	152.40	23.2	51.7	48.2	.0	.0	.0	.0	.0	.0
515.0	156.97	23.0	51.5	48.0	.0	.0	.0	.0	.0	.0
530.0	161.54	22.9	51.4	47.9	.0	.0	.0	.0	.0	.0
545.0	166.12	22.7	51.2	47.7	.0	.0	.0	.0	.0	.0
560.0	170.69	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0
575.0	175.26	22.5	51.0	47.5	.0	.0	.0	.0	.0	.0
590.0	179.83	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
605.0	184.40	22.2	50.7	47.2	.0	.0	.0	.0	.0	.0
620.0	188.98	22.1	50.6	47.1	.0	.0	.0	.0	.0	.0
635.0	193.55	22.0	50.5	47.0	.0	.0	.0	.0	.0	.0
650.0	198.12	21.9	50.4	46.9	.0	.0	.0	.0	.0	.0
665.0	202.69	21.7	50.2	46.7	.0	.0	.0	.0	.0	.0
680.0	207.26	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
695.0	211.84	21.5	50.0	46.5	.0	.0	.0	.0	.0	.0
710.0	216.41	21.4	49.9	46.4	.0	.0	.0	.0	.0	.0
725.0	220.98	21.3	49.8	46.3	.0	.0	.0	.0	.0	.0
740.0	225.55	21.2	49.7	46.2	.0	.0	.0	.0	.0	.0
755.0	230.12	21.1	49.6	46.1	.0	.0	.0	.0	.0	.0
770.0	234.70	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
785.0	239.27	20.9	49.4	45.9	.0	.0	.0	.0	.0	.0
800.0	243.84	20.8	49.3	45.8	.0	.0	.0	.0	.0	.0
815.0	248.41	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
830.0	252.98	20.6	49.1	45.6	.0	.0	.0	.0	.0	.0
845.0	257.56	20.6	49.1	45.6	.0	.0	.0	.0	.0	.0
860.0	262.13	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
875.0	266.70	20.4	48.9	45.4	.0	.0	.0	.0	.0	.0
890.0	271.27	20.3	48.8	45.3	.0	.0	.0	.0	.0	.0
905.0	275.84	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
920.0	280.42	20.1	48.6	45.1	.0	.0	.0	.0	.0	.0
935.0	284.99	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
950.0	289.56	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
965.0	294.13	19.9	48.4	44.9	.0	.0	.0	.0	.0	.0
980.0	298.70	19.8	48.3	44.8	.0	.0	.0	.0	.0	.0
995.0	303.28	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
1010.0	307.85	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
1025.0	312.42	19.6	48.1	44.6	.0	.0	.0	.0	.0	.0
1040.0	316.99	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
1055.0	321.56	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
1070.0	326.14	19.4	47.9	44.4	.0	.0	.0	.0	.0	.0
1085.0	330.71	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
1100.0	335.28	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
1115.0	339.85	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
1130.0	344.42	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
1145.0	349.00	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
1160.0	353.57	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
1175.0	358.14	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
1190.0	362.71	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
1205.0	367.28	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
1220.0	371.86	18.7	47.2	43.7	.0	.0	.0	.0	.0	.0
1235.0	376.43	18.7	47.2	43.7	.0	.0	.0	.0	.0	.0
1250.0	381.00	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
1265.0	385.57	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
1280.0	390.14	18.5	47.0	43.5	.0	.0	.0	.0	.0	.0
1295.0	394.72	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
1310.0	399.29	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
1325.0	403.86	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
1340.0	408.43	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
1355.0	413.00	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
1370.0	417.58	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
1385.0	422.15	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0

1400.0	426.72	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
1415.0	431.29	18.0	46.5	43.0	.0	.0	.0	.0	.0	.0
1430.0	435.86	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
1445.0	440.44	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
1460.0	445.01	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
1475.0	449.58	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
1490.0	454.15	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
1505.0	458.72	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
1520.0	463.30	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
1535.0	467.87	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
1550.0	472.44	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
1565.0	477.01	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
1580.0	481.58	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
1595.0	486.16	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
1610.0	490.73	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
1625.0	495.30	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
1640.0	499.87	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
1655.0	504.44	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
1670.0	509.02	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
1685.0	513.59	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
1700.0	518.16	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
1715.0	522.73	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
1730.0	527.30	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
1745.0	531.88	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
1760.0	536.45	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
1775.0	541.02	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
1790.0	545.59	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
1805.0	550.16	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
1820.0	554.74	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
1835.0	559.31	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
1850.0	563.88	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
1865.0	568.45	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
1880.0	573.02	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
1895.0	577.60	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
1910.0	582.17	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
1925.0	586.74	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
1940.0	591.31	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
1955.0	595.88	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
1970.0	600.46	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
1985.0	605.03	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
2000.0	609.60	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
2025.0	617.22	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
2050.0	624.84	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
2075.0	632.46	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
2100.0	640.08	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
2125.0	647.70	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
2150.0	655.32	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
2175.0	662.94	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
2200.0	670.56	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
2225.0	678.18	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
2250.0	685.80	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
2275.0	693.42	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
2300.0	701.04	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
2325.0	708.66	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
2350.0	716.28	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
2375.0	723.90	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
2400.0	731.52	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
2425.0	739.14	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
2450.0	746.76	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
2475.0	754.38	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
2500.0	762.00	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
2525.0	769.62	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
2550.0	777.24	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0

2575.0	784.86	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
2600.0	792.48	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
2625.0	800.10	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
2650.0	807.72	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
2675.0	815.34	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
2700.0	822.96	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
2725.0	830.58	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
2750.0	838.20	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
2775.0	845.82	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
2800.0	853.44	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
2825.0	861.06	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
2850.0	868.68	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
2875.0	876.30	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
2900.0	883.92	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
2925.0	891.54	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
2950.0	899.16	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
2975.0	906.78	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
3000.0	914.40	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
3025.0	922.02	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
3050.0	929.64	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
3075.0	937.26	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
3100.0	944.88	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0

Audible noise prediction methods do not apply to all line geometries, voltages, or weather conditions. If a prediction method does not apply, the appropriate output data column will be zeros.

RESULTS OF ENVIRO PROGRAM

Single Circuit, 1,575 amp, 550-kV, H & Y-Frame Structure at 5,000 ft elevation.
Part 2: From Centerline to -3,100 ft horizontally.

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	550.0	.0	1575.0	.0	3	-28.0	34.5	A
2	1	550.0	240.0	1575.0	120.0	3	.0	34.5	B
3	1	550.0	120.0	1575.0	240.0	3	28.0	34.5	C

MINIMUM GROUND CLEARANCE = 34.500 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)

SUBCONDUCTOR INFORMATION - IRREGULAR BUNDLES

BNDL #	COORDINATES X (IN)	COORDINATES Y (IN)	DIAMETER (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	.00	.000	1.300	.06840	.071000	.368000
1	10.00	12.500	1.300	.06840	.071000	.368000
1	20.00	.000	1.300	.06840	.071000	.368000
2	.00	.000	1.300	.06840	.071000	.368000
2	10.00	12.500	1.300	.06840	.071000	.368000
2	20.00	.000	1.300	.06840	.071000	.368000
3	.00	.000	1.300	.06840	.071000	.368000
3	10.00	12.500	1.300	.06840	.071000	.368000
3	20.00	.000	1.300	.06840	.071000	.368000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	17.19	24.31	-24.31
2	AC	18.59	26.29	-26.29
3	AC	17.19	24.31	-24.31

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B2H50004

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*     AC  ELECTRIC FIELD PROFILE      *
*    at   3.28 feet above ground      *
*                                     *
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LATERAL DISTANCE (feet)	(meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-3100.0	-944.88	.000	.000	.000	.000	.000
-3075.0	-937.26	.000	.000	.000	.000	.000
-3050.0	-929.64	.000	.000	.000	.000	.000
-3025.0	-922.02	.000	.000	.000	.000	.000
-3000.0	-914.40	.000	.000	.000	.000	.000
-2975.0	-906.78	.000	.000	.000	.000	.000
-2950.0	-899.16	.000	.000	.000	.000	.000
-2925.0	-891.54	.000	.000	.000	.000	.000
-2900.0	-883.92	.000	.000	.000	.000	.000
-2875.0	-876.30	.000	.000	.000	.000	.000
-2850.0	-868.68	.000	.000	.000	.000	.000
-2825.0	-861.06	.000	.000	.000	.000	.000
-2800.0	-853.44	.000	.000	.000	.000	.000
-2775.0	-845.82	.000	.000	.000	.000	.000
-2750.0	-838.20	.000	.000	.000	.000	.000
-2725.0	-830.58	.000	.000	.000	.000	.000
-2700.0	-822.96	.000	.000	.000	.000	.000
-2675.0	-815.34	.000	.000	.000	.000	.000
-2650.0	-807.72	.000	.000	.000	.000	.000
-2625.0	-800.10	.000	.000	.000	.000	.000
-2600.0	-792.48	.000	.000	.000	.000	.000
-2575.0	-784.86	.000	.000	.000	.000	.000
-2550.0	-777.24	.000	.000	.000	.000	.000
-2525.0	-769.62	.000	.000	.000	.000	.000
-2500.0	-762.00	.000	.000	.000	.000	.000
-2475.0	-754.38	.000	.000	.000	.000	.000
-2450.0	-746.76	.000	.000	.000	.000	.000
-2425.0	-739.14	.000	.000	.000	.000	.000
-2400.0	-731.52	.000	.001	.000	.000	.000
-2375.0	-723.90	.000	.001	.000	.000	.000
-2350.0	-716.28	.000	.000	.000	.000	.000
-2325.0	-708.66	.000	.001	.000	.000	.000
-2300.0	-701.04	.000	.001	.000	.000	.000
-2275.0	-693.42	.000	.001	.000	.000	.000
-2250.0	-685.80	.000	.001	.000	.000	.000
-2225.0	-678.18	.000	.001	.000	.000	.000
-2200.0	-670.56	.000	.001	.000	.000	.000
-2175.0	-662.94	.000	.001	.000	.000	.000
-2150.0	-655.32	.000	.001	.000	.000	.000
-2125.0	-647.70	.000	.001	.000	.000	.000
-2100.0	-640.08	.000	.001	.000	.000	.000
-2075.0	-632.46	.000	.001	.000	.000	.000
-2050.0	-624.84	.000	.001	.000	.000	.000
-2025.0	-617.22	.000	.001	.000	.000	.000
-2000.0	-609.60	.000	.001	.000	.000	.000
-1985.0	-605.03	.000	.001	.000	.000	.000
-1970.0	-600.46	.000	.001	.000	.000	.000
-1955.0	-595.88	.000	.001	.000	.000	.000
-1940.0	-591.31	.000	.001	.000	.000	.000
-1925.0	-586.74	.000	.001	.000	.000	.000
-1910.0	-582.17	.000	.001	.000	.000	.000
-1895.0	-577.60	.000	.001	.000	.000	.000
-1880.0	-573.02	.000	.001	.000	.000	.000
-1865.0	-568.45	.001	.001	.001	.000	.000

-1850.0	-563.88	.001	.001	.001	.000	.001
-1835.0	-559.31	.001	.001	.001	.000	.001
-1820.0	-554.74	.001	.001	.001	.000	.001
-1805.0	-550.16	.001	.001	.001	.000	.001
-1790.0	-545.59	.001	.001	.001	.000	.001
-1775.0	-541.02	.001	.001	.001	.000	.001
-1760.0	-536.45	.001	.001	.001	.000	.001
-1745.0	-531.88	.001	.001	.001	.000	.001
-1730.0	-527.30	.001	.001	.001	.000	.001
-1715.0	-522.73	.001	.001	.001	.000	.001
-1700.0	-518.16	.001	.001	.001	.000	.001
-1685.0	-513.59	.001	.001	.001	.000	.001
-1670.0	-509.02	.001	.001	.001	.000	.001
-1655.0	-504.44	.001	.001	.001	.000	.001
-1640.0	-499.87	.001	.001	.001	.000	.001
-1625.0	-495.30	.001	.001	.001	.000	.001
-1610.0	-490.73	.001	.001	.001	.000	.001
-1595.0	-486.16	.001	.001	.001	.000	.001
-1580.0	-481.58	.001	.001	.001	.000	.001
-1565.0	-477.01	.001	.001	.001	.000	.001
-1550.0	-472.44	.001	.001	.001	.000	.001
-1535.0	-467.87	.001	.001	.001	.000	.001
-1520.0	-463.30	.001	.001	.001	.000	.001
-1505.0	-458.72	.001	.001	.001	.000	.001
-1490.0	-454.15	.001	.001	.001	.000	.001
-1475.0	-449.58	.001	.001	.001	.000	.001
-1460.0	-445.01	.001	.001	.001	.000	.001
-1445.0	-440.44	.001	.001	.001	.000	.001
-1430.0	-435.86	.001	.001	.001	.000	.001
-1415.0	-431.29	.001	.001	.001	.000	.001
-1400.0	-426.72	.001	.001	.001	.000	.001
-1385.0	-422.15	.001	.001	.001	.000	.001
-1370.0	-417.58	.001	.001	.001	.000	.001
-1355.0	-413.00	.001	.001	.001	.000	.001
-1340.0	-408.43	.001	.001	.001	.000	.001
-1325.0	-403.86	.001	.001	.001	.000	.001
-1310.0	-399.29	.001	.001	.001	.000	.001
-1295.0	-394.72	.001	.001	.001	.000	.001
-1280.0	-390.14	.001	.001	.001	.000	.001
-1265.0	-385.57	.001	.001	.001	.000	.001
-1250.0	-381.00	.001	.001	.001	.000	.001
-1235.0	-376.43	.001	.001	.001	.000	.001
-1220.0	-371.86	.001	.001	.001	.000	.001
-1205.0	-367.28	.001	.001	.001	.000	.001
-1190.0	-362.71	.001	.001	.001	.000	.001
-1175.0	-358.14	.001	.001	.001	.000	.001
-1160.0	-353.57	.002	.001	.002	.000	.002
-1145.0	-349.00	.002	.001	.002	.000	.002
-1130.0	-344.42	.002	.001	.002	.000	.002
-1115.0	-339.85	.002	.001	.002	.000	.002
-1100.0	-335.28	.002	.001	.002	.000	.002
-1085.0	-330.71	.002	.001	.002	.000	.002
-1070.0	-326.14	.002	.001	.002	.000	.002
-1055.0	-321.56	.002	.001	.002	.000	.002
-1040.0	-316.99	.002	.001	.002	.000	.002
-1025.0	-312.42	.002	.002	.002	.000	.002
-1010.0	-307.85	.002	.002	.002	.000	.002
-995.0	-303.28	.002	.002	.002	.000	.002
-980.0	-298.70	.002	.002	.002	.000	.002
-965.0	-294.13	.002	.002	.002	.000	.002
-950.0	-289.56	.003	.002	.003	.000	.003
-935.0	-284.99	.003	.002	.003	.000	.003
-920.0	-280.42	.003	.002	.003	.000	.003

-905.0	-275.84	.003	.002	.003	.000	.003
-890.0	-271.27	.003	.002	.003	.000	.003
-875.0	-266.70	.003	.002	.003	.000	.003
-860.0	-262.13	.003	.002	.003	.000	.003
-845.0	-257.56	.003	.002	.003	.000	.003
-830.0	-252.98	.004	.002	.004	.000	.004
-815.0	-248.41	.004	.002	.004	.000	.004
-800.0	-243.84	.004	.002	.004	.000	.004
-785.0	-239.27	.004	.002	.004	.000	.004
-770.0	-234.70	.004	.002	.004	.000	.004
-755.0	-230.12	.005	.002	.005	.000	.005
-740.0	-225.55	.005	.002	.005	.000	.005
-725.0	-220.98	.005	.002	.005	.000	.005
-710.0	-216.41	.005	.002	.005	.000	.005
-695.0	-211.84	.006	.002	.006	.000	.006
-680.0	-207.26	.006	.002	.006	.000	.006
-665.0	-202.69	.006	.002	.006	.000	.006
-650.0	-198.12	.007	.002	.007	.000	.007
-635.0	-193.55	.007	.002	.007	.000	.007
-620.0	-188.98	.008	.002	.008	.000	.008
-605.0	-184.40	.008	.002	.008	.000	.008
-590.0	-179.83	.009	.002	.009	.000	.009
-575.0	-175.26	.010	.002	.010	.000	.010
-560.0	-170.69	.010	.002	.010	.000	.010
-545.0	-166.12	.011	.002	.011	.000	.011
-530.0	-161.54	.012	.002	.012	.000	.012
-515.0	-156.97	.013	.002	.013	.000	.013
-500.0	-152.40	.014	.002	.014	.000	.014
-490.0	-149.35	.015	.002	.015	.000	.015
-480.0	-146.30	.016	.002	.016	.000	.016
-470.0	-143.26	.017	.002	.017	.000	.017
-460.0	-140.21	.018	.002	.018	.000	.018
-450.0	-137.16	.019	.002	.019	.000	.019
-440.0	-134.11	.020	.002	.020	.000	.020
-430.0	-131.06	.022	.002	.022	.000	.022
-420.0	-128.02	.023	.002	.023	.001	.023
-410.0	-124.97	.025	.002	.025	.001	.025
-400.0	-121.92	.027	.002	.027	.001	.027
-390.0	-118.87	.029	.002	.029	.001	.029
-380.0	-115.82	.031	.002	.031	.001	.031
-370.0	-112.78	.033	.002	.033	.001	.033
-360.0	-109.73	.036	.002	.036	.001	.036
-350.0	-106.68	.039	.002	.039	.001	.039
-340.0	-103.63	.043	.002	.043	.001	.043
-330.0	-100.58	.046	.002	.046	.001	.046
-320.0	-97.54	.051	.002	.051	.002	.051
-310.0	-94.49	.056	.002	.056	.002	.056
-300.0	-91.44	.061	.002	.061	.002	.061
-290.0	-88.39	.068	.002	.068	.002	.068
-280.0	-85.34	.075	.002	.075	.003	.075
-270.0	-82.30	.083	.002	.083	.003	.083
-260.0	-79.25	.093	.002	.093	.003	.093
-250.0	-76.20	.104	.002	.104	.004	.104
-240.0	-73.15	.117	.001	.117	.005	.117
-230.0	-70.10	.133	.001	.133	.006	.133
-220.0	-67.06	.151	.001	.151	.007	.151
-210.0	-64.01	.173	.001	.173	.008	.173
-200.0	-60.96	.200	.001	.200	.010	.200
-190.0	-57.91	.232	.001	.232	.012	.232
-180.0	-54.86	.272	.001	.271	.014	.272
-170.0	-51.82	.321	.000	.320	.018	.321
-160.0	-48.77	.382	.000	.382	.023	.382
-150.0	-45.72	.461	.000	.460	.029	.461

-140.0	-42.67	.562	.001	.561	.038	.562
-130.0	-39.62	.695	.001	.693	.050	.694
-120.0	-36.58	.871	.001	.869	.067	.871
-110.0	-33.53	1.111	.002	1.107	.092	1.110
-100.0	-30.48	1.443	.002	1.438	.128	1.442
-90.0	-27.43	1.912	.002	1.903	.182	1.909
-80.0	-24.38	2.582	.002	2.568	.262	2.578
-70.0	-21.34	3.545	.002	3.525	.374	3.538
-60.0	-18.29	4.895	.000	4.869	.509	4.882
-50.0	-15.24	6.621	.006	6.595	.594	6.593
-40.0	-12.19	8.294	.019	8.284	.451	8.238
-30.0	-9.14	8.797	.054	8.795	.507	8.706
-20.0	-6.10	7.336	.142	7.302	1.257	7.237
-10.0	-3.05	5.600	.262	5.593	1.495	5.536
.0	.00	5.451	.238	5.451	1.296	5.337

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AC CURRENTS IN EACH BUNDLE:

BNDL #	AC CURRENTS (Amperes) REAL	IMAGINARY	TOTAL	BUNDLE POSITION X-COORD	Y-COORD
1	1575.00	.00	1575.00	-28.00	34.50
2	-787.50	1363.99	1575.00	.00	34.50
3	-787.50	-1363.99	1575.00	28.00	34.50

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MAGNETIC FIELD PROFILE
at 3.28 feet above ground

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LATERAL DISTANCE (feet)	(meters)	AC MAGNETIC FIELD: MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
-3100.0	-944.88	.06	.788	.06	.06	.08
-3075.0	-937.26	.06	.795	.06	.06	.08
-3050.0	-929.64	.06	.802	.06	.06	.08
-3025.0	-922.02	.06	.809	.06	.06	.08
-3000.0	-914.40	.06	.816	.06	.06	.08
-2975.0	-906.78	.07	.822	.06	.06	.08
-2950.0	-899.16	.07	.828	.06	.06	.09
-2925.0	-891.54	.07	.834	.06	.06	.09
-2900.0	-883.92	.07	.839	.06	.06	.09
-2875.0	-876.30	.07	.842	.06	.07	.09
-2850.0	-868.68	.07	.845	.06	.07	.09
-2825.0	-861.06	.07	.847	.06	.07	.09
-2800.0	-853.44	.07	.847	.06	.07	.09
-2775.0	-845.82	.07	.845	.06	.07	.09
-2750.0	-838.20	.07	.842	.06	.07	.09
-2725.0	-830.58	.07	.837	.06	.07	.10
-2700.0	-822.96	.07	.830	.06	.07	.10
-2675.0	-815.34	.08	.822	.06	.08	.10
-2650.0	-807.72	.08	.812	.06	.08	.10
-2625.0	-800.10	.08	.800	.06	.08	.10

-2600.0	-792.48	.08	.787	.06	.08	.10
-2575.0	-784.86	.08	.773	.06	.08	.10
-2550.0	-777.24	.08	.758	.06	.08	.10
-2525.0	-769.62	.08	.742	.06	.08	.10
-2500.0	-762.00	.08	.726	.06	.08	.10
-2475.0	-754.38	.09	.708	.06	.08	.10
-2450.0	-746.76	.09	.690	.06	.09	.11
-2425.0	-739.14	.09	.671	.06	.09	.11
-2400.0	-731.52	.09	.651	.06	.09	.11
-2375.0	-723.90	.09	.631	.06	.09	.11
-2350.0	-716.28	.09	.611	.06	.09	.11
-2325.0	-708.66	.09	.589	.06	.09	.11
-2300.0	-701.04	.10	.568	.06	.09	.11
-2275.0	-693.42	.10	.546	.06	.09	.11
-2250.0	-685.80	.10	.524	.06	.09	.11
-2225.0	-678.18	.10	.501	.06	.09	.11
-2200.0	-670.56	.10	.478	.06	.10	.11
-2175.0	-662.94	.10	.455	.06	.10	.12
-2150.0	-655.32	.11	.431	.06	.10	.12
-2125.0	-647.70	.11	.407	.07	.10	.12
-2100.0	-640.08	.11	.383	.07	.10	.12
-2075.0	-632.46	.11	.359	.07	.10	.12
-2050.0	-624.84	.11	.335	.07	.10	.12
-2025.0	-617.22	.12	.310	.07	.10	.12
-2000.0	-609.60	.12	.286	.07	.10	.12
-1985.0	-605.03	.12	.272	.07	.10	.12
-1970.0	-600.46	.12	.257	.07	.10	.13
-1955.0	-595.88	.12	.243	.08	.10	.13
-1940.0	-591.31	.12	.228	.08	.10	.13
-1925.0	-586.74	.13	.214	.08	.10	.13
-1910.0	-582.17	.13	.200	.08	.10	.13
-1895.0	-577.60	.13	.186	.08	.10	.13
-1880.0	-573.02	.13	.172	.08	.10	.13
-1865.0	-568.45	.13	.158	.09	.10	.13
-1850.0	-563.88	.13	.144	.09	.10	.13
-1835.0	-559.31	.14	.131	.09	.10	.14
-1820.0	-554.74	.14	.117	.09	.10	.14
-1805.0	-550.16	.14	.104	.09	.10	.14
-1790.0	-545.59	.14	.091	.10	.10	.14
-1775.0	-541.02	.14	.079	.10	.10	.14
-1760.0	-536.45	.14	.067	.10	.10	.14
-1745.0	-531.88	.15	.055	.10	.10	.15
-1730.0	-527.30	.15	.043	.11	.10	.15
-1715.0	-522.73	.15	.032	.11	.10	.15
-1700.0	-518.16	.15	.021	.11	.10	.15
-1685.0	-513.59	.16	.010	.12	.10	.16
-1670.0	-509.02	.16	.000	.12	.10	.16
-1655.0	-504.44	.16	.010	.12	.10	.16
-1640.0	-499.87	.16	.019	.13	.10	.16
-1625.0	-495.30	.17	.028	.13	.10	.17
-1610.0	-490.73	.17	.036	.14	.10	.17
-1595.0	-486.16	.17	.044	.14	.10	.17
-1580.0	-481.58	.18	.052	.14	.10	.18
-1565.0	-477.01	.18	.059	.15	.10	.18
-1550.0	-472.44	.18	.065	.15	.10	.18
-1535.0	-467.87	.19	.071	.16	.10	.19
-1520.0	-463.30	.19	.077	.16	.10	.19
-1505.0	-458.72	.19	.082	.17	.10	.19
-1490.0	-454.15	.20	.087	.17	.10	.20
-1475.0	-449.58	.20	.091	.18	.10	.20
-1460.0	-445.01	.21	.095	.18	.10	.21
-1445.0	-440.44	.21	.098	.19	.10	.21
-1430.0	-435.86	.22	.101	.19	.10	.22

-1415.0	-431.29	.22	.103	.20	.10	.22
-1400.0	-426.72	.23	.106	.20	.10	.23
-1385.0	-422.15	.23	.107	.21	.10	.23
-1370.0	-417.58	.24	.109	.22	.10	.24
-1355.0	-413.00	.24	.110	.22	.10	.24
-1340.0	-408.43	.25	.110	.23	.10	.25
-1325.0	-403.86	.26	.111	.24	.10	.26
-1310.0	-399.29	.26	.111	.25	.10	.26
-1295.0	-394.72	.27	.111	.25	.10	.27
-1280.0	-390.14	.28	.110	.26	.10	.28
-1265.0	-385.57	.28	.110	.27	.10	.29
-1250.0	-381.00	.29	.109	.28	.10	.29
-1235.0	-376.43	.30	.108	.29	.10	.30
-1220.0	-371.86	.31	.106	.29	.10	.31
-1205.0	-367.28	.32	.105	.30	.10	.32
-1190.0	-362.71	.33	.104	.31	.10	.33
-1175.0	-358.14	.33	.102	.32	.10	.34
-1160.0	-353.57	.34	.100	.33	.10	.35
-1145.0	-349.00	.35	.098	.34	.10	.36
-1130.0	-344.42	.37	.096	.35	.10	.37
-1115.0	-339.85	.38	.094	.37	.10	.38
-1100.0	-335.28	.39	.092	.38	.10	.39
-1085.0	-330.71	.40	.090	.39	.10	.40
-1070.0	-326.14	.41	.087	.40	.10	.41
-1055.0	-321.56	.42	.085	.42	.10	.43
-1040.0	-316.99	.44	.083	.43	.10	.44
-1025.0	-312.42	.45	.080	.44	.10	.45
-1010.0	-307.85	.47	.078	.46	.10	.47
-995.0	-303.28	.48	.076	.47	.10	.48
-980.0	-298.70	.50	.073	.49	.10	.50
-965.0	-294.13	.52	.071	.51	.10	.52
-950.0	-289.56	.53	.069	.52	.10	.53
-935.0	-284.99	.55	.066	.54	.10	.55
-920.0	-280.42	.57	.064	.56	.10	.57
-905.0	-275.84	.59	.062	.58	.10	.59
-890.0	-271.27	.61	.059	.60	.10	.61
-875.0	-266.70	.63	.057	.63	.10	.64
-860.0	-262.13	.66	.055	.65	.11	.66
-845.0	-257.56	.68	.053	.68	.11	.68
-830.0	-252.98	.71	.051	.70	.11	.71
-815.0	-248.41	.74	.048	.73	.11	.74
-800.0	-243.84	.77	.046	.76	.11	.77
-785.0	-239.27	.80	.044	.79	.12	.80
-770.0	-234.70	.83	.042	.82	.12	.83
-755.0	-230.12	.86	.041	.85	.12	.86
-740.0	-225.55	.90	.039	.89	.12	.90
-725.0	-220.98	.94	.037	.93	.13	.94
-710.0	-216.41	.98	.035	.97	.13	.98
-695.0	-211.84	1.02	.033	1.01	.14	1.02
-680.0	-207.26	1.07	.032	1.06	.14	1.07
-665.0	-202.69	1.12	.030	1.11	.15	1.12
-650.0	-198.12	1.17	.029	1.16	.16	1.17
-635.0	-193.55	1.23	.027	1.22	.16	1.23
-620.0	-188.98	1.29	.026	1.28	.17	1.29
-605.0	-184.40	1.35	.025	1.34	.18	1.36
-590.0	-179.83	1.43	.023	1.41	.19	1.43
-575.0	-175.26	1.50	.022	1.49	.20	1.50
-560.0	-170.69	1.58	.021	1.57	.21	1.58
-545.0	-166.12	1.67	.020	1.66	.23	1.67
-530.0	-161.54	1.77	.019	1.75	.24	1.77
-515.0	-156.97	1.88	.018	1.86	.26	1.88
-500.0	-152.40	1.99	.017	1.97	.28	1.99
-490.0	-149.35	2.07	.016	2.05	.30	2.07

-480.0	-146.30	2.16	.016	2.14	.31	2.16
-470.0	-143.26	2.25	.015	2.23	.33	2.25
-460.0	-140.21	2.35	.014	2.33	.35	2.35
-450.0	-137.16	2.46	.014	2.43	.37	2.46
-440.0	-134.11	2.57	.014	2.54	.39	2.57
-430.0	-131.06	2.69	.013	2.66	.42	2.69
-420.0	-128.02	2.82	.013	2.79	.45	2.82
-410.0	-124.97	2.96	.012	2.92	.48	2.96
-400.0	-121.92	3.11	.012	3.07	.51	3.11
-390.0	-118.87	3.27	.012	3.23	.55	3.27
-380.0	-115.82	3.45	.011	3.40	.59	3.45
-370.0	-112.78	3.64	.011	3.58	.64	3.64
-360.0	-109.73	3.84	.011	3.78	.69	3.84
-350.0	-106.68	4.06	.011	3.99	.75	4.06
-340.0	-103.63	4.31	.011	4.23	.82	4.31
-330.0	-100.58	4.57	.010	4.48	.89	4.57
-320.0	-97.54	4.86	.010	4.76	.98	4.86
-310.0	-94.49	5.18	.010	5.07	1.07	5.18
-300.0	-91.44	5.53	.010	5.40	1.18	5.53
-290.0	-88.39	5.91	.011	5.77	1.30	5.91
-280.0	-85.34	6.34	.011	6.18	1.44	6.34
-270.0	-82.30	6.82	.011	6.63	1.60	6.82
-260.0	-79.25	7.35	.011	7.13	1.79	7.35
-250.0	-76.20	7.95	.011	7.69	2.01	7.95
-240.0	-73.15	8.62	.012	8.32	2.27	8.62
-230.0	-70.10	9.38	.012	9.02	2.58	9.38
-220.0	-67.06	10.25	.013	9.82	2.94	10.25
-210.0	-64.01	11.24	.014	10.72	3.37	11.24
-200.0	-60.96	12.38	.015	11.76	3.90	12.38
-190.0	-57.91	13.71	.016	12.94	4.53	13.71
-180.0	-54.86	15.26	.017	14.30	5.32	15.26
-170.0	-51.82	17.09	.019	15.88	6.30	17.09
-160.0	-48.77	19.26	.021	17.73	7.53	19.26
-150.0	-45.72	21.87	.023	19.89	9.11	21.88
-140.0	-42.67	25.05	.026	22.44	11.15	25.06
-130.0	-39.62	28.96	.029	25.45	13.84	28.97
-120.0	-36.58	33.85	.033	29.02	17.46	33.87
-110.0	-33.53	40.07	.039	33.24	22.43	40.10
-100.0	-30.48	48.10	.046	38.14	29.39	48.15
-90.0	-27.43	58.69	.055	43.63	39.39	58.78
-80.0	-24.38	72.94	.067	49.22	54.04	73.10
-70.0	-21.34	92.43	.083	53.37	75.85	92.74
-60.0	-18.29	119.28	.105	52.20	107.97	119.93
-50.0	-15.24	155.51	.136	38.88	152.04	156.93
-40.0	-12.19	200.32	.180	40.27	199.53	203.55
-30.0	-9.14	245.01	.245	123.20	220.14	252.27
-20.0	-6.10	274.55	.336	220.61	187.63	289.61
-10.0	-3.05	283.02	.444	272.76	146.71	309.71
.0	.00	281.52	.512	281.48	144.12	316.23

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*********************************
*                               *
*         AUDIBLE NOISE         *
*   GENERATED ACOUSTIC POWER    *
*       (dB above 1uW/m)        *
*                               *
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-60.66	-45.46	-49.19
2	AC	-56.31	-42.88	-45.47

3 AC -60.66 -45.46 -49.19

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*                      *
*    AUDIBLE NOISE     *
*   (other methods)    *
*                      *
* Altitude   5000. ft  *
*                      *
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LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	BPA METHOD FAIR WEATHER dB(A)	BPA METHOD L5 RAIN dB(A)	BPA METHOD L50 RAIN dB(A)	Ldn dB(A)	CRIEPI AVERAGE FAIR dB(A)	CRIEPI L5 RAIN dB(A)	EdF L5 RAIN dB(A)	ENEL L5 RAIN dB(A)	IREQ L5 RAIN dB(A)
-3100.0	-944.88	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
-3075.0	-937.26	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-3050.0	-929.64	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-3025.0	-922.02	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-3000.0	-914.40	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-2975.0	-906.78	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-2950.0	-899.16	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-2925.0	-891.54	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-2900.0	-883.92	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-2875.0	-876.30	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
-2850.0	-868.68	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
-2825.0	-861.06	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-2800.0	-853.44	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-2775.0	-845.82	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-2750.0	-838.20	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-2725.0	-830.58	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-2700.0	-822.96	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
-2675.0	-815.34	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
-2650.0	-807.72	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
-2625.0	-800.10	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
-2600.0	-792.48	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
-2575.0	-784.86	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
-2550.0	-777.24	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-2525.0	-769.62	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-2500.0	-762.00	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
-2475.0	-754.38	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
-2450.0	-746.76	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
-2425.0	-739.14	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
-2400.0	-731.52	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
-2375.0	-723.90	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
-2350.0	-716.28	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
-2325.0	-708.66	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
-2300.0	-701.04	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
-2275.0	-693.42	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
-2250.0	-685.80	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
-2225.0	-678.18	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
-2200.0	-670.56	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
-2175.0	-662.94	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
-2150.0	-655.32	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
-2125.0	-647.70	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
-2100.0	-640.08	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
-2075.0	-632.46	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
-2050.0	-624.84	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
-2025.0	-617.22	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
-2000.0	-609.60	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
-1985.0	-605.03	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
-1970.0	-600.46	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0

-1955.0	-595.88	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
-1940.0	-591.31	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
-1925.0	-586.74	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
-1910.0	-582.17	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
-1895.0	-577.60	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
-1880.0	-573.02	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
-1865.0	-568.45	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
-1850.0	-563.88	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
-1835.0	-559.31	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
-1820.0	-554.74	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
-1805.0	-550.16	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
-1790.0	-545.59	16.8	45.3	41.8	.0	.0	.0	.0	.0	.0
-1775.0	-541.02	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
-1760.0	-536.45	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
-1745.0	-531.88	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
-1730.0	-527.30	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
-1715.0	-522.73	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
-1700.0	-518.16	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
-1685.0	-513.59	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
-1670.0	-509.02	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
-1655.0	-504.44	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
-1640.0	-499.87	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
-1625.0	-495.30	17.3	45.8	42.3	.0	.0	.0	.0	.0	.0
-1610.0	-490.73	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-1595.0	-486.16	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-1580.0	-481.58	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-1565.0	-477.01	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
-1550.0	-472.44	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
-1535.0	-467.87	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
-1520.0	-463.30	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
-1505.0	-458.72	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
-1490.0	-454.15	17.7	46.2	42.7	.0	.0	.0	.0	.0	.0
-1475.0	-449.58	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
-1460.0	-445.01	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
-1445.0	-440.44	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
-1430.0	-435.86	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
-1415.0	-431.29	18.0	46.5	43.0	.0	.0	.0	.0	.0	.0
-1400.0	-426.72	18.0	46.5	43.0	.0	.0	.0	.0	.0	.0
-1385.0	-422.15	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
-1370.0	-417.58	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
-1355.0	-413.00	18.2	46.7	43.2	.0	.0	.0	.0	.0	.0
-1340.0	-408.43	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
-1325.0	-403.86	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
-1310.0	-399.29	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
-1295.0	-394.72	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
-1280.0	-390.14	18.5	47.0	43.5	.0	.0	.0	.0	.0	.0
-1265.0	-385.57	18.5	47.0	43.5	.0	.0	.0	.0	.0	.0
-1250.0	-381.00	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
-1235.0	-376.43	18.7	47.2	43.7	.0	.0	.0	.0	.0	.0
-1220.0	-371.86	18.7	47.2	43.7	.0	.0	.0	.0	.0	.0
-1205.0	-367.28	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
-1190.0	-362.71	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
-1175.0	-358.14	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
-1160.0	-353.57	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
-1145.0	-349.00	19.0	47.5	44.0	.0	.0	.0	.0	.0	.0
-1130.0	-344.42	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
-1115.0	-339.85	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
-1100.0	-335.28	19.2	47.7	44.2	.0	.0	.0	.0	.0	.0
-1085.0	-330.71	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
-1070.0	-326.14	19.4	47.9	44.4	.0	.0	.0	.0	.0	.0
-1055.0	-321.56	19.4	47.9	44.4	.0	.0	.0	.0	.0	.0
-1040.0	-316.99	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
-1025.0	-312.42	19.6	48.1	44.6	.0	.0	.0	.0	.0	.0

-1010.0	-307.85	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
-995.0	-303.28	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
-980.0	-298.70	19.8	48.3	44.8	.0	.0	.0	.0	.0	.0
-965.0	-294.13	19.9	48.4	44.9	.0	.0	.0	.0	.0	.0
-950.0	-289.56	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
-935.0	-284.99	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
-920.0	-280.42	20.1	48.6	45.1	.0	.0	.0	.0	.0	.0
-905.0	-275.84	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
-890.0	-271.27	20.3	48.8	45.3	.0	.0	.0	.0	.0	.0
-875.0	-266.70	20.4	48.9	45.4	.0	.0	.0	.0	.0	.0
-860.0	-262.13	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
-845.0	-257.56	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
-830.0	-252.98	20.6	49.1	45.6	.0	.0	.0	.0	.0	.0
-815.0	-248.41	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
-800.0	-243.84	20.8	49.3	45.8	.0	.0	.0	.0	.0	.0
-785.0	-239.27	20.9	49.4	45.9	.0	.0	.0	.0	.0	.0
-770.0	-234.70	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
-755.0	-230.12	21.1	49.6	46.1	.0	.0	.0	.0	.0	.0
-740.0	-225.55	21.2	49.7	46.2	.0	.0	.0	.0	.0	.0
-725.0	-220.98	21.3	49.8	46.3	.0	.0	.0	.0	.0	.0
-710.0	-216.41	21.4	49.9	46.4	.0	.0	.0	.0	.0	.0
-695.0	-211.84	21.5	50.0	46.5	.0	.0	.0	.0	.0	.0
-680.0	-207.26	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
-665.0	-202.69	21.7	50.2	46.7	.0	.0	.0	.0	.0	.0
-650.0	-198.12	21.8	50.3	46.8	.0	.0	.0	.0	.0	.0
-635.0	-193.55	22.0	50.5	47.0	.0	.0	.0	.0	.0	.0
-620.0	-188.98	22.1	50.6	47.1	.0	.0	.0	.0	.0	.0
-605.0	-184.40	22.2	50.7	47.2	.0	.0	.0	.0	.0	.0
-590.0	-179.83	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
-575.0	-175.26	22.4	50.9	47.4	.0	.0	.0	.0	.0	.0
-560.0	-170.69	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0
-545.0	-166.12	22.7	51.2	47.7	.0	.0	.0	.0	.0	.0
-530.0	-161.54	22.8	51.3	47.8	.0	.0	.0	.0	.0	.0
-515.0	-156.97	23.0	51.5	48.0	.0	.0	.0	.0	.0	.0
-500.0	-152.40	23.1	51.6	48.1	.0	.0	.0	.0	.0	.0
-490.0	-149.35	23.2	51.7	48.2	.0	.0	.0	.0	.0	.0
-480.0	-146.30	23.3	51.8	48.3	.0	.0	.0	.0	.0	.0
-470.0	-143.26	23.4	51.9	48.4	.0	.0	.0	.0	.0	.0
-460.0	-140.21	23.5	52.0	48.5	.0	.0	.0	.0	.0	.0
-450.0	-137.16	23.7	52.2	48.7	.0	.0	.0	.0	.0	.0
-440.0	-134.11	23.8	52.3	48.8	.0	.0	.0	.0	.0	.0
-430.0	-131.06	23.9	52.4	48.9	.0	.0	.0	.0	.0	.0
-420.0	-128.02	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0
-410.0	-124.97	24.1	52.6	49.1	.0	.0	.0	.0	.0	.0
-400.0	-121.92	24.2	52.7	49.2	.0	.0	.0	.0	.0	.0
-390.0	-118.87	24.4	52.9	49.4	.0	.0	.0	.0	.0	.0
-380.0	-115.82	24.5	53.0	49.5	.0	.0	.0	.0	.0	.0
-370.0	-112.78	24.6	53.1	49.6	.0	.0	.0	.0	.0	.0
-360.0	-109.73	24.8	53.3	49.8	.0	.0	.0	.0	.0	.0
-350.0	-106.68	24.9	53.4	49.9	.0	.0	.0	.0	.0	.0
-340.0	-103.63	25.0	53.5	50.0	.0	.0	.0	.0	.0	.0
-330.0	-100.58	25.2	53.7	50.2	.0	.0	.0	.0	.0	.0
-320.0	-97.54	25.3	53.8	50.3	.0	.0	.0	.0	.0	.0
-310.0	-94.49	25.5	54.0	50.5	.0	.0	.0	.0	.0	.0
-300.0	-91.44	25.7	54.2	50.7	.0	.0	.0	.0	.0	.0
-290.0	-88.39	25.8	54.3	50.8	.0	.0	.0	.0	.0	.0
-280.0	-85.34	26.0	54.5	51.0	.0	.0	.0	.0	.0	.0
-270.0	-82.30	26.2	54.7	51.2	.0	.0	.0	.0	.0	.0
-260.0	-79.25	26.4	54.9	51.4	.0	.0	.0	.0	.0	.0
-250.0	-76.20	26.6	55.1	51.6	.0	.0	.0	.0	.0	.0
-240.0	-73.15	26.8	55.3	51.8	.0	.0	.0	.0	.0	.0
-230.0	-70.10	27.0	55.5	52.0	.0	.0	.0	.0	.0	.0
-220.0	-67.06	27.2	55.7	52.2	.0	.0	.0	.0	.0	.0

-210.0	-64.01	27.4	55.9	52.4	.0	.0	.0	.0	.0	.0
-200.0	-60.96	27.7	56.2	52.7	.0	.0	.0	.0	.0	.0
-190.0	-57.91	27.9	56.4	52.9	.0	.0	.0	.0	.0	.0
-180.0	-54.86	28.2	56.7	53.2	.0	.0	.0	.0	.0	.0
-170.0	-51.82	28.4	56.9	53.4	.0	.0	.0	.0	.0	.0
-160.0	-48.77	28.7	57.2	53.7	.0	.0	.0	.0	.0	.0
-150.0	-45.72	29.1	57.6	54.1	.0	.0	.0	.0	.0	.0
-140.0	-42.67	29.4	57.9	54.4	.0	.0	.0	.0	.0	.0
-130.0	-39.62	29.8	58.3	54.8	.0	.0	.0	.0	.0	.0
-120.0	-36.58	30.1	58.6	55.1	.0	.0	.0	.0	.0	.0
-110.0	-33.53	30.6	59.1	55.6	.0	.0	.0	.0	.0	.0
-100.0	-30.48	31.0	59.5	56.0	.0	.0	.0	.0	.0	.0
-90.0	-27.43	31.5	60.0	56.5	.0	.0	.0	.0	.0	.0
-80.0	-24.38	32.1	60.6	57.1	.0	.0	.0	.0	.0	.0
-70.0	-21.34	32.7	61.2	57.7	.0	.0	.0	.0	.0	.0
-60.0	-18.29	33.3	61.8	58.3	.0	.0	.0	.0	.0	.0
-50.0	-15.24	34.0	62.5	59.0	.0	.0	.0	.0	.0	.0
-40.0	-12.19	34.8	63.3	59.8	.0	.0	.0	.0	.0	.0
-30.0	-9.14	35.4	63.9	60.4	.0	.0	.0	.0	.0	.0
-20.0	-6.10	35.9	64.4	60.9	.0	.0	.0	.0	.0	.0
-10.0	-3.05	36.3	64.8	61.3	.0	.0	.0	.0	.0	.0
.0	.00	36.5	65.0	61.5	.0	.0	.0	.0	.0	.0

Audible noise prediction methods do not apply to all line geometries, voltages, or weather conditions. If a prediction method does not apply, the appropriate output data column will be zeros.

RESULTS OF ENVIRO PROGRAM

Single Circuit, 402 amp, 230-kV, H-Frame Structure at 5,000 ft elevation

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	230.0	.0	402.0	.0	1	-19.5	20.0	A
2	1	230.0	240.0	402.0	240.0	1	.0	20.0	B
3	1	230.0	120.0	402.0	120.0	1	19.5	20.0	C

MINIMUM GROUND CLEARANCE = 20.000 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	1.108	.000	.11520	.11700	.399000
2	1.108	.000	.11520	.11700	.399000
3	1.108	.000	.11520	.11700	.399000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	15.32	21.67	-21.67
2	AC	16.02	22.65	-22.65
3	AC	15.32	21.67	-21.67

♀

AC ELECTRIC FIELD PROFILE at 3.28 feet above ground

LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-500.0	-152.40	.002	.002	.002	.000	.002
-495.0	-150.88	.002	.002	.002	.000	.002
-490.0	-149.35	.002	.002	.002	.000	.002
-485.0	-147.83	.002	.002	.002	.000	.002
-480.0	-146.30	.002	.002	.002	.000	.002
-475.0	-144.78	.002	.002	.002	.000	.002
-470.0	-143.26	.002	.002	.002	.000	.002

-465.0	-141.73	.002	.002	.002	.000	.002
-460.0	-140.21	.002	.002	.002	.000	.002
-455.0	-138.68	.002	.002	.002	.000	.002
-450.0	-137.16	.002	.002	.002	.000	.002
-445.0	-135.64	.002	.002	.002	.000	.002
-440.0	-134.11	.002	.002	.002	.000	.002
-435.0	-132.59	.002	.002	.002	.000	.002
-430.0	-131.06	.003	.002	.003	.000	.003
-425.0	-129.54	.003	.002	.003	.000	.003
-420.0	-128.02	.003	.002	.003	.000	.003
-415.0	-126.49	.003	.002	.003	.000	.003
-410.0	-124.97	.003	.002	.003	.000	.003
-405.0	-123.44	.003	.002	.003	.000	.003
-400.0	-121.92	.003	.002	.003	.000	.003
-395.0	-120.40	.003	.002	.003	.000	.003
-390.0	-118.87	.003	.002	.003	.000	.003
-385.0	-117.35	.003	.002	.003	.000	.003
-380.0	-115.82	.004	.002	.004	.000	.004
-375.0	-114.30	.004	.002	.004	.000	.004
-370.0	-112.78	.004	.002	.004	.000	.004
-365.0	-111.25	.004	.002	.004	.000	.004
-360.0	-109.73	.004	.002	.004	.000	.004
-355.0	-108.20	.004	.002	.004	.000	.004
-350.0	-106.68	.005	.002	.005	.000	.005
-345.0	-105.16	.005	.002	.005	.000	.005
-340.0	-103.63	.005	.002	.005	.000	.005
-335.0	-102.11	.005	.002	.005	.000	.005
-330.0	-100.58	.005	.002	.005	.000	.005
-325.0	-99.06	.006	.002	.006	.000	.006
-320.0	-97.54	.006	.002	.006	.000	.006
-315.0	-96.01	.006	.002	.006	.000	.006
-310.0	-94.49	.007	.002	.007	.000	.007
-305.0	-92.96	.007	.002	.007	.000	.007
-300.0	-91.44	.007	.002	.007	.000	.007
-295.0	-89.92	.008	.002	.008	.000	.008
-290.0	-88.39	.008	.002	.008	.000	.008
-285.0	-86.87	.008	.002	.008	.000	.008
-280.0	-85.34	.009	.002	.009	.000	.009
-275.0	-83.82	.009	.002	.009	.000	.009
-270.0	-82.30	.010	.002	.010	.000	.010
-265.0	-80.77	.010	.002	.010	.000	.010
-260.0	-79.25	.011	.002	.011	.000	.011
-255.0	-77.72	.012	.002	.012	.000	.012
-250.0	-76.20	.012	.002	.012	.000	.012
-245.0	-74.68	.013	.002	.013	.001	.013
-240.0	-73.15	.014	.002	.014	.001	.014
-235.0	-71.63	.015	.002	.015	.001	.015
-230.0	-70.10	.016	.002	.016	.001	.016
-225.0	-68.58	.017	.002	.017	.001	.017
-220.0	-67.06	.018	.002	.018	.001	.018
-215.0	-65.53	.019	.002	.019	.001	.019
-210.0	-64.01	.021	.002	.021	.001	.021
-205.0	-62.48	.022	.002	.022	.001	.022
-200.0	-60.96	.024	.001	.024	.001	.024
-195.0	-59.44	.026	.001	.026	.001	.026
-190.0	-57.91	.028	.001	.028	.001	.028
-185.0	-56.39	.030	.001	.030	.002	.030
-180.0	-54.86	.033	.001	.033	.002	.033
-175.0	-53.34	.035	.001	.035	.002	.035
-170.0	-51.82	.039	.001	.039	.002	.039
-165.0	-50.29	.042	.001	.042	.003	.042
-160.0	-48.77	.046	.001	.046	.003	.046
-155.0	-47.24	.051	.001	.051	.003	.051

-150.0	-45.72	.056	.001	.056	.004	.056
-145.0	-44.20	.062	.000	.062	.004	.062
-140.0	-42.67	.069	.000	.069	.005	.069
-135.0	-41.15	.077	.000	.077	.006	.077
-130.0	-39.62	.086	.000	.086	.006	.086
-125.0	-38.10	.097	.000	.096	.008	.097
-120.0	-36.58	.109	.001	.109	.009	.109
-115.0	-35.05	.124	.001	.124	.011	.124
-110.0	-33.53	.142	.001	.141	.013	.142
-105.0	-32.00	.163	.002	.162	.015	.163
-100.0	-30.48	.188	.002	.187	.018	.188
-95.0	-28.96	.219	.002	.218	.023	.219
-90.0	-27.43	.258	.003	.256	.028	.258
-85.0	-25.91	.305	.003	.303	.035	.305
-80.0	-24.38	.365	.004	.363	.044	.365
-75.0	-22.86	.442	.004	.438	.057	.441
-70.0	-21.34	.541	.005	.536	.074	.540
-65.0	-19.81	.670	.005	.663	.097	.669
-60.0	-18.29	.843	.006	.833	.130	.841
-55.0	-16.76	1.076	.006	1.061	.177	1.073
-50.0	-15.24	1.393	.006	1.372	.242	1.389
-45.0	-13.72	1.830	.006	1.800	.331	1.821
-40.0	-12.19	2.423	.004	2.383	.441	2.407
-35.0	-10.67	3.196	.001	3.149	.548	3.165
-30.0	-9.14	4.090	.012	4.052	.563	4.031
-25.0	-7.62	4.850	.035	4.839	.364	4.747
-20.0	-6.10	5.003	.086	4.998	.480	4.859
-15.0	-4.57	4.313	.201	4.263	1.084	4.170
-10.0	-3.05	3.386	.389	3.365	1.372	3.325
-5.0	-1.52	3.373	.356	3.367	1.218	3.258
.0	.00	3.640	.272	3.640	.991	3.466
5.0	1.52	3.373	.356	3.367	1.218	3.258
10.0	3.05	3.386	.389	3.365	1.372	3.325
15.0	4.57	4.313	.201	4.263	1.084	4.170
20.0	6.10	5.003	.086	4.998	.480	4.859
25.0	7.62	4.850	.035	4.839	.364	4.747
30.0	9.14	4.090	.012	4.052	.563	4.031
35.0	10.67	3.196	.001	3.149	.548	3.165
40.0	12.19	2.423	.004	2.383	.441	2.407
45.0	13.72	1.830	.006	1.800	.331	1.821
50.0	15.24	1.393	.006	1.372	.242	1.389
55.0	16.76	1.076	.006	1.061	.177	1.073
60.0	18.29	.843	.006	.833	.130	.841
65.0	19.81	.670	.005	.663	.097	.669
70.0	21.34	.541	.005	.536	.074	.540
75.0	22.86	.442	.004	.438	.057	.441
80.0	24.38	.365	.004	.363	.044	.365
85.0	25.91	.305	.003	.303	.035	.305
90.0	27.43	.258	.003	.256	.028	.258
95.0	28.96	.219	.002	.218	.023	.219
100.0	30.48	.188	.002	.187	.018	.188
105.0	32.00	.163	.002	.162	.015	.163
110.0	33.53	.142	.001	.141	.013	.142
115.0	35.05	.124	.001	.124	.011	.124
120.0	36.58	.109	.001	.109	.009	.109
125.0	38.10	.097	.000	.096	.008	.097
130.0	39.62	.086	.000	.086	.006	.086
135.0	41.15	.077	.000	.077	.006	.077
140.0	42.67	.069	.000	.069	.005	.069
145.0	44.20	.062	.000	.062	.004	.062
150.0	45.72	.056	.001	.056	.004	.056
155.0	47.24	.051	.001	.051	.003	.051
160.0	48.77	.046	.001	.046	.003	.046

165.0	50.29	.042	.001	.042	.003	.042
170.0	51.82	.039	.001	.039	.002	.039
175.0	53.34	.035	.001	.035	.002	.035
180.0	54.86	.033	.001	.033	.002	.033
185.0	56.39	.030	.001	.030	.002	.030
190.0	57.91	.028	.001	.028	.001	.028
195.0	59.44	.026	.001	.026	.001	.026
200.0	60.96	.024	.001	.024	.001	.024
205.0	62.48	.022	.002	.022	.001	.022
210.0	64.01	.021	.002	.021	.001	.021
215.0	65.53	.019	.002	.019	.001	.019
220.0	67.06	.018	.002	.018	.001	.018
225.0	68.58	.017	.002	.017	.001	.017
230.0	70.10	.016	.002	.016	.001	.016
235.0	71.63	.015	.002	.015	.001	.015
240.0	73.15	.014	.002	.014	.001	.014
245.0	74.68	.013	.002	.013	.001	.013
250.0	76.20	.012	.002	.012	.000	.012
255.0	77.72	.012	.002	.012	.000	.012
260.0	79.25	.011	.002	.011	.000	.011
265.0	80.77	.010	.002	.010	.000	.010
270.0	82.30	.010	.002	.010	.000	.010
275.0	83.82	.009	.002	.009	.000	.009
280.0	85.34	.009	.002	.009	.000	.009
285.0	86.87	.008	.002	.008	.000	.008
290.0	88.39	.008	.002	.008	.000	.008
295.0	89.92	.008	.002	.008	.000	.008
300.0	91.44	.007	.002	.007	.000	.007
305.0	92.96	.007	.002	.007	.000	.007
310.0	94.49	.007	.002	.007	.000	.007
315.0	96.01	.006	.002	.006	.000	.006
320.0	97.54	.006	.002	.006	.000	.006
325.0	99.06	.006	.002	.006	.000	.006
330.0	100.58	.005	.002	.005	.000	.005
335.0	102.11	.005	.002	.005	.000	.005
340.0	103.63	.005	.002	.005	.000	.005
345.0	105.16	.005	.002	.005	.000	.005
350.0	106.68	.005	.002	.005	.000	.005
355.0	108.20	.004	.002	.004	.000	.004
360.0	109.73	.004	.002	.004	.000	.004
365.0	111.25	.004	.002	.004	.000	.004
370.0	112.78	.004	.002	.004	.000	.004
375.0	114.30	.004	.002	.004	.000	.004
380.0	115.82	.004	.002	.004	.000	.004
385.0	117.35	.003	.002	.003	.000	.003
390.0	118.87	.003	.002	.003	.000	.003
395.0	120.40	.003	.002	.003	.000	.003
400.0	121.92	.003	.002	.003	.000	.003
405.0	123.44	.003	.002	.003	.000	.003
410.0	124.97	.003	.002	.003	.000	.003
415.0	126.49	.003	.002	.003	.000	.003
420.0	128.02	.003	.002	.003	.000	.003
425.0	129.54	.003	.002	.003	.000	.003
430.0	131.06	.003	.002	.003	.000	.003
435.0	132.59	.002	.002	.002	.000	.002
440.0	134.11	.002	.002	.002	.000	.002
445.0	135.64	.002	.002	.002	.000	.002
450.0	137.16	.002	.002	.002	.000	.002
455.0	138.68	.002	.002	.002	.000	.002
460.0	140.21	.002	.002	.002	.000	.002
465.0	141.73	.002	.002	.002	.000	.002
470.0	143.26	.002	.002	.002	.000	.002
475.0	144.78	.002	.002	.002	.000	.002

480.0	146.30	.002	.002	.002	.000	.002
485.0	147.83	.002	.002	.002	.000	.002
490.0	149.35	.002	.002	.002	.000	.002
495.0	150.88	.002	.002	.002	.000	.002
500.0	152.40	.002	.002	.002	.000	.002

♀

AC CURRENTS IN EACH BUNDLE:

BNDL #	----- AC CURRENTS (Amperes) ----- REAL	IMAGINARY	TOTAL	BUNDLE POSITION X-COORD	Y-COORD
1	402.00	.00	402.00	-19.50	20.00
2	-201.00	-348.14	402.00	.00	20.00
3	-201.00	348.14	402.00	19.50	20.00

♀

MAGNETIC FIELD PROFILE
at 3.28 feet above ground

LATERAL DISTANCE (feet)	(meters)	<----- AC MAGNETIC FIELD -----> MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
-500.0	-152.40	.36	.014	.35	.03	.36
-495.0	-150.88	.36	.013	.36	.03	.36
-490.0	-149.35	.37	.013	.37	.03	.37
-485.0	-147.83	.38	.012	.38	.03	.38
-480.0	-146.30	.39	.012	.38	.03	.39
-475.0	-144.78	.39	.012	.39	.03	.39
-470.0	-143.26	.40	.011	.40	.03	.40
-465.0	-141.73	.41	.011	.41	.03	.41
-460.0	-140.21	.42	.011	.42	.04	.42
-455.0	-138.68	.43	.010	.43	.04	.43
-450.0	-137.16	.44	.010	.44	.04	.44
-445.0	-135.64	.45	.010	.45	.04	.45
-440.0	-134.11	.46	.009	.46	.04	.46
-435.0	-132.59	.47	.009	.47	.04	.47
-430.0	-131.06	.48	.009	.48	.04	.48
-425.0	-129.54	.49	.008	.49	.04	.49
-420.0	-128.02	.51	.008	.50	.04	.51
-415.0	-126.49	.52	.008	.52	.05	.52
-410.0	-124.97	.53	.008	.53	.05	.53
-405.0	-123.44	.54	.007	.54	.05	.54
-400.0	-121.92	.56	.007	.55	.05	.56
-395.0	-120.40	.57	.007	.57	.05	.57
-390.0	-118.87	.59	.006	.58	.05	.59
-385.0	-117.35	.60	.006	.60	.06	.60
-380.0	-115.82	.62	.006	.61	.06	.62
-375.0	-114.30	.63	.006	.63	.06	.63
-370.0	-112.78	.65	.005	.65	.06	.65
-365.0	-111.25	.67	.005	.67	.06	.67
-360.0	-109.73	.69	.005	.68	.07	.69
-355.0	-108.20	.71	.005	.70	.07	.71

-350.0	-106.68	.73	.004	.72	.07	.73
-345.0	-105.16	.75	.004	.75	.08	.75
-340.0	-103.63	.77	.004	.77	.08	.77
-335.0	-102.11	.79	.004	.79	.08	.79
-330.0	-100.58	.82	.003	.81	.09	.82
-325.0	-99.06	.84	.003	.84	.09	.84
-320.0	-97.54	.87	.003	.87	.09	.87
-315.0	-96.01	.90	.003	.89	.10	.90
-310.0	-94.49	.93	.003	.92	.10	.93
-305.0	-92.96	.96	.002	.95	.11	.96
-300.0	-91.44	.99	.002	.99	.11	.99
-295.0	-89.92	1.03	.002	1.02	.12	1.03
-290.0	-88.39	1.06	.002	1.05	.13	1.06
-285.0	-86.87	1.10	.001	1.09	.13	1.10
-280.0	-85.34	1.14	.001	1.13	.14	1.14
-275.0	-83.82	1.18	.001	1.17	.15	1.18
-270.0	-82.30	1.23	.001	1.22	.15	1.23
-265.0	-80.77	1.27	.000	1.26	.16	1.27
-260.0	-79.25	1.32	.000	1.31	.17	1.32
-255.0	-77.72	1.37	.000	1.36	.18	1.37
-250.0	-76.20	1.43	.000	1.42	.19	1.43
-245.0	-74.68	1.49	.000	1.47	.21	1.49
-240.0	-73.15	1.55	.001	1.54	.22	1.55
-235.0	-71.63	1.62	.001	1.60	.23	1.62
-230.0	-70.10	1.69	.001	1.67	.25	1.69
-225.0	-68.58	1.77	.001	1.75	.27	1.77
-220.0	-67.06	1.85	.002	1.83	.28	1.85
-215.0	-65.53	1.93	.002	1.91	.30	1.93
-210.0	-64.01	2.03	.002	2.00	.33	2.03
-205.0	-62.48	2.13	.003	2.10	.35	2.13
-200.0	-60.96	2.24	.003	2.20	.38	2.24
-195.0	-59.44	2.35	.003	2.32	.41	2.35
-190.0	-57.91	2.48	.004	2.44	.44	2.48
-185.0	-56.39	2.62	.004	2.57	.48	2.62
-180.0	-54.86	2.76	.004	2.71	.52	2.76
-175.0	-53.34	2.92	.005	2.87	.56	2.92
-170.0	-51.82	3.10	.005	3.04	.61	3.10
-165.0	-50.29	3.29	.006	3.22	.67	3.29
-160.0	-48.77	3.50	.006	3.42	.74	3.50
-155.0	-47.24	3.73	.007	3.64	.81	3.73
-150.0	-45.72	3.99	.007	3.89	.90	3.99
-145.0	-44.20	4.27	.008	4.15	.99	4.27
-140.0	-42.67	4.58	.008	4.45	1.10	4.58
-135.0	-41.15	4.93	.009	4.77	1.23	4.93
-130.0	-39.62	5.32	.010	5.14	1.38	5.32
-125.0	-38.10	5.76	.011	5.54	1.56	5.76
-120.0	-36.58	6.25	.012	6.00	1.76	6.25
-115.0	-35.05	6.81	.013	6.51	2.00	6.81
-110.0	-33.53	7.45	.014	7.09	2.29	7.45
-105.0	-32.00	8.19	.016	7.75	2.64	8.19
-100.0	-30.48	9.04	.018	8.50	3.07	9.04
-95.0	-28.96	10.02	.019	9.36	3.59	10.03
-90.0	-27.43	11.18	.022	10.36	4.23	11.19
-85.0	-25.91	12.56	.024	11.51	5.03	12.56
-80.0	-24.38	14.20	.027	12.85	6.06	14.20
-75.0	-22.86	16.18	.031	14.41	7.37	16.19
-70.0	-21.34	18.61	.035	16.24	9.10	18.62
-65.0	-19.81	21.62	.040	18.39	11.40	21.64
-60.0	-18.29	25.41	.047	20.88	14.53	25.44
-55.0	-16.76	30.26	.055	23.71	18.86	30.30
-50.0	-15.24	36.56	.065	26.78	25.00	36.64
-45.0	-13.72	44.90	.078	29.71	33.85	45.04
-40.0	-12.19	56.05	.094	31.48	46.67	56.30

-35.0	-10.67	70.89	.117	29.81	64.85	71.38
-30.0	-9.14	89.92	.147	21.51	88.31	90.89
-25.0	-7.62	111.71	.189	23.92	111.15	113.69
-20.0	-6.10	131.28	.248	65.01	118.61	135.25
-15.0	-4.57	142.52	.331	110.68	101.42	150.12
-10.0	-3.05	144.13	.446	136.35	79.42	157.79
-5.0	-1.52	139.30	.587	138.94	82.33	161.50
.0	.00	135.03	.673	135.03	90.92	162.78
5.0	1.52	139.31	.587	138.95	82.33	161.51
10.0	3.05	144.14	.446	136.36	79.42	157.80
15.0	4.57	142.53	.331	110.69	101.42	150.13
20.0	6.10	131.29	.248	65.02	118.61	135.26
25.0	7.62	111.71	.189	23.94	111.15	113.70
30.0	9.14	89.92	.147	21.52	88.31	90.89
35.0	10.67	70.89	.117	29.81	64.85	71.38
40.0	12.19	56.05	.095	31.48	46.67	56.30
45.0	13.72	44.90	.078	29.71	33.85	45.04
50.0	15.24	36.56	.065	26.78	25.00	36.64
55.0	16.76	30.25	.055	23.71	18.86	30.30
60.0	18.29	25.40	.047	20.88	14.53	25.43
65.0	19.81	21.62	.041	18.39	11.40	21.63
70.0	21.34	18.60	.036	16.24	9.10	18.62
75.0	22.86	16.18	.032	14.41	7.37	16.19
80.0	24.38	14.19	.028	12.84	6.06	14.20
85.0	25.91	12.55	.025	11.50	5.03	12.56
90.0	27.43	11.18	.023	10.35	4.23	11.18
95.0	28.96	10.02	.020	9.36	3.59	10.02
100.0	30.48	9.03	.019	8.50	3.07	9.03
105.0	32.00	8.18	.017	7.75	2.64	8.19
110.0	33.53	7.45	.016	7.09	2.30	7.45
115.0	35.05	6.81	.014	6.51	2.01	6.81
120.0	36.58	6.25	.013	6.00	1.76	6.25
125.0	38.10	5.76	.012	5.54	1.56	5.76
130.0	39.62	5.32	.012	5.14	1.38	5.32
135.0	41.15	4.93	.011	4.77	1.23	4.93
140.0	42.67	4.58	.010	4.44	1.10	4.58
145.0	44.20	4.27	.010	4.15	.99	4.27
150.0	45.72	3.99	.009	3.88	.90	3.99
155.0	47.24	3.73	.009	3.64	.81	3.73
160.0	48.77	3.50	.008	3.42	.74	3.50
165.0	50.29	3.29	.008	3.22	.67	3.29
170.0	51.82	3.10	.008	3.04	.61	3.10
175.0	53.34	2.92	.007	2.87	.56	2.92
180.0	54.86	2.76	.007	2.71	.52	2.76
185.0	56.39	2.61	.007	2.57	.48	2.61
190.0	57.91	2.48	.007	2.44	.44	2.48
195.0	59.44	2.35	.006	2.32	.41	2.35
200.0	60.96	2.24	.006	2.20	.38	2.24
205.0	62.48	2.13	.006	2.10	.35	2.13
210.0	64.01	2.03	.006	2.00	.33	2.03
215.0	65.53	1.93	.006	1.91	.30	1.93
220.0	67.06	1.85	.006	1.82	.28	1.85
225.0	68.58	1.76	.006	1.74	.27	1.76
230.0	70.10	1.69	.006	1.67	.25	1.69
235.0	71.63	1.62	.006	1.60	.23	1.62
240.0	73.15	1.55	.006	1.53	.22	1.55
245.0	74.68	1.49	.006	1.47	.21	1.49
250.0	76.20	1.43	.006	1.42	.19	1.43
255.0	77.72	1.37	.006	1.36	.18	1.37
260.0	79.25	1.32	.006	1.31	.17	1.32
265.0	80.77	1.27	.006	1.26	.16	1.27
270.0	82.30	1.22	.006	1.21	.15	1.22
275.0	83.82	1.18	.006	1.17	.15	1.18

280.0	85.34	1.14	.006	1.13	.14	1.14
285.0	86.87	1.10	.006	1.09	.13	1.10
290.0	88.39	1.06	.006	1.05	.13	1.06
295.0	89.92	1.02	.006	1.02	.12	1.02
300.0	91.44	.99	.006	.98	.11	.99
305.0	92.96	.96	.006	.95	.11	.96
310.0	94.49	.93	.006	.92	.10	.93
315.0	96.01	.90	.006	.89	.10	.90
320.0	97.54	.87	.006	.87	.09	.87
325.0	99.06	.84	.006	.84	.09	.84
330.0	100.58	.82	.006	.81	.09	.82
335.0	102.11	.79	.007	.79	.08	.79
340.0	103.63	.77	.007	.77	.08	.77
345.0	105.16	.75	.007	.74	.08	.75
350.0	106.68	.73	.007	.72	.07	.73
355.0	108.20	.71	.007	.70	.07	.71
360.0	109.73	.69	.007	.68	.07	.69
365.0	111.25	.67	.007	.67	.07	.67
370.0	112.78	.65	.008	.65	.06	.65
375.0	114.30	.63	.008	.63	.06	.63
380.0	115.82	.62	.008	.61	.06	.62
385.0	117.35	.60	.008	.60	.06	.60
390.0	118.87	.59	.008	.58	.05	.59
395.0	120.40	.57	.009	.57	.05	.57
400.0	121.92	.56	.009	.55	.05	.56
405.0	123.44	.54	.009	.54	.05	.54
410.0	124.97	.53	.009	.53	.05	.53
415.0	126.49	.52	.009	.51	.05	.52
420.0	128.02	.50	.010	.50	.04	.50
425.0	129.54	.49	.010	.49	.04	.49
430.0	131.06	.48	.010	.48	.04	.48
435.0	132.59	.47	.010	.47	.04	.47
440.0	134.11	.46	.011	.46	.04	.46
445.0	135.64	.45	.011	.45	.04	.45
450.0	137.16	.44	.011	.44	.04	.44
455.0	138.68	.43	.011	.43	.04	.43
460.0	140.21	.42	.012	.42	.04	.42
465.0	141.73	.41	.012	.41	.03	.41
470.0	143.26	.40	.012	.40	.03	.40
475.0	144.78	.39	.013	.39	.03	.39
480.0	146.30	.39	.013	.38	.03	.39
485.0	147.83	.38	.013	.38	.03	.38
490.0	149.35	.37	.013	.37	.03	.37
495.0	150.88	.36	.014	.36	.03	.36
500.0	152.40	.36	.014	.35	.03	.36

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*                               *
*         AUDIBLE NOISE         *
*   GENERATED ACOUSTIC POWER    *
*       (dB above 1uW/m)        *
*                               *
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-69.04	-50.33	-59.77
2	AC	-66.18	-48.65	-57.32
3	AC	-69.04	-50.33	-59.77

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*   AUDIBLE NOISE   *
*   (other methods)   *
*   *
* Altitude   5000. ft *
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LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	BPA METHOD FAIR WEATHER dB(A)	BPA METHOD L5 RAIN dB(A)	BPA METHOD L50 RAIN dB(A)	BPA METHOD Ldn dB(A)	CRIEPI AVERAGE FAIR dB(A)	CRIEPI L5 RAIN dB(A)	EdF L5 RAIN dB(A)	ENEL L5 RAIN dB(A)	IREQ L5 RAIN dB(A)
-500.0	-152.40	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0
-495.0	-150.88	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
-490.0	-149.35	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
-485.0	-147.83	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
-480.0	-146.30	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
-475.0	-144.78	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
-470.0	-143.26	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
-465.0	-141.73	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
-460.0	-140.21	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
-455.0	-138.68	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
-450.0	-137.16	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
-445.0	-135.64	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
-440.0	-134.11	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
-435.0	-132.59	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
-430.0	-131.06	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
-425.0	-129.54	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
-420.0	-128.02	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
-415.0	-126.49	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
-410.0	-124.97	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
-405.0	-123.44	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
-400.0	-121.92	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
-395.0	-120.40	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
-390.0	-118.87	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
-385.0	-117.35	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
-380.0	-115.82	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0
-375.0	-114.30	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
-370.0	-112.78	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
-365.0	-111.25	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
-360.0	-109.73	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
-355.0	-108.20	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
-350.0	-106.68	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
-345.0	-105.16	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-340.0	-103.63	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
-335.0	-102.11	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
-330.0	-100.58	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
-325.0	-99.06	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-320.0	-97.54	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
-315.0	-96.01	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
-310.0	-94.49	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
-305.0	-92.96	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
-300.0	-91.44	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
-295.0	-89.92	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-290.0	-88.39	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
-285.0	-86.87	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
-280.0	-85.34	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
-275.0	-83.82	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
-270.0	-82.30	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
-265.0	-80.77	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
-260.0	-79.25	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
-255.0	-77.72	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
-250.0	-76.20	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0

-245.0	-74.68	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
-240.0	-73.15	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
-235.0	-71.63	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
-230.0	-70.10	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
-225.0	-68.58	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
-220.0	-67.06	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
-215.0	-65.53	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
-210.0	-64.01	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
-205.0	-62.48	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
-200.0	-60.96	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
-195.0	-59.44	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
-190.0	-57.91	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
-185.0	-56.39	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
-180.0	-54.86	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
-175.0	-53.34	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
-170.0	-51.82	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
-165.0	-50.29	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
-160.0	-48.77	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
-155.0	-47.24	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
-150.0	-45.72	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
-145.0	-44.20	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
-140.0	-42.67	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
-135.0	-41.15	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
-130.0	-39.62	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
-125.0	-38.10	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
-120.0	-36.58	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
-115.0	-35.05	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
-110.0	-33.53	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
-105.0	-32.00	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
-100.0	-30.48	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
-95.0	-28.96	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
-90.0	-27.43	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
-85.0	-25.91	21.3	49.8	46.3	.0	.0	.0	.0	.0	.0
-80.0	-24.38	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
-75.0	-22.86	21.9	50.4	46.9	.0	.0	.0	.0	.0	.0
-70.0	-21.34	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
-65.0	-19.81	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0
-60.0	-18.29	23.1	51.6	48.1	.0	.0	.0	.0	.0	.0
-55.0	-16.76	23.5	52.0	48.5	.0	.0	.0	.0	.0	.0
-50.0	-15.24	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0
-45.0	-13.72	24.5	53.0	49.5	.0	.0	.0	.0	.0	.0
-40.0	-12.19	25.1	53.6	50.1	.0	.0	.0	.0	.0	.0
-35.0	-10.67	25.8	54.3	50.8	.0	.0	.0	.0	.0	.0
-30.0	-9.14	26.5	55.0	51.5	.0	.0	.0	.0	.0	.0
-25.0	-7.62	27.1	55.6	52.1	.0	.0	.0	.0	.0	.0
-20.0	-6.10	27.6	56.1	52.6	.0	.0	.0	.0	.0	.0
-15.0	-4.57	28.0	56.5	53.0	.0	.0	.0	.0	.0	.0
-10.0	-3.05	28.3	56.8	53.3	.0	.0	.0	.0	.0	.0
-5.0	-1.52	28.5	57.0	53.5	.0	.0	.0	.0	.0	.0
.0	.00	28.6	57.1	53.6	.0	.0	.0	.0	.0	.0
5.0	1.52	28.5	57.0	53.5	.0	.0	.0	.0	.0	.0
10.0	3.05	28.3	56.8	53.3	.0	.0	.0	.0	.0	.0
15.0	4.57	28.0	56.5	53.0	.0	.0	.0	.0	.0	.0
20.0	6.10	27.6	56.1	52.6	.0	.0	.0	.0	.0	.0
25.0	7.62	27.1	55.6	52.1	.0	.0	.0	.0	.0	.0
30.0	9.14	26.5	55.0	51.5	.0	.0	.0	.0	.0	.0
35.0	10.67	25.8	54.3	50.8	.0	.0	.0	.0	.0	.0
40.0	12.19	25.1	53.6	50.1	.0	.0	.0	.0	.0	.0
45.0	13.72	24.5	53.0	49.5	.0	.0	.0	.0	.0	.0
50.0	15.24	24.0	52.5	49.0	.0	.0	.0	.0	.0	.0
55.0	16.76	23.5	52.0	48.5	.0	.0	.0	.0	.0	.0
60.0	18.29	23.1	51.6	48.1	.0	.0	.0	.0	.0	.0
65.0	19.81	22.6	51.1	47.6	.0	.0	.0	.0	.0	.0

70.0	21.34	22.3	50.8	47.3	.0	.0	.0	.0	.0	.0
75.0	22.86	21.9	50.4	46.9	.0	.0	.0	.0	.0	.0
80.0	24.38	21.6	50.1	46.6	.0	.0	.0	.0	.0	.0
85.0	25.91	21.3	49.8	46.3	.0	.0	.0	.0	.0	.0
90.0	27.43	21.0	49.5	46.0	.0	.0	.0	.0	.0	.0
95.0	28.96	20.7	49.2	45.7	.0	.0	.0	.0	.0	.0
100.0	30.48	20.5	49.0	45.5	.0	.0	.0	.0	.0	.0
105.0	32.00	20.2	48.7	45.2	.0	.0	.0	.0	.0	.0
110.0	33.53	20.0	48.5	45.0	.0	.0	.0	.0	.0	.0
115.0	35.05	19.7	48.2	44.7	.0	.0	.0	.0	.0	.0
120.0	36.58	19.5	48.0	44.5	.0	.0	.0	.0	.0	.0
125.0	38.10	19.3	47.8	44.3	.0	.0	.0	.0	.0	.0
130.0	39.62	19.1	47.6	44.1	.0	.0	.0	.0	.0	.0
135.0	41.15	18.9	47.4	43.9	.0	.0	.0	.0	.0	.0
140.0	42.67	18.8	47.3	43.8	.0	.0	.0	.0	.0	.0
145.0	44.20	18.6	47.1	43.6	.0	.0	.0	.0	.0	.0
150.0	45.72	18.4	46.9	43.4	.0	.0	.0	.0	.0	.0
155.0	47.24	18.3	46.8	43.3	.0	.0	.0	.0	.0	.0
160.0	48.77	18.1	46.6	43.1	.0	.0	.0	.0	.0	.0
165.0	50.29	17.9	46.4	42.9	.0	.0	.0	.0	.0	.0
170.0	51.82	17.8	46.3	42.8	.0	.0	.0	.0	.0	.0
175.0	53.34	17.6	46.1	42.6	.0	.0	.0	.0	.0	.0
180.0	54.86	17.5	46.0	42.5	.0	.0	.0	.0	.0	.0
185.0	56.39	17.4	45.9	42.4	.0	.0	.0	.0	.0	.0
190.0	57.91	17.2	45.7	42.2	.0	.0	.0	.0	.0	.0
195.0	59.44	17.1	45.6	42.1	.0	.0	.0	.0	.0	.0
200.0	60.96	17.0	45.5	42.0	.0	.0	.0	.0	.0	.0
205.0	62.48	16.9	45.4	41.9	.0	.0	.0	.0	.0	.0
210.0	64.01	16.7	45.2	41.7	.0	.0	.0	.0	.0	.0
215.0	65.53	16.6	45.1	41.6	.0	.0	.0	.0	.0	.0
220.0	67.06	16.5	45.0	41.5	.0	.0	.0	.0	.0	.0
225.0	68.58	16.4	44.9	41.4	.0	.0	.0	.0	.0	.0
230.0	70.10	16.3	44.8	41.3	.0	.0	.0	.0	.0	.0
235.0	71.63	16.2	44.7	41.2	.0	.0	.0	.0	.0	.0
240.0	73.15	16.1	44.6	41.1	.0	.0	.0	.0	.0	.0
245.0	74.68	16.0	44.5	41.0	.0	.0	.0	.0	.0	.0
250.0	76.20	15.9	44.4	40.9	.0	.0	.0	.0	.0	.0
255.0	77.72	15.8	44.3	40.8	.0	.0	.0	.0	.0	.0
260.0	79.25	15.7	44.2	40.7	.0	.0	.0	.0	.0	.0
265.0	80.77	15.6	44.1	40.6	.0	.0	.0	.0	.0	.0
270.0	82.30	15.5	44.0	40.5	.0	.0	.0	.0	.0	.0
275.0	83.82	15.4	43.9	40.4	.0	.0	.0	.0	.0	.0
280.0	85.34	15.3	43.8	40.3	.0	.0	.0	.0	.0	.0
285.0	86.87	15.2	43.7	40.2	.0	.0	.0	.0	.0	.0
290.0	88.39	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
295.0	89.92	15.1	43.6	40.1	.0	.0	.0	.0	.0	.0
300.0	91.44	15.0	43.5	40.0	.0	.0	.0	.0	.0	.0
305.0	92.96	14.9	43.4	39.9	.0	.0	.0	.0	.0	.0
310.0	94.49	14.8	43.3	39.8	.0	.0	.0	.0	.0	.0
315.0	96.01	14.7	43.2	39.7	.0	.0	.0	.0	.0	.0
320.0	97.54	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
325.0	99.06	14.6	43.1	39.6	.0	.0	.0	.0	.0	.0
330.0	100.58	14.5	43.0	39.5	.0	.0	.0	.0	.0	.0
335.0	102.11	14.4	42.9	39.4	.0	.0	.0	.0	.0	.0
340.0	103.63	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
345.0	105.16	14.3	42.8	39.3	.0	.0	.0	.0	.0	.0
350.0	106.68	14.2	42.7	39.2	.0	.0	.0	.0	.0	.0
355.0	108.20	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
360.0	109.73	14.1	42.6	39.1	.0	.0	.0	.0	.0	.0
365.0	111.25	14.0	42.5	39.0	.0	.0	.0	.0	.0	.0
370.0	112.78	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
375.0	114.30	13.9	42.4	38.9	.0	.0	.0	.0	.0	.0
380.0	115.82	13.8	42.3	38.8	.0	.0	.0	.0	.0	.0

385.0	117.35	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
390.0	118.87	13.7	42.2	38.7	.0	.0	.0	.0	.0	.0
395.0	120.40	13.6	42.1	38.6	.0	.0	.0	.0	.0	.0
400.0	121.92	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
405.0	123.44	13.5	42.0	38.5	.0	.0	.0	.0	.0	.0
410.0	124.97	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
415.0	126.49	13.4	41.9	38.4	.0	.0	.0	.0	.0	.0
420.0	128.02	13.3	41.8	38.3	.0	.0	.0	.0	.0	.0
425.0	129.54	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
430.0	131.06	13.2	41.7	38.2	.0	.0	.0	.0	.0	.0
435.0	132.59	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
440.0	134.11	13.1	41.6	38.1	.0	.0	.0	.0	.0	.0
445.0	135.64	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
450.0	137.16	13.0	41.5	38.0	.0	.0	.0	.0	.0	.0
455.0	138.68	12.9	41.4	37.9	.0	.0	.0	.0	.0	.0
460.0	140.21	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
465.0	141.73	12.8	41.3	37.8	.0	.0	.0	.0	.0	.0
470.0	143.26	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
475.0	144.78	12.7	41.2	37.7	.0	.0	.0	.0	.0	.0
480.0	146.30	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
485.0	147.83	12.6	41.1	37.6	.0	.0	.0	.0	.0	.0
490.0	149.35	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
495.0	150.88	12.5	41.0	37.5	.0	.0	.0	.0	.0	.0
500.0	152.40	12.4	40.9	37.4	.0	.0	.0	.0	.0	.0

Audible noise prediction methods do not apply to all line geometries, voltages, or weather conditions. If a prediction method does not apply, the appropriate output data column will be zeros.

RESULTS OF ENVIRO PROGRAM

Single Circuit, 515 amp, 138-kV, H-Frame Structure at 5,000 ft elevation

BUNDLE INFORMATION

BNDL #	CIRC #	VOLTAGE (kV)	VOLTAGE ANGLE (DEG)	LOAD (AMPS)	CURRENT ANGLE (DEG)	# OF COND	COORDINATES X (FT)	COORDINATES Y (FT)	PHASE
1	1	138.0	.0	515.0	.0	1	-13.5	20.0	A
2	1	138.0	240.0	515.0	240.0	1	.0	20.0	B
3	1	138.0	120.0	515.0	120.0	1	13.5	20.0	C

MINIMUM GROUND CLEARANCE = 20.000 FT.

SUBCONDUCTOR INFORMATION - REGULAR BUNDLES

BNDL #	DIAMETER (IN)	SPACING (IN)	DC RESIST. (OHMS/MI)	AC RESIST. (OHMS/MI)	AC REACT. (OHMS/MI)
1	.574	.000	.23400	.23500	.487000
2	.574	.000	.23400	.23500	.487000
3	.574	.000	.23400	.23500	.487000

MAXIMUM SURFACE GRADIENT (kV/cm)

BNDL #	Type	ACrms	PEAK(+)	PEAK(-)
1	AC	16.69	23.60	-23.60
2	AC	17.59	24.88	-24.88
3	AC	16.69	23.60	-23.60

♀

AC ELECTRIC FIELD PROFILE at 3.28 feet above ground

LATERAL DISTANCE (feet)	LATERAL DISTANCE (meters)	MAXIMUM FIELD (kV/m)	MINOR/MAJOR ELLIPSE AXES (ratio)	VERTICAL (kV/m)	HORIZONTAL (kV/m)	SPACE POTENTIAL (kV)
-500.0	-152.40	.001	.003	.001	.000	.001
-495.0	-150.88	.001	.003	.001	.000	.001
-490.0	-149.35	.001	.003	.001	.000	.001
-485.0	-147.83	.001	.003	.001	.000	.001
-480.0	-146.30	.001	.003	.001	.000	.001
-475.0	-144.78	.001	.003	.001	.000	.001
-470.0	-143.26	.001	.003	.001	.000	.001

-465.0	-141.73	.001	.003	.001	.000	.001
-460.0	-140.21	.001	.003	.001	.000	.001
-455.0	-138.68	.001	.003	.001	.000	.001
-450.0	-137.16	.001	.003	.001	.000	.001
-445.0	-135.64	.001	.003	.001	.000	.001
-440.0	-134.11	.001	.003	.001	.000	.001
-435.0	-132.59	.001	.003	.001	.000	.001
-430.0	-131.06	.001	.003	.001	.000	.001
-425.0	-129.54	.001	.003	.001	.000	.001
-420.0	-128.02	.001	.003	.001	.000	.001
-415.0	-126.49	.001	.003	.001	.000	.001
-410.0	-124.97	.001	.003	.001	.000	.001
-405.0	-123.44	.001	.003	.001	.000	.001
-400.0	-121.92	.001	.003	.001	.000	.001
-395.0	-120.40	.001	.003	.001	.000	.001
-390.0	-118.87	.001	.003	.001	.000	.001
-385.0	-117.35	.001	.003	.001	.000	.001
-380.0	-115.82	.002	.003	.002	.000	.002
-375.0	-114.30	.002	.003	.002	.000	.002
-370.0	-112.78	.002	.003	.002	.000	.002
-365.0	-111.25	.002	.003	.002	.000	.002
-360.0	-109.73	.002	.003	.002	.000	.002
-355.0	-108.20	.002	.003	.002	.000	.002
-350.0	-106.68	.002	.003	.002	.000	.002
-345.0	-105.16	.002	.003	.002	.000	.002
-340.0	-103.63	.002	.003	.002	.000	.002
-335.0	-102.11	.002	.003	.002	.000	.002
-330.0	-100.58	.002	.003	.002	.000	.002
-325.0	-99.06	.002	.003	.002	.000	.002
-320.0	-97.54	.002	.003	.002	.000	.002
-315.0	-96.01	.003	.003	.003	.000	.003
-310.0	-94.49	.003	.003	.003	.000	.003
-305.0	-92.96	.003	.003	.003	.000	.003
-300.0	-91.44	.003	.003	.003	.000	.003
-295.0	-89.92	.003	.003	.003	.000	.003
-290.0	-88.39	.003	.003	.003	.000	.003
-285.0	-86.87	.003	.003	.003	.000	.003
-280.0	-85.34	.004	.003	.004	.000	.004
-275.0	-83.82	.004	.003	.004	.000	.004
-270.0	-82.30	.004	.003	.004	.000	.004
-265.0	-80.77	.004	.003	.004	.000	.004
-260.0	-79.25	.004	.003	.004	.000	.004
-255.0	-77.72	.005	.003	.005	.000	.005
-250.0	-76.20	.005	.003	.005	.000	.005
-245.0	-74.68	.005	.003	.005	.000	.005
-240.0	-73.15	.006	.003	.006	.000	.006
-235.0	-71.63	.006	.003	.006	.000	.006
-230.0	-70.10	.006	.003	.006	.000	.006
-225.0	-68.58	.007	.003	.007	.000	.007
-220.0	-67.06	.007	.003	.007	.000	.007
-215.0	-65.53	.008	.003	.008	.000	.008
-210.0	-64.01	.008	.003	.008	.000	.008
-205.0	-62.48	.009	.003	.009	.000	.009
-200.0	-60.96	.009	.003	.009	.000	.009
-195.0	-59.44	.010	.003	.010	.000	.010
-190.0	-57.91	.011	.003	.011	.001	.011
-185.0	-56.39	.012	.003	.012	.001	.012
-180.0	-54.86	.013	.003	.013	.001	.013
-175.0	-53.34	.014	.003	.014	.001	.014
-170.0	-51.82	.015	.003	.015	.001	.015
-165.0	-50.29	.016	.003	.016	.001	.016
-160.0	-48.77	.018	.003	.018	.001	.018
-155.0	-47.24	.020	.003	.020	.001	.020

-150.0	-45.72	.022	.003	.022	.001	.022
-145.0	-44.20	.024	.003	.024	.002	.024
-140.0	-42.67	.027	.002	.026	.002	.027
-135.0	-41.15	.030	.002	.029	.002	.029
-130.0	-39.62	.033	.002	.033	.002	.033
-125.0	-38.10	.037	.002	.037	.003	.037
-120.0	-36.58	.042	.002	.041	.003	.042
-115.0	-35.05	.047	.002	.047	.004	.047
-110.0	-33.53	.054	.001	.053	.005	.054
-105.0	-32.00	.061	.001	.061	.006	.061
-100.0	-30.48	.071	.001	.070	.007	.071
-95.0	-28.96	.082	.001	.082	.008	.082
-90.0	-27.43	.096	.000	.095	.010	.096
-85.0	-25.91	.113	.000	.112	.012	.113
-80.0	-24.38	.134	.001	.133	.016	.134
-75.0	-22.86	.161	.001	.160	.020	.161
-70.0	-21.34	.195	.002	.194	.026	.195
-65.0	-19.81	.240	.002	.238	.033	.240
-60.0	-18.29	.299	.003	.296	.044	.298
-55.0	-16.76	.377	.003	.373	.059	.376
-50.0	-15.24	.484	.004	.477	.081	.482
-45.0	-13.72	.629	.004	.619	.111	.627
-40.0	-12.19	.830	.003	.816	.152	.826
-35.0	-10.67	1.104	.001	1.085	.205	1.097
-30.0	-9.14	1.464	.005	1.441	.257	1.450
-25.0	-7.62	1.887	.017	1.868	.270	1.859
-20.0	-6.10	2.255	.044	2.249	.185	2.204
-15.0	-4.57	2.330	.104	2.327	.271	2.251
-10.0	-3.05	1.966	.238	1.932	.595	1.869
-5.0	-1.52	1.449	.464	1.423	.725	1.366
.0	.00	1.272	.551	1.272	.701	1.183
5.0	1.52	1.449	.464	1.423	.725	1.366
10.0	3.05	1.966	.238	1.932	.595	1.869
15.0	4.57	2.330	.104	2.327	.271	2.251
20.0	6.10	2.255	.044	2.249	.185	2.204
25.0	7.62	1.887	.017	1.868	.270	1.859
30.0	9.14	1.464	.005	1.441	.257	1.450
35.0	10.67	1.104	.001	1.085	.205	1.097
40.0	12.19	.830	.003	.816	.152	.826
45.0	13.72	.629	.004	.619	.111	.627
50.0	15.24	.484	.004	.477	.081	.482
55.0	16.76	.377	.003	.373	.059	.376
60.0	18.29	.299	.003	.296	.044	.298
65.0	19.81	.240	.002	.238	.033	.240
70.0	21.34	.195	.002	.194	.026	.195
75.0	22.86	.161	.001	.160	.020	.161
80.0	24.38	.134	.001	.133	.016	.134
85.0	25.91	.113	.000	.112	.012	.113
90.0	27.43	.096	.000	.095	.010	.096
95.0	28.96	.082	.001	.082	.008	.082
100.0	30.48	.071	.001	.070	.007	.071
105.0	32.00	.061	.001	.061	.006	.061
110.0	33.53	.054	.001	.053	.005	.054
115.0	35.05	.047	.002	.047	.004	.047
120.0	36.58	.042	.002	.041	.003	.042
125.0	38.10	.037	.002	.037	.003	.037
130.0	39.62	.033	.002	.033	.002	.033
135.0	41.15	.030	.002	.029	.002	.029
140.0	42.67	.027	.002	.026	.002	.027
145.0	44.20	.024	.003	.024	.002	.024
150.0	45.72	.022	.003	.022	.001	.022
155.0	47.24	.020	.003	.020	.001	.020
160.0	48.77	.018	.003	.018	.001	.018

165.0	50.29	.016	.003	.016	.001	.016
170.0	51.82	.015	.003	.015	.001	.015
175.0	53.34	.014	.003	.014	.001	.014
180.0	54.86	.013	.003	.013	.001	.013
185.0	56.39	.012	.003	.012	.001	.012
190.0	57.91	.011	.003	.011	.001	.011
195.0	59.44	.010	.003	.010	.000	.010
200.0	60.96	.009	.003	.009	.000	.009
205.0	62.48	.009	.003	.009	.000	.009
210.0	64.01	.008	.003	.008	.000	.008
215.0	65.53	.008	.003	.008	.000	.008
220.0	67.06	.007	.003	.007	.000	.007
225.0	68.58	.007	.003	.007	.000	.007
230.0	70.10	.006	.003	.006	.000	.006
235.0	71.63	.006	.003	.006	.000	.006
240.0	73.15	.006	.003	.006	.000	.006
245.0	74.68	.005	.003	.005	.000	.005
250.0	76.20	.005	.003	.005	.000	.005
255.0	77.72	.005	.003	.005	.000	.005
260.0	79.25	.004	.003	.004	.000	.004
265.0	80.77	.004	.003	.004	.000	.004
270.0	82.30	.004	.003	.004	.000	.004
275.0	83.82	.004	.003	.004	.000	.004
280.0	85.34	.004	.003	.004	.000	.004
285.0	86.87	.003	.003	.003	.000	.003
290.0	88.39	.003	.003	.003	.000	.003
295.0	89.92	.003	.003	.003	.000	.003
300.0	91.44	.003	.003	.003	.000	.003
305.0	92.96	.003	.003	.003	.000	.003
310.0	94.49	.003	.003	.003	.000	.003
315.0	96.01	.003	.003	.003	.000	.003
320.0	97.54	.002	.003	.002	.000	.002
325.0	99.06	.002	.003	.002	.000	.002
330.0	100.58	.002	.003	.002	.000	.002
335.0	102.11	.002	.003	.002	.000	.002
340.0	103.63	.002	.003	.002	.000	.002
345.0	105.16	.002	.003	.002	.000	.002
350.0	106.68	.002	.003	.002	.000	.002
355.0	108.20	.002	.003	.002	.000	.002
360.0	109.73	.002	.003	.002	.000	.002
365.0	111.25	.002	.003	.002	.000	.002
370.0	112.78	.002	.003	.002	.000	.002
375.0	114.30	.002	.003	.002	.000	.002
380.0	115.82	.002	.003	.002	.000	.002
385.0	117.35	.001	.003	.001	.000	.001
390.0	118.87	.001	.003	.001	.000	.001
395.0	120.40	.001	.003	.001	.000	.001
400.0	121.92	.001	.003	.001	.000	.001
405.0	123.44	.001	.003	.001	.000	.001
410.0	124.97	.001	.003	.001	.000	.001
415.0	126.49	.001	.003	.001	.000	.001
420.0	128.02	.001	.003	.001	.000	.001
425.0	129.54	.001	.003	.001	.000	.001
430.0	131.06	.001	.003	.001	.000	.001
435.0	132.59	.001	.003	.001	.000	.001
440.0	134.11	.001	.003	.001	.000	.001
445.0	135.64	.001	.003	.001	.000	.001
450.0	137.16	.001	.003	.001	.000	.001
455.0	138.68	.001	.003	.001	.000	.001
460.0	140.21	.001	.003	.001	.000	.001
465.0	141.73	.001	.003	.001	.000	.001
470.0	143.26	.001	.003	.001	.000	.001
475.0	144.78	.001	.003	.001	.000	.001

480.0	146.30	.001	.003	.001	.000	.001
485.0	147.83	.001	.003	.001	.000	.001
490.0	149.35	.001	.003	.001	.000	.001
495.0	150.88	.001	.003	.001	.000	.001
500.0	152.40	.001	.003	.001	.000	.001

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AC CURRENTS IN EACH BUNDLE:

BNDL #	----- AC CURRENTS (Amperes) ----- REAL	IMAGINARY	TOTAL	BUNDLE POSITION X-COORD	Y-COORD
1	515.00	.00	515.00	-13.50	20.00
2	-257.50	-446.00	515.00	.00	20.00
3	-257.50	446.00	515.00	13.50	20.00

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*                                     *
*        MAGNETIC FIELD PROFILE       *
*      at   3.28 feet  above ground   *
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LATERAL DISTANCE (feet)	(meters)	<----------- AC MAGNETIC FIELD ------------> MAJOR AXIS (mG)	MINOR/ MAJOR (RATIO)	VERTICAL COMP (mG)	HORIZONTAL COMP (mG)	RMS RESULTANT (mG)
-500.0	-152.40	.32	.014	.31	.03	.32
-495.0	-150.88	.32	.013	.32	.03	.32
-490.0	-149.35	.33	.013	.33	.03	.33
-485.0	-147.83	.34	.013	.33	.03	.34
-480.0	-146.30	.34	.012	.34	.03	.34
-475.0	-144.78	.35	.012	.35	.03	.35
-470.0	-143.26	.36	.012	.36	.03	.36
-465.0	-141.73	.36	.011	.36	.03	.36
-460.0	-140.21	.37	.011	.37	.03	.37
-455.0	-138.68	.38	.011	.38	.03	.38
-450.0	-137.16	.39	.010	.39	.03	.39
-445.0	-135.64	.40	.010	.40	.03	.40
-440.0	-134.11	.41	.010	.41	.03	.41
-435.0	-132.59	.42	.009	.42	.04	.42
-430.0	-131.06	.43	.009	.43	.04	.43
-425.0	-129.54	.44	.009	.44	.04	.44
-420.0	-128.02	.45	.008	.45	.04	.45
-415.0	-126.49	.46	.008	.46	.04	.46
-410.0	-124.97	.47	.008	.47	.04	.47
-405.0	-123.44	.48	.008	.48	.04	.48
-400.0	-121.92	.49	.007	.49	.04	.49
-395.0	-120.40	.51	.007	.50	.05	.51
-390.0	-118.87	.52	.007	.52	.05	.52
-385.0	-117.35	.53	.006	.53	.05	.53
-380.0	-115.82	.55	.006	.54	.05	.55
-375.0	-114.30	.56	.006	.56	.05	.56
-370.0	-112.78	.58	.006	.57	.06	.58
-365.0	-111.25	.59	.006	.59	.06	.59
-360.0	-109.73	.61	.005	.61	.06	.61
-355.0	-108.20	.63	.005	.62	.06	.63

-350.0	-106.68	.64	.005	.64	.06	.64
-345.0	-105.16	.66	.005	.66	.07	.66
-340.0	-103.63	.68	.004	.68	.07	.68
-335.0	-102.11	.70	.004	.70	.07	.70
-330.0	-100.58	.72	.004	.72	.08	.72
-325.0	-99.06	.75	.004	.74	.08	.75
-320.0	-97.54	.77	.003	.77	.08	.77
-315.0	-96.01	.80	.003	.79	.09	.80
-310.0	-94.49	.82	.003	.82	.09	.82
-305.0	-92.96	.85	.003	.84	.10	.85
-300.0	-91.44	.88	.003	.87	.10	.88
-295.0	-89.92	.91	.002	.90	.11	.91
-290.0	-88.39	.94	.002	.93	.11	.94
-285.0	-86.87	.97	.002	.97	.12	.97
-280.0	-85.34	1.01	.002	1.00	.12	1.01
-275.0	-83.82	1.04	.002	1.04	.13	1.04
-270.0	-82.30	1.08	.001	1.07	.14	1.08
-265.0	-80.77	1.12	.001	1.11	.14	1.12
-260.0	-79.25	1.17	.001	1.16	.15	1.17
-255.0	-77.72	1.21	.001	1.20	.16	1.21
-250.0	-76.20	1.26	.001	1.25	.17	1.26
-245.0	-74.68	1.32	.000	1.30	.18	1.32
-240.0	-73.15	1.37	.000	1.36	.19	1.37
-235.0	-71.63	1.43	.000	1.41	.20	1.43
-230.0	-70.10	1.49	.000	1.48	.22	1.49
-225.0	-68.58	1.56	.000	1.54	.23	1.56
-220.0	-67.06	1.63	.001	1.61	.25	1.63
-215.0	-65.53	1.71	.001	1.69	.27	1.71
-210.0	-64.01	1.79	.001	1.77	.29	1.79
-205.0	-62.48	1.88	.001	1.85	.31	1.88
-200.0	-60.96	1.97	.001	1.94	.33	1.97
-195.0	-59.44	2.07	.002	2.04	.36	2.07
-190.0	-57.91	2.18	.002	2.15	.39	2.18
-185.0	-56.39	2.30	.002	2.27	.42	2.30
-180.0	-54.86	2.43	.003	2.39	.45	2.43
-175.0	-53.34	2.57	.003	2.53	.49	2.57
-170.0	-51.82	2.73	.003	2.67	.54	2.73
-165.0	-50.29	2.90	.003	2.84	.59	2.90
-160.0	-48.77	3.08	.004	3.01	.64	3.08
-155.0	-47.24	3.28	.004	3.20	.71	3.28
-150.0	-45.72	3.50	.005	3.41	.78	3.50
-145.0	-44.20	3.75	.005	3.65	.86	3.75
-140.0	-42.67	4.02	.006	3.90	.96	4.02
-135.0	-41.15	4.32	.006	4.19	1.07	4.32
-130.0	-39.62	4.66	.007	4.50	1.19	4.66
-125.0	-38.10	5.03	.007	4.85	1.34	5.03
-120.0	-36.58	5.46	.008	5.25	1.51	5.46
-115.0	-35.05	5.94	.009	5.69	1.72	5.94
-110.0	-33.53	6.49	.010	6.19	1.96	6.49
-105.0	-32.00	7.12	.011	6.75	2.25	7.12
-100.0	-30.48	7.84	.012	7.40	2.60	7.84
-95.0	-28.96	8.68	.013	8.13	3.03	8.68
-90.0	-27.43	9.66	.015	8.98	3.56	9.66
-85.0	-25.91	10.81	.017	9.96	4.21	10.82
-80.0	-24.38	12.19	.019	11.10	5.03	12.19
-75.0	-22.86	13.83	.021	12.43	6.08	13.84
-70.0	-21.34	15.84	.025	13.99	7.43	15.84
-65.0	-19.81	18.30	.028	15.82	9.21	18.31
-60.0	-18.29	21.37	.033	17.96	11.60	21.38
-55.0	-16.76	25.26	.039	20.46	14.85	25.28
-50.0	-15.24	30.27	.046	23.29	19.38	30.30
-45.0	-13.72	36.84	.055	26.36	25.81	36.89
-40.0	-12.19	45.61	.067	29.26	35.12	45.71

-35.0	-10.67	57.48	.084	30.93	48.69	57.68
-30.0	-9.14	73.60	.106	28.93	68.12	74.01
-25.0	-7.62	94.94	.137	20.05	93.71	95.83
-20.0	-6.10	120.81	.182	27.19	119.74	122.79
-15.0	-4.57	146.47	.244	77.08	129.59	150.78
-10.0	-3.05	164.15	.328	132.89	110.35	172.74
-5.0	-1.52	170.62	.420	164.35	84.98	185.02
.0	.00	171.10	.466	171.10	79.76	188.78
5.0	1.52	170.62	.420	164.36	84.98	185.03
10.0	3.05	164.15	.328	132.90	110.35	172.75
15.0	4.57	146.48	.244	77.09	129.59	150.79
20.0	6.10	120.81	.182	27.21	119.74	122.79
25.0	7.62	94.94	.138	20.06	93.71	95.83
30.0	9.14	73.60	.106	28.94	68.12	74.02
35.0	10.67	57.48	.084	30.92	48.69	57.68
40.0	12.19	45.61	.068	29.26	35.12	45.71
45.0	13.72	36.84	.055	26.36	25.81	36.89
50.0	15.24	30.27	.046	23.29	19.38	30.30
55.0	16.76	25.26	.039	20.45	14.85	25.27
60.0	18.29	21.37	.033	17.96	11.60	21.38
65.0	19.81	18.30	.029	15.82	9.21	18.30
70.0	21.34	15.83	.025	13.99	7.43	15.84
75.0	22.86	13.83	.022	12.43	6.08	13.84
80.0	24.38	12.18	.020	11.10	5.03	12.19
85.0	25.91	10.81	.018	9.96	4.21	10.81
90.0	27.43	9.66	.016	8.98	3.56	9.66
95.0	28.96	8.68	.014	8.13	3.03	8.68
100.0	30.48	7.84	.013	7.40	2.60	7.84
105.0	32.00	7.12	.012	6.75	2.25	7.12
110.0	33.53	6.49	.011	6.19	1.96	6.49
115.0	35.05	5.94	.010	5.69	1.72	5.94
120.0	36.58	5.46	.010	5.24	1.52	5.46
125.0	38.10	5.03	.009	4.85	1.34	5.03
130.0	39.62	4.65	.008	4.50	1.19	4.65
135.0	41.15	4.32	.008	4.18	1.07	4.32
140.0	42.67	4.02	.007	3.90	.96	4.02
145.0	44.20	3.74	.007	3.64	.86	3.74
150.0	45.72	3.50	.007	3.41	.78	3.50
155.0	47.24	3.28	.006	3.20	.71	3.28
160.0	48.77	3.08	.006	3.01	.64	3.08
165.0	50.29	2.89	.006	2.83	.59	2.89
170.0	51.82	2.73	.006	2.67	.54	2.73
175.0	53.34	2.57	.006	2.53	.49	2.57
180.0	54.86	2.43	.005	2.39	.45	2.43
185.0	56.39	2.30	.005	2.27	.42	2.30
190.0	57.91	2.18	.005	2.15	.39	2.18
195.0	59.44	2.07	.005	2.04	.36	2.07
200.0	60.96	1.97	.005	1.94	.33	1.97
205.0	62.48	1.88	.005	1.85	.31	1.88
210.0	64.01	1.79	.005	1.77	.29	1.79
215.0	65.53	1.71	.005	1.69	.27	1.71
220.0	67.06	1.63	.005	1.61	.25	1.63
225.0	68.58	1.56	.005	1.54	.23	1.56
230.0	70.10	1.49	.005	1.48	.22	1.49
235.0	71.63	1.43	.005	1.41	.21	1.43
240.0	73.15	1.37	.005	1.36	.19	1.37
245.0	74.68	1.31	.005	1.30	.18	1.31
250.0	76.20	1.26	.005	1.25	.17	1.26
255.0	77.72	1.21	.005	1.20	.16	1.21
260.0	79.25	1.17	.005	1.16	.15	1.17
265.0	80.77	1.12	.005	1.11	.14	1.12
270.0	82.30	1.08	.005	1.07	.14	1.08
275.0	83.82	1.04	.005	1.04	.13	1.04

280.0	85.34	1.01	.005	1.00	.12	1.01
285.0	86.87	.97	.005	.96	.12	.97
290.0	88.39	.94	.005	.93	.11	.94
295.0	89.92	.91	.005	.90	.11	.91
300.0	91.44	.88	.005	.87	.10	.88
305.0	92.96	.85	.005	.84	.10	.85
310.0	94.49	.82	.006	.82	.09	.82
315.0	96.01	.80	.006	.79	.09	.80
320.0	97.54	.77	.006	.77	.08	.77
325.0	99.06	.75	.006	.74	.08	.75
330.0	100.58	.72	.006	.72	.08	.72
335.0	102.11	.70	.006	.70	.07	.70
340.0	103.63	.68	.006	.68	.07	.68
345.0	105.16	.66	.006	.66	.07	.66
350.0	106.68	.64	.007	.64	.06	.64
355.0	108.20	.63	.007	.62	.06	.63
360.0	109.73	.61	.007	.61	.06	.61
365.0	111.25	.59	.007	.59	.06	.59
370.0	112.78	.58	.007	.57	.06	.58
375.0	114.30	.56	.007	.56	.05	.56
380.0	115.82	.55	.008	.54	.05	.55
385.0	117.35	.53	.008	.53	.05	.53
390.0	118.87	.52	.008	.52	.05	.52
395.0	120.40	.51	.008	.50	.05	.51
400.0	121.92	.49	.008	.49	.04	.49
405.0	123.44	.48	.009	.48	.04	.48
410.0	124.97	.47	.009	.47	.04	.47
415.0	126.49	.46	.009	.46	.04	.46
420.0	128.02	.45	.009	.45	.04	.45
425.0	129.54	.44	.010	.43	.04	.44
430.0	131.06	.43	.010	.42	.04	.43
435.0	132.59	.42	.010	.41	.04	.42
440.0	134.11	.41	.010	.41	.04	.41
445.0	135.64	.40	.011	.40	.03	.40
450.0	137.16	.39	.011	.39	.03	.39
455.0	138.68	.38	.011	.38	.03	.38
460.0	140.21	.37	.012	.37	.03	.37
465.0	141.73	.36	.012	.36	.03	.36
470.0	143.26	.36	.012	.36	.03	.36
475.0	144.78	.35	.012	.35	.03	.35
480.0	146.30	.34	.013	.34	.03	.34
485.0	147.83	.33	.013	.33	.03	.33
490.0	149.35	.33	.013	.33	.03	.33
495.0	150.88	.32	.014	.32	.03	.32
500.0	152.40	.31	.014	.31	.03	.31

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*********************************
*                               *
*         AUDIBLE NOISE         *
*   GENERATED ACOUSTIC POWER    *
*        (dB above 1uW/m)       *
*                               *
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BNDL #	Type	Summer Fair	L5 RAIN	L50 RAIN
1	AC	-79.00	-59.73	-70.50
2	AC	-75.78	-57.92	-67.71
3	AC	-79.00	-59.73	-70.50

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*               AUDIBLE NOISE              *
*                                          *
* Microphone is   5.00 feet  above ground *
*          Altitude     5000. ft           *
*                                          *
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<------------ HVTRC CALCULATION METHOD ---------->

LATERAL DISTANCE (feet)	(meters)	L50 FAIR (dB(A))	L5 RAIN (dB(A))	L50 RAIN (dB(A))	Leq(24) (dB(A))	Ldn (dB(A))
-500.0	-152.40	16.5	35.2	24.8	23.3	30.9
-495.0	-150.88	16.6	35.2	24.9	23.3	31.0
-490.0	-149.35	16.7	35.3	25.0	23.4	31.0
-485.0	-147.83	16.8	35.4	25.1	23.5	31.1
-480.0	-146.30	16.8	35.5	25.1	23.6	31.2
-475.0	-144.78	16.9	35.5	25.2	23.6	31.3
-470.0	-143.26	17.0	35.6	25.3	23.7	31.3
-465.0	-141.73	17.1	35.7	25.4	23.8	31.4
-460.0	-140.21	17.2	35.8	25.4	23.9	31.5
-455.0	-138.68	17.2	35.8	25.5	23.9	31.6
-450.0	-137.16	17.3	35.9	25.6	24.0	31.7
-445.0	-135.64	17.4	36.0	25.7	24.1	31.7
-440.0	-134.11	17.5	36.1	25.8	24.2	31.8
-435.0	-132.59	17.5	36.2	25.8	24.3	31.9
-430.0	-131.06	17.6	36.2	25.9	24.3	32.0
-425.0	-129.54	17.7	36.3	26.0	24.4	32.1
-420.0	-128.02	17.8	36.4	26.1	24.5	32.1
-415.0	-126.49	17.9	36.5	26.2	24.6	32.2
-410.0	-124.97	18.0	36.6	26.2	24.7	32.3
-405.0	-123.44	18.0	36.6	26.3	24.7	32.4
-400.0	-121.92	18.1	36.7	26.4	24.8	32.5
-395.0	-120.40	18.2	36.8	26.5	24.9	32.6
-390.0	-118.87	18.3	36.9	26.6	25.0	32.6
-385.0	-117.35	18.4	37.0	26.7	25.1	32.7
-380.0	-115.82	18.5	37.1	26.8	25.2	32.8
-375.0	-114.30	18.6	37.2	26.8	25.3	32.9
-370.0	-112.78	18.6	37.3	26.9	25.4	33.0
-365.0	-111.25	18.7	37.3	27.0	25.4	33.1
-360.0	-109.73	18.8	37.4	27.1	25.5	33.2
-355.0	-108.20	18.9	37.5	27.2	25.6	33.3
-350.0	-106.68	19.0	37.6	27.3	25.7	33.4
-345.0	-105.16	19.1	37.7	27.4	25.8	33.5
-340.0	-103.63	19.2	37.8	27.5	25.9	33.5
-335.0	-102.11	19.3	37.9	27.6	26.0	33.6
-330.0	-100.58	19.4	38.0	27.7	26.1	33.7
-325.0	-99.06	19.5	38.1	27.8	26.2	33.8
-320.0	-97.54	19.6	38.2	27.9	26.3	33.9
-315.0	-96.01	19.7	38.3	28.0	26.4	34.0
-310.0	-94.49	19.8	38.4	28.1	26.5	34.1
-305.0	-92.96	19.9	38.5	28.2	26.6	34.2
-300.0	-91.44	20.0	38.6	28.3	26.7	34.3
-295.0	-89.92	20.1	38.7	28.4	26.8	34.4
-290.0	-88.39	20.2	38.8	28.5	26.9	34.5
-285.0	-86.87	20.3	38.9	28.6	27.0	34.6
-280.0	-85.34	20.4	39.0	28.7	27.1	34.8
-275.0	-83.82	20.5	39.1	28.8	27.2	34.9
-270.0	-82.30	20.6	39.2	28.9	27.3	35.0
-265.0	-80.77	20.7	39.3	29.0	27.4	35.1
-260.0	-79.25	20.8	39.5	29.1	27.6	35.2
-255.0	-77.72	21.0	39.6	29.3	27.7	35.3

-250.0	-76.20	21.1	39.7	29.4	27.8	35.4
-245.0	-74.68	21.2	39.8	29.5	27.9	35.5
-240.0	-73.15	21.3	39.9	29.6	28.0	35.7
-235.0	-71.63	21.4	40.0	29.7	28.1	35.8
-230.0	-70.10	21.6	40.2	29.9	28.3	35.9
-225.0	-68.58	21.7	40.3	30.0	28.4	36.0
-220.0	-67.06	21.8	40.4	30.1	28.5	36.2
-215.0	-65.53	21.9	40.6	30.2	28.7	36.3
-210.0	-64.01	22.1	40.7	30.4	28.8	36.4
-205.0	-62.48	22.2	40.8	30.5	28.9	36.6
-200.0	-60.96	22.4	41.0	30.6	29.1	36.7
-195.0	-59.44	22.5	41.1	30.8	29.2	36.8
-190.0	-57.91	22.6	41.2	30.9	29.3	37.0
-185.0	-56.39	22.8	41.4	31.1	29.5	37.1
-180.0	-54.86	22.9	41.5	31.2	29.6	37.3
-175.0	-53.34	23.1	41.7	31.4	29.8	37.4
-170.0	-51.82	23.2	41.8	31.5	29.9	37.6
-165.0	-50.29	23.4	42.0	31.7	30.1	37.7
-160.0	-48.77	23.6	42.2	31.9	30.3	37.9
-155.0	-47.24	23.7	42.3	32.0	30.4	38.1
-150.0	-45.72	23.9	42.5	32.2	30.6	38.3
-145.0	-44.20	24.1	42.7	32.4	30.8	38.4
-140.0	-42.67	24.3	42.9	32.6	31.0	38.6
-135.0	-41.15	24.5	43.1	32.7	31.2	38.8
-130.0	-39.62	24.6	43.3	32.9	31.4	39.0
-125.0	-38.10	24.8	43.5	33.1	31.6	39.2
-120.0	-36.58	25.1	43.7	33.3	31.8	39.4
-115.0	-35.05	25.3	43.9	33.6	32.0	39.6
-110.0	-33.53	25.5	44.1	33.8	32.2	39.8
-105.0	-32.00	25.7	44.3	34.0	32.4	40.1
-100.0	-30.48	26.0	44.6	34.3	32.7	40.3
-95.0	-28.96	26.2	44.8	34.5	32.9	40.6
-90.0	-27.43	26.5	45.1	34.8	33.2	40.8
-85.0	-25.91	26.8	45.4	35.0	33.5	41.1
-80.0	-24.38	27.0	45.7	35.3	33.8	41.4
-75.0	-22.86	27.4	46.0	35.6	34.1	41.7
-70.0	-21.34	27.7	46.3	36.0	34.4	42.0
-65.0	-19.81	28.0	46.6	36.3	34.7	42.4
-60.0	-18.29	28.4	47.0	36.7	35.1	42.8
-55.0	-16.76	28.8	47.4	37.1	35.5	43.2
-50.0	-15.24	29.2	47.9	37.5	35.9	43.6
-45.0	-13.72	29.7	48.3	38.0	36.4	44.1
-40.0	-12.19	30.2	48.8	38.5	36.9	44.6
-35.0	-10.67	30.8	49.4	39.1	37.5	45.1
-30.0	-9.14	31.4	50.0	39.7	38.1	45.7
-25.0	-7.62	32.0	50.7	40.3	38.7	46.4
-20.0	-6.10	32.7	51.3	41.0	39.4	47.0
-15.0	-4.57	33.3	51.9	41.6	40.0	47.6
-10.0	-3.05	33.7	52.3	42.0	40.4	48.0
-5.0	-1.52	34.0	52.5	42.3	40.7	48.3
.0	.00	34.1	52.6	42.4	40.8	48.5
5.0	1.52	34.0	52.5	42.3	40.7	48.3
10.0	3.05	33.7	52.3	42.0	40.4	48.0
15.0	4.57	33.3	51.9	41.6	40.0	47.6
20.0	6.10	32.7	51.3	41.0	39.4	47.0
25.0	7.62	32.0	50.7	40.3	38.7	46.4
30.0	9.14	31.4	50.0	39.7	38.1	45.7
35.0	10.67	30.8	49.4	39.1	37.5	45.1
40.0	12.19	30.2	48.8	38.5	36.9	44.6
45.0	13.72	29.7	48.3	38.0	36.4	44.1
50.0	15.24	29.2	47.9	37.5	35.9	43.6
55.0	16.76	28.8	47.4	37.1	35.5	43.2
60.0	18.29	28.4	47.0	36.7	35.1	42.8

65.0	19.81	28.0	46.6	36.3	34.7	42.4
70.0	21.34	27.7	46.3	36.0	34.4	42.0
75.0	22.86	27.4	46.0	35.6	34.1	41.7
80.0	24.38	27.0	45.7	35.3	33.8	41.4
85.0	25.91	26.8	45.4	35.0	33.5	41.1
90.0	27.43	26.5	45.1	34.8	33.2	40.8
95.0	28.96	26.2	44.8	34.5	32.9	40.6
100.0	30.48	26.0	44.6	34.3	32.7	40.3
105.0	32.00	25.7	44.3	34.0	32.4	40.1
110.0	33.53	25.5	44.1	33.8	32.2	39.8
115.0	35.05	25.3	43.9	33.6	32.0	39.6
120.0	36.58	25.1	43.7	33.3	31.8	39.4
125.0	38.10	24.8	43.5	33.1	31.6	39.2
130.0	39.62	24.6	43.3	32.9	31.4	39.0
135.0	41.15	24.5	43.1	32.7	31.2	38.8
140.0	42.67	24.3	42.9	32.6	31.0	38.6
145.0	44.20	24.1	42.7	32.4	30.8	38.4
150.0	45.72	23.9	42.5	32.2	30.6	38.3
155.0	47.24	23.7	42.3	32.0	30.4	38.1
160.0	48.77	23.6	42.2	31.9	30.3	37.9
165.0	50.29	23.4	42.0	31.7	30.1	37.7
170.0	51.82	23.2	41.8	31.5	29.9	37.6
175.0	53.34	23.1	41.7	31.4	29.8	37.4
180.0	54.86	22.9	41.5	31.2	29.6	37.3
185.0	56.39	22.8	41.4	31.1	29.5	37.1
190.0	57.91	22.6	41.2	30.9	29.3	37.0
195.0	59.44	22.5	41.1	30.8	29.2	36.8
200.0	60.96	22.4	41.0	30.6	29.1	36.7
205.0	62.48	22.2	40.8	30.5	28.9	36.6
210.0	64.01	22.1	40.7	30.4	28.8	36.4
215.0	65.53	21.9	40.6	30.2	28.7	36.3
220.0	67.06	21.8	40.4	30.1	28.5	36.2
225.0	68.58	21.7	40.3	30.0	28.4	36.0
230.0	70.10	21.6	40.2	29.9	28.3	35.9
235.0	71.63	21.4	40.0	29.7	28.1	35.8
240.0	73.15	21.3	39.9	29.6	28.0	35.7
245.0	74.68	21.2	39.8	29.5	27.9	35.5
250.0	76.20	21.1	39.7	29.4	27.8	35.4
255.0	77.72	21.0	39.6	29.3	27.7	35.3
260.0	79.25	20.8	39.5	29.1	27.6	35.2
265.0	80.77	20.7	39.3	29.0	27.4	35.1
270.0	82.30	20.6	39.2	28.9	27.3	35.0
275.0	83.82	20.5	39.1	28.8	27.2	34.9
280.0	85.34	20.4	39.0	28.7	27.1	34.8
285.0	86.87	20.3	38.9	28.6	27.0	34.6
290.0	88.39	20.2	38.8	28.5	26.9	34.5
295.0	89.92	20.1	38.7	28.4	26.8	34.4
300.0	91.44	20.0	38.6	28.3	26.7	34.3
305.0	92.96	19.9	38.5	28.2	26.6	34.2
310.0	94.49	19.8	38.4	28.1	26.5	34.1
315.0	96.01	19.7	38.3	28.0	26.4	34.0
320.0	97.54	19.6	38.2	27.9	26.3	33.9
325.0	99.06	19.5	38.1	27.8	26.2	33.8
330.0	100.58	19.4	38.0	27.7	26.1	33.7
335.0	102.11	19.3	37.9	27.6	26.0	33.6
340.0	103.63	19.2	37.8	27.5	25.9	33.5
345.0	105.16	19.1	37.7	27.4	25.8	33.5
350.0	106.68	19.0	37.6	27.3	25.7	33.4
355.0	108.20	18.9	37.5	27.2	25.6	33.3
360.0	109.73	18.8	37.4	27.1	25.5	33.2
365.0	111.25	18.7	37.3	27.0	25.4	33.1
370.0	112.78	18.6	37.3	26.9	25.4	33.0
375.0	114.30	18.6	37.2	26.8	25.3	32.9

380.0	115.82	18.5	37.1	26.8	25.2	32.8
385.0	117.35	18.4	37.0	26.7	25.1	32.7
390.0	118.87	18.3	36.9	26.6	25.0	32.6
395.0	120.40	18.2	36.8	26.5	24.9	32.6
400.0	121.92	18.1	36.7	26.4	24.8	32.5
405.0	123.44	18.0	36.6	26.3	24.7	32.4
410.0	124.97	18.0	36.6	26.2	24.7	32.3
415.0	126.49	17.9	36.5	26.2	24.6	32.2
420.0	128.02	17.8	36.4	26.1	24.5	32.1
425.0	129.54	17.7	36.3	26.0	24.4	32.1
430.0	131.06	17.6	36.2	25.9	24.3	32.0
435.0	132.59	17.5	36.2	25.8	24.3	31.9
440.0	134.11	17.5	36.1	25.8	24.2	31.8
445.0	135.64	17.4	36.0	25.7	24.1	31.7
450.0	137.16	17.3	35.9	25.6	24.0	31.7
455.0	138.68	17.2	35.8	25.5	23.9	31.6
460.0	140.21	17.2	35.8	25.4	23.9	31.5
465.0	141.73	17.1	35.7	25.4	23.8	31.4
470.0	143.26	17.0	35.6	25.3	23.7	31.3
475.0	144.78	16.9	35.5	25.2	23.6	31.3
480.0	146.30	16.8	35.5	25.1	23.6	31.2
485.0	147.83	16.8	35.4	25.1	23.5	31.1
490.0	149.35	16.7	35.3	25.0	23.4	31.0
495.0	150.88	16.6	35.2	24.9	23.3	31.0
500.0	152.40	16.5	35.2	24.8	23.3	30.9