#### APPENDIX A

# LETTERS AND FORMS USED FOR THE MAGNETIC FIELD EXPOSURE MEASUREMENTS

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Document #1

U.S. DEPARTMENT OF ENERGY SURVEY OF PERSONAL MAGNETIC FIELD EXPOSURE

Dear Friend:

The U.S. Department of Energy is conducting an important study of people's

exposure to magnetic field which come from power lines and electrical equipment. You may

have the opportunity to be part of this study in the near future.

Westat, Incorporated, an environmental research firm located in Rockville,

Maryland and Enertech Consultants of Campbell, California are conducting this survey on behalf

of the U.S. Department of Energy.

One of our interviewers will be calling you soon to ask a few general questions

about your household. Based on your answers to the interviewer's questions, you or another

member of your family may be invited to take part in this study. If you are selected, the

interviewer will explain the study in detail and answer any questions you may have. You will

receive a payment of \$50.00 for your participation.

While cooperation is voluntary, we hope you will agree to participate if selected.

Being chosen for our study means that you are part of a scientifically selected sample. Your

participation is important for the study to produce use4fuoe information. The information you

provide will contribute greatly to scientists' understanding of people's exposure to magnetic

fields.

Please feel free to call me at 1-800-937-8281 if you have any questions or wish to

verify the survey. Thank you in advance for your cooperation.

Sincerely,

Mary Dingwall

Study Director

Westat.Inc.

A-3

October 22, 1997 ID #: SURVEY OF PERSONAL MAGNETIC FIELD EXPOSURE **DESCRIPTIVE QUESTIONNAIRE HOUSEHOLD SCREENER and RESPONDENT SELECTION**  A1. Hello, my name is {INTERVIEWER'S NAME} and I'm calling from Westat, Inc. on behalf of the United States Department of Energy. Have I reached {PHONE NUMBER}?

YES	1		
NO	2	$\rightarrow$	THANK PERSON &
			HANG UP
REFUSAL	7		
DON'T KNOW	В		

#### A2. Are you a full-time resident of the household who is at least 18 years old?

{FULL-TIME RESIDENT RESIDES IN HH OVER HALF THE YEAR; NOT A VISITOR, BABYSITTER, ETC.}

YES	_1 ⊣	<ul> <li>CONTINUE</li> </ul>
NO, WILL GET ADULT	2 -	GO TO RESTART
REFUSAL	7	
DON'T KNOW	8	

Westat is working on a study sponsored by the United States Department of Energy to measure people's exposure to electromagnetic fields, which come from power lines and electrical equipment.

#### A3a. IF THE RESPONDENT WAS SENT AN INTRODUCTORY LETTER:

We recently sent you a letter to introduce you to the study. As the letter said, your participation is voluntary and you will be paid for your time. I would like to ask a few questions to determine if your household is eligible for the study. GO TO A4.

#### A3b. IF THE RESPONDENT WAS NOT SENT AN INTRODUCTORY LETTER:

I would like to ask you a few questions now to determine if your household is eligible for the study. Based on your answers to these questions, you or another member of your household may be invited to take part in this scientific study to help understand people's exposure to magnetic fields. If you are selected, your participation in this study is voluntary and you will receive a payment of \$50 for your participation.

ASK QUESTIONS NOW	1	-	GO TO A4
NEEDS MORE INFORMATION	2	$\rightarrow$	GO TO BOX AT
REFUSAL	7		
DON'T KNOW	8		

	BOX A1	
So that we can send you a lette name and address:	er introducing us and the stud	dy, please give me your
Name:		
Street:		
City:	State:	Zip:
Thank you, we will send you an When would be a good time to {TRY TO GET CALLBACK DAT	reach you?	ou back in a few days.

#### RESTART

Hello, my name is {INTERVIEWER'S NAME} and I'm calling from Westat, Inc. on behalf of the United States Department of Energy. Westat is working on a study sponsored by the United States Department of Energy to measure daily exposure to magnetic fields, which come from power lines and electrical equipment. We recently sent you a letter to introduce you to the study. As the letter said, your participation is voluntary and you will be paid for your time. I would like to ask a few questions to determine if your household is eligible for the study.

#### A4. Is this phone for:

Home use	1		
Business and home use or	2		
Business use only?	3	$\rightarrow$	THANK YOU FOR
			YOUR TIME. WE ARE
			ONLY INTERESTED IN
			HOUSEHOLDS.

#### REFUSAL AVOIDANCE/REFUSAL CONVERSION

While cooperation is voluntary, we hope your household will agree to participate if selected. Being chosen for our survey means that you are part of a scientifically selected national sample. The information you provide will contribute greatly to our nation's understanding of people's exposure to magnetic fields. If it is OK, I'd like to finish the questions to see if you qualify for the study.

If you would like to verify the legitimacy of the study and speak with the project director, please call Mary Dingwall at Westat at (800) 937-8281. What would be a good time to call you back? (SUGGEST SAME TIME TOMORROW NIGHT)

A5a.	IF THE RESPONDENT WAS SENT AN INTRODUCTORY LETTER:			
	ls your address	s: {household address	including city, sta	te, and ZIP}
		CORRECT CHANGES NOTED BELC REFUSED DON' KNOW	)W 2 7	
CORRECT	ADDRESS:			
		Street/RFD		Apt.#
	<del></del>	City S	tate	ZIP Code
A5b.	IF THE RESPO	NDENT WAS NOT SENT	AN INTRODUCTO	ORY LETTER:
	What is your na	ame and address:		
	Name:	<u> </u>		
	Street:			
	City:		State:	Zip:
A6.		a primary residence o less than half the year?		nome or second home
		PRIMARY RESIDENCE		
		VACATION/2ND HOME	2 -	→ THANK YOU FOR YOUR TIME, WE ARE ONLY INTERESTED IN PRIMARY RESIDENCES.
		REFUSAL		
			-	

A7. The purpose of the study is to gather information about daily exposure to magnetic fields. We will be asking a member of your household to wear a monitoring device for a 24-hour period and complete a short questionnaire. The device is about the size and weight of a pager. This person will receive a payment of 50 dollars for their participation.

A8.	Please tell me the first name of the person in your household who has the {next/most recent} birthday. [ENTER SOME UNIQUE IDENTIFIER, I.E., OLDEST SON, IF NAME IS REFUSED]
	FNAME
A9.	What is his/her birthdate?
	_  /    DD
A10.	[IF NOT OBVIOUS, ASK GENDER OR PERSON WITH {NEXT/MOST RECENT} BIRTHDAY]
	MALE 1 FEMALE 2
A11.	Would you please tell me the number of people who usually live in this household, including yourself?
	NUMBER OF HOUSEHOLD  MEMBERS
ASK QUES	TION A12 FOR THE SELECTED INDIVIDUAL.
A12.	Are/is {you/FNAME} a full-time resident of this household, that is a person who lives in the residence year round except for short periods of time?
	YES
(i.e. STU	THE RESPONDENT CHOSEN IS AWAY FROM HOME FOR PERIODS OF TIME DENT, MEMBER OF ARMED FORCES), CHOOSE THE NEXT ELIGIBLE IDENT. RESTART AT QUESTION A8.

IF RESPONDENT IS SELECTED AND HE/SHE IS 18 YEARS OR OLDER:

CONTINUE WITH A13.

IF OTHER PERSON 18 YEARS OR OLDER IS SELECTED:

ASK TO SPEAK WITH HIM OR HER, EXPLAIN THE STUDY USING THIS TEXT:

The purpose of the study is to gather information about daily exposure to magnetic fields. We will be asking you to wear a monitoring device for a 24-hour period and complete a short questionnaire. The device is about the size and weight of a pager. You will receive a payment of 50 dollars for your participation.

IF A SELECTED RESPONDENT REFUSES, RESTART AT AS TO DETERMINE THE NEXT SELECTED RESPONDENT AND ASK HIM OR HER TO PARTICIPATE.

IF ANY RESPONDENT REFUSES, EXPLAIN THE REASON FOR HIS/HER REFUSAL IN THE SPACE PROVIDED AT THE END OF THE QUESTIONNAIRE.

IF A **MINOR IS SELECTED**, ASK TO SPEAK TO HIS/HER PARENT/GUARDIAN. EXPLAIN THE STUDY USING THIS TEXT:

The purpose of the study is to gather information about daily exposure to magnetic fields. {SELECTED PARTICIPANT'S NAME} has been selected to participate in this study. We will be asking him/her to wear a monitoring device for a 24-hour period and to complete a short questionnaire. The device is about the size and weight of a pager (IF INFANT/TODDLER: and will be stored inside a teddy bear that should be kept near the child for the day of the measurements). He/she will receive a payment of 50 dollars for participating.

IF THE PARENT/GUARDIAN REFUSES, RESTART AT A8 TO DETERMINE THE NEXT SELECTED RESPONDENT AND ASK HIM OR HER TO PARTICIPATE.

IF THE PARENT/GUARDIAN GIVES PERMISSION FOR THE MINOR TO PARTICIPATE AND THE MINOR IS 13 YEARS OR OLDER, ASK TO SPEAK WITH THE MINOR TO GAIN HIS/HER ASSENT. EXPLAIN THE STUDY TO THE MINOR USING THE SAME TEXT (ABOVE) AS THAT FOR AN ADULT THEN CONTINUE WITH A13. IF THE MINOR IS 12 OR YOUNGER, CONTINUE WITH A13.

A13.	Are you plann months?	ing on moving out of this househo	old a	any	time in the next 2
		YES	1	<b>→</b>	THANK YOU FOR YOUR TIME. WE ARE UNABLE TO INCLUDE YOU IN OUR STUDY AT
		NOREFUSAL DON'T KNOW	2 7 8		THIS TIME.
A14.					
a.	FULL NAME OF	F PARTICIPANT:			
IF PARTIC	IPANT IS UNDER	18, OBTAIN FULL NAME OF PARTICI	PAN	NTS	GUARDIAN.
b.	FULL NAME OF	F GUARDIAN:			
in a	en you get the fo	rill be receiving a letter explaining the orm, please read it, sign it, and send i oring device. Thank you for your part	t ba	ck t	o us so that we can
REASON F	OR PROBLEM C	R RESPONDENT REFUSAL:			

Document # 3
Date: Address:
United States Department of Energy Survey of Personal Magnetic Field Exposure
Dear,
Thank you for agreeing to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". You simply wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home or place of work as a result of the distribution and use of electric power. You can clip the meter on your waist or place it in a pocket or in something that you keep near you at all times as shown in the attached photos. You will also be asked to keep a simple diary indicating daily activities such as waking up, going to work, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.
You will be paid \$50.00 for your participation. After receiving the meter back from you, we will extract the magnetic field values recorded while you wore the meter and send you a summary of the results showing the average magnetic field to which you have been exposed in your home and outside your home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.
We want to be sure that you are well informed about the objective and modality of the study. For this purpose, we ask you to read, sign, and return to us the attached "Consent Form". A space is

If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.

provided for a witness' signature. Please use the attached self-addressed stamped envelope. As soon as we receive the signed Consent Form from you, we will mail you the meter for the

exposure measurements, the diary, the instructions, and the \$50.00 check.

Sincerely,

Luciano E. Zaffanella Enertech Consultants

# The Magnetic Field Exposure Meter used in the Study

The small meter we are asking you to wear has a clip on the back and can be worn in a number of convenient ways:



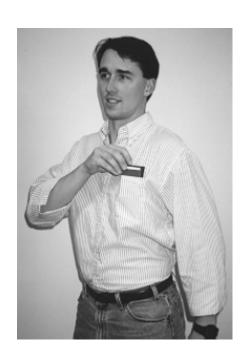
Clipped on to your belt...



In your jacket pocket...



or in your pants pocket



or in your shirt pocket

Document # 4
Date: Address:
United States Department of Energy Survey of Personal Magnetic Field Exposure
Dear
Thank you for agreeing to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". You simply wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home or place of work as a result of the distribution and use of electric power. You can clip the meter on your waist or place it in a pocket or in something that you keep near you at all times (like a purse) as shown in the attached photos. You will also be asked to keep a simple diary indicating daily activities such as waking up, going to work, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.
You will be paid \$50.00 for your participation. After receiving the meter back from you, we will extract the magnetic field values recorded while you wore the meter and send you a summary of the results showing the average magnetic field to which you have been exposed in your home and outside your home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.
We want to be sure that you are well informed about the objective and modality of the study. For this purpose, we ask you to read, sign, and return to us the attached "Consent Form". A space is provided for a witness' signature. Please use the attached self-addressed stamped envelope. As soon as we receive the signed Consent Form from you, we will mail you the meter for the exposure measurements, the diary, the instructions, and the \$50.00 check.

If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.

Sincerely,

Luciano E. Zaffanella Enertech Consultants

# The Magnetic Field Exposure Meter used in the Study

The small meter we are asking you to wear comes with a clip on the back and can be worn in a number of convenient ways:



Clipped on to your belt or waistband...



or in your pocket



In your jacket pocket...



or in your purse

Document # 5		
Date: Address:		
United States Department of Energy Survey of Personal Magnetic Field Exposure		
Dear,		
Thank you for permitting [child's name] to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.		
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". The child will wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home, school, daycare center, or any other place where your child may be, as a result of the distribution and use of electric power. The child can clip the meter on the waist, place it in a pocket or in something that is kept near him at all times. We ask that a simple 24-hour diary be kept indicating daily activities such as leaving home, going to school, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.		
You will receive \$50.00 for your child's participation. After receiving the meter back from you, we will extract the magnetic field values recorded while wearing the meter and send you a summary of the results showing the average magnetic field to which the child has been exposed in and outside the home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.		
We want to be sure that you are well informed about the objective and modality of the study. For this		

If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.

we receive the signed Consent Form from you, we will mail you the meter for the exposure

purpose, we ask you and the child to read, sign, and return to us the attached "Consent Form". A space is provided for a witness' signature. Please use the attached self-addressed stamped envelope. As soon as

Sincerely,

Luciano E. Zaffanella Enertech Consultants

measurements, the diary, the instructions, and the \$50.00 check.

# The Magnetic Field Exposure Meter used in the Study

The small meter we are asking you to wear has a clip on the back and can be worn in a number of convenient ways:



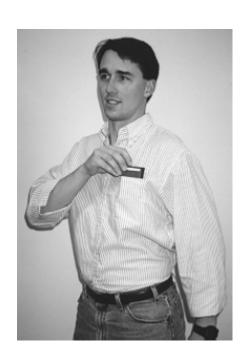
Clipped on to your belt...



In your jacket pocket...



or in your pants pocket



or in your shirt pocket

Document # 6		
Date: Address:		
United States Department of Energy Survey of Personal Magnetic Field Exposure		
Dear,		
Thank you for permitting [child's name] to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.		
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". The child will wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home, school, daycare center, or any other place where your child may be, as a result of the distribution and use of electric power. The child can clip the meter on the waist, place it in a pocket or in something that is kept near her at all times. We ask that a simple 24-hour diary be kept indicating daily activities such as leaving home, going to school, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.		
You will receive \$50.00 for your child's participation. After receiving the meter back from you, we will extract the magnetic field values recorded while wearing the meter and send you a summary of the results showing the average magnetic field to which the child has been exposed in and outside the home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.		
We want to be sure that you are well informed about the objective and modality of the study. For this purpose, we ask you and the child to read, sign, and return to us the attached "Consent Form". A space is provided for a witness' signature. Please use the attached self-addressed stamped envelope. As soon as we receive the signed Consent Form from you, we will mail you the meter for the exposure measurements, the diary, the instructions, and the \$50.00 check.		
If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.		
Sincerely,		

Luciano E. Zaffanella Enertech Consultants

### The Magnetic Field Exposure Meter used in the Study

The small meter we are asking you to wear comes with a clip on the back and can be worn in a number of convenient ways:



Clipped on to your belt or waistband...



or in your pocket



In your jacket pocket...



or in your purse

Document # 7		
Date: Address:		
United States Department of Energy Survey of Personal Magnetic Field Exposure		
Dear,		
Thank you for permitting [child's name] to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.		
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". The child will wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home, school, daycare center, or any other place where your child may be, as a result of the distribution and use of electric power. For young children we provide a holder shaped like a stuffed bear. We ask that a simple 24-hour diary be kept indicating daily activities such as leaving home, going to school, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.		
You will receive \$50.00 for your child's participation. After receiving the meter back from you, we will extract the magnetic field values recorded while wearing the meter and send you a summary of the results showing the average magnetic field to which the child has been exposed in and outside the home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.		
We want to be sure that you are well informed about the objective and modality of the study. For this purpose, we ask you and the child (if appropriate) to read, sign, and return to us the attached "Consent Form". A space is provided for a witness' signature <u>if one is convenient</u> . Please use the attached self-addressed stamped envelope. As soon as we receive the signed Consent Form from you, we will mail you the meter for the exposure measurements, the diary, the instructions, and the \$50.00 check.		
If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.		
Sincerely,		
Luciano E. Zaffanella		

**Enertech Consultants** 

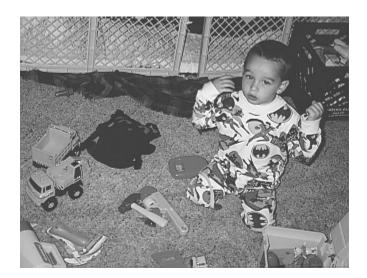
# Exposure Meter used in the Study

The instrument is placed inside the Teddy bear, which can be worn as a backpack, carried, or placed near your child:





May be worn as a backpack...



carried, or placed near your child

Document # 8
Date: Address:
United States Department of Energy Survey of Personal Magnetic Field Exposure
Dear,
Thank you for permitting [child's name] to participate in the Survey of Personal Magnetic Field Exposure. This is an important study conducted for the U.S. Department of Energy.
Participation in this study is easy. We will mail you a small monitoring device, similar in size and weight to a portable phone pager. The monitoring device is a "magnetic field personal exposure meter". The child will wear this meter for 24 hours. The magnetic fields measured by this meter are those that exist in your home, school, daycare center, or any other place where your child may be, as a result of the distribution and use of electric power. For young children we provide a holder shaped like a stuffed bear We ask that a simple 24-hour diary be kept indicating daily activities such as leaving home, going to school, returning home, and going to bed. We will also be asking you to send the meter and the diary back to us, using a shipping box and a prepaid UPS shipping envelope.
You will receive \$50.00 for your child's participation. After receiving the meter back from you, we will extract the magnetic field values recorded while wearing the meter and send you a summary of the results showing the average magnetic field to which the child has been exposed in and outside the home. These data, without any personal identification, will be pooled with data from many other people to help a team of leading scientists learn about the magnetic fields that people are exposed to in the United States.
We want to be sure that you are well informed about the objective and modality of the study. For this purpose, we ask you to read, sign, and return to us the attached "Consent Form". A space is provided for a witness' signature. Please use the attached self-addressed stamped envelope. As soon as we receive the signed Consent Form from you, we will mail you the meter for the exposure measurements, the diary, the instructions, and the \$50.00 check.
If you have any questions, please call our toll-free number 1-800-866-8144. Please indicate that you are calling the "Survey Hotline". We look forward to your joining in our research effort and we greatly appreciate your help.

Sincerely,

Luciano E. Zaffanella Enertech Consultants

# The Magnetic Field Exposure Meter used in the Study

The instrument is placed inside a soft Teddy bear (which has no straps), and should be kept near your infant:



In bed...







in the car seat or high chair

#### Document #9

#### **CONSENT FORM**

Project: Survey of Personal Magnetic Field Exposure

Principal Investigator: Luciano Zaffanella

Enertech Consultants Lee, MA 01238 Phone (413) 243-2800

Co-Principal Investigator: Paul C. Gailey

Oak Ridge National Laboratory

Oak Ridge, Tennessee Phone (615) 574-0419

Sponsor: U.S. Department of Energy, Oak Ridge National Laboratory

#### **PURPOSE**

The purpose of this study is to develop survey methodologies to characterize magnetic field exposures of the general population. A pilot study shall be performed to validate the survey methodologies.

#### **PROCEDURES**

As a participant in this study, you will be asked to wear a personal exposure magnetic field meter on your body for one day. The meter is similar in size and weight to a portable "walkman" tape player. The meter collects and stores magnetic field measurements. You will be asked to keep a simple diary indicating daily activities such as waking up, commuting to work, going to bed, etc. You may be interviewed and asked to recollect at what time you performed certain daily activities.

If your infant or toddler child is participating in this study, you will be asked to place the personal exposure magnetic field meter inside a soft toy (teddy bear) and keep the toy near your child for one day.

#### **RISKS AND BENEFITS**

At present no health effects can be linked to exposure to EMF at the levels we will be measuring. Although epidemiological studies have suggested an association between possible EMF sources and a risk of disease (e.g. living near power lines and leukemia risk in children), similar studies based on measurements of EMF have found no increase in the risk of disease in adults or children.

You will not be exposed to any additional EMF beyond what currently exists in your home or office. There are no known physical risks associated with wearing the meter or participating in this study. The meter only measures magnetic fields and does not emit any magnetic energy while operating. The meter is fairly lightweight and can be worn comfortably in a pouch.

The benefit of participating in this study is to assist in developing survey methodologies to characterize magnetic field exposures of the general population. At your request, you will receive a summary of your personal EMF exposure measurements as recorded by the meter you wore.

#### VOLUNTARY NATURE OF THE STUDY

Participation in this study is completely voluntary and there is no penalty for declining to participate.

In order for a child to participate, the parent/guardian must give consent on the child's behalf and sign this form to document assent. The child participant may also sign, but the child's signature without that of the parent/guardian does not constitute the informed consent necessary for participation in this study.

#### CONFIDENTIALITY

Your identity will remain confidential. Confidentiality will be maintained on all the measurement data, activity diaries, questionnaires, and individual records obtained from this study. All individual identifiers on the data collection forms will be replaced with a unique study code after the data is collected. We will retain a copy of the master code key until after the analysis is completed. This way we can provide a summary of the readings to you at your request. Once the analysis is completed, we will destroy the master key so the data can no longer be linked to specific individuals. You will never be publicly identified.

DADTICIDANT'S STATEMENT

FARTICIFANT S	STATEMENT	
(participant's name, printed) have read the		
information provided above. The purpose, procedures, risks, and benefits of the study have been		
explained to me by an interviewer from Westat Corporation during a phone call and by Luciano E.		
Zaffanella (Enertech Consultants) in a letter received	with this form. I voluntarily agree to participate in	
this activity. I have had an opportunity to ask question	s. I understand that further questions I may have	
about the research or about my rights as a subject will	be answered by <i>Luciano Zaffanella or another</i>	
person from Enertech Consultants, Toll-free 1-800-86	6-8144, and/or by the Chair of the ORAU/ORNL	
Committee on Human Studies, P.O. Box 117 Oak Ridg	e, TN 37831-0117; telephone (423)576-1725. I	
understand that there are no known physical or health	risks associated with my participation in this	
study. I may decide at any time to withdraw my conse	nt and stop participating without any penalty or	
loss of benefits to which I am otherwise entitled.		
Participant's Signature	Date	
or Parent's/Guardian's Signature	Time	
Child's Signature	Date	
The child's signature does not constitute the participar	t's informed consent Time	
without the Parent's/Guardian's signature		
Witness's Name (printed)	Date	
Witness's Signature	Dota	
Withess's Signature	Datc	
I	(name of person obtaining consent, printed) have	
discussed the above information with	(participant's name)	
and have addressed questions to his/her satisfaction.		
Signature of Person Obtaining Consent		
Date	Time	

Consent Form approved by the ORAU/ORNL Committee on Human Studies (IRB #M1394) for a period of up to 12 months, on 8/14/97.

# United States Department of Energy Nationwide Survey of Personal Magnetic Exposure

# How to Use the Exposure Meter

Please read and follow the instructions on the following pages.

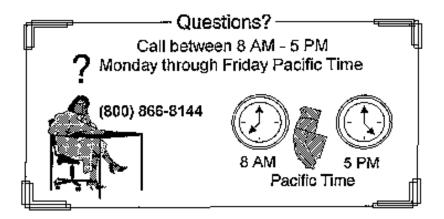
Because of federal regulations regarding electronic devices on airplanes, do not use the meter if the one wearing the meter is going to be traveling by plane. Please wait until they return from the trip before using the meter.

If you have any questions please call us toll-free at 1-800-866-8144 between 7am-5pm Pacific Time.

Thank you.

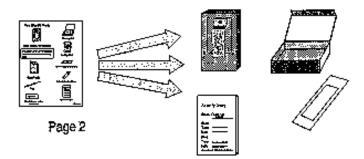


# United States Department of Energy Nationwide Survey of Personal Magnetic Exposure



# Instructions:

 Please check to see if you have everything shown on Page 2. If you are missing something or have any questions, call (800) 866-8144.

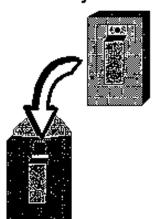


- Please follow the instructions beginning on Page 3.Put the meter on as soon as you can betweenMonday morning and Thursday evening.
- Please do not change your usual activity routine while wearing the meter.

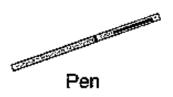
# You Should Have:

This meter gives off no radiation and is not harmful to you in any way.

Meter with belt clip in Nylon Pouch



Nylon Pouch with Meter



\$50.00

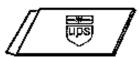
Check in your name for \$50.00



Shipping Box



Activity Diary





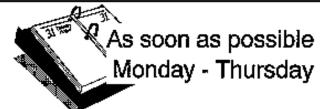
UPS Shipping Envelope and Shipping Label

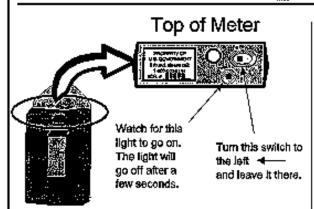


Strip of Sealing Tape



Respondent Questionnaire

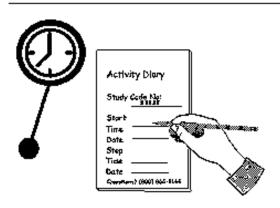




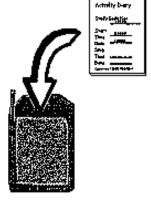
Move switch to the left.
Watch for the red light to
go on. The light will go off
after a few seconds. The
meter is now recording data.



Please close the pouch. You will not need to touch any of the switches on the meter again.



Write the time you turned on the meter on the Activity Diary



Keep the Activity Diary in the pouch pocket



## For the next 24 hours; Keep the Meter near you all the time

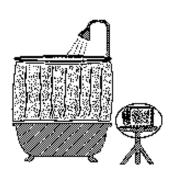




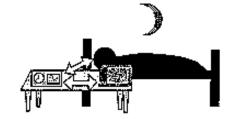
Please clip the meter on a belt or place it in a pocket, or in a purse



You may wear it while exercising or running.



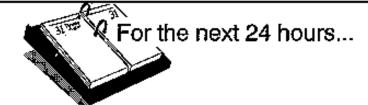
Do not get the Pouch wet



At night keep the pouch close to you. <u>DO NOT</u> place the pouch on or near clock radios or other electrical appliances but keep it as far away from appliances as they are from your head.

## Take the pouch off but keep it near you if

- \* It is too uncomfortable to wear
- \* You take a bath, shower, or go swimming



# Write down your activities and times in the Activity Diary ...



... when you enter or leave your home for more than 15 minutes



... when you go to bed or get up



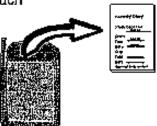
... when you arrive or leave from work or school



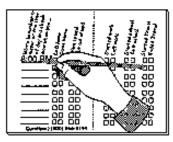
... when you travel (except on an airplane)

For example, Let's say you leave home to drive to go shopping:

Take the Diary out of the pouch

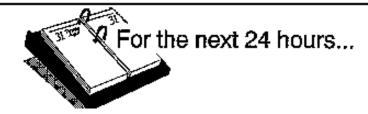






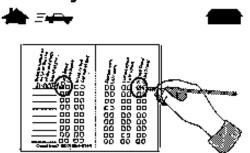
Write down the time of day on the next blank line

If you have a question, please call (800) 866-8144



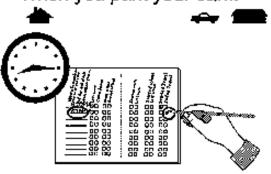
# Example continued: leaving home and driving to go shopping ...

When you leave home...



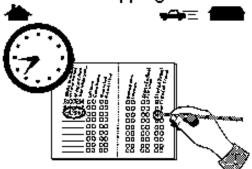
Check the "Left home" box (since you left home) and the "Started Travel" box (since you are going shopping).

When you park your car ...



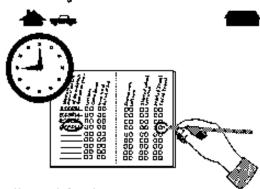
Record the time of day and check the "Ended Travel" box

When you go back to your car after shopping...



Record the time of day and check the "Started Trave!" box

When you arrive back home...

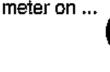


Record the time of day and check the "Ended Travel" and "Came home" boxes

If you have a question, please call (800) 866-8144

# 24 hours after you first put the meter on...

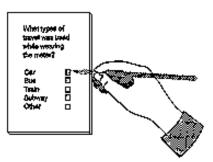
24 hours after you first turn the



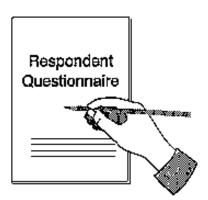


Write on the cover of the Diary the time you stopped using the meter.

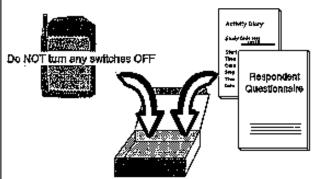
Please do not turn off the switch on the meter. It will turn itself off after 29 hours of recording data.



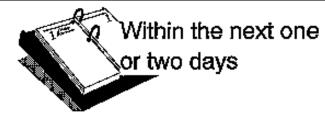
Check the boxes showing what kinds of transportation you used while wearing the meter.

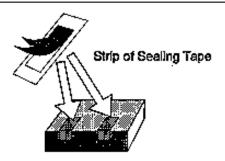


Please complete the four-page Questionnaire.

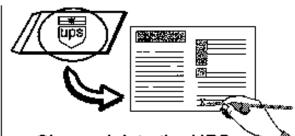


Place the Pouch (with the meter still in it), the Questionnaire, and the Activity Diary in the Shipping Box





Seal the Shipping Box with the Sealing Tape



Sign and date the UPS shipping label; do not mark anything else on the label.

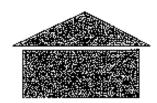
You will not need to pay anything.

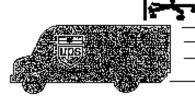
Place the Shipping Box in the Mailing Bag and Seal it



Call UPS at 800-742-5877. Let them know you want them to pick up a "Domestic Air Package."

You will not need to pay anything.







(800) 742-5877

# United States Department of Energy Nationwide Survey of Personal Magnetic Exposure

# How to Use the Exposure Meter

Please read and follow the instructions on the following pages.

Because of federal regulations regarding electronic devices on airplanes, do not use the meter if the one wearing the meter is going to be traveling by plane. Please wait until they return from the trip before using the meter.

If you have any questions please call us toll-free at 1-800-866-8144 between 7am-5pm Pacific Time.

Thank you.

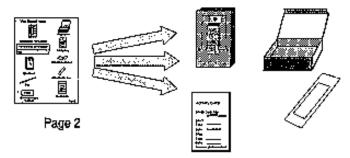


# United States Department of Energy Nationwide Survey of Personal Magnetic Exposure



# Instructions:

 Please check to see if you have everything shown on Page 2. If you are missing something or have any questions, call (800) 866-8144.



- Please follow the instructions beginning on Page 3.Start as soon as you can between Monday morning and Thursday evening.
- 3. Please do not change your child's usual activity routine.

# You Should Have:



Meter with belt clip on back

This meter gives off no radiation and is not harmful to you in any way.



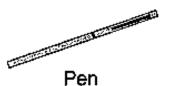
Shipping Box



Activity Diary



Bear Backpack Meter Holder



\$50.00

Check in your name for \$50.00





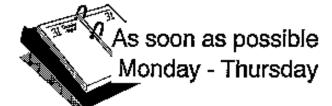
UPS Shipping Envelope and Shipping Label

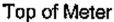


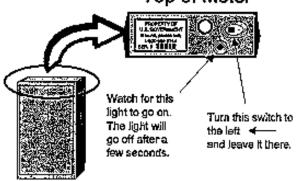
Strip of Sealing Tape



Respondent Questionnaire



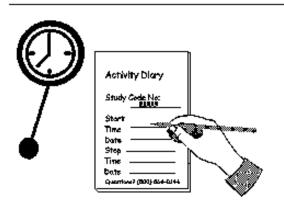




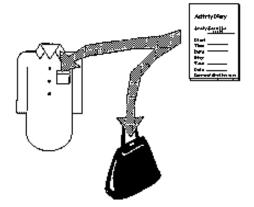
Move switch to the left.
Watch for the red light to
go on. The light will go off
after a few seconds. The
meter is now recording data.



Please put Meter in the bear backpack holder.



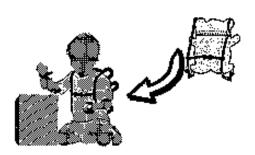
Write the time you turned on the meter on the Activity Diary



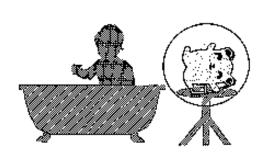
Keep the Activity Diary and pen in a convenient place.



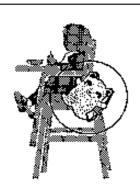
For the next 24 hours: Keep the Meter near the child all the time



Place the Backpack on the child and adjust



Remove the Backpack during swimming or baths



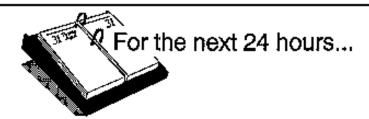
Keep the Backpack леаг the Child when not worn



During bedtime keep the backpack close to the bed. <u>DO NOT</u> place the backpack on or near clock radios or other electrical appliances but keep it as far away from appliances as they are from the child's head.

Take the backpack off but keep it near the child if

- \* It is too uncomfortable for the child to wear
- \* The child takes a bath, shower, or goes swimming



## Write down the child's activities and times in the Activity Diary ...



... when the child enters or leaves your home for more than 15 minutes



... when the child goes to bed or gets up



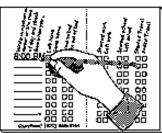
... when the child arrives or leaves daycare or school



... when the child travels (except on an airplane)

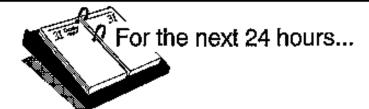
For example, Let's say you leave home and drive the child with you to go shopping:





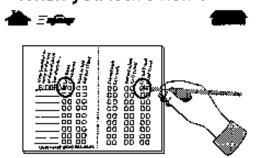
Write down the time of day on the next blank line

If you have a question, please call (800) 866-8144



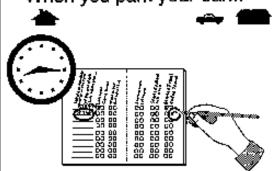
# Example continued: leaving home and driving to go shopping ...

When you leave home...



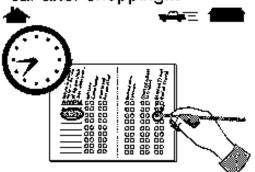
Check the "Left home" box (since you left home) and the "Started Travel" box (since you are going shopping).

When you park your car...



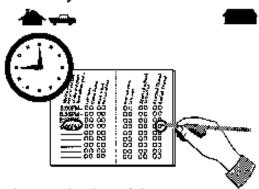
Record the time of day and check the \*Ended Trave!" box

When you go back to your car after shopping...



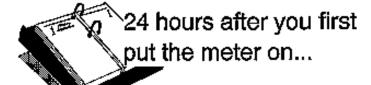
Record the time of day and check the "Started Trave!" box

When you arrive back home...



Record the time of day and check the "Ended Travel" and "Came home" boxes

If you have a question, please call (800) 866-8144



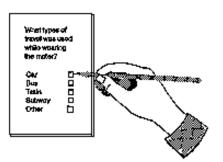
24 hours after you first turn the

meter on ...

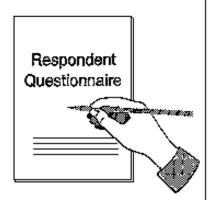


Write on the cover of the Diary the time you stopped using the meter.

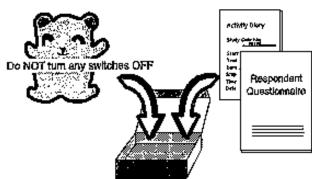
Please do not remove the meter from the Teddy Bear. The meter will turn itself off after 29 hours of recording data.



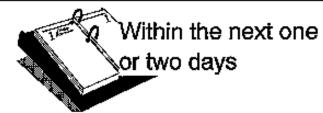
Check the boxes showing the kinds of transportation used while wearing the meter.

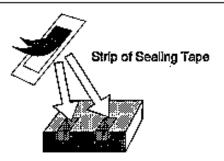


Please complete the four-page Questionnaire.

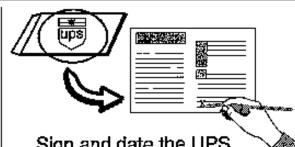


Place the Teddy Bear (with the meter still in it), the Questionnaire, and the Activity Diary in the Shipping Box





Seal the Shipping Box with the Sealing Tape



Sign and date the UPS shipping label; do not mark anything else on the label.

You will not need to pay anything.

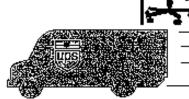
Place the Shipping Box in the Mailing Bag and Seal it



Call UPS at 800-742-5877. Let them know you want them to pick up a "Domestic Air Package."

You will not need to pay anything.







(800) 742-5877

## United States Department of Energy Nationwide Survey of Personal Magnetic Exposure

## How to Use the Exposure Meter

Please read and follow the instructions on the following pages.

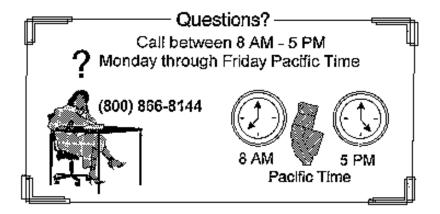
Because of federal regulations regarding electronic devices on airplanes, do not use the meter if the one wearing the meter is going to be traveling by plane. Please wait until they return from the trip before using the meter.

If you have any questions please call us toll-free at 1-800-866-8144 between 7am-5pm Pacific Time.

Thank you.

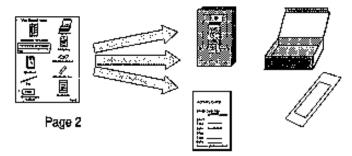


#### United States Department of Energy Nationwide Survey of Personal Magnetic Exposure



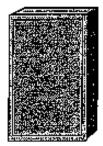
#### Instructions:

 Please check to see if you have everything shown on Page 2. If you are missing something or have any questions, call (800) 866-8144.



- Please follow the instructions beginning on Page 3.Start as soon as you can between Monday morning and Thursday evening.
- 3. Please do not change your child's usual activity routine.

## You Should Have:



Meter with belt clip on back

This meter gives off no radiation and is not harmful to you in any way.



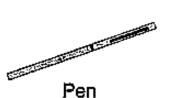
Shipping Box



Activity Diary

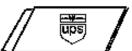


Teddy Bear Meter Holder



\$50.00

Check in your name for \$50.00





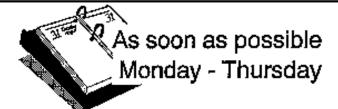
UPS Shipping Envelope and Shipping Label



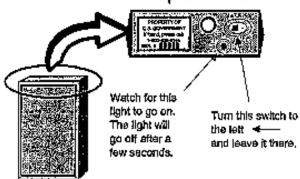
Strip of Sealing Tape



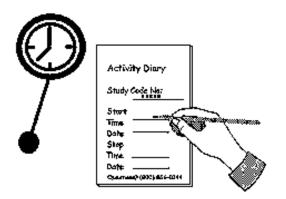
Respondent Questionnaire



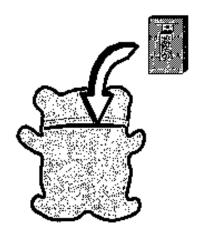




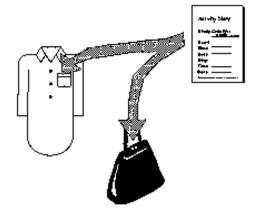
Move switch to the left.
Watch for the red light to
go on. The light will go off
after a few seconds. The
meter is now recording data.



Write the time you turned on the meter on the Activity Diary



Please put Meter in the bear meter holder.



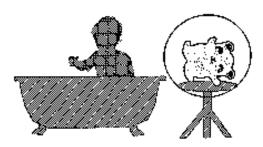
Keep the Activity Diary and pen in a convenient place.



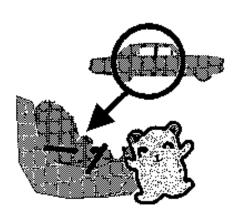
#### For the next 24 hours: Keep the Meter near the child all the time



Place the Holder near the child whenever possible



Keep the Holder dry during swimming or baths



Keep the Holder close to the child while traveling.



At night or during naps keep the Holder near the child.



## Write down the child's activities and times in the Activity Diary ...



.. when the child enters or leaves your home for more than 15 minutes



... when the child goes to bed or gets up



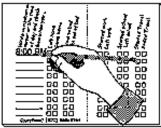
... when the child arrives or leaves daycare or school



... when the child travels (except on an airplane)

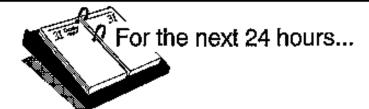
For example, Let's say you leave home and drive the child with you to go shopping:





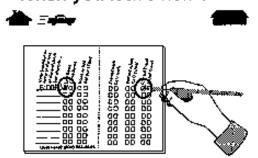
Write down the time of day on the next blank line

If you have a question, please call (800) 866-8144



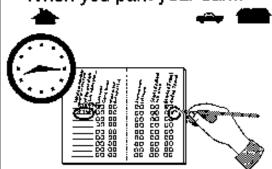
# Example continued: leaving home and driving to go shopping ...

When you leave home...



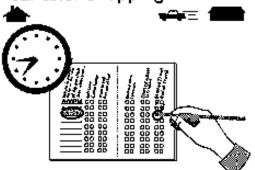
Check the "Left home" box (since you left home) and the "Started Travel" box (since you are going shopping).

When you park your car...



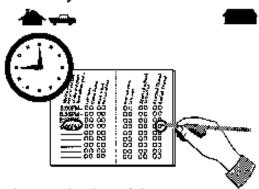
Record the time of day and check the "Ended Travel" box

When you go back to your car after shopping...



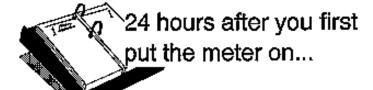
Record the time of day and check the "Started Trave!" box

When you arrive back home...

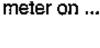


Record the time of day and check the "Ended Travel" and "Came home" boxes

If you have a question, please call (800) 866-8144



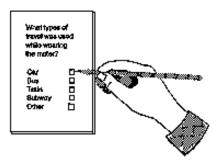
24 hours after you first turn the



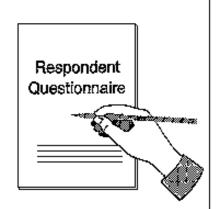


Write on the cover of the Diary the time you stopped using the meter.

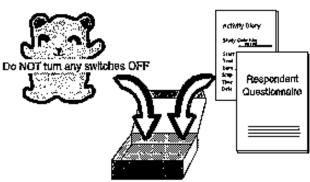
Please do not remove the meter from the Teddy Bear. The meter will turn itself off after 29 hours of recording data.



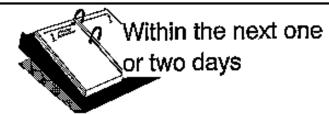
Check the boxes showing the kinds of transportation used while wearing the meter.

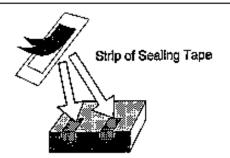


Please complete the four-page Questionnaire.

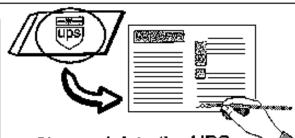


Place the Teddy Bear (with the meter still in it), the Questionnaire, and the Activity Diary in the Shipping Box





Seal the Shipping Box with the Sealing Tape



Sign and date the UPS shipping label; do not mark anything else on the label.

You will not need to pay anything.

Place the Shipping Box in the Mailing Bag and Seal it

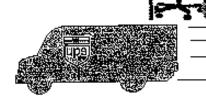




Call UPS at 800-742-5877. Let them know you want them to pick up a "Domestic Air Package."

You will not need to pay anything.





(800) 742-5877

Document # 13 (Activity Diary)		
Questions? (800) 866-8144		
Started Work   Start   Start		
Write in the time of doy and check box when you  Went to bed an all the time of doy and check box	1	l , , , , , , , , , , , , , , , , , , ,
4418-888 (008) SanoitaauD	a y	418-9
started work  Left work  Left barred fravel  Started fravel  Ended fravel	Activity Diary Name	Start Time Date Stop Time Date Oate
Write in the time of day and check of day and check when you  Let: home come home bed bed to bed to bed to the top bed to the top bed to the top bed to the top top to the top top to the top	What types of travel was used while wearing the meter?	Car
——————————————————————————————————————		
Started work     Started work		
Write in the time of day and check box when you  Left home cane home  Cane home		

# U.S. DEPARTMENT OF ENERGY SURVEY OF PERSONAL MAGNETIC FIELD EXPOSURE RESPONDENT QUESTIONNAIRE

Please answer for the person named below.

[Place Label Here]

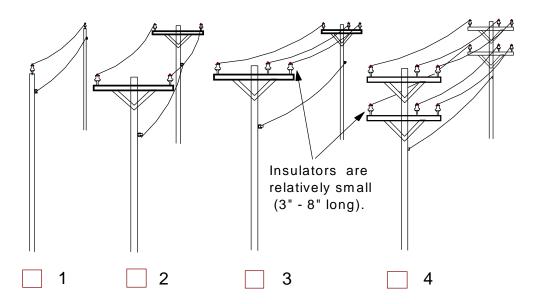
As part of your participation in the U.S. Department of Energy's Magnetic Field Personal Exposure Survey, please complete this questionnaire. This questionnaire will help researchers establish whether or not there is a relationship between magnetic field exposure measured by the EMF meter and aspects of your work or residence. Please return the questionnaire in the same box that you use to return the meter. If you have any questions, please call 1-800-866-8144.

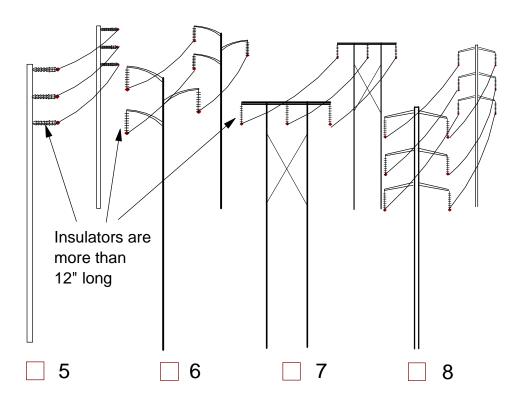
<u>Work</u>	<u>Information</u> - The following questions ask about your job and where you work.
Q1.	What is your occupation? (Example: student, salesperson, teacher, nurse, etc.) Please fill in your primary job or occupation.
02	Where did you arend most of your time outside the house while weening the meter?
Q2.	Where did you spend most of your time outside the house, while wearing the meter?  Please check one
	Office
	Grocery Store or Supermarket
	Other Store
	Health Care Facility
	Electric Powerplant
	Factory •
	Farm•
	Restaurant•
	School•
	Light Industry
	OTHER NOT LISTED ABOVE
	If "OTHER" please specify location:
Resid	ence Information - The next few questions ask about the features of your home.
Q3.	What type of residence do you have?
	Please check one
	Single Family Home•  Duplex•
	Low-rise Apartments or Condominiums (4 floors or less) •
	Hi-rise Apartments or Condominiums (5 or more floors) •
	Mobile Home•
	OTHER NOT LISTED ABOVE
	If "OTHER" please specify type of residence:

Q4.	What floor is your bedroom on?
	Please check one
	Basement•
	First floor•
	Second Floor
	Third Floor•
	OTHER•
	If "OTHER" please specify location:
	if official please specify location.
Q5.	What is the square footage in your home (excluding garage, basement, attic, and open
•	patios)?
	Please check one
	Less than 1000 square feet
	Between 1000 and 2000 square feet
	More than 2000 square feet
<b>Q6.</b>	Which type of water supply pipes do you have?
	Please check one
	Metal•
	Plastic•
	Do not know
Power	Lines - The next questions ask about the power lines near your home.
o=	
Q7.	Is there <u>any</u> Power Line visible within 150 feet from your residence in any direction?
	DI 1 1
	Please check one
	Yes•
	No•
Please	e note: Only answer Q8a and Q8b if you answered "yes" to Q7.
1 ICast	note. Only answer God and God it you answered yes to Q7.
Q8a.	What is the shortest distance between the power line and your residence?
	·
	Please check one
	Less than 25 feet
	Between 25 and 50 feet
	More than 50 feet

Please turn page →

**Q8b.** Which of the following power lines most closely resembles the power line near your home? Please choose only <u>one</u> type. Check the box underneath the picture.





Comments:

#### Document # 15

Date		
Name		
Address		
Dear		

Thank you for your participation in the United States Department of Energy's Nationwide Survey of Magnetic Field Exposure. We have extracted the magnetic field data from the meter you sent us and will incorporate this information with that from the other participants in the study. Personal information will be removed from the data file to insure your confidentiality. Scientists will use the information you have provided to gain a better understanding of the types and levels of exposure experienced by the US population to magnetic fields produced by electric utilities.

For the 24 hours you wore the meter your average exposure was: \_\_\_\_\_ milliguass (mG)

A milligauss is a measure of the strength of the magnetic field. To allow you to put this number in perspective, here is what we know about magnetic fields. A recent survey of 1,000 U.S. homes has found:

- 28% of all residences had an average field greater than 1 mG.
- 10.4% of the residences had an average field greater than 2 mG.
- 1.8% of the residences had an average field greater than 5mG.

The magnetic field exposures have been measured for some occupations. Exposure during a work shift vary with the type of electrical equipment used, and time spent near the equipment. The range of exposures for various types of workers is shown below (data from the National Institute for Occupational Safety and Health, September 1996).

Range of average magnetic fields	
0.2 - 2.0 mG	
0.5 - 4.5 mG	
0.6 - 27.6 mG	
0.8 - 4.5 mG	
0.8 - 34.0 mG	
1.7 - 96.0 mG	
0.3 - 3.7 mG	

Once again, thank you for your participation. If you have any questions concerning your result, please call us at (413) 243-2800 between 8am and 5pm, Monday through Friday.

Sincerely,

Richard N. Iriye Enertech Consultants

Date
Name Address
Dear:
Thank you for your participation in the United States Department of Energy's Nationwide Survey of Magnetic Field Personal Exposure. Unfortunately, we were unable to read the data from the meter you wore because of the following reason(s):
☐ The meter was turned off before 24 hours had gone by and we could not get enough data from it for good measurement of that day's exposure.
$\square$ The meter did not work properly and we could not read the data from it.
□
Even though we cannot supply you with information about the magnetic fields you were in, we may be able to use the information you supplied in the activity diary and the questionnaire for some other parts of the study.
Once again, thank you for your participation. If you have any questions please call us at 800-866-8144 between 8 am and 5pm Pacific time Monday through Friday.
Sincerely,
Richard N. Iriye Enertech Consultants

Document # 16

#### Document #17

Date
Name Address
Dear:
We received the consent form you mailed us for your participation in the Department of Energy's national survey of magnetic fields. The goal of the study was to measure 1000 individuals across the United States and we will be able to meet that goal without the need for you to wear the exposure meter.
We thank you for your interest in the study. If you have any questions, please call us toll-free at 1-800-866-8144.
Once again, thank you for your consideration.
Sincerely,
Richard N. Iriye
Enertech Consultants

Document # 18

Date

Name Address

To Whom It May Concern:

You may have received a UPS 2<sup>nd</sup> Day Air package containing a small meter with instructions indicating that its purpose is for a scientific study. The meter belongs to the United States Department of Energy and has been sent to a consenting subject by Enertech Consultants. If you have received this package and you are not the addressed subject, please return the meter using the packaging materials enclosed with the meter. We are in the final phases of the study and need to return the meters to the United States government, and we must report any missing equipment. Upon receiving the meter, we will send you a check for \$20 to thank you for your cooperation and any inconvenience.

If you do not have the meter and if this letter has reached you in error, please return the enclosed postcard.

Sincerely,

Richard N. Iriye Enertech Consultants

Document # 19
Date
Name Address
Dear:
Thank you for your participation in the United States Department of Energy's Survey of Magnetic Field Exposure. We shipped a meter and other study materials to you several weeks ago and have not received them back. We have tried to reach you by phone but have not been able to contact you.
Please follow the enclosed instructions to return the meter by <b>May 1, 1998</b> using the UPS materials sent with the meter. If you have lost these materials, please call us toll-free at 1-800-866-8144 between 7am - 5pm Monday-Friday and let us know; we'll sent you another set of materials. You may use this number if you have any other questions.
Sincerely,
Richard Iriye
Enertech Consultants

Document # 20
Date
Name Address
Dear:
Our records show that we have not received the meter, pouch, and other study materials for the United States Department of Energy's survey of personal exposure. We are in the final phases of the project and preparing the final report. If the items sent to you are not returned by <b>May 15</b> , <b>1998</b> , we must report the missing government property to the Department of Energy in the final report and during their audit of the project.
Please use the enclosed shipping materials to return the materials or call us at 800-866-8144 if you have questions or wish to explain the loss of the equipment.
Sincerely,
Richard N. Iriye Enertech Consultants