

**EMF Measurements Database  
Metadata for Data Set # 006  
Survey of Personal Magnetic Field Exposure,  
Phase II: 1000-Person Survey**

EMF Measurements Database  
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# 1. Dataset Information

## 1.1 Dataset Identification

**DATASET-TITLE:** Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

**DATASET-NUMBER:** 006

**DATASET-VERSION:** 20000829

**DATASET-STATUS:** Complete

## 1.2 Dataset Description

**DATASET-ABSTRACT:** The goal of this engineering project was to obtain accurate information on the distribution of magnetic field exposures of the general population of the United States.

**PRODUCER:**

Enertech Consultants  
Luciano Zaffanella  
17 Main Street Lee, MA 01238  
413-243-2800 (voice)  
413-243-4620 (fax)  
luciano@bcn.net

**TIME-PERIOD:** Measurements were made between November 1997 and April 1998

**GEOGRAPHIC-LOCATION:** Subject measurements were made randomly throughout the United States.

**DATASET-PURPOSE:**

**ASSOCIATED-PROJECT:**

**PROJECT-NAME:** DOE EMF Rapid Program Engineering Project #6 "Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey"

**SPONSORSHIP:**

US Department of Energy

**CITATION:** Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey. Prepared for Lockheed Martin Energy Systems, Inc., P.O. Box 2002, 241 W. Tyrone Road, D104, Oak Ridge, Tennessee 37831-6501.

## 1.3 Measurement Design

### 1.3.1 Sample

**SAMPLE-TARGET:** Persons.

**SAMPLE-SELECTION:** Households were identified from random listed telephone numbers and selected based upon their willingness to participate.

**SAMPLE-SIZE:** 1012 subjects.

**MEASURED-PARAMETER:** RMS magnetic field in the frequency range from 40 to 1000 Hz measured along three orthogonal axes and combined to give a resultant value.

**METHODOLOGY:** Measurements were performed according to the survey protocol described in the Final Report of DOE Rapid Program Engineering Project #6 "Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey". The basic components of the protocol are: Random telephone number selection, subject introductory letter, subject interview, subject consent, personal exposure meter and instruction delivery, 24 hour personal exposure measurements, meter download / magnetic field exposure calculations, and database storage.

**SAMPLING-INTERVAL:** An EMDEX PAL was used, taking samples every one half of a second. Summaries of the 1/2-second interval measurements were summarized at 10-minute intervals.

**SAMPLING-DURATION:** Persons measured in the study collected EMDEX PAL data for 24 consecutive hours.

## 1.4 Instrumentation

### 1.4.1 EMDEX PAL

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

### **MANUFACTURER:**

Enertech Consultants  
300 Orchard City Drive, Suite #132 Campbell, California 95008

**INSTRUMENT-VERSION:** Version 1.05

**ASSOCIATED-SOFTWARE:** The PAL Windows Software was used by the original researchers to download and process the data.

**FREQUENCY-RESPONSE:** 40 - 1000 Hz

**DYNAMIC-RANGE:** Magnetic Field, 0.1 mG to 1 Gauss in each of three orthogonal directions.

**DISCUSSION:** The EMDEX PAL was used to store the personal exposure measurements collected over a 24-hour period.

## **1.5 Revision History**

### **1.5.1 DATE: 20000829**

#### **CONTACT:**

Russell Senior  
EMF Measurements Database  
T. Dan Bracken, Inc. 5415 S.E. Milwaukie Avenue Portland, Oregon 97202  
503-233-2181 (voice)  
503-233-2665 (fax)  
russell@emf-data.org

**REVISION-DESCRIPTION:** Reorganization of original researchers metadata to conform to the EMF Measurements Database versions of the data products. A number of issues with the data could not be resolved because the original researchers were not able to assist us.

### **1.5.2 DATE: 19980505**

#### **CONTACT:**

Enertech Consultants  
Luciano Zaffanella  
Main Street Lee, MA 01238  
413-243-2800 (voice)  
413-243-4620 (fax)  
luciano@bcn.net

**REVISION-DESCRIPTION:** Original researchers completed report and analyses.

## 2. Data Model

### 2.1 ENTITY: Subject

**ENTITY-DESCRIPTION:** A person participating in the US Department of Energy's Magnetic Field Personal Exposure Survey.

#### 2.1.1 ATTRIBUTE: Subject number

**ATTRIBUTE-DESCRIPTION:** A unique identifier for the subject. These identifiers were assigned by the original researchers to each subject participating in the study.

**SIMPLE-DOMAIN:** A positive integer, from 100009 to 218607

#### 2.1.2 ATTRIBUTE: Subject sex

**ATTRIBUTE-DESCRIPTION:** The sex of the subject.

**CODESET-DOMAIN:**

1 Female

2 Male

#### 2.1.3 ATTRIBUTE: Subject age

**ATTRIBUTE-DESCRIPTION:** The age of the subject, calculated by subtracting the birth date from Dec 31, 1997.

**SIMPLE-DOMAIN:** A positive real number, from 0.07 to 93.37 years

#### 2.1.4 ATTRIBUTE: Subject age group

**ATTRIBUTE-DESCRIPTION:** The age group to which the subject belongs.

**CODESET-DOMAIN:**

1 Pre-school age: less than 5 years of age

2 Retirement age: greater than 65 years of age

3 School age: from 5 to 18 years of age

4 Working age: from 18 to 65 years of age

#### 2.1.5 ATTRIBUTE: Household size

**ATTRIBUTE-DESCRIPTION:** This field was not documented in the original researchers metadata, but it seems reasonable given the values to assume that it represents the number of persons residing in the household.

**SIMPLE-DOMAIN:** A positive integer, from 1 to 13

#### 2.1.6 ATTRIBUTE: City

**ATTRIBUTE-DESCRIPTION:** The city of residence of the subject.

**CODESET-DOMAIN:**

1 Aberdeen

2 Abescon

3 Addison

4 Agency

5 Ahoskie

6 Aia

7 Aiken

8 Akron

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

9	Albuquerque
10	Alderson
11	Allen Park
12	Alpha
13	Alpharetta
14	Alpine
15	Altomont Springs
16	Altoona
17	Altus
18	Amarillo
19	Amherst
20	Anacortes
21	Anaheim
22	Anchorage
23	Annandale
24	Annapolis
25	Anniston
26	Anza
27	Apple Valley
28	Appleton
29	Arabi
30	Arcadia
31	Arkansas City
32	Arlington
33	Arlington Hgts
34	Ashburn
35	Asheboro
36	Atlanta
37	Atlantic Beach
38	Au Gres
39	Auburn
40	Aurora
41	Austin
42	Baltimore
43	Baly City
44	Bangor
45	Banquete

46	Baraboo
47	Barboursville
48	Basking Ridge
49	Battle Creek
50	Bay City
51	Bay Shore
52	Baytown
53	Beechgrove
54	Bel Air
55	Belfair
56	Belleville
57	Bellevue
58	Bellingham
59	Bellmore
60	Belmont
61	Belton
62	Bend
63	Benton
64	Bequmont
65	Berkeley
66	Bernardston
67	Berwick
68	Bethlehem
69	Bettendorf
70	Beulah
71	Biddeford
72	Big Rapids
73	Birchunville
74	Birmingham
75	Blackfoot
76	Blackwood
77	Blaine
78	Blairsville
79	Blandsville
80	Bloomington
81	Blue Mounds
82	Boca Raton

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

83	Bogota
84	Boothwyn
85	Bordentown
86	Bountiful
87	Bowdoinham
88	Bowling Green
89	Boynton Beach
90	Brawley
91	Bridge City
92	Bridgehampton
93	Bridgewater
94	Brillion
95	Brookings
96	Brookline
97	Brooklyn
98	Brooklyn Center
99	Brooksville
100	Brownsville
101	Bryan
102	Bryant
103	Buchanan
104	Buffalo
105	Burlington
106	Burton
107	Burtsville
108	Butler
109	Byers
110	Cadiz
111	Cairo
112	Cambridge
113	Camden
114	Camillus
115	Canton
116	Canyonville
117	Cape Elizabeth
118	Carbondale
119	Carlisle



120	Carme
121	Carrollton
122	Cave City
123	Cedar Rapids
124	Cedar Spring
125	Centerville
126	Chadbourn
127	Chagrin Falls
128	Chambersburg
129	Chandler
130	Charleston
131	Chase
132	Chelmsford
133	Chepachet
134	Cherry Hill
135	Chesapeake
136	Chesapeake Bch
137	Chester
138	Cheyenne
139	Chicago
140	Chicago Heights
141	Chillicothe
142	Churubusco
143	Cincinnati
144	Circle
145	Cirtus Hts
146	Clanton
147	Clark
148	Clayton
149	Clearfield
150	Clearwater
151	Cleveland
152	Clifton
153	Clinton
154	Clintonville
155	Clovis
156	Cohocton

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157	Colfax
158	College Dale
159	Collingswood
160	Coloma
161	Colorado Springs
162	Columbia
163	Columbus
164	Colusa
165	Concord
166	Conway
167	Conyers
168	Coralville
169	Coraopolis
170	Corona
171	Corpus Christi
172	Corry
173	Cos Cob
174	Costa Mesa
175	Cottage Grove
176	Covina
177	Crane
178	Crescent
179	Crestview
180	Crewe
181	Cripple Creek
182	Crystal Spg
183	Cudahy
184	Cupertino
185	Curlew
186	Cuyahoga Falls
187	Dallas
188	Dallastown
189	Dalton
190	Daly City
191	Dania
192	Dansville
193	Davenport

194	Davis
195	Dayton
196	Dearborn Heights
197	Dedham
198	Deer Park
199	Defiance
200	Delhi
201	Demott
202	Denmark
203	Depew
204	Des Moines
205	Desert Hot Springs
206	Detroit
207	Devon
208	Dillon
209	Dixon Springs
210	Dodge City
211	Dodgeville
212	Doudley
213	Drexel Hill
214	Driggs
215	Duanesburg
216	Dubach
217	Dumont
218	Durham
219	E Brunswick
220	E Providence
221	Eagle
222	Easley
223	East Dubuque
224	East Long Meadow
225	East Moline
226	East Norristown
227	Easton
228	Eau Claire
229	Edna
230	Eight Mile

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231	El Paso
232	El Rito
233	Elizabeth
234	Elizabethtown
235	Elk Rapids
236	Elkins
237	Elkview
238	Ellenton
239	Ellicot City
240	Ellwood City
241	Elm Grove
242	Elmira
243	Elyria
244	Enfield
245	Enid
246	Erie
247	Escalon
248	Escanaba
249	Escondido
250	Euliss
251	Eureka
252	Evanston
253	Evansville
254	Export
255	Fair Oaks
256	Fairbury
257	Fairfax
258	Fargo
259	Farmington
260	Feastville
261	Federal Way
262	Ferndale
263	Fishers
264	Flint
265	Florence
266	Floresville
267	Florissant

268	Florissant
269	Floyd County
270	Floyds Knobs
271	Flushing
272	Foristell
273	Fort Lauderdale
274	Fort Wayne
275	Fort Worth
276	Frankfort
277	Franklin
278	Fremont
279	Fresno
280	Fuguay-Varina
281	Fullerton
282	Fulton
283	Gainesville
284	Galloway
285	Gardnerville
286	Garfield
287	Garland
288	Garner
289	Gaston
290	Gastonia
291	Gates Mills
292	Germantown
293	Gibson City
294	Gibsonburg
295	Gladstone
296	Glen Allen
297	Glen Burnie
298	Glendale
299	Goleta
300	Goshen
301	Grand Island
302	Grand Rapids
303	Gray
304	Grayling

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305	Green Bay
306	Greenfield Ctr
307	Greensboro
308	Greensburg
309	Greenville
310	Greenwood
311	Gresham
312	Hackett
313	Hailey
314	Hamilton
315	Hamlin
316	Hannibal
317	Hanover Park
318	Harlingen
319	Harrah
320	Harrisburg
321	Harvey
322	Hastings
323	Hatfield
324	Hattiesburg
325	Hauppauge
326	Havertown
327	Henderson
328	Hendersonville
329	Henniker
330	Hernando
331	Hickory
332	High Point
333	Highland Park
334	Highland Village
335	Hobart
336	Holbrook
337	Holcomb
338	Holland
339	Holmen
340	Honolulu
341	Hopewell

342	Hoquiam
343	Houghton
344	Houston
345	Howey In The Hills
346	Hudson
347	Humble
348	Huntington
349	Huntington Beach
350	Huntsville
351	Hyannis
352	Indian Shores
353	Indiana
354	Indianapolis
355	Inverness
356	Iowa City
357	Iron Mountain
358	Iron Station
359	Ironton
360	Irvington
361	Island Lake
362	Jackson
363	Jacksonville
364	Janesville
365	Jefferville
366	Jemez Pueblo
367	Jersey Mills
368	Johnson City
369	Jonesburg
370	Kahilua
371	Kalamazoo
372	Kansas City
373	Katy
374	Kaysville
375	Kaysvillet
376	Keaau
377	Kearny
378	Kellyton

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379	Kelso
380	Kenmore
381	Kent
382	Kettering
383	Keystone
384	Kingsport
385	Kingston
386	Kingwood
387	Kissimmee
388	Knox City
389	Knoxville
390	Kokomo
391	La Crosse
392	La Puente
393	Lafayette
394	Lagrange
395	Laguna Hills
396	Laie
397	Lake City
398	Lake Mills
399	Lakeville
400	Lakewood
401	Lame Deer
402	Lansing
403	Laurel
404	Lawrence
405	Lawrenceville
406	Lawton
407	Lebanon
408	Leesburg
409	Leipsic
410	Lenexa
411	Lenoir City
412	Lexington
413	Liberty
414	Liberty Hill
415	Liberty Lake



416	Lima
417	Linden
418	Lisbon
419	Little Falls
420	Little Rock
421	Littleton
422	Livermore
423	Lockport
424	Lodi
425	Londonderry
426	Long Beach
427	Long Valley
428	Longmont
429	Longview
430	Los Angeles
431	Louisville
432	Loveland
433	Lowell
434	Loxahatchee
435	Lozano
436	Lyman
437	Lynchburg
438	Lynn Haven
439	Lyons
440	Macon
441	Madison
442	Madison Heights
443	Madison Hgts
444	Malden
445	Manassas
446	Manchester
447	Manteca
448	Marianna
449	Marion
450	Marlborough
451	Marysville
452	Maryville

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453	Mattapan
454	Mattawan
455	Matthews
456	Maybrook
457	Maysville
458	Mcalisterville
459	Mcdonald
460	Meadville
461	Mebane
462	Mechanicburg
463	Medford
464	Medina
465	Mequon
466	Mercersburg
467	Meriden
468	Metairie
469	Miami
470	Middle Island
471	Middletown
472	Milan
473	Miliani
474	Millerstown
475	Millfield
476	Millsboro
477	Millstone
478	Milwaukee
479	Minneapolis
480	Mobile
481	Molalla
482	Mondamin
483	Monrovia
484	Monte Vista
485	Montgomery
486	Moore
487	Moreno Valley
488	Morgantown
489	Morris

490	Morristown
491	Moscow
492	Moultrie
493	Mount Airy
494	Mount Olive
495	Mount Rainier
496	Mountain View
497	Mt Gilead
498	Mt Lake Terrace
499	Mt Pleasant
500	Mt Washington
501	Muncie
502	Muncy
503	Munster
504	Murfreesboro
505	Muskegon
506	Myrtle Beach
507	N . Manchester
508	N Tonawanda
509	N. Brunswick
510	Napa
511	Naples
512	Nashua
513	Nashville
514	Natick
515	National Park
516	Natrona Heights
517	Nenomonie
518	Neshanic Sta
519	New Bedford
520	New Berlin
521	New Carlisle
522	New Castle
523	New Enterprise
524	New Haven
525	New London
526	New Orleans

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527	New York
528	Newark
529	Newberry
530	Newport
531	Newport News
532	Newton
533	Newtonville
534	Niles
535	Nine Mile Falls
536	Niverville
537	Norcross
538	Norfolk
539	North Platte
540	Northfield
541	Northhampton
542	Northville
543	Nw Smyrna Beach
544	Oak Park
545	Oakes
546	Oceanside
547	Oconto
548	Odenville
549	Odessa
550	Ogden
551	Oklahoma City
552	Omaha
553	Ontario
554	Oregon
555	Orlando
556	Ortonville
557	Osage
558	Overland Park
559	Owosso
560	Oxford
561	Oxnard
562	Paducah
563	Palm Bay

564	Palm Beach Gardens
565	Palmer
566	Pampa
567	Panama City Beach
568	Papillion
569	Paris
570	Pass Christian
571	Paterson
572	Paynesville
573	Pekin
574	Pembroke Pines
575	Pensacola
576	Peoria
577	Perkiomenville
578	Perryville
579	Pheonix
580	Philadelphia
581	Phoenix
582	Pippa Passess
583	Pittsburg
584	Pittsburgh
585	Placida
586	Plain City
587	Plainview
588	Plainville
589	Plattsburgh
590	Pocatello
591	Ponca City
592	Pooler
593	Port Chester
594	Portland
595	Portsmouth
596	Price
597	Prt Jefferson
598	Puyallup
599	Quaker City
600	Quitman

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601	Raleigh
602	Ravenswood
603	Reading
604	Red Wing
605	Redmond
606	Redondo Beach
607	Reidsville
608	Reno
609	Renton
610	Richfield
611	Richland
612	Richmond
613	Richville
614	Ridgewood
615	Ripley
616	River Ridge
617	Riverside
618	Roberts
619	Rochester
620	Rock Springs
621	Rockaway
622	Rockford
623	Rockport
624	Rocky Mountain
625	Rocton
626	Rogers
627	Rolling Meadows
628	Roodhouse
629	Roscoe
630	Roswell
631	Round Rock
632	Russell
633	S Sioux City
634	Sacramento
635	Saginaw
636	Saint Charles
637	Saint Clair

638	Saint Cloud
639	Saint George
640	Saint Louis
641	Saint Paul
642	Salem
643	Salisbury
644	Salt Lake City
645	San Antonio
646	San Bruno
647	San Diego
648	San Francisco
649	San Jose
650	San Leandro
651	Sandy
652	Sanger
653	Sangerville
654	Santa Barbara
655	Santa Fe
656	Santa Maria
657	Santa Monica
658	Santa Paula
659	Santa Rosa
660	Santee
661	Saranac
662	Savanna
663	Schaumburg
664	Scottsdale
665	Seattle
666	Sebastopol
667	Selden
668	Selma
669	Sequim
670	Shaftsbury
671	Shawano
672	Sheldon Spring
673	Shepherdstown
674	Sherman

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675	Shoreline
676	Silver Spring
677	Sinking Spring
678	Sioux Falls
679	Social Circle
680	Somers
681	Somerset
682	South Bend
683	South Laguna
684	South River
685	Southbury
686	Spelter
687	Spokane
688	Spring
689	Spring City
690	Springfield
691	St Louis
692	St Paul
693	St Petersburg
694	Stamford
695	Stanhope
696	Staten Island
697	Sterling Heights
698	Stevens Point
699	Stevensville
700	Stockbridge
701	Stockton
702	Storrs
703	Stratford
704	Street
705	Strong
706	Sugarland
707	Sun Valley
708	Susquehanna
709	Sussex
710	Sutton
711	Sycamore



712	Sylacauga
713	Syracuse
714	Talladega
715	Tallahassee
716	Tama
717	Tarpon Springs
718	Tauares
719	Taylor
720	Tehachapi
721	Terra Alta
722	Thibodaux
723	Thousand Oaks
724	Tichnor
725	Tiffin
726	Tioga
727	Toledo
728	Toms River
729	Tualatin
730	Tulare
731	Tulsa
732	Tuscumbia
733	Tyler
734	Tyner
735	Vail
736	Val Paraiso
737	Valley Center
738	Van Buren
739	Van Nuys
740	Vancouver
741	Venice
742	Ventura
743	Vernon-Rockvl.
744	Victoria
745	Vincennes
746	Vinita
747	Virginia Beach
748	W Hartford

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

749	W. Liberty
750	Waipahu
751	Walla Walla
752	Wallace
753	Walnut
754	Waltham
755	Warren
756	Washburn
757	Washington
758	Wasington
759	Waterbury
760	Waterford
761	Watertown
762	Waynesville
763	West Blocton
764	West Carrolton
765	West Chester
766	West Islip
767	West Jordan
768	West Lebanon
769	West Linn
770	West Valley
771	West Warwick
772	Westbend
773	Westchester
774	Westerville
775	Westfield
776	Wheaton
777	Whitesboro
778	Whiting
779	Whitmire
780	Whittier
781	Wichita Falls
782	Wildwood
783	Williston
784	Wilmington
785	Winchester

786	Winona
787	Winton
788	Witchita
789	Woodland
790	Woodstock
791	Woonsocket
792	Wrentham
793	Wyalusing
794	Xenia
795	Yakima
796	Yaphank
797	Yardley
798	Yarmouth Port
799	Yukon
800	Zephyrhills

### 2.1.7 **ATTRIBUTE: State**

**ATTRIBUTE-DESCRIPTION:** The state of residence of the subject.

**CODESET-DOMAIN:**

1	AK
2	AL
3	AR
4	AZ
5	CA
6	CO
7	CT
8	DC
9	DE
10	FL
11	GA
12	HI
13	IA
14	ID
15	IL
16	IN
17	KS
18	KY
19	LA

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

20	MA
21	MD
22	ME
23	MI
24	MN
25	MO
26	MS
27	MT
28	NC
29	ND
30	NE
31	NH
32	NJ
33	NM
34	NV
35	NY
36	OH
37	OK
38	OR
39	PA
40	RI
41	SC
42	SD
43	TN
44	TX
45	UT
46	VA
47	VT
48	WA
49	WI
50	WV
51	WY

### 2.1.8 ATTRIBUTE: Zip code

**ATTRIBUTE-DESCRIPTION:** The zip code of residence of the subject.

**SIMPLE-DOMAIN:** A positive integer, from 01028 to 99645

### 2.1.9 ATTRIBUTE: Region

**ATTRIBUTE-DESCRIPTION:** The region in which the subject resides. Regions are defined by the US Department of the Census.

**CODESET-DOMAIN:**

- 1 Midwest
- 2 Northeast
- 3 South
- 4 West

**2.2 ENTITY: Questionnaire**

**ENTITY-DESCRIPTION:** This entity reflects the portion of the respondent questionnaire pertaining to work, residence, and power line information.

**2.2.1 ATTRIBUTE: Occupation**

**ATTRIBUTE-DESCRIPTION:** The occupation of the subject.

**CODESET-DOMAIN:**

- 0 Unknown
- 1 2nd grade student
- 2 3 year old—preschool
- 3 3 yr. old child
- 4 4th grade student
- 5 5 1/2 months old
- 6 Accountant
- 7 Administrative
- 8 Administrative assistant
- 9 Air traffic controller
- 10 Aircraft mechanic
- 11 Aircraft technician
- 12 Airport customer service
- 13 Allergist—solo practice
- 14 Americorps volunteer
- 15 Analyst
- 16 Apartment complex manager
- 17 Apartment manager
- 18 Applications control engineer
- 19 Army soldier
- 20 Artist/decorative painter
- 21 Assembler
- 22 Assembler—cables
- 23 Assistant cashier/teller
- 24 Assistant principal
- 25 Assistant superintendent
- 26 Assistant winemaker

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

- 27 Asst. carpenter
- 28 At home
- 29 Attorney
- 30 Auto salesperson
- 31 Auto technician
- 32 Automotive sales
- 33 Automotive technician
- 34 Baby
- 35 Baker
- 36 Ballet instructor
- 37 Bank manager
- 38 Bank teller
- 39 Banker
- 40 Barber
- 41 Beautician—hairdresser
- 42 Bell atlantic service tech.
- 43 Billing clerk
- 44 Blackjack dealer
- 45 Bookkeeper (work at home)
- 46 Bookkeeper—home office
- 47 Budget analyst—navy exchange service command
- 48 Bus driver
- 49 Bus driver in sick leave
- 50 Business analyst
- 51 Business owner/in home office
- 52 Cadd operator (computer aided drafting & design)
- 53 Cafeteria aide in high school
- 54 Captain—offshore crew boat
- 55 Careprovider of parents
- 56 Caretaker
- 57 Carpenter
- 58 Carpenter, security officer
- 59 Cash receiver (process check for deposit in bank)
- 60 Cashier
- 61 Cashier in department store
- 62 Cathy's catering—cleaning or dishwasher
- 63 Certified orthodontic assistant

64	Chef
65	Chemical engineer
66	Chemical supervisor
67	Chemist—manager
68	Child
69	Child (2)
70	Child attending daycare
71	Child care owner/director
72	Child—none
73	Church retirement home
74	Civil engineer
75	Civil service cost recovery specialist
76	Clerical
77	Clerical—underwriting tech @ insurance co
78	Clerk
79	Clothing designer
80	Communications consultant
81	Communications engineering
82	Composer/computer operator
83	Computer draftsman
84	Computer network administrator
85	Computer operator
86	Computer operator (mis department)
87	Computer programmer
88	Computer programmer analyst
89	Computer systems analyst
90	Computer tech
91	Computer technician
92	Computers—network administrator
93	Construction electrician
94	Construction pipefitter
95	Construction worker
96	Consultant
97	Consultant, work out of house
98	Contractor/carpenter
99	Cook
100	Corporate treasurer

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

101	Correctional worker
102	Cosmetologist (sic)
103	Credit card insurance sales
104	Csr driver for anderson news
105	Custodian
106	Customer satisfaction rep.
107	Customer service rep
108	Customer service rep.
109	Customer service representative
110	Customer service telephone rep
111	Customer services manager
112	Cytotechnologist
113	Dairy farm herdsman
114	Data communications specialist
115	Day care student (4 years old)
116	Day lead custodian
117	Deli cook
118	Delivery person
119	Dental assistant
120	Dental hygienist
121	Dentist
122	Deputy district attorney
123	Development technician
124	Dietary aid
125	Direct care worker—w.c.turner ii
126	Director of foodservice purchasing
127	Director of operations, mgr. manufacturing and pack
128	Director. of public info./governmental relations
129	Disabled
130	Disabled but run a deer processing shop
131	Dishwasher/prep cook
132	Dispatcher (records clerk)
133	District attorney office—investigator
134	Dock worker
135	Domestic provider
136	Driver
137	Edible oil processing operator



138	Editorial assistant—construction magazines
139	Educational gerontologist
140	Elected official—town councilman
141	Electrical engineer
142	Electrician
143	Electrician (contractor)
144	Electrician—retired
145	Electronic engineer
146	Electronic technician
147	Elementary school cafeteria worker
148	Elementary school counselor
149	Elementary school office clerk
150	Elementary student
151	Employee benefits manager
152	Employment program representative
153	Engineer
154	Engineer/ski instructor
155	Engineering technician
156	Equip tech—dialysis center
157	Estimator
158	Executive recruiter
159	Extrusion tech. at amtopp
160	Factory assembler
161	Factory rep
162	Factory worker
163	Factory worker—run a gerber 2500 cutting machine
164	Family care provider
165	Far, work
166	Farmer
167	Farmer but not working today (to cold -27 below 0)
168	Farmer—greenhouses
169	Farming
170	Fast food
171	Fast food restaurant manager
172	Fast food store manager
173	Firefighter
174	Firefighter/emt-i

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

175 Floor tech. (i work for a nursing center)  
176 Florist  
177 Food and beverage service  
178 Food prep cashier  
179 Former ins. agent—now retired homemaker  
180 Full-time college student  
181 Full-time college student, works at mcdonalds  
182 Full-time homemaker  
183 Furniture consultant  
184 Gasoline attendant at a full service gas station  
185 General manager cable news channel  
186 General manager for telecommunications co  
187 Golf course superintendent  
188 Graduate student  
189 Graphic artist  
190 Graphic designer  
191 Graphic/industrial designer with workspace at home  
192 Grocery manager  
193 Hairdresser  
194 Hairstylist  
195 Handicap  
196 Heavy equipment operator  
197 High school registrar  
198 High school secretary  
199 Hilo operator  
200 Home health aide  
201 Home manager  
202 Home services  
203 Homemaker  
204 Homemaker (recently unemployed)  
205 Homemaker (retired teacher)  
206 Homemaker—former teacher  
207 Homemaker—mother  
208 Homemaker/sales associate for eddie bauer  
209 Homemakers  
210 Homeschool teacher/mom  
211 Horse farm worker & pet shop owner

212	Horticulture department garden foreperson
213	Hostess at a restaurant
214	House mother
215	House wife
216	House wife/mother
217	Housekeeper
218	Housekeeping (vacuum., dust, make coffee, etc)
219	Housewife
220	Housewife (retired)
221	Housewife and driver to transport children
222	Housewife and mother
223	Housewife and student
224	Housewife, part-time computer operator
225	Housewife, seamstress
226	Housewife—retired
227	Housewife—retired secretary
228	Housewife/cafeteria cook
229	Housewife/mother—part-time computer consultant
230	Housewife/mueting nursery
231	Housewife/secretary to husband
232	Housewife/student
233	Housewife/volunteer
234	Human resource director
235	Human resources administration
236	Human resources assistant
237	Human resources director
238	Human services administrator (social work)
239	I'm on s.s.i. and i don't have a job.
240	Icu/ccu registered nurse
241	In-home care
242	Industrial maintenance mechanic
243	Information manager
244	Inspector
245	Instructor
246	Instrumentation technician
247	Intern (doctor)
248	Investigator—deptartment of medical examiner

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

249 Job coach for mentally & physically handicapped  
250 Journalist/author—work at home  
251 Journeyman plumber  
252 Lab assistant  
253 Labor  
254 Labor foreman—construction  
255 Laborer  
256 Laborer—window & door factory  
257 Landscaper  
258 Lawyer  
259 Legal clerk  
260 Legal secretary  
261 Letter carrier/student  
262 Lighting technician  
263 Loader/unloader at united parcel services  
264 Loan specialist/loan servicing company  
265 Local delivery truck driver  
266 Lumbermen's building  
267 Machine operator  
268 Machine operator manager  
269 Machine operator—business forms printing co.  
270 Machinist  
271 Machinist retired  
272 Maintenance engineer  
273 Maintenance inventory and office supervisor  
274 Maintenance manager for city, div. of water  
275 Maintenance tech  
276 Management  
277 Manager of research and education  
278 Manufacturing  
279 Manufacturing plant manager  
280 Marriage, family, child counseling intern  
281 Mechanic  
282 Mechanical engineer  
283 Med tech, med assist examiner for insurance co.  
284 Medical assistant  
285 Medical records clerk—chart analyst

286	Medical records technician
287	Medical records technician/currently unemployed
288	Medical student
289	Melder (laid off)
290	Middle school student
291	Mother
292	Museum educator
293	Music minister
294	N/a respondent is 4 yrs old
295	N/a—3 yrs old
296	Neon tube bender
297	Newspaper reporter
298	Night club manager
299	None
300	None given
301	None—5 year-old child
302	None—toddler
303	Not working
304	Nuclear medicine technologist
305	Nurse
306	Nurse asst.
307	Nurse home health aids
308	Nurse rn
309	Nursery work (child care)
310	Occupational therapist for in home care
311	Occupational therapy assistant on maternity leave
312	Office engineer
313	Office manager
314	Office supervisor in medical clinic
315	Office worker
316	On social security
317	Operating engineer—loader operator
318	Operations manager
319	Operations manager at electronics store
320	Operations manager/industrial engineer
321	Optician—safety glasses for general electric co.
322	Optometric assistant

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

323	Order puller
324	Organization advisor (admin)
325	Panic dood hardware
326	Paramedic
327	Paraprofessional
328	Part time carpenter
329	Part time church receptionist
330	Part time clerical worker
331	Part-time ballroom dance instructor semi-retired
332	Part-time teacher
333	Parts counter clerk at a motorcycle dealership
334	Pastor
335	Pet groomer
336	Pet store employee
337	Pharmacist
338	Pharmacist—clinical pharmacist outpatient
339	Pharmacist—retired
340	Pharmacy technician
341	Photographer
342	Physical educator
343	Physical therapist
344	Physician (m.d.)
345	Physician's attendant/qualified med. aide
346	Physicist—laser lab
347	Police officer
348	Police sergeant
349	Postmaster
350	Potable water plant operator/waste water operator
351	Preschool teacher
352	Preschooler
353	Printing pressman
354	Proctor & gamble
355	Produce and nursery salesperson
356	Product mgr.
357	Production
358	Production engineer (magnetics mfg.)
359	Production manager

360 Production mgr.  
361 Professor  
362 Program manager, office work  
363 Programmer  
364 Programmer analyst  
365 Project engineer (outside plant—telephone)  
366 Project manager  
367 Project manager—cb7 computer consultant  
368 Property manager  
369 Psychiatrist  
370 Public arbitrator nyse, nasd, and pe  
371 Public safety officer (police and fire) 24-hr shift  
372 Public supermarket cashier  
373 Purchasing agent  
374 Purchasing assistant  
375 Real estate appraiser  
376 Real estate salesperson  
377 Realtor  
378 Receptionist  
379 Receptionist/hotel  
380 Registered dietitian  
381 Registered nurse  
382 Rehabilitation technician  
383 Rental housing specialist iii  
384 Research assistant  
385 Research mathematician  
386 Reservations @ wdw dolphin  
387 Resident motel manager  
388 Retail salesperson  
389 Retail worker  
390 Retire  
391 Retired  
392 Retired "homebody"  
393 Retired (homemaker)  
394 Retired (housewife)  
395 Retired a. f. auto tool repairman  
396 Retired army

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

397 Retired carpenter  
398 Retired coal miner—worked in coal mines 33 yrs  
399 Retired dairy inspector  
400 Retired dental office asst.  
401 Retired disability  
402 Retired draftsman tool designer  
403 Retired educator; now a social services coordinator  
404 Retired elementary school teacher  
405 Retired factory worker  
406 Retired farmer  
407 Retired from aluminum co of america  
408 Retired housewife living on a farm  
409 Retired librarian/media spec.  
410 Retired nurse  
411 Retired part time work  
412 Retired registered nurse  
413 Retired rural letter carrier  
414 Retired school teacher  
415 Retired security agent  
416 Retired service engineer  
417 Retired teacher  
418 Retired volunteer work  
419 Retired wood worker  
420 Retired, clerk in electro-motive div. of gm  
421 Retired, now house wife, gardner  
422 Retired—(lockheed asg—quality control)  
423 Retired—building contractor  
424 Retired—fund raiser  
425 Retired—home economist  
426 Retired—homemaker  
427 Retired—hospital auxiliary worker  
428 Retired—housewife  
429 Retired—lab tech.  
430 Retired—personnel mgt.  
431 Retired—work part time at cemetery  
432 Retired—work part time delivering senior meals  
433 Retiree



- 434 Returns processor
- 435 Road work and cook
- 436 Roman catholic priest
- 437 Roofing and rental home repair
- 438 Roofing contractor
- 439 Route driver
- 440 Route sales
- 441 Rural mail carrier
- 442 Sales
- 443 Sales associate
- 444 Sales person
- 445 Sales person in produce market
- 446 Sales person real state
- 447 Sales realtor
- 448 Sales rep
- 449 Sales tech. for dishwashing machine co.
- 450 Sales—cemetery funeral pre-arrangement
- 451 Salesperson
- 452 Salesperson at sports store
- 453 Salesperson for component testing
- 454 Salesperson—outside sales
- 455 Sandwich maker
- 456 Scanning coordinator/brookshire grocery
- 457 School bus driver and tax collector
- 458 School counselor and teacher. 2nd—pizza delivery
- 459 School librarian
- 460 Scientist
- 461 Scientist (biochemist)
- 462 Sears automotive back shop supervisor
- 463 Secretary
- 464 Secretary/prospect researcher
- 465 Security equipment sales person
- 466 Security guard
- 467 Self-contained aide
- 468 Self-employed
- 469 Self-employed carpenter
- 470 Self-employed computer consultant

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

471 Self-employed, take care of livestock currently  
472 Self-employed—manage my own land and investment  
473 Semi retired farmer  
474 Semi-retired finance co and factoring co owner  
475 Semi-retired part-time employment—handyman jobs  
476 Senior research assoc.  
477 Sergeant at state prison  
478 Service technician—culligan inc  
479 Sewing machine operator  
480 Sheet metal mechanic  
481 Shop repair person  
482 Sliding salesman  
483 Small manufacturing/retail studio manager  
484 Snd. grade student  
485 Social service administrator  
486 Software engineer  
487 Software engineer at microsoft  
488 Software process analyst  
489 Soil conservationist—bureau of land management  
490 Sr. datacomm. analyst  
491 Station attendant  
492 Stay at home mom  
493 Student  
494 Student & assistant at uw stout library  
495 Student (age 8)  
496 Student (full-time); part time waitress  
497 Student 6th grade  
498 Student college  
499 Student, japanese speaking tour guide  
500 Student, telemarketer  
501 Student/day care  
502 Student/interviewer  
503 Student/nurse/anesthetist  
504 Student/secretary  
505 Student/tool and die/army  
506 Subsidiary accounting assistant  
507 Substitute teacher

508 Supervisor at barnes & noble bookstore  
509 Supervisor, personal lines policy processing  
510 Surveyor  
511 System analyst  
512 Systems engineer  
513 Tax auditor  
514 Tax collector's office administrative assistant  
515 Taxi cab fleet owner  
516 Teacher  
517 Teacher (technical trainer)  
518 Teacher aide  
519 Teacher assistant  
520 Teacher band director high school  
521 Teacher retired/sub teacher  
522 Teacher's aide—preschool  
523 Teacher's assistant  
524 Teacher, manager  
525 Telecommunications mgr.  
526 Telephone cable splicer  
527 Tire service tech  
528 Title assistant—customer service title company  
529 To play, i'm three years old  
530 Toddler—4.5 yrs  
531 Toolsetter  
532 Traffic engineer  
533 Transportation planner  
534 Travel agent  
535 Treasurer, business manager  
536 Truck driver  
537 Trust officer  
538 Unemployed  
539 Unemployment insurance claims manager  
540 Unit manager for skilled nursing facility  
541 University professor (texas a&m university)  
542 Us navy—quality control inspector  
543 Us postal service window clerk  
544 Utah transit authority (bus operator)

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

545	Veterinarian—house call service
546	Volunteer
547	Volunteer minister
548	Waitress
549	Waitress & student
550	Warehouse manager—food production plant
551	Warehouse person checker
552	Warehouse worker
553	Warehouseman
554	Waste water treatment operator (plant)
555	Welding and repair
556	Westmont worker
557	Wife and babysitter in home
558	Wood finisher
559	Work at copy and printing shop (office/machines)
560	Work at school lunch room
561	Work for an airlines at the local airport.
562	X-ray technologist—retired 1993
563	Yoke tester on crt tube displays

### 2.2.2 ATTRIBUTE: Occupation category

**ATTRIBUTE-DESCRIPTION:** Occupations were subdivided by categories, following the Census Occupational Categories.

**CODESET-DOMAIN:**

- 0 Not reported
- 1 Managerial and Professional Specialty Occupations
- 2 Technical, Sales, and Administrative Support Occupations
- 3 Service Occupation
- 4 Farming, Forestry, and Fishing Occupations
- 5 Precision Production, Craft, and Repair Occupations plus Operators, Fabricators, and Laborers
- 6 Electrical occupations classified as such by Dr. Samuel Milham in his study of leukemia mortality in men occupationally exposed to EMF. The electrical occupations include: electronic technicians, radio and telegraph operators, electricians, linemen (power and telephone), television and radio repairmen, power-station operators, aluminum workers, welders and flame cutters, motion-picture projectionists, electrical engineers, and streetcar and subway motormen.

### 2.2.3 ATTRIBUTE: Work location

**ATTRIBUTE-DESCRIPTION:** The location where the subject works most of the time outside of the home.

**CODESET-DOMAIN:**

0	No response or unknown
1	Office
2	Grocery store or supermarket
3	Other store
4	Health care facility
5	Electric powerplant
6	Factory
7	Farm
8	Restaurant
9	School
10	Light industry
11	Other

#### 2.2.4 ATTRIBUTE: Other location

**ATTRIBUTE-DESCRIPTION:** Specified other outside home location

**CODESET-DOMAIN:**

0	Unknown
1	A.f.c. home
2	Air traffic control center
3	Aircraft pdm plant
4	Airport
5	Airport maintenance
6	And restaurant
7	And riding in my car
8	Another home
9	Areas surrounding home on walk
10	Around edna + on 40-mile trip
11	Around town
12	At a meeting at a friends home
13	At home
14	At home or in car transporting daughter to work
15	At work
16	At work—marine science center
17	Auto shop
18	Automobile repair garage, visiting friend's home
19	Backyard
20	Backyard, walking in neighborhood
21	Bank

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

- 22 Bank and city hall
- 23 Bank, library, trash transfer station
- 24 Bar or nightclub
- 25 Barber shop
- 26 Basketball game
- 27 Bath tub mfg.
- 28 Beauty salon
- 29 Bingo hall
- 30 Bingo hall (5hrs); health club (1.5hrs)
- 31 Bowling
- 32 Bowling alley
- 33 Bowling alley, playing video games
- 34 Bowling center
- 35 Boyfriend's apartment
- 36 Cabinet shop
- 37 Car
- 38 Car and other people's homes
- 39 Car dealership garage
- 40 Car or truck
- 41 Casino
- 42 Casino (2hrs)
- 43 Church
- 44 Church and business
- 45 Church—girl scout meeting
- 46 City bld—public safety bld
- 47 City park
- 48 Cleaning homes and businesses
- 49 Cleaning yard
- 50 Clubhouse and shopping
- 51 Community center
- 52 Computer data center
- 53 Computer room at work
- 54 Construction
- 55 Construction project (hotel)
- 56 Construction site
- 57 Court
- 58 Daycare

- 59 Delivering mail
- 60 Delivering meals
- 61 Department store
- 62 Department stores
- 63 Department store
- 64 Department store, mall, movie theater
- 65 Did not go out
- 66 Did not go outside
- 67 Did not leave house
- 68 Doctor's office and shopping
- 69 Doing little errands right in tioga
- 70 Doing odd jobs running errands
- 71 Driving
- 72 Driving around pittsburgh
- 73 Driving school bus
- 74 Driving truck, gym
- 75 Energy air facility
- 76 Engineering test lab
- 77 Errands, kids to school, market, orthodontist
- 78 Exercise class
- 79 Family's houses
- 80 Field work
- 81 Forest area
- 82 Friend's
- 83 Friend's and hospital
- 84 Friend's apartment
- 85 Friend's house
- 86 Friend's houses
- 87 Front porch of home
- 88 Front yard
- 89 Fuel oil home delivery
- 90 Garage
- 91 Garage—shop
- 92 Gardening/hospital , store/health care facility
- 93 Gas station
- 94 General/outside, walking/store
- 95 Glass studio

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

- 96 Golf course
- 97 Grandmother's house
- 98 Gravel processing plant
- 99 Grocery store, health care facility
- 100 Hair salon
- 101 Hairdresser's
- 102 Half of time at office, other half on the road.
- 103 Hardware store
- 104 Health care facility
- 105 Health care facility, restaurant, day care center
- 106 Health care facility, restaurant, other store
- 107 Health club
- 108 Health spa
- 109 Heavy industries
- 110 Hiking—pine grove
- 111 History village in park setting
- 112 Home
- 113 Home and outside
- 114 Home or out in neighborhood
- 115 Home/office
- 116 Home/old farm house
- 117 Home/school
- 118 Homes of my patients
- 119 Hospital—volunteer office work
- 120 House keeper
- 121 House to house checking
- 122 Houses, apartments (cleaning)
- 123 Hunting
- 124 Hunting in woods
- 125 In & out of house, shopping, eye doc
- 126 In car
- 127 In car and outside playing
- 128 In car traveling
- 129 In car—taking grandchildren to various activities
- 130 In deer shop
- 131 In home
- 132 In house



- 133 In my car. had to drive to work to pick up papers
- 134 In private home—on streets of I. a.
- 135 In the yard of my home
- 136 Inside home
- 137 Interstate travel
- 138 Laser lab
- 139 Library
- 140 Light industry
- 141 Limousine
- 142 Living room of apartment
- 143 Local delivery around indianapolis in semi-truck
- 144 Lots of christmas shopping
- 145 Luncheon at country club
- 146 Mall
- 147 Mall at scottsbluff, ne
- 148 Mall—retail (work)
- 149 Mental hospital
- 150 Metro skate west
- 151 Mostly in car running errands
- 152 Mostly in home inside
- 153 Mostly travel/water treatment plant
- 154 Mother's home
- 155 Movie theater
- 156 Mueiting's nursery
- 157 Neighbor's
- 158 Neighbor's house
- 159 Neon processing plant and glass blowing
- 160 New constructions sites
- 161 New house construction
- 162 Nursing home
- 163 Office
- 164 On bus
- 165 On highway
- 166 On walks about the town
- 167 Orthodontist dentist
- 168 Other store
- 169 Other store, restaurant

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

- 170 Other store, restaurant, church
- 171 Other store/health care facility/restaurant
- 172 Other, laundry mat
- 173 Other/body shop
- 174 Out doors urban environment
- 175 Outdoors
- 176 Outdoors at work
- 177 Outside
- 178 Outside at science center dedication
- 179 Outside in neighborhood
- 180 Outside my house + another in brecksville
- 181 Outside on bike in neighborhood
- 182 Outside repair/installation work
- 183 Outside, commercial building
- 184 Paradise bowl
- 185 Patients' homes
- 186 Pet store
- 187 Pharmacy
- 188 Picked up children
- 189 Playing in neighborhood
- 190 Playing tennis at ymca
- 191 Pole (?) barn
- 192 Police radio dispatch center
- 193 Post office mail truck
- 194 Post office/postal vehicle
- 195 Preschool, backyard, nursing home, store
- 196 Pt's homes
- 197 Putting on vinyl siding on house
- 198 Recreation center
- 199 Recreation table
- 200 Refinery field
- 201 Relatives home
- 202 Research laboratory
- 203 Residence
- 204 Residence & garage (hobby)
- 205 Residential
- 206 Residential home being constructed

207	Residential house building
208	Restaurant
209	Restaurant, other store
210	Retail mall
211	Retail store
212	Retired
213	Road
214	Road repair
215	Rotary club and travel
216	Running errands
217	Running errands and transporting children
218	Rural residence
219	School
220	Sears homelife furniture store
221	Shop, various locations
222	Shopping
223	Shopping mall
224	Sick—home
225	Ski slopes
226	South hill mall
227	Spent most of time at home
228	Stayed at home
229	Stayed home entire time
230	Store, other store, restaurant
231	Swimming pool
232	Target distribution warehouse
233	Tax lawyer's office
234	Theater
235	This day was spent at home house keeping routine
236	Travelling
237	Truck driver
238	Various job locations
239	Vehicle
240	Veterinary
241	Video store
242	Visiting family
243	Wal-mart

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

244	Walking
245	Walking & in various homes & stores in community
246	Walking in park
247	Walking in the park
248	Walking neighborhood
249	Walking outside
250	Walking, grocery store
251	Walking, visited friend
252	Warehouse
253	While on service calls at company building
254	Winery
255	Work
256	Work site
257	Work smuggler's notch. jeff vt (?)
258	Worked in son's home rural area from 0910 to 1510
259	Working outside
260	Works in a health care facility
261	Works out of home (bottom floor)
262	Workshop
263	Yard
264	Zoo

### 2.2.5 ATTRIBUTE: Residence

**ATTRIBUTE-DESCRIPTION:** The type of residence in which the subject resides.

**CODESET-DOMAIN:**

0	No response or unknown
1	Single family home
2	Duplex
3	Low-rise apartments or condominiums (4 floors or less)
4	High-rise apartments or condominiums (5 floors or less)
5	Mobile home
6	Other

### 2.2.6 ATTRIBUTE: Bedroom floor

**ATTRIBUTE-DESCRIPTION:** The floor that the bedroom of the subject is located on.

**CODESET-DOMAIN:**

0	No response or unknown
1	Basement
2	First floor
3	Second floor

4 Third floor

5 Other

### 2.2.7 ATTRIBUTE: Home size

**ATTRIBUTE-DESCRIPTION:** The square footage of the subject's home excluding garage, basement, attic, and open patios

**CODESET-DOMAIN:**

0 No response or unknown

1 Less than 1000 square feet

2 Between 1000 and 2000 square feet

3 More than 2000 square feet

### 2.2.8 ATTRIBUTE: Pipe type

**ATTRIBUTE-DESCRIPTION:** The type of water supply pipes in the subject's home.

**CODESET-DOMAIN:**

0 No response or unknown

1 Metal

2 Plastic

### 2.2.9 ATTRIBUTE: Power line visible

**ATTRIBUTE-DESCRIPTION:** This attribute indicates if a power line is visible within 150 feet of the subject's residence in any direction.

**CODESET-DOMAIN:**

0 No response or unknown

1 A power line is visible within 150 feet of the subject's residence.

### 2.2.10 ATTRIBUTE: Power line distance

**ATTRIBUTE-DESCRIPTION:** The shortest distance between the power line and the subject's residence.

**CODESET-DOMAIN:**

0 no response or unknown

1 Less than 25 feet

2 Between 25 and 50 feet

3 More than 50 feet

### 2.2.11 ATTRIBUTE: Power line type

**ATTRIBUTE-DESCRIPTION:** The power line configuration that most closely resembles the power lines near the subject's home.

**CODESET-DOMAIN:**

0 No response or unknown

1 Distribution line - single phase with neutral

2 Distribution line - two phase with neutral

3 Distribution line - three phase with neutral

4 Distribution line - double circuit three phase with neutral

5 Transmission line - vertical three phase

- 6 Transmission line - delta three phase
- 7 Transmission line - flat three phase
- 8 Transmission line - double circuit vertical three phase

### 2.3 RELATIONSHIP: Subject-Questionnaire

**RELATIONSHIP-DESCRIPTION:** Relates the Subject and Questionnaire entities. Each subject is associated with one questionnaire.

**RELATIONSHIP-FROM:** Subject

**RELATIONSHIP-TO:** Questionnaire

**CARDINALITY:** 1 to 1

### 2.4 ENTITY: Activity diary entry

**ENTITY-DESCRIPTION:** This entity reflects each record of the activity diary that was maintained by the subject. To interpret the activity diary correctly, the activity diary entries for each subject must be arranged in chronological order. Each entry takes effect at the indicated time and persists until superseded by a subsequent entry.

#### 2.4.1 ATTRIBUTE: Activity time

**ATTRIBUTE-DESCRIPTION:** This attribute indicates the time that an activity status begins.

**ATTRIBUTE-ACCURACY:** This attribute was recorded by the subjects to the minute. It is not known what clock the participants used as a reference and how that time corresponds with the EMDEX PAL time.

**SIMPLE-DOMAIN:** A date/time, in YYYYMMDDHHmm (YYYY=year, MM=month, DD=day, HH=hour, and mm=minute) format.

#### 2.4.2 ATTRIBUTE: Activity status

**ATTRIBUTE-DESCRIPTION:** This attribute indicates the activity status that begins at the indicated time.

With the exceptions noted below, each new activity status supersedes the previous one. The 'Unknown', 'Home', 'Bed', 'Work', 'School' and 'Travel' activity status are mutually exclusive. The 'Unknown' activity should be considered the default activity status.

There are three special activity status: 'Session start', 'Invalid data begins' and 'Invalid data ends'. In these three cases the underlying activity status persists until superseded by one of the mutually exclusive status. The special activity status are cues about how to use the data in the associated periods.

**ATTRIBUTE-ACCURACY:** The activity status records presented here were derived from records provided by the original researchers in a different format. That format provided for multiple activity start/stop indications to occur at the same time (e.g. home ends, travel begins). In some cases activity indications were missing entirely. The invalid periods were derived from separate information provided by the original researchers and merged. Inconsistencies were observed between the activity diary entries and the duration of time periods indicated in the 'Measurement summary' entity. The original researchers were not able to help resolve these inconsistencies.

**CODESET-DOMAIN:**

- 0 Unknown
- 1 Home
- 2 Bed
- 3 Work

- 4 School
- 5 Travel
- 10 Session start

Records with this status indicate when the 24-hour period of interest begins. These records do not supersede the activity that was previously indicated.

- 20 Invalid data begins.

Invalid periods were identified by the original researchers as reflecting invalid measurements. Records of this type indicate the beginning of such invalid periods. These records do not supersede the activity that was previously indicated, but indicate that the measurements should not be associated with that activity.

- 30 Invalid data ends

Invalid periods were identified by the original researchers as reflecting invalid measurements. Records of this type indicate the end of such invalid periods. These records do not supersede the activity that was previously indicated, but indicate that the measurements should again be associated with that activity.

### 2.4.3 ATTRIBUTE: Activity anomaly

**ATTRIBUTE-DESCRIPTION:** This attribute indicates activity records that appear anomalous, in that they occur prior to the indicated session start time. It is not clear how measurements prior to the session start should be treated in analysis. The original researchers were unable to assist us in clarification of this issue.

**CODESET-DOMAIN:**

- 0 This activity record does not appear before the indicated beginning of the session.
- 1 This activity record does appear before the indicated beginning of the session.

## 2.5 RELATIONSHIP: Subject-Activity diary entry

**RELATIONSHIP-DESCRIPTION:** Relates the Subject and Activity diary entry entities. Each subject is associated with zero or more activity diary entries.

**RELATIONSHIP-FROM:** Subject

**RELATIONSHIP-TO:** Activity diary entry

**CARDINALITY:** 1 to many

## 2.6 ENTITY: Measurement summary

**ENTITY-DESCRIPTION:** This entity summarizes a collection of data logger measurements. The data logger samples every 0.5 seconds and computes an internal resultant field. The data logger accumulates information for periods of 10-minutes and then stores a series of summary values. This entity is a summary computed from these 10-minute recorded values. The order statistics (percentiles) cannot be computed accurately from the stored values. The method used to compute percentile approximations is not known.

### 2.6.1 ATTRIBUTE: Day of week

**ATTRIBUTE-DESCRIPTION:** A code identifying the day of week during which the majority of the 24 hour measurement period fell.

**CODESET-DOMAIN:**

- 1 Monday

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

- 2 Tuesday
- 3 Wednesday
- 4 Thursday
- 5 Friday
- 6 Saturday
- 7 Sunday

### 2.6.2 ATTRIBUTE: Activity type

**ATTRIBUTE-DESCRIPTION:** This attribute indicates the type of measurements summarized.

**CODESET-DOMAIN:**

- 0 The 24-hour period of interest
- 1 Home
- 2 Bed
- 3 Work
- 4 School
- 5 Travel
- 6 Other

### 2.6.3 ATTRIBUTE: Duration total

**ATTRIBUTE-DESCRIPTION:** Duration of the period with the associated activity type, as defined by the activity diary information.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 1440 minutes

### 2.6.4 ATTRIBUTE: Duration analyzed

**ATTRIBUTE-DESCRIPTION:** Duration of the period with the associated activity type that was analyzed. Measurements were only analyzed for 10-minute periods where the activity type was uniform throughout. Mixed activity periods were analyzed as part of the 'other' activity category. Also, periods associated with invalid periods were not analyzed.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 1440 minutes

### 2.6.5 ATTRIBUTE: Average

**ATTRIBUTE-DESCRIPTION:** Mean value of the resultant magnetic field of values in the measurement period.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 83.15 mG

### 2.6.6 ATTRIBUTE: Standard deviation

**ATTRIBUTE-DESCRIPTION:** Standard deviation of the resultant magnetic field of values in the measurement period.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 245.83 mG

### 2.6.7 ATTRIBUTE: Geometric mean

**ATTRIBUTE-DESCRIPTION:** Geometric mean of the resultant magnetic field of values in the measurement period.

**SIMPLE-DOMAIN:** A positive real number, from 0.11 to 43.49 mG

### 2.6.8 ATTRIBUTE: Geometric standard deviation



**ATTRIBUTE-DESCRIPTION:** Geometric standard deviation of the resultant magnetic field of values in the measurement period.

**SIMPLE-DOMAIN:** A positive real number, from 1 to 10.51

#### 2.6.9 **ATTRIBUTE: Minimum**

**ATTRIBUTE-DESCRIPTION:** Minimum resultant magnetic field of values in the measurement period.

**SIMPLE-DOMAIN:** Positive Real (mG)

#### 2.6.10 **ATTRIBUTE: 1st percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 1 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.1 to 39.78 mG

#### 2.6.11 **ATTRIBUTE: 5th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 5 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.1 to 41.31 mG

#### 2.6.12 **ATTRIBUTE: 10th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 10 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.1 to 42.31 mG

#### 2.6.13 **ATTRIBUTE: 25th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 25 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.1 to 42.8 mG

**2.6.14 ATTRIBUTE: 50th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 50 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.11 to 43.62 mG

**2.6.15 ATTRIBUTE: 75th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 75 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.11 to 44.44 mG

**2.6.16 ATTRIBUTE: 90th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 90 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.12 to 295.78 mG

**2.6.17 ATTRIBUTE: 95th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 95 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A positive real number, from 0.12 to 691.73 mG

**2.6.18 ATTRIBUTE: 99th percentile**

**ATTRIBUTE-DESCRIPTION:** The magnitude not exceeded by 99 percent of the resultant magnetic field measurements within the analyzed period.

**ATTRIBUTE-ACCURACY:** Percentiles are computed using an unknown method.

Computing percentiles from the values retained from the 10-minute sampling

periods is not likely to be straightforward. In some cases, the first percentile is reported as less than the minimum. Some percentiles are reported as smaller than lower order percentiles (e.g. 95th percentile > 99th percentile). Neither of these are not mathematically possible. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1589.22 mG

#### 2.6.19 **ATTRIBUTE: Maximum**

**ATTRIBUTE-DESCRIPTION:** Maximum resultant magnetic field measurement within the analyzed period.

**SIMPLE-DOMAIN:** A positive real number, from 0 to 1761 mG

#### 2.6.20 **ATTRIBUTE: Time exceeding 0.5 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 0.5 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1438.7 minutes

#### 2.6.21 **ATTRIBUTE: Time exceeding 1.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 1.0 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1438.69 minutes

#### 2.6.22 **ATTRIBUTE: Time exceeding 2.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 2.0 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1413.4 minutes

#### 2.6.23 **ATTRIBUTE: Time exceeding 4.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 4.0 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1319.61 minutes

#### 2.6.24 **ATTRIBUTE: Time exceeding 8.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 8.0 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1070.41 minutes

#### 2.6.25 **ATTRIBUTE: Time exceeding 16.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 16 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 830 minutes

#### 2.6.26 **ATTRIBUTE: Time exceeding 32.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 32 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 830 minutes

#### 2.6.27 **ATTRIBUTE: Time exceeding 64.0 mG**

**ATTRIBUTE-DESCRIPTION:** The total time of the analyzed period that the resultant magnetic field is above 64 mG.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 125 minutes

#### 2.6.28 **ATTRIBUTE: Sudden field changes, low**

**ATTRIBUTE-DESCRIPTION:** The number of momentary field changes that exceed a threshold during the analyzed period, where the absolute value of the

differences in successive field readings ( $\Delta B$ ) is greater than or equal to 2.5 mG, the ratio between  $\Delta B$  and the average of the previous and the current resultant magnetic field values is greater than 1/2, and the resultant magnetic field value is less than or equal to 5.0 mG.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 3295

### 2.6.29 **ATTRIBUTE: Sudden field changes, medium**

**ATTRIBUTE-DESCRIPTION:** The number of momentary field changes that exceed a threshold during the analyzed period, where the absolute value of the differences in successive field readings ( $\Delta B$ ) is greater than or equal to 2.5 mG, the ratio between  $\Delta B$  and the average of the previous and the current resultant magnetic field values is greater than 1/2, and the resultant magnetic field value is greater than 5.0 mG and less than or equal to 10 mG.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 1238

### 2.6.30 **ATTRIBUTE: Sudden field changes, high**

**ATTRIBUTE-DESCRIPTION:** The number of momentary field changes that exceed a threshold during the analyzed period, where the absolute value of the differences in successive field readings ( $\Delta B$ ) is greater than or equal to 2.5 mG, the ratio between  $\Delta B$  and the average of the previous and the current resultant magnetic field values is greater than 1/2, and the resultant magnetic field value is greater than 10.0 mG.

**ATTRIBUTE-ACCURACY:** There are three cases where nonsensical negative values appear for this attribute. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** An integer, from -23261 to 1303

### 2.6.31 **ATTRIBUTE: Constancy**

**ATTRIBUTE-DESCRIPTION:** The amount of time during the analyzed period when resultant magnetic field exceeded 2.0 mG and the change in the magnetic field in each of the three axes was less than 10% of the resultant between consecutive 1/2-second measurement.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 1386 minutes

### 2.6.32 **ATTRIBUTE: Intermittency**

**ATTRIBUTE-DESCRIPTION:** The mean absolute first-difference in the resultant magnetic field divided by the mean resultant magnetic field for the period, expressed as a percentage.

**ATTRIBUTE-ACCURACY:** These values appear very small. It may be that they are not expressed as a percentage after all. The original researchers were not able to assist in resolving this issue.

**SIMPLE-DOMAIN:** A non-negative real number, from 0 to 1.998 percent

## 2.7 **RELATIONSHIP: Subject-Measurement summary**

**RELATIONSHIP-DESCRIPTION:** Relates the Subject and Measurement summary entities. Each subject is associated with zero or more measurement summary instances.

**RELATIONSHIP-FROM:** Subject

**RELATIONSHIP-TO:** Measurement summary

**CARDINALITY:** 1 to many

## 2.8 **ENTITY: Weight**

**ENTITY-DESCRIPTION:** This entity contains information pertaining to the weight that each participant in the study was assigned to take into account the chance of selection of that person in the sample. This information is used to generate representative sample and variance estimators.

**2.8.1 ATTRIBUTE: Base weight**

**ATTRIBUTE-DESCRIPTION:** This weight can be interpreted as the number of persons in the population that the sample person is representing. Sample estimators which are computed using these weights are "unbiased" estimators of the corresponding population totals of interest.

**SIMPLE-DOMAIN:** A positive integer, from 52,347 to 1,560,537

**2.8.2 ATTRIBUTE: Replicate weight**

**ATTRIBUTE-DESCRIPTION:** Each participant in the study is also assigned 50 replicate weights. These weights also can be interpreted as the number of persons in the population that the sample person is representing. These 50 replicate weights are used to compute the variance estimators.

**SIMPLE-DOMAIN:** A non-negative integer, from 0 to 2,658,728

**2.9 RELATIONSHIP: Subject-Weight**

**RELATIONSHIP-DESCRIPTION:** Relates the Subject and Weight entities. Each subject is associated with one weight instance.

**RELATIONSHIP-FROM:** Subject

**RELATIONSHIP-TO:** Weight

**CARDINALITY:** 1 to 1

## 3. Data Products

### 3.1 Distributors

#### 3.1.1 Distributor

EMF Measurements Database  
Russell S. Senior  
T. Dan Bracken, Inc. 5414 S.E. Milwaukie Avenue, Suite 4 Portland, Oregon 97202  
503-233-2181 (voice)  
503-233-2665 (fax)  
data@emf-data.org

### 3.2 Available Data Products

#### 3.2.1 Data Product: Subject Information

**DATA-PRODUCT-NAME:** Subject Information

**DATA-PRODUCT-DESCRIPTION:** This data product contains general information about each subject. Among the information is age, sex, and geographic location.

**LEVEL-OF-INTERPRETATION:** Derived data

**DATA-PRODUCT-CONDITIONS:** User License

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**DATA-PRODUCT-URL:** ftp://ftp.emf-data.org/pub/emf-data/datasets/006/rapid6-subject.zip

**DATA-PRODUCT-AVAILABILITY:** The files associated with this data product are also available by mail on diskette, CD or other mutually agreeable medium for a nominal fee to cover the costs of materials, shipping and handling.

**RECORD-DELIMITER:** 2-character sequence: ASCII 13, ASCII 10 (decimal)

**FIELD-DELIMITER:** One or more space characters: ASCII 32 (decimal)

**MISSING-VALUE:** A single period character: ASCII 46 (decimal)

**DATA-PRODUCT-USE-SIZE:** 34,778 bytes

**DATA-PRODUCT-DOWNLOAD-SIZE:** 14,074 bytes

**NUMBER-OF-RECORDS:** 1012

**NUMBER-OF-FIELDS:** 9

**MAXIMUM-RECORD-LENGTH:** 36 bytes

**FIELD-CONTENT:**

- 1 **Subject number** (See section 2.1.1)
- 2 **Subject sex** (See section 2.1.2)
- 3 **Subject age** (See section 2.1.3)
- 4 **Subject age group** (See section 2.1.4)
- 5 **Household size** (See section 2.1.5)
- 6 **City** (See section 2.1.6)
- 7 **State** (See section 2.1.7)
- 8 **Zip code** (See section 2.1.8)
- 9 **Region** (See section 2.1.9)

### 3.2.2 Data Product: Questionnaire Information

**DATA-PRODUCT-NAME:** Questionnaire Information

**DATA-PRODUCT-DESCRIPTION:** This data product contains questionnaire data filled in by each subject. The questionnaire contains information pertaining to work, residence, and power line information.

**LEVEL-OF-INTERPRETATION:** Derived data

**DATA-PRODUCT-CONDITIONS:** User License

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**DATA-PRODUCT-URL:** <ftp://ftp.emf-data.org/pub/emf-data/datasets/006/rapid6-question.zip>

**DATA-PRODUCT-AVAILABILITY:** The files associated with this data product are also available by mail on diskette, CD or other mutually agreeable medium for a nominal fee to cover the costs of materials, shipping and handling.

**RECORD-DELIMITER:** 2-character sequence: ASCII 13, ASCII 10 (decimal)

**FIELD-DELIMITER:** One or more space characters: ASCII 32 (decimal)

**MISSING-VALUE:** A single period character: ASCII 46 (decimal)

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

**DATA-PRODUCT-USE-SIZE:** 33,346 bytes  
**DATA-PRODUCT-DOWNLOAD-SIZE:** 10,278 bytes  
**NUMBER-OF-RECORDS:** 1012  
**NUMBER-OF-FIELDS:** 12  
**MAXIMUM-RECORD-LENGTH:** 37 bytes  
**FIELD-CONTENT:**

- 1 **Subject number** (See section 2.1.1)
- 2 **Occupation** (See section 2.2.1)
- 3 **Occupation category** (See section 2.2.2)
- 4 **Work location** (See section 2.2.3)
- 5 **Other location** (See section 2.2.4)
- 6 **Residence** (See section 2.2.5)
- 7 **Bedroom floor** (See section 2.2.6)
- 8 **Home size** (See section 2.2.7)
- 9 **Pipe type** (See section 2.2.8)
- 10 **Power line visible** (See section 2.2.9)
- 11 **Power line distance** (See section 2.2.10)
- 12 **Power line type** (See section 2.2.11)

### 3.2.3 Data Product: Diary Information

**DATA-PRODUCT-NAME:** Diary Information

**DATA-PRODUCT-DESCRIPTION:** This data product contains the information collected in the activity diaries as well as information pertaining to data validity as determined by the original researchers.

**LEVEL-OF-INTERPRETATION:** Derived data

**DATA-PRODUCT-CONDITIONS:** User License

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(including negligence or otherwise) arising in any way out of the use of these information, reports and/or data, even if advised of the possibility of such damage.

**DATA-PRODUCT-URL:** ftp://ftp.emf-data.org/pub/emf-data/datasets/006/rapid6-diary.zip

**DATA-PRODUCT-AVAILABILITY:** The files associated with this data product are also available by mail on diskette, CD or other mutually agreeable medium for a nominal fee to cover the costs of materials, shipping and handling.

**RECORD-DELIMITER:** 2-character sequence: ASCII 13, ASCII 10 (decimal)

**FIELD-DELIMITER:** One or more space characters: ASCII 32 (decimal)

**MISSING-VALUE:** A single period character: ASCII 46 (decimal)

**DATA-PRODUCT-USE-SIZE:** 290,747 bytes

**DATA-PRODUCT-DOWNLOAD-SIZE:** 46,409 bytes

**NUMBER-OF-RECORDS:** 11,588

**NUMBER-OF-FIELDS:** 4

**MAXIMUM-RECORD-LENGTH:** 26 bytes

**FIELD-CONTENT:**

- 1 **Subject number** (See section 2.1.1)
- 2 **Activity time** (See section 2.4.1)
- 3 **Activity status** (See section 2.4.2)
- 4 **Activity anomaly** (See section 2.4.3)

### 3.2.4 Data Product: Measurement Summary Information

**DATA-PRODUCT-NAME:** Measurement Summary Information

**DATA-PRODUCT-DESCRIPTION:** This data product contains the summaries of the EMDEX PAL measurements computed by the original researchers.

**LEVEL-OF-INTERPRETATION:** Derived data

**DATA-PRODUCT-CONDITIONS:** User License

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**DATA-PRODUCT-URL:** ftp://ftp.emf-data.org/pub/emf-data/datasets/006/rapid6-measure.zip

## Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey

**DATA-PRODUCT-AVAILABILITY:** The files associated with this data product are also available by mail on diskette, CD or other mutually agreeable medium for a nominal fee to cover the costs of materials, shipping and handling.

**RECORD-DELIMITER:** 2-character sequence: ASCII 13, ASCII 10 (decimal)

**FIELD-DELIMITER:** One or more space characters: ASCII 32 (decimal)

**MISSING-VALUE:** A single period character: ASCII 46 (decimal)

**DATA-PRODUCT-USE-SIZE:** 849,510 bytes

**DATA-PRODUCT-DOWNLOAD-SIZE:** 246,513 bytes

**NUMBER-OF-RECORDS:** 7,084

**NUMBER-OF-FIELDS:** 33

**MAXIMUM-RECORD-LENGTH:** 168 bytes

**FIELD-CONTENT:**

- 1 **Subject number** *(See section 2.1.1)*
- 2 **Day of week** *(See section 2.6.1)*
- 3 **Activity type** *(See section 2.6.2)*
- 4 **Duration total** *(See section 2.6.3)*
- 5 **Duration analyzed** *(See section 2.6.4)*
- 6 **Average** *(See section 2.6.5)*
- 7 **Standard deviation** *(See section 2.6.6)*
- 8 **Geometric mean** *(See section 2.6.7)*
- 9 **Geometric standard deviation** *(See section 2.6.8)*
- 10 **Minimum** *(See section 2.6.9)*
- 11 **1st percentile** *(See section 2.6.10)*
- 12 **5th percentile** *(See section 2.6.11)*
- 13 **10th percentile** *(See section 2.6.12)*
- 14 **25th percentile** *(See section 2.6.13)*
- 15 **50th percentile** *(See section 2.6.14)*
- 16 **75th percentile** *(See section 2.6.15)*
- 17 **90th percentile** *(See section 2.6.16)*
- 18 **95th percentile** *(See section 2.6.17)*
- 19 **99th percentile** *(See section 2.6.18)*
- 20 **Maximum** *(See section 2.6.19)*
- 21 **Time exceeding 0.5 mG** *(See section 2.6.20)*
- 22 **Time exceeding 1.0 mG** *(See section 2.6.21)*
- 23 **Time exceeding 2.0 mG** *(See section 2.6.22)*
- 24 **Time exceeding 4.0 mG** *(See section 2.6.23)*
- 25 **Time exceeding 8.0 mG** *(See section 2.6.24)*
- 26 **Time exceeding 16.0 mG** *(See section 2.6.25)*
- 27 **Time exceeding 32.0 mG** *(See section 2.6.26)*
- 28 **Time exceeding 64.0 mG** *(See section 2.6.27)*
- 29 **Sudden field changes, low** *(See section 2.6.28)*

- 30 **Sudden field changes, medium** (See section 2.6.29)
- 31 **Sudden field changes, high** (See section 2.6.30)
- 32 **Constancy** (See section 2.6.31)
- 33 **Intermittency** (See section 2.6.32)

### 3.2.5 Data Product: Weight Information

**DATA-PRODUCT-NAME:** Weight Information

**DATA-PRODUCT-DESCRIPTION:** This data product contains the weights used in computing unbiased exposure estimations.

**LEVEL-OF-INTERPRETATION:** Derived data

**DATA-PRODUCT-CONDITIONS:** User License

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**DATA-PRODUCT-URL:** <ftp://ftp.emf-data.org/pub/emf-data/datasets/006/rapid6-weight.zip>

**DATA-PRODUCT-AVAILABILITY:** The files associated with this data product are also available by mail on diskette, CD or other mutually agreeable medium for a nominal fee to cover the costs of materials, shipping and handling.

**RECORD-DELIMITER:** 2-character sequence: ASCII 13, ASCII 10 (decimal)

**FIELD-DELIMITER:** One or more space characters: ASCII 32 (decimal)

**MISSING-VALUE:** A single period character: ASCII 46 (decimal)

**DATA-PRODUCT-USE-SIZE:** 362,158 bytes

**DATA-PRODUCT-DOWNLOAD-SIZE:** 130,548 bytes

**NUMBER-OF-RECORDS:** 1012

**NUMBER-OF-FIELDS:** 52

**MAXIMUM-RECORD-LENGTH:** 416 bytes

**FIELD-CONTENT:**

- 1 **Subject number** (See section 2.1.1)
- 2 **Base weight** (See section 2.8.1)
- 3 **Replicate weight** (See section 2.8.2)

**Survey of Personal Magnetic Field Exposure, Phase II: 1000-Person Survey**

- 4     **Replicate weight** *(See section 2.8.2)*
- 5     **Replicate weight** *(See section 2.8.2)*
- 6     **Replicate weight** *(See section 2.8.2)*
- 7     **Replicate weight** *(See section 2.8.2)*
- 8     **Replicate weight** *(See section 2.8.2)*
- 9     **Replicate weight** *(See section 2.8.2)*
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- 48 **Replicate weight** *(See section 2.8.2)*
- 49 **Replicate weight** *(See section 2.8.2)*
- 50 **Replicate weight** *(See section 2.8.2)*
- 51 **Replicate weight** *(See section 2.8.2)*
- 52 **Replicate weight** *(See section 2.8.2)*

