

Home EMF Environmental Assessment

Scot Appert BBEC
BioHealthy Homes
Phone: (206) 883 1694
www.BioHealthyHomes.com

Date: April 24, 2014
Submitted To: Mighty Energy Solutions, a distributor of SolaRay Panels
Address: 3108 SW Webster Seattle WA 98126

Scot Appert of BioHealthy Homes performed an Electromagnetic Radiation Assessment at the above address of the readily accessible portions. Disassembly of equipment, opening of walls, moving of furniture, walking or climbing on roofs, entering into confined spaces or excavating is not part of or included in this assessment. This assessment is for the time of inspection only, and conditions may change and the results could be different at different times.

MEASUREMENTS AT 12:30 April 24, 2014

I inspected the SolaRay II radiant heat panels installed on the bedroom ceiling of the residence. The meter I used is the Gigahertz Solutions NFA 1000. The panels had high magnetic fields right next to the panels when on but the field dropped off quickly. At my head height the difference between when the panel was on and off was .17 mG which is considered no risk elevation. The electric fields did not affect the bed location when it was on.

ELECTROMAGNETIC FREQUENCY FINDINGS -

1. Magnetic fields from AC power system in MilliGauss:

At panel- 15-18 mG
Head height when on- 1.49 mG
Head height when off- 1.32 mG
Master bed- 1.41 on, 1.26 off

2. Electric Fields

At panel when on: left side 18 V/m, right side 57 V/m
At panel when off: 4.8 V/m
The bed was not affected by the panels whether it was on or off

[Please refer to anomalie reference chart and additional resources on page 2 for help interpreting data.]

ELECTROMAGNETIC ANOMOLIES:

Reference Chart below is based on Building Biology Standards set by The Institute of Building Biology + Ecology Neubeuern (IBN) Germany baubiologie.de/site/english.php and the Institute of Building Biology and Ecology (IBE) USA buildingbiology.net

	<u>ANOMOLIES</u>			
	<u>Ideal</u>	<u>Weak</u>	<u>Strong</u>	<u>Extreme</u>
Magnetic Fields milliGauss mG	<.2	.2-1	1-5	>5
High (Radio) Frequency Radiation uW/m2 Microwatts per meter squared	<1	1-50	50-1000	>1000
Body Voltage milliVolts mV	<10	10-100	100-1000	>1000
Electric Fields with ground V/m	<1	1-5	5-50	>50

Biological Risk Definitions From IBE and IBN:

IDEAL- Unavoidable, minimum imposed by our technological civilization, but often found in homes

WEAK- Biologically active, but no large risk for healthy people with intact immune system, without chronic diseases or special sensitivities. If client is not healthy, remediation must be done.

STRONG- Unacceptable biological risk for all people especially if multiple stress factors are acting together. Remediation must be done as soon as possible.

EXTREME- A critical biological risk to all people. Remediation must be done quickly even without the presence of multiple stress factors.

EXPLANATION OF FIELDS, SOURCES AND POSSIBLE EFFECTS:

***Magnetic Fields** (measured in milligauss) = low frequency EMF - sources: wiring in walls, appliances such as electric stove, fridge, microwave oven, and laptop computers. High magnetic fields (above 3 mG) have been correlated to the development of Leukemia, breast cancer and other serious diseases. www.bioinitiative.org/

***High (Radio) Frequency Radiation** (measured in uW/m2 Microwatts per meter squared) = high frequency EMF also called Radio Frequency (RF) – possible sources: cell tower micro waves, microwave ovens, fluorescent bulbs, cordless phones, and wifi. See BioInitiative Report for biological effects. www.bioinitiative.org/

The Bio Initiative Report documents bio-effects, adverse health effects and public health conclusions about impacts of non-ionizing radiation (electromagnetic fields including extremely-low frequency ELF-EMF and radio-frequency/microwave or RF-EMF fields). Based on research and science-based evidence of the biological effects of both Extremely Low Frequency fields from electric and magnetic sources and high frequency field sources, it is the conclusion of the BioInitiative Report that people exercise the Precautionary Principle limiting controllable sources and exposure to EMF.

Respectfully Submitted By:

BioHealthy Homes

Scot Appert BBEC

Building Biologist and Environmental Consultant

Electromagnetic Radiation Specialist

Certified Lead Renovator

Applied Microbial Remediator

Mold Removal Specialist

Water Removal Technician