

BASELINES

PURPOSE

While other groups may choose to honor a more metaphysically based approach to the subject, for PPI paranormal phenomena are first and foremost an exercise in careful environmental monitoring. Establishing a baseline of readings is fundamental to conducting our investigations according to the scientific method. Baseline data are useful tools by which to measure anomalous readings and to establish the environmental norms of a location to be investigated. For example, if the baseline background radiation of a room is .12 microsieverts, then a significant drop of radiation during a Q&A vigil to .06 mSv might be an indicator of an influential anomaly or condition. Recognizing when readings deviate from the baseline standards can either help identify environmental causes to explain paranormal phenomena, or reinforce the significance of concurrent events such as EVP, shadow forms, cold spots, touches, etc.

However, investigators should note external environmental and atmospheric data that may affect, both, baseline readings and real-time readings during an investigation. For instance, the most common mistake made by investigators is to assume that cold spots occurring during the late night/early morning hours of a night-time investigation are localized, paranormal phenomena instead of ordinary atmospheric changes to temperature, humidity, and barometric pressure. Hourly meteorological data for the location of the investigation is indispensable for such purpose and is widely available on sites such as Weather Underground and the National Weather Service.

METHODOLOGY

Baselines readings, or “sweeps” as they are sometimes called, should be conducted in a systematic and thorough manner. This means dedicating a block of time to the process before the actual start of the investigation, which can require more effort depending on the size of the venue and whether or not perimeter readings are needed. For detached structures, external readings are not only strongly recommended, but investigators should remain watchful for potential sources of unusually high electromagnetic field output such as junctions boxes and power lines.

Baseline sweeps are best done by two or three investigators, one of whom is charged solely with recording the baseline data. A well organized baseline sweep will have a predetermined course of rooms to navigate. It helps not to overwhelm the recording investigator with a swarm of data, so the power should be given that investigator to task the other investigators with the systematic gathering of specific readings: ambient temperature first, then humidity, then carbon monoxide readings, and so on. (Spot EMF readings are best reserved for last before moving to the next location in the baseline sweeps.)

APPLICATION

During the active investigation, the record of completed baselines should be kept on hand as a reference. After the investigation, the baseline readings should be copied and posted (or distributed) for the benefit of other investigators who are reviewing their audio and video from the investigation. If a client report is generated, a proper table of baselines should be included.

USING THIS FORM

Although it can be adapted to the environmental monitoring equipment you possess, this “Baseline Readings” form is designed to record the most common types of data needed for a paranormal investigation and the post-investigation review process.

Area/Location: At the top of each column, indicate the specific room or area for which you are gathering data. The goal of this heading is to help you compartmentalize readings in the most sensible and useful way possible. An initial walk-through at the venue can help you select the rooms in advance. Sometimes, however, you might need to make a change along the way, collecting a separate set of readings for an en suite bathroom, for instance.

Time: Since the process of gathering baseline readings can take time, it's important to record the time you are in any one location, because influential meteorological and geological events could be occurring at the same time. Recording the time goes hand in hand with tracking the movements of investigators through the venue. PPI prefers to use military format (e.g., “21:42” instead of “9:42 PM”), but as long as you check your watch and record the hour and specific minute (hh:mm), whatever format is comfortable to you is fine.

Carbon Monoxide: Measured in parts per million (ppm), carbon monoxide is a toxic gas that causes hypoxia (oxygen deprivation) and nerve damage, including brain damage. Hypoxia can incur a number of other symptoms, such a sleep paralysis and somnambulism (sleep walking), that can be mistaken as paranormal experiences. Except by its symptoms, it's otherwise very difficult to detect unless a specialize instrument is deployed. Readings of 100 ppm or greater are considered hazardous, and any readings above 00 ppm should be reported to the clients. Fortunately, most smoke detectors these days monitor for carbon monoxide poisoning.

Ambient Temp: Ambient temperature is, by definition, a *general* reading and should be taken if possible from the most centrally located position in the space. Depending on the layout of the room and the furnishings within it, accessing a centrally located position might not always be

possible, in which case it is best to select the most commonly used area instead. PPI records ambient temperature in Fahrenheit, but use with consistency whatever standard that makes you feel most comfortable.

Spot Temp: Even within a confined space, temperatures can vary. Sometimes one part of the room will simply be colder or warmer than others without any seeming cause. Other times, windows and doorways, floors and ceilings, exterior and load-bearing walls, fish tanks and plasma TVs, conduits and plumbing—these can all produce their own source of temperature different from the ambient temperature and potentially influential to readings later on during the active investigation. Investigators should note any significant source of temperature variation during the baselines sweeps, and name the source when taking the reading.

Pressure and Humidity: Atmospheric pressure, recorded in millibars (mb), and humidity, recorded in percentage (%), are often overlooked environmental factors in reports of paranormal phenomena, particularly subjective ones. Cold spots, anomalous “touches,” dizziness, and even “skin crawling” can all be tied to localized changes in air pressure and moisture. What’s more, these are the factors most likely to fluctuate during a night-time investigation. Once again, these readings should be considered alongside hourly meteorological data for the location of the investigation, typically available on-line.

Background Radiation: Threats of nuclear war and disasters such as Fukushima and Chernobyl tend to make us hyper-wary of radiation. However, background radiation is normal and present at all times. Measured in millisieverts or microsieverts (μSv or mSv), common background radiation can fluctuate according to geophysical factors, solar weather, and even the presence of common household materials such as granite counter tops. Substructures can produce radioactive emissions in the form of radon gas, and any number of other unsuspected low level radiation sources may be already in your home right now. In short, for the vast majority of us, background radiation is nothing to worry about. The average daily dose of radiation is .10 μSv or less, and it takes exposure greater by the tens of thousands before it starts to be a cancer risk. In paranormal investigating, though, minor changes in background radiation are reported to coincide with alleged increased or reduced paranormal activity. In particular, a sudden decrease in background radiation is thought to cultivate conditions right for paranormal events. This hypothesis, however, remains

unsupported by the science community, who are legitimately skeptical of its pseudoscience. Regardless, it’s an extremely useful data set to obtain and monitor during a paranormal investigation, particularly during EVP vigils. In fact, PPI has, on occasion, been able to document manipulations of the background radiation readings coinciding with certain lines of EVP questioning.

Base EMF and Spot EMFs: As with ambient temperature, baseline electromagnetic fields, recorded in milligauss (mGs), are gathered from the most centrally located area of the room (or an equivalent location). EMFs are among the most commonly recorded data in investigations, thanks in part to the attention that handheld EMF detectors have been given in television “paratainment.” These devices are commonly—and simplistically—thought to indicate the presence of paranormal activity when fluctuations are noted, but, as PPI investigator and tech manager Brian Miller explains, “EMF detectors have broad calibration ranges that overlap many common ambient sources of electromagnetic energy. Most display a sum of electromagnetic energy readings, while others can be set to pick up very narrow ranges of electromagnetic energy, allowing researchers to determine whether the source is radio frequency (RF), microwave or something else.” Although such settings vary depending on the model of EMF detector, remaining vigilant to EMF sources is now one of the cornerstones of modern, scientifically-motivated paranormal investigating. Baselines sweeps for EMFs will not only help to avoid false positives later on, it will help to alert clients (and investigators) to the possible symptoms of EMF sensitivity that are frequently misinterpreted as paranormal experiences; such symptoms can include hallucination, night terrors and sleep paralysis, paranoia and watchful feelings, as well as headache, fatigue, skin crawling, and other physical symptoms. The most common source of high EMF are old alarm clocks (not coincidentally, situated at head-level during sleep), and bathroom fans, but older homes whose wiring is no longer shielded according to regulation may also present EMF hazards. It should be noted, however, that electro-sensitivity, a.k.a. “EMF sickness,” is highly contentious. While it’s true that constant exposure to extremely high doses of EMF can be deleterious, detractors of electro-sensitivity insist that it is a psychosomatic condition: the belief that one suffers from the presence of low-level electromagnetic fields manifests actual physical symptoms, some of which can be severe. Regardless of whether EMF sensitivity is “real,” paranormal investigators remain morally bound to record it in hopes that the data will be of benefit the health of the client as well as the search for evidence of paranormal phenomena.

You’ll find the form attached on the next page.

TEAM /GROUP: _____

BASELINE READINGS	CASE: _____	READINGS TAKEN BY (USE INVESTIGATOR INITIALS):		
	DATE: _____			

AREA / LOCATION								
TIME hh:mm								
CO ppm								
AMBIENT TEMP °F								
SPOT TEMP °F								
PRESSURE mb								
HUMIDITY %								
BKG RAD mSv								
BASE EMF mG								
SPOT EMFs mG	Object / Spot	Reading	Object / Spot	Reading	Object / Spot	Reading	Object / Spot	Reading

TEAM /GROUP: _____

AREA / LOCATION								
TIME hh:mm								
CO ppm								
AMBIENT TEMP °F								
SPOT TEMP °F								
PRESSURE mb								
HUMIDITY %								
BKG RAD mSv								
BASE EMF mG								
SPOT EMFs mG	Object / Spot	Reading	Object / Spot	Reading	Object / Spot	Reading	Object / Spot	Reading