



November 27, 2018

We want each of you to know how sad we are for the challenges you and California family, friends, and/or colleagues are facing from California's devastating forest fires. Our son and his young family, which includes our two grandchildren, also live in California as do many of our personal friends and colleagues. From the calls and notes we have received, we know that people throughout California are concerned about the Woolsey Fire and have asked us about the possibility that radioactive contamination at the Santa Susana atomic test facility site might have spread in the smoke. At this point in time, no one knows the real answer to that question.

We listened to your requests and have created a methodology for determining if any radioactivity may have migrated from the Santa Susana site and if so:

- What radioactive isotopes migrated?
- What were the concentrations of those radioactive isotopes?
- How long will those isotopes be dangerous (i.e. what is the half-life of these deposits of radioactivity)?
- Where were the radioactive isotopes deposited, and, what are the possible risks to the millions of people in the greater L.A. area?

At Fairewinds Energy Education, we let the data do the talking. We are a science-based organization, and we and our colleagues will test the dirt and dust samples and then release that data to the general public once it is analyzed by the scientists involved. This process does take time. There will not be any immediate answers, and this is at least a four to five-month project. By sending your samples for testing, you agree that the data will be made public, although your personal information with your name and location will not. When the data is released every sample will be mapped by GPS.

Email info@FairewindsEnergy.org | Phone 843-501-7660 | Fax (802) 304-1051
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Fairewinds Energy Education, 520 Folly Road, Suite 25 #344, Charleston, SC 29412

Let me thank you up front for your interest in collecting samples from the Woolsey Fire that began near the Santa Susana atomic power site. *Please read this entire letter carefully as it contains all the protocols and information you will need in order to conduct volunteer or citizen scientist sampling. We ask that you please read carefully and follow all directions.*

If you have any questions or concerns, please feel free to email us or ring us. And, remember that we are a small office with several members of the Fairewinds Crew working remotely, so it may take time for us to respond promptly if we are out of the office traveling and/or conducting research.

Fairewinds, PSR-LA, and several other community groups will be working together to collect dust from vacuum cleaner bags, air-conditioning filters collected from homes, and buildings, car air filters, and dirt samples from land within 100 miles of the Santa Susanna nuclear site and/or the Woolsey fire and its smoke and have these samples analyzed. Our priorities are to protect everyone involved, so please read and follow all protocols!

The specific contents of the dust and soil are presently unknown. The recent fire presents an opportunity to scientifically analyze dust and dirt that was volatilized by the fire. PSR and other community groups will act as points of collection for any air filters, dust, and dirt samples, and Fairewinds will provide analysis of the samples along with the labs.

Please email and let us know you are sending samples so that they may be properly logged in prior to shipping. Any samples sent to us for which we have not received prior notification from you and acknowledgement for receipt by Fairewinds will simply be thrown out or returned unopened to sender.

Basic sampling instructions

This guide is meant to help volunteer samplers and citizen scientists follow some important basic rules to be safer and to improve the quality of your sampling work. Please remember that this very short set of instructions cannot tell you everything that you need to know about collecting samples.

FIRST, a note from California's Governor:

“To protect against the potential health danger, the California Governor's Office of Emergency Services (Cal OES) advised residents to wear a mask.”

Details here in *Newsweek Magazine*:

CALIFORNIA WILDFIRE SMOKE: WHAT IS AN N95 SMOKE MASK? HOW LONG DOES IT LAST? HOW DO YOU USE IT?

<https://www.newsweek.com/california-wildfire-smoke-n95-mask-how-long-does-it-last-how-do-you-use-it-1219963>

1. Safety tips to know before you take a field sample:

- Avoid working alone in the field. Make sure someone else knows where you are and what you are doing.
- Remember that radioactive dusts can be inhaled, ingested, or can be retained on clothing and shoes.
- Use disposable gloves while sampling to reduce cross contamination between samples, and to reduce your exposure to dusts.
- High quality disposable P95 dust masks are recommended for general sampling. Please remember that old military type masks are most likely unreliable.
- Do not use tobacco, eat, or drink while sampling. This rule will help you reduce the chances of ingesting radioactive dusts.
- If you can, wear long sleeved shirts, trousers, and shoes that cover your feet when you are sampling. *Do not bring contaminated samples, used masks and gloves, or dusty clothing into clean environments (leave your contaminated stuff outside your home).*
- Radioactive particulate filtering masks are expensive, but provide even better protection than the P95 dust masks. (Using these masks in high risk zones requires training beyond the scope of this sampling guide, and *the outside of these masks must be cleaned after use and before storage. These masks should also be stored in air tight bags.*)
- Please change your clothing and shoes when sampling is completed. Keep these possibly contaminated materials segregated from other household items and clothing, and never bring them inside your home or work area.

- *It is important to remember that wearing protective gear may make you more likely to suffer heat stroke. Take frequent breaks, and decontaminate sufficiently so that you can find a clean place to drink lots of water.*
- Make sure that all potentially hazardous samples are labeled. Take smaller samples if you believe that the materials you are sampling may have high count rates.
- Immediately wash your hands and face or better yet, shower, immediately after completing your collection efforts in the field.

2. **Instructions for collecting field samples:**

- As they are collected, samples should immediately be placed in sealed plastic bags. Use double bagging to prevent escape of contaminated material.
 - Please use a sharpie that will not wipe off to label and date everything.
 - GPS the location, and write the GPS location on the bag.
- For soils, the preferred sample weight is about 10 grams [about 1 tablespoon]. The sample does not need to be weighed. It is important for us that samples not be too large, or they will become expensive to discard properly at the labs. If you are a citizen scientist with a radiation detector or Geiger counter and you believe that a sample may have a high CPM (counts per minute), then collect a smaller sample.
- Automobile and truck engine air filters are very important samples. If you plan to collect these, please take the following steps:
 - Write down the make, model, and year of the vehicle.
 - Write down how long the filter was in use, (if you know), and the city where the vehicle is normally used or stored.
 - Note if the filter is a cabin filter or an engine filter.
 - Potentially, these filters may be radioactive or chemically contaminated by the fire. Please remember to wear gloves and your mask and bag these carefully.
- When packing samples, please use material like newspaper or other packing materials to keep the sample in the center of any shipping box or container and so that it does not move around and is not damaged.

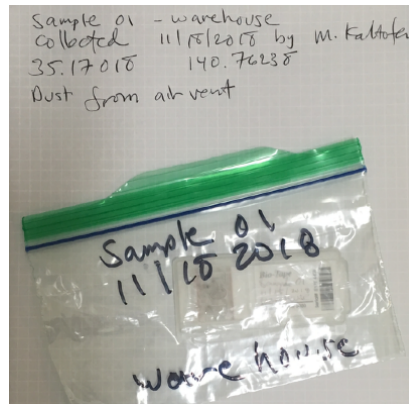
- Again, please label all bags, in fact, label everything. You know what something is, but your sample may be tested again many months or even years after it is collected for follow-up studies, and scientists will require all the information you can provide.
- *Before your package to us is sealed, separately, on a piece of paper, please include a list of samples sent, and note the time, place, and date that samples were collected.*
- The person collecting the samples and the person shipping should sign their names to the list of samples.
- *Out of respect for the many people who are involved in delivering packages, please do not send large amounts of what you may believe to be highly radioactive material.* Samples should be small enough and well packaged, so that radiation counters (if you have one) do not show radiation through the sealed package. Using a larger box increases the distance between people and the sample. You may also take a smaller sample.
- Most of all do keep all samples small. We only need about a tablespoon of fine material to complete our testing, that's about 1/2 ounce.

3. **How to take a tape lift sample with tape lift sample slides**

- Tape lifts samples are small microscope slides that have a piece of double-sticky adhesive tape to pick up dust. These samples, while small, are excellent for measuring alpha radiation quickly. They are cheap and safe to mail and ship.
Bio Tape Slides: <https://www.zefon.com/bio-tape-slides-50bx>
- An unused tape lift slide is pictured below (left). When you are ready to collect your sample, write the date, sample identification number and place you are sampling on the label, in pen. Then peel off the protective plastic cover to reveal the tape section (below right).



- Press the slide (tape side down - see below left) onto the dusty surface.
- Press on multiple areas if necessary to collect enough dust to see easily.
- Return the slide into its holder and seal in a Ziploc bag. Label everything and keep notes of every sample in a notebook. Send the slide (a copies of the notes) to us.



4. How to sample household dust:

1. Starting with a new vacuum cleaner bag, thoroughly vacuum your home twice in a period of one week.
2. For each sample, Fairewinds needs less than 10-grams, which is about a teabag worth or a tablespoon-full of that dust from the bottom of each vacuum cleaner bag. We do not need the contents of the entire vacuum cleaner bag, and we cannot use cat hair, dog hair or dust bunnies.

3. Each sample should be placed inside 2-Ziploc bags (one inside the other) with the GPS location, name and phone number written on the bag with a Sharpie, so it does not wipe off. [Your name and phone number are confidential and will not be provided to other parties.]
4. Please contact Fairewinds Energy Education at info@fairewindsenergy.org and we will put you in contact with the appropriate people in your area who will be consolidating samples for shipment.
5. We will then authorize the shipments from the group contacts. Any packages sent to us that have not been pre-authorized and appropriately shipped will simply be discarded unopened.

We thank you in advance for your efforts to work with us as volunteer samplers and citizen scientists to conduct this important scientific analysis. None of us know where this sampling will lead, but it is an important part of our work together as community members. Thank you for joining us in this work.

Sincerely,

Maggie and Arnie Gundersen and The Fairewinds Crew

Ship to: 520 Folly Road, Suite 25, #344, Charleston, SC 29412

Email: info@fairewindsenergy.org

Phone: 843-501-7660

Again, please remember that your sample(s) must be registered with us before you ship your package to us. Any unregistered samples will never be opened or analyzed.

P.S.

Many people have also called or written us regarding chemical contamination from all the California fires. Please contact PSR and other environmental groups for the methodology and laboratories working to ascertain the chemical composition of samples from this region. Chemical contamination is not our area of expertise, the methodologies involved are entirely different from each other, and the equipment required is entirely unique for each area of study.