

Frequently Asked Questions

Pacific Wood Treating Cleanup Site

March 2015

Neighborhood Soil Dioxin Study

Pacific Wood Treating (PWT) operated on the Port of Ridgefield (port) waterfront property from 1964-1993. PWT pressure treated wood products with a variety of toxic chemicals (see page 4). In 1993, PWT declared bankruptcy. Contamination related to PWT has been found in soil, sediment, and groundwater on and off the port property.

The Department of Ecology (Ecology) and the port have entered into several legal agreements for the port to study and clean up contamination from the former wood treating plant. In December 2014, we entered into a legal agreement for the port to study and, if needed, plan for cleanup of dioxins in the neighborhood east of the port property (off-property). Ecology and the port are funding the study and cleanup.

This FAQ answers questions about dioxins, health effects and healthy actions, the port's plans for sampling yards, and results from past sampling. We will update this document and our website when we have more information from the study.

Dioxin Information

Q: What are dioxins?

A: Dioxins are toxic chemicals that can harm your health. Dioxins are a family of chemicals with similar chemical structures and effects on living things. They do not break down easily in the environment, and as a result, are found everywhere. Most people are exposed to very small levels of dioxins when they consume food or milk, breathe air, or have skin contact with dioxin contaminated soils or other materials.

Q: Could dioxins affect the health of my family?

A: Exposure to lower levels of dioxins, like those previously found in Ridgefield right-of-ways (see page 6), does not pose an immediate health risk but may pose a long-term health risk. The odds of developing health problems are different for each person.

Exposure to small amounts of dioxins can possibly increase the risk of certain cancers in humans. However, that risk could be as small as zero. Some non-cancer health effects are associated with dioxin exposure, such as immune system and reproductive system problems.

Based on data from animal studies, there is some concern that exposure to lower levels of dioxins over long periods (or higher levels at sensitive times) might affect reproduction or development. Dioxins may also have harmful effects on the liver, peripheral nerves, and the immune system. The health effects associated with low-level dioxin exposure are still being studied.

TOPICS

- Dioxin information
- Healthy actions
- Yard soil sampling process
- Past soil sampling results

FOR MORE INFORMATION

Site Investigation

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Public Involvement

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Site Document Locations

Ridgefield Library

210 N. Main Avenue
Ridgefield, WA 98642
(360) 887-8281

WA Department of Ecology

Southwest Regional Office
300 Desmond Drive
Lacey, WA 98503
Call or email for an appointment
(360) 407-6365 or
publicdisclosureswro@ecy.wa.gov

Ecology's Website

<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=3020>

Accommodation Requests

To request materials in a format for the visually impaired, call Ecology at (360) 407-6300, Washington Relay Service at 711, or TTY 877-833-6341.

Facility Site ID# 1019

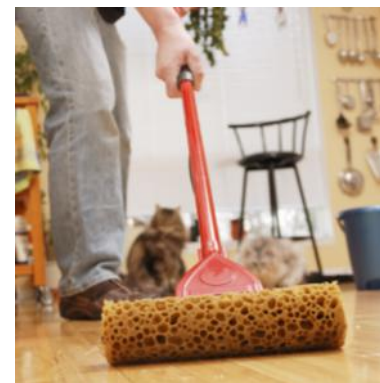
Q: How could I be exposed to dioxins?

A: Everyone is exposed to dioxins because they are in many foods (especially meat and dairy products) and present throughout our environment. For nonsmokers, about 90 to 95% of exposure usually comes from food. Cigarette smokers may have additional exposure to dioxins. Soil, air, and water usually contribute only a small part of our exposure to dioxins. Exposure to contamination could occur if you have direct contact with the soil—when gardening or playing in the dirt—or accidentally inhaling (breathing) or ingesting (eating) soil.

**Q: How can I keep my family safe from possible contamination?**

A: There are several ways that you can reduce your exposure to dioxins and other types of soil contamination. These healthy actions include:

- Washing your hands before eating after playing or working outside.
- Removing your shoes before going inside.
- Preventing children from eating dirt.
- Washing children's toys, bedding and pacifiers often.
- Damp dusting, mopping and vacuuming often.
- Keeping your pets clean – brush and bathe them often.
- Eating a healthy and balanced diet and reducing your intake of fatty foods (whole milk, meat).
- Washing fruits and vegetables before eating them, especially if they are grown at home.
- Gardening in raised beds with clean soil.
- Wearing gloves when gardening or landscaping.

**Q: What is the state cleanup level for dioxin?**

A: Ecology sets cleanup levels based on state law—the Model Toxics Control Act. For cancer-causing contaminants we set cleanup levels to protect people against an increased lifetime cancer risk of one in a million. For dioxin, the risk-based cleanup level is 13 parts per trillion (ppt).

**Q: What is the risk at 13 ppt dioxin?**

A: Risk is based on the amount of exposure a person has to contamination and how toxic a particular contaminant is. A person ingesting (eating or drinking) or inhaling (breathing in then swallowing) 200 milligrams (about the size of a standard pain reliever tablet) of soil or dust containing 13 ppt dioxin each day for 6 years would have a one in a million excess risk of developing cancer in a 75 year timeframe. This means that in a population of one million people, there may be one more case of cancer than if there were no dioxin in soil.



Q: Are the vegetables in my garden safe?

A: Fruits and vegetables are okay to eat because they take up only a very small fraction of dioxins from soil. However, since garden soils may cling to the outside of the edible portions, it is important to peel or thoroughly wash the produce to remove any contamination that may be present.

Q: Where do dioxins come from?

A: Dioxins are unintentional byproducts of both human activities and natural processes. They can be formed during industrial processes, such as certain types of chemical manufacturing. Dioxins can also be formed when people burn wood or waste debris. Waste incinerators, home burn barrels*, fireplaces, and wood stoves release dioxins into the air. Exhaust from diesel engines also contains dioxins, as do emissions from natural sources such as forest fires and volcanoes.

Due to changes in environmental regulations and industrial processes, emissions of dioxins and in the U.S. have decreased significantly since the 1970s.

**Please contact the Southwest Clean Air Agency for more information about the health effects of home burning, and how to reduce your risk. Phone: (360) 574-3058, Web site: www.swcleanair.org.*

Q: Who can I contact for more information?

A: The box on page 1 has a list of staff members available to answer your questions.

Yard Sampling and the Off-Property Study**Q: What is happening now?**

A: A new legal agreement with Ecology requires the port to further study dioxin contamination in the neighborhood study area shown in Figure 1 (page 4). We believe that dioxin levels are higher in the study area due to Pacific Wood Treating's operations. Dioxins may have blown off the property in dust or been tracked onto roads in the study area by truck tires.

Under the new legal agreement with Ecology, the port will:

- Develop a **sampling plan** for investigating dioxins in yards in the study area. The port submitted a draft sampling plan in January 2015. Ecology approved the plan in March and it is posted on our website.
- Conduct soil sampling in yards and right-of ways to define the extent of dioxin contamination. This is the **remedial investigation (RI)**. The port began the first part of the investigation in March 2015.
- Use the RI results to do a **feasibility study (FS)**, which presents and evaluates cleanup options.
- Develop an **RI/FS report** that documents the RI and FS.
- If Ecology decides one is needed, develop a **preliminary draft cleanup action plan**, which outlines the proposed cleanup process.

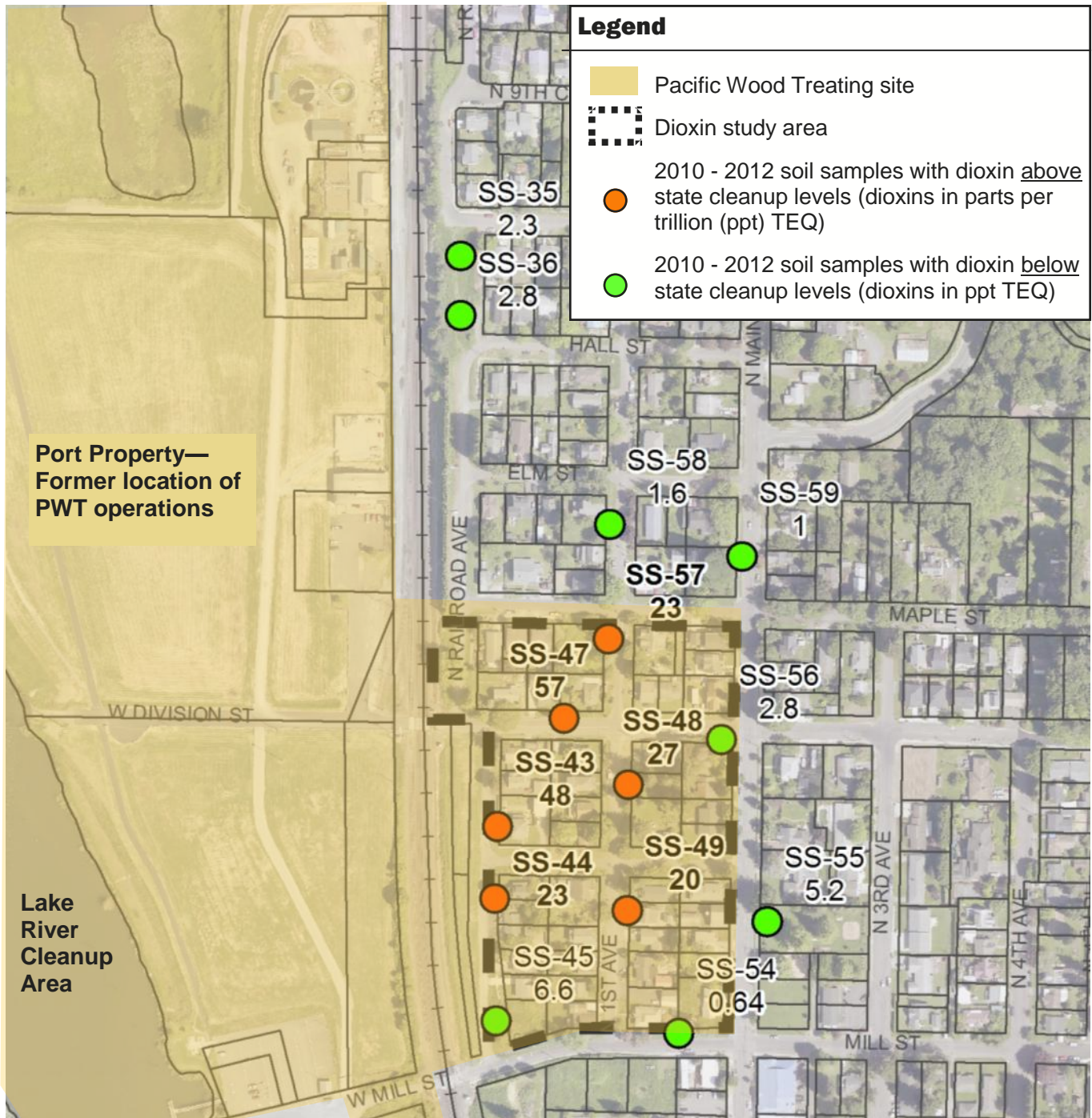
Q: What is the purpose of the new study of dioxin in yards?

A: The port and Ecology will use the data from this study to evaluate if cleanup is needed and what the cleanup plan should be for the study area.

Q: How are the port and Ecology deciding what properties to sample?

A: Ecology and the port identified the study area based on sampling the port did in public right-of-ways. However, dioxin levels can vary. A single sample taken from public property cannot be used to say whether a residential property contains dioxin contamination or at what level. Also, landscaping and other activities can affect dioxin levels, so Ecology and the port will be looking at property landscaping history to decide what properties to sample for this study.

Figure 1: Neighborhood Dioxin Study Area and PWT Site



Q: Why aren't the port and Ecology sampling every property?

A: At this stage in the study we do not plan to sample every property in the study area. Since the dioxins likely came from air-borne dust, they are expected to be found in surface soils where the dust settled. As a result, dioxins may no longer be present in surface soils that were disturbed or displaced since PWT stopped operating in 1993.

Q: What types of yards are you looking to sample?

A: We are looking for properties in the study area shown in Figure 1 with:

- Yards with exposed soils (not paved over).
- Yards without major landscaping or other disturbance in the last 20 years.
- Areas with no past use of burn barrels, fire pits, or the herbicide 2,4,5-T.
- No history of a major structure fire.

Q: How does soil sampling work?

A: After receiving an access agreement and property questionnaire, Ecology and the port will determine if a property will be sampled and do a pre-sampling visit. Samplers will develop a sampling plan for each yard. The plan will show areas of interest for sampling and areas that will not be sampled.

In each area of interest, they will take ten shallow samples, which they will mix together. Then they will place a single sample of the mixed soil in a jar or bag for laboratory analysis. This is called a composite sample. Most sample holes will be six inches deep and about an inch in diameter. At some yards, the samplers will also collect one deeper samples from six to twelve inches below surface level. The samplers will fill in all the holes.

You can read more about sampling plans in our *Pacific Wood Treating Neighborhood Soil Dioxin Study Process* handout and in the sampling plan. Both will be on our website.

Q: How can I sign up to be contacted about sampling?

A: If you live in the study area shown on the map on page 4, the port's consultants and Ecology will attempt to contact you in spring 2015. They will ask you some questions about the history of your property to find out if it is a good yard to sample for the study (see above). If you live in the study area, please send Diana Smith your contact information (see page 1).

Q: What will Ecology and the port do with the results?

A: The sampling data will be used to determine the extent of contamination and evaluate cleanup options. We will provide the sampling results for each yard to the owners and residents. The port will include the results in the RI/FS report. If Ecology determines that cleanup is needed, the port will use the results to develop a preliminary draft cleanup action plan.

Q: What happens if I have dioxins above state cleanup levels?

A: The port will evaluate cleanup options in the feasibility study and Ecology will select the most appropriate cleanup method. Then, we will notify property owners and residents of the study area about the proposed cleanup plan. We will hold a public comment period on the RI/FS report, and the proposed cleanup action plan. We won't know what cleanup options apply until we know the extent and levels of dioxins in yards.

Past Off-Property Soil Sampling

Q: How were past samples collected?

A: In 2009, the port began doing sampling to define the extent of wood treating compounds in soil north, east, and south of the main port property (see Figure 2 below). In residential areas, the port took samples in public right-of-ways.

Figure 2 shows the locations of 22 soil samples the port tested. The port also took samples from the Railroad Avenue and Railroad Overpass properties. However, the port cleaned up these areas in 2013 and 2014 so the samples are not shown.

Q: What contaminants did the port test for in off-property soil?

A: The port analyzed the first 12 off-property soil samples for the wood treating-related compounds pentachlorophenol (PCP), arsenic and other metals, polycyclic aromatic hydrocarbons (PAHs), and dioxins. Dioxin was the only contaminant found above cleanup levels, so the other soil samples were only tested for dioxins.

Q: What did the past study find?

A: Soil sampling in right-of ways showed dioxin concentrations ranging from 0.49 – 55.5 parts per trillion (ppt). Dioxins were above 13 ppt, the state cleanup level for unrestricted land use, in six of the 22 samples.

The port did this initial sampling to see if contamination was present, not to determine final cleanup areas. However, the state cleanup level does provide some context for evaluating the results. Above 13 ppt, there may be greater than a one-in-a-million cancer risk, depending on type and length of exposure.

Q: How were dioxins in soil cleaned up on port property?

A: The port used a soil cap to cover areas where they found dioxins on port property. This included the former PWT operating areas, as well as the Railroad Avenue and Railroad Overpass properties to the west and southwest of the study area.

Figure 2: Port Property Cleanup and Past Off-Property Soil Sampling

