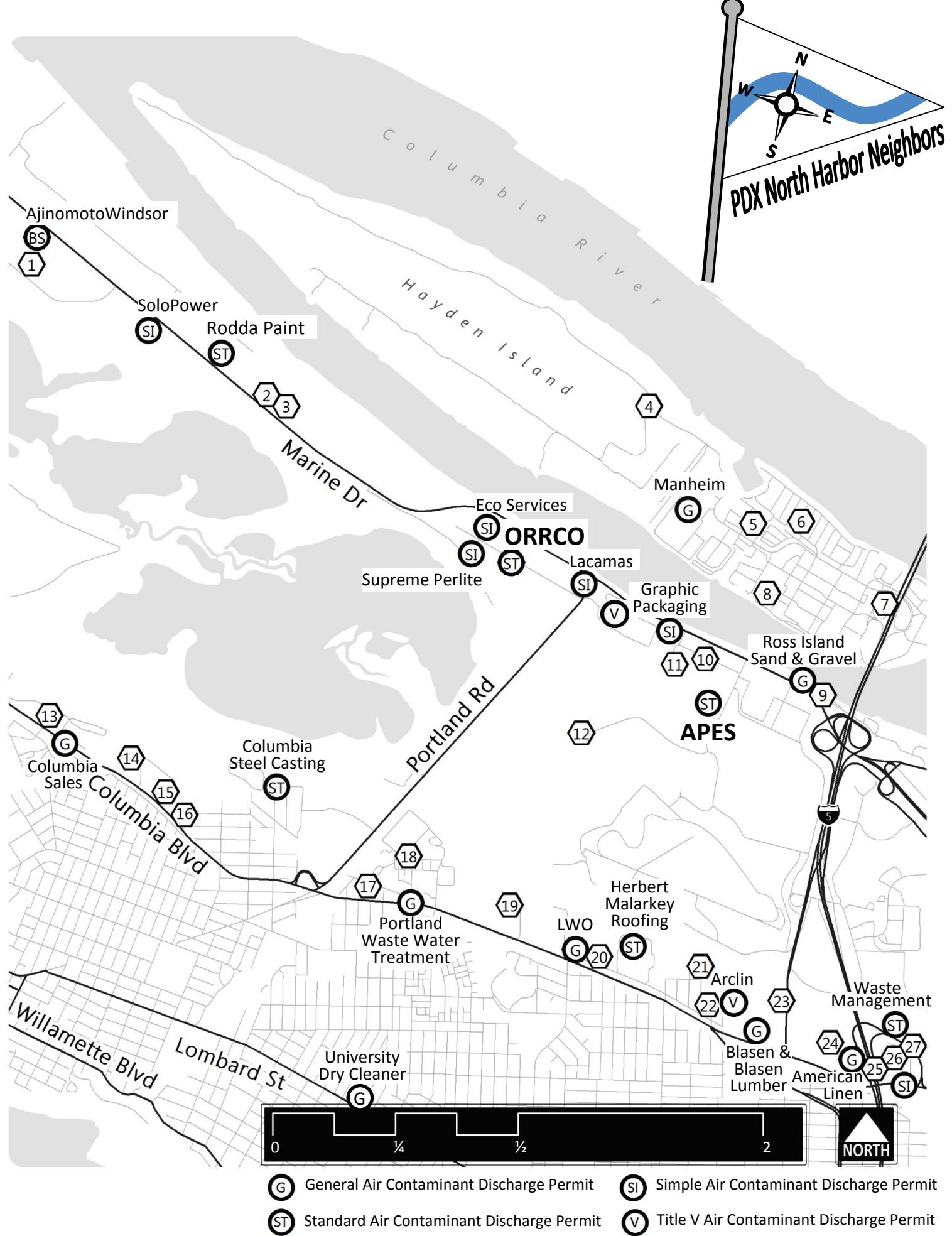


PDX North Harbor Neighbors



Living near or on the Columbia River in North Portland means being a neighbor to American Petroleum Environment Services (APES) and Oil Re-Refining Company (ORRCO). These are oil re-refineries take used oil and process it for industrial use. This used oil contains a wide variety of chemicals from the machines in which it was used. These re-refineries evaporate and distill this tainted oil causing hazardous waste to be released to the air. The air pollution from this, and the contaminated fuel they burn, is severe. All of North Portland and parts of Vancouver are affected, depending on which way the wind is blowing.

Over 300 hazardous agents, collectively known as polycyclic aromatic hydrocarbons (PAHs), are known to be among the emissions from petroleum re-refining companies. Some of the PAHs from APES and ORRCO are being monitored by the Department of Environmental Quality (DEQ) and the Environmental Protection Agency (EPA) including benzene, dioxane, naphthalene, chloroform, and sulfur dioxide. So far there has been a lack of sustained and detailed measurements by DEQ of these emissions, a health threat they have long known about.

We expect the oil re-refineries to use best available emission control devices as well as a clean source of fuel such as natural gas. APES is currently using, although they aren't supposed to, their own toxic byproduct - called light ends gasses and off-gasses - to fuel their boiler. Their use of a waste product as a fuel source is big part of the problem. On April

29th, 2016 DEQ stopped ORRCO from illegally incinerating used oil filters on site.

Exposure to these chemicals is a fact of life in North Portland Harbor. Here are three typical experiences:

Nina wrote one weekend last year: "Hayden Island was gassed again. It occurred late night and early morning. On the 27th I was awakened by the heavy smell of rotten eggs. I was sleeping with my window open, so got up and closed it, cursing under my breath. Of course, the noxious smell lingered in the house. I have congestive heart failure, which is well managed with medication and diet to prevent accumulation of fluid in my lungs. The next morning, my face was puffy and I could feel edema starting to take hold in my lungs. It is now June 1, and I am still having to take additional medication to eliminate the fluid and keep it at bay."

Also last year, Sue and her 16-year-old grandson attended Delta Park Sports Complex to compete in Lacrosse games with other schools. That day, the air was especially horrible with the intense odor of off gassing from the oil re-refineries. People on the sidelines eyes were tearing. Most didn't know what was going on, as people come from all over Portland and Oregon to compete at the park. Those of us that live here are all too familiar with this. After a few minutes of playing, children of all ages, who were participating in competitions, started coughing. Some couldn't catch their breath.

"I've experienced burning, bloody sinuses three or four times," part time Hayden Island resident Steve said. "and headaches that I have to leave the property to get right."

On May 9th, at the Hayden Island Red Lion public meeting with EPA and DEQ, DEQ reported that monitoring of the air near APES and ORRCO had revealed elevated levels of four hazardous gases, benzene, dioxane, naphthalene, and chloroform.

We know we are inhaling PAHs on a regular basis. We are working now to understand much of the different chemicals we are being exposed to. Hydrogen sulfide smells like rotten eggs, the smell we associate with the off-gassing incidences. Some of the dangerous chemicals released have no smell.

HYDROGEN SULFIDE

Hydrogen sulfide is a highly toxic, flammable gas that smells like rotten eggs. It is an irritant and chemical asphyxiate which effects both oxygen utilization and the central nervous system. Adverse health effects vary depending on level and duration of your exposure.

Chronic Exposure

Repeated exposure can cause health issues, at levels, which would normally have no effect. Chronic exposure may cause low blood pressure, headache, nausea, loss of appetite, disturbed equilibrium, tremors, convulsions, eye-membrane inflammation, fatigue, irritability, insomnia, digestive disturbances, weight loss and chronic cough. Neurological symptoms, including psychological disorders, have been associated with chronic exposure. Some evidence suggests exposure may increase the risk of miscarriage.

Low Concentration Health Effects

Low concentrations (50 ppm) may irritate your eyes, nose, throat and lower respiratory system. You may experience burning/ tearing

of eyes, cough, shortness of breath, and bronchial or lung hemorrhage. If you are asthmatic, you may have breathing difficulties. You may not feel the effects for several hours or days, when being exposed at low-level concentrations.

Moderate Concentration Health Effects

In addition to worsening symptoms of low-level exposure, at moderate concentrations you may also experience headache, dizziness, nausea, vomiting, staggering and irritability/excitability.

Moderate levels of hydrogen sulfide inhalation can also cause accumulation of fluid in your lungs, which may be immediate or delayed up to 3 days. If you have congestive heart failure, fluid in your lungs caused by hydrogen sulfide inhalation can cause worsening of symptoms.

High Concentration Health Effects

At high concentrations, just a few breaths can lead to immediate loss of consciousness, coma, respiratory paralysis, seizures and death. Survivors of severe exposure may develop psychological disturbances and permanent brain, heart and cornea damage. Inhalation of high concentrations may cause insufficient cardiac output, irregular heartbeat and conduction abnormalities.

General Population Exposure

Incidents of general population exposure have been reported, with effects ranging from minor nuisance to serious illness and death. Read about incidences at:
<http://www.eenews.net/stories/1060007591>

BENZINE

Benzine is classified as a known human carcinogen. Breathing high doses can affect the nervous system, causing dizziness, drowsiness, headaches, tremors, confusion and unconsciousness. Long-term exposure harms the bone marrow, where your new blood cells

form. This can result in anemia (low red blood cell count), causing weakness and fatigue, low white blood cell count, lowering your ability to fight infections, which can be life-threatening, and low blood platelet count, causing excess bruising and bleeding.

Some research suggests long-term exposure may harm reproductive organs, causing irregular menstrual periods and ovary shrinkage.

In addition to the conditions above, The International Agency for Research on Cancer describes benzene as causing acute myeloid leukemia, acute lymphocytic leukemia, chronic lymphocytic leukemia, multiple myeloma, and non-Hodgkin lymphomas.

1,4 DIOXANE

1,4 Dioxane is classified as a probable human carcinogen and confirmed animal carcinogen. Short-term inhalation of high levels of dioxane causes vertigo, drowsiness, headache, anorexia and irritation of the eyes, nose, throat, and lungs in humans. It may also irritate the skin.

NAPHTHALENE

Naphthalene is classified as an anticipated human carcinogen and confirmed animal carcinogen. Under California's Proposition 65, naphthalene is listed as "known to the State to cause cancer." Research indicates inhalation of naphthalene may cause hemolytic anemia. A condition in which your red blood cells are destroyed, causing fatigue, lack of appetite, restlessness and pale skin. Cataracts have occurred with acute exposure.

CHLOROFORM

Chloroform is classified as a probable human carcinogen. It used to be used as a surgical anesthetic. Short-term and chronic effects from inhalation at lower levels can cause central nervous system depression, resulting in depression or irritability. Chronic inhalation

exposure also affects the liver, causing hepatitis and jaundice.

POLYCYCLIC AROMATIC HYDROCARBONS

Benzene, dioxane, naphthalene, chloroform and hydrogen sulfide are only 5 of the over 300 PAHs associated with oil re-refineries. PAHs haven't all been researched individually. However health effects of exposure to PAHs as a group have been researched. Following is a list of health issues suggested by research, to be caused by PAH exposure.

Pulmonary

- Asthma, asthma-like symptoms, bronchitis, chronic cough, COPD, emphysema and sore throats, not associated with a virus

Heart disease

- Arrhythmia, congestive heart failure and atherosclerosis

Reproductive

- Difficulty conceiving, infertility, premature birth

Prenatal exposure - developmental

- Anxiety, depression and attention problems
- Behavioral problems at ages 6 and 8
- Childhood asthma, birth defects – heart malformation
- Low birth weight
- Lower IQ at age 3
- Premature birth

Postnatal exposure

- ADHD

Cancer

- Lung, Bladder, colon, kidney, liver, stomach

Renal

- Kidney and liver damage

Other

- Decreased immune function, cataracts

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